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ENGLISH
CYCLOPÆDIA.









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GEOGRAPHY

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THE
ENGLISH CYCLOPÆDIA.

GEOGRAPHY.

OLONETZ.

OLONETZ, an extensive government of Russia comprised between 60° 30' and 66° 30' N. lat., 29° 40' and 40° 20' E. long.; is bounded N. and N.E. by Archangel, S.E. by Wologda, S. by Novogorod, S.W. by St. Petersburg, and W. by Lake Ladoga and Finland. The area, including the great lakes, amounts to 58,906 square miles. The population in 1846 was only 263,100. The total area of the lakes in this government amounts to 7797 square miles: including Lake Onega 4851 square miles (exclusive of the island of Klinezkoj, 44 square miles); a portion of the Lake of Ladoga 1175 square miles; Sseg-Osero Lake 453 square miles; Wyg-Osero 353 square miles; Latscha 205 square miles; Wodla 198 square miles; Ssjam-Osero 114 square miles, and many others.

As this government extends to the polar circle, its northern half has entirely the character of the high northern latitudes, while the southern part has more of the character of the temperate zone. The Scandinavian Mountains enter the country from the north-west, surround the two great lakes Ladoga and Onega, and run to the borders of St. Petersburg and Novogorod. This range is low and rocky, the highest summits scarcely rising more than from 300 to 420 feet above the general level, yet they are covered during a great part of the year with snow. The country at their base is in general low, wet, and swampy. The summits are clothed with thick forests of fir and other timber: the declivities are in some places open and susceptible of cultivation. Blocks of granite, some of them of enormous size, are scattered all over the mountains. The dry, open, and wooded parts contain under the greenward pure or clayey mould over clay mixed with boulders of the rocks of the country: in the morasses bog-iron ore abounds, with deep sand and clay. The surface may be said to be equally divided between mountains and forests, open tracts, morasses, and water.

This government contains 1998 lakes, and 858 rivers and rivulets. The two greatest lakes are Ladoga and Onega: of the former a large portion is in this government, the remainder is in St. Petersburg and Archangel. Lake Onega is nearly in the centre of the government: its mean length is 130 miles, and the breadth from 70 to 80 miles. Like Lake Ladoga, it contains numerous islands, most of which are covered with forests. The principal rivers are the Svir, which runs from Lake Onega into Lake Ladoga, and though full of boulders is navigable; the Olonka, the Ruskola, and the Janez, all of which run into Lake Ladoga. The following rivers run into Lake Onega:—the Wytegra, the Wode, the Lisch, and the Suma, all flowing from lakes of the same names, and the Losocha. The most considerable river however is the Onega, which issues from Lake Lussa, near Lake Onega, and running through the government of Archangel, falls into the White Sea. In many of these rivers there are waterfalls, the most remarkable of which is that called Kiwatscha, in the river Suna. The climate is pretty uniform: the spring is long and damp, with frequent night frosts; the summer short, with many foggy days, the vegetation being however very vigorous, on account of the length of the days: the autumn is bleak; the winter long and severe. Corn, chiefly barley and rye, ripens well; but unforeseen accidents sometimes destroy the entire harvest. The health of the inhabitants does not suffer by the cold.

Notwithstanding the cold and severe winter and the short summer, agriculture is carried on in all the circles. The inhabitants cannot however raise sufficient corn for their own consumption. Flax and hemp thrive, and are extensively cultivated. There is no fruit except cranberries, bilberries, &c., and these and other wild berries abound.

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OLYNTHUS.

Turnips, carrots, radishes, onions and some potatoes are cultivated. Timber, which is the principal source of wealth, abounds. Except the oak and beech, almost all the forest trees common in Russia flourish here, the finest larches in the world perhaps, and pines fit for masts 100 feet in length. The forests supply fuel, timber for building houses and boats, resin, turpentine, pitch, tar, charcoal, tanners' bark, barks, planks, and laths for exportation.

The fur-bearing animals furnish a profitable article of commerce. The breeding of cattle is not carried on to any great extent, because their maintenance in the long winter is too expensive. Almost every peasant however has a couple of horses, cows, swine, and some domestic fowls, yet the total number of any of these on such a vast area is altogether insignificant. The number of sheep was stated a few years ago to amount only to 4000. The wild animals are wolves, bears, elks, gluttons, foxes, badgers, and reindeer. Seals are found in the two great lakes. Water-fowl of various kinds abound. The fisheries are very productive; great quantities of sturgeon and salmon are sent to St. Petersburg. The minerals are iron, granite, serpentine, porphyry, sandstone, quartz, lime, clay-slate, alabaster, talc, gypsum, and marble. Iron is smelted, and wrought into various articles for domestic use. Copperas is manufactured. The province has copper- and gold-mines not worked; there are also silver, lead, and sulphur. Salt is obtained from some springs, but not sufficient for the supply of the inhabitants.

The exports are the natural productions of the government, cannon from the imperial foundry of Petrosavodsk, cast-iron, and some tallow. The greater part of the exports goes to St. Petersburg; the remainder to Archangel.

The great majority of the inhabitants are Russians; in the western part there are many Finns. There are a few nomade Laplanders in the circle of Kem.

Olonetz, the former capital, is situated in 61° 0' 45" N. lat., 32° 50' E. long., on the river Olonka. It is an open town, with 8000 inhabitants. There are three stone and five wooden churches. A good deal of fine thread is manufactured here, and a considerable trade is carried on, partly across Lake Ladoga with St. Petersburg, and partly at the two annual fairs. The first dock-yard established by Peter the Great was at Onega, and ship-building is still carried on. *Petrosavodsk*, the present capital, is situated in 61° 47' N. lat., 34° 24' E. long., on a bay of Lake Onega, and was so named by the empress Catharine II. from many manufactories ('zavod') erected here by Peter the Great. It is an ill-built town, remarkable only for the great imperial cannon-foundry: population, 4000. The only other place worth naming is *Kargopol*, in the south-east of the government, near Lake Latscha: population, 3000.

OLONNE-LES-SALLES. [VENDEE.]

OLONO, RIVER. [AUSTRIA.]

OLORON. [PYRENEES, BASSES.]

OLOT. [CALABRIA.]

OLYMPUS. [ANATOLIA; CRETE; THESSALY.]

OLYNTHUS, a town in Macedonia, at the head of the Toronaic Gulf, was probably founded by the Chalcidians and Eretrians of Euboea. (Strabo, x. p. 447.) It was 60 stadia from Potidea, and was visible from the latter place. (Thuc., i. 63.) It fell under the dominion of Athens, but revolted at the beginning of the Peloponnesian war, and secured its independence with the aid of the Spartan Brasidas. From this time it was the most important of the towns of Chalcidice, and the head of a league. The jealousy of the Spartans subsequently

made them attack the freedom of Olynthus, which became a dependency of Sparta, B.C. 379. After the Spartan supremacy had been overthrown by Epaminondas, the Olynthians again recovered their independence. Philip of Macedonia viewed with jealousy the confederacy of the Olynthians, but he made peace with them after his quarrel with the Athenians. In B.C. 349 the Olynthians broke off their alliance with Philip, and sent to Athens for assistance. The Athenians, by the advice of Demosthenes, who advocated the cause of the Olynthians in his three Olynthiac Orations, sent troops to their aid; but the Olynthians were defeated, and obliged to surrender their town, which was destroyed by Philip B.C. 347.



Coin of Olynthus. Actual size.

OMAGH, county Tyrone, Ireland, the assize-town, and the seat of a Poor-Law Union, is situated on the left bank of the Strule, in 54° 36' N. lat., 7° 19' W. long., distant by road 34 miles S. from Londonderry, and 110 miles N.N.W. from Dublin. The population in 1851 was 3385. Omagh Poor-Law Union comprises 29 electoral divisions, with an area of 174,214 acres, and a population in 1841 of 69,499; in 1851 of 56,302. In 1689 a garrison left in the place by James II., on retiring, set fire to and almost completely destroyed the town. In 1743 it was laid waste by an accidental fire. It is now a clean, neat, and well-built town. The river is crossed by a handsome stone bridge. In the town are the parish church, and chapels for Roman Catholics, Baptists, Methodists, and Presbyterians; also several schools partially endowed. The county court house is an elegant building of Grecian architecture. The town contains the county jail (a large modern building), a new district lunatic asylum, the county infirmary, a fever hospital, dispensary, and Union workhouse. Large sales of corn and of brown linens are made at the weekly markets. Quarter and petty sessions are held. Fairs are held on the first Tuesday of every month; Saturday is the market-day.

OMAGO. [ISTRIA.]

OMAN. [ARABIA.]

OMER, St., a fortified town in France, in the department of Pas-de-Calais, 28 miles S.E. by railway from Calais, is situated in 50° 44' 53" N. lat., 2° 15' 20" E. long., at an elevation of 75 feet above the level of the sea, and has 19,226 inhabitants in the commune, but including the suburbs the population probably exceeds 25,000. St. Omer is surrounded by fortifications between two and three miles in circuit, constructed of red bricks. It is strengthened by four forts and by entrenchments, and further protected by marshes, which can easily be flooded. There are four gates, of which only two will admit carriages. The town is traversed by the Aa, and by the canal which unites the Aa to the Lys. The principal streets are broad; the houses are chiefly built of yellow or gray bricks, except some of the public buildings, which are of red bricks. The Place d'Armes at the west of the town is the only large square; the town-hall occupies the east side of it. The former cathedral of Notre-Dame, and the church of the former Jesuit college, are the finest of the public buildings. Other remarkable objects are—the ruins of the church of St. Bertin, formerly the finest gothic church in French Flanders; the hospitals; the theatre; and the public library, which contains 20,000 volumes. The town has tribunals of first instance and of commerce, a consultative chamber of manufactures, a college, an ecclesiastical seminary, and an English college for the education of British Roman Catholics. The ramparts, which are planted with elm-trees, the quays on the banks of the canal, and the Calais road form handsome public walks. There are many fountains. Woollen cloth, blankets, thread, oil, glue, fishing-nets, paper, brandy, beer, leather, and salt are the leading manufactures of the town, which is also the centre of a considerable commerce in wool, corn, wine, flax, coal, &c. The inhabitants of the two suburbs Haut-Pont and Lizel to the north of the town retain the Flemish language, and are mostly engaged in raising garden stuffs on spots of ground which they have recovered by draining from the marshes near the Aa. Between these suburbs and the neighbouring village of Clairmarais were not long ago several floating islands, on which cattle might be seen grazing and trees growing; when the cattle were wanted the islands were drawn to the shore like a boat. Several islands that formerly floated in these marshes have become fixed.

OMERCOTE. [HINDUSTAN.]

OMERCUNTUC. [HINDUSTAN.]

OMOA. [HONDURAS.]

OMSK. [SIBERIA.]

ONDARROA. [BASQUE PROVINCES.]

ONEGA LAKE. [RUSSIA.]

ONEGLIA. [NICIA.]

ONEIDA LAKE. [NEW YORK.]

ONGAR, or CHIPPING ONGAR, Essex, a market-town and the seat of a Poor-Law Union, in the parish of Ongar, is situated on the right bank of the river Roding, in 51° 42' N. lat., 0° 14' E. long., distant 11 miles W.S.W. from Chelmsford, and 22 miles N.E. from London. The population of the parish in 1851 was 843. The living is a rectory in the archdeaconry of Essex and diocese of Rochester. Ongar Poor-Law Union contains 26 parishes and townships, with an area of 47,465 acres, and a population in 1851 of 11,855.

A castle built at Ongar in the time of Henry II., was demolished in the reign of Elizabeth. The moat and some earthworks of the castle remain. The town is built on the slope and brow of a hill. The Roding is here crossed by a bridge of three arches. The parish church, a small neat edifice, is of early English character. Roman bricks have been used in the construction of the building. There are a chapel for Independents; an Endowed school, called the King's Trust; and an Infant school. Saturday is the market-day; a fair is held on October 12th.

ONOLZBACH. [ANSBACH.]

ONTARIO LAKE. [CANADA.]

OODIPOOR. [HINDUSTAN.]

OOMAK. [ALEUTIAN ISLANDS.]

OONALASHKA, one of the ALEUTIAN ISLANDS, is situated in 54° N. lat., 138° 20' W. long., and extends from north-east to south-west about 50 miles, but it varies greatly in width. Black masses of rocks rise perpendicularly out of the sea to a great elevation, and their summits are covered with perpetual ice. The highest summit, called Makushinskaja-Sobka, is 5474 feet above the sea-level, and continues to smoke without interruption. There is also another active volcano. There are several hot springs; and earthquakes are common. The rocks consist of granite and porphyry.

Oonalashka and the islands lying west of it are entirely destitute of trees. Dwarf willows occur in damp places. Even the lower hills only support alpine plants. The moisture of the atmosphere maintains a perpetual verdure on the steep mountain summits up to the snow. The Russians have brought cattle to the island. Potatoes, turnips, and radishes are the only vegetables that thrive. No kind of grain succeeds.

The inhabitants live chiefly by fishing. The surrounding sea abounds in cod, halibut, and seals. Whales are also numerous. Wild geese and ducks are very abundant in spring and autumn; they are salted and smoked for winter food. The Russian American Company has an establishment at Illiuliuk, or Illoalak, towards the north-eastern extremity of the island. The harbour is surrounded by high mountains and very safe, but it is difficult of access, owing to the entrance being narrow, tortuous, and there being no bottom at 100 fathoms. The climate is very foggy and damp; mean annual temperature 40° Fahr.

OONIMAK. [ALEUTIAN ISLANDS.]

OOSTERHOUT. [BRABANT, NORTH.]

OPELOUSAS. [LOUISIANA.]

OPHIR, a name indicating a place which was known to the Hebrews and to the neighbouring nations, as early as the time of Job, as producing such an abundance of excellent gold, that 'the gold of Ophir' became a proverbial expression for fine gold. The position of this place is very difficult to determine. We are informed that Solomon, in conjunction with Hiram, king of Tyre, sent a navy from Ezion-Geber, at the head of the Red Sea, to Ophir, and that this navy returned bringing 420 (in Chronicles 450) talents of gold, sandal-wood (called in our translation almug or aljun-trees), and precious stones (1 Kings, ix. 26-28; x. 11, compared with 2 Chron. viii. 17-18; ix. 10); and also that Jehoshaphat built ships of Tarshish to go to Ophir for gold (in Chronicles it is said that he built ships to go to Tarshish), which were wrecked at Ezion-Geber. (1 Kings, xxii. 48-49, compared with 2 Chron. xx. 36-37.) We are also told in 1 Kings, x. 22, that Solomon had at sea a navy of Tarshish with the navy of Hiram; once in three years (or every third year) came the navy of Tarshish, bringing gold and silver, ivory, apes, and peacocks.

Both Solomon and Jehoshaphat built the navies bound for Ophir at Ezion-Geber, at the head of the Red Sea, and nearly all the inquiries into the position of this place have proceeded on the assumption that the passage in 1 Kings, x. 22, refers to the same navy which is spoken of in 1 Kings, ix. 27-28, &c., and consequently that Tarshish and Ophir were visited in the same voyage. It has therefore been necessary for those who make this assumption not only to find a place which suits the description of Ophir, and which produces 'gold, sandal-wood, and precious stones,' but also to account for the 'silver, ivory, apes, and peacocks,' which were brought by the navy of Tarshish, and for the three years consumed in the voyage.

The position of Ophir and Tarshish have occasioned much discussion. Tarshish is generally supposed to be identified with Tartessus in Spain, a colony and trading port of the Phœnicians. But to connect this port with Ophir in one voyage from Ezion-Geber in the Red Sea, would involve the doubling of the Cape of Good Hope, which is by no means likely to have been effected at so early an age, and still less a common trading voyage; and therefore it has been endeavoured to find another Tarshish in the east. The position of Ophir has been placed by different writers on the south-west coast of Arabia; in Eastern Africa, about Sofala; in the Persian Gulf; and

in India. The probability is that, though there may have been places of those names, the names were used to indicate any long voyage, as ships of Tarshiah were large ships for long voyages, as is shown by Solomon having 'a navy of Tarshiah' at sea with that of Hiram, as we now speak of a fleet of East or West Indiamen without meaning to designate any particular port they may be bound to.

OPORTO (O PORTO, 'the Port'), a city and sea-port of Portugal, locally situated in the province of Entre Douro e Minho, but politically included in the province of Beira as the capital of the minor province of Porto. The city is built on the north bank of the Douro, about 2 miles from the mouth of the river, in 41° 9' N. lat., 8° 37' W. long., 175 miles N. by E. from the city of Lisbon. The population, including the suburbs, is about 80,000.

The city extends about a mile along the bank of the river, and covers the acclivities and partly the summits of the rising ground which flanks the river on the north. Viewed from the south, the city presents a very striking and beautiful appearance. The houses, being all white-washed, give it an air of extreme cleanliness, but many of the streets, especially those on the ascent of the hill, are narrow, crooked, and dirty. Oporto is however, on the whole, the cleanest city in Portugal. It contains many broad straight streets, with a number of new and handsome houses, with gardens adjoining them filled with vines, orange-trees, and flowering shrubs. The steep declivity of the hill on which the greater part of the town is built makes it difficult to ride on horseback or in carriages, though this inconvenience has been somewhat remedied by recent improvements. On the east side of the town houses are built against so steep a part of the hill-side, that they can only be approached by steps out of the rock.

The river affords a tolerably secure harbour, without any artificial aid except an elevated and walled quay, to which the ships' cables may be fastened during the floods, which often come down with such force, that, without this support, the vessels would inevitably be carried out into the sea. The mouth of the Douro is obstructed by a bar of shifting sand, which renders its entrance difficult. This obstacle once surmounted, the river is well adapted to the purposes of trade, being sufficiently deep in front of the town. Vessels of from 200 to 300 tons can pass over the bar, but only when the tide is nearly full. Vessels drawing above 16 feet water can scarcely ever enter the river. The quay extends the whole length of the town.

Oporto is defended by a cordon of detached batteries which extend round the city and suburbs. There are some remains of old walls round the ancient part of the city, but they are of no value for purposes of defence.

Oporto has four suburbs, besides the town of Villa Nova do Porto, on the south bank of the river. It has 11 public squares called Campos, or Praças, of which the most spacious are those of As Ortas, San Roque, and Vitoria; 14 hospitals, or charitable asylums; and about 80 churches, besides a large cathedral built by Henry of Be-augon, first count of Portugal, in 1105. It had 17 monasteries, some of which were destroyed during the siege in the civil war of 1832, and the rest have been converted to secular uses. It is the see of a bishop, who resides chiefly at Mezanfrio, but who has a fine modern-built palace within the city. A theatre, in the highest part of the town, built by an Italian architect, is much admired. The English factory is a large and handsome building, with a library, reading-room, and ball-room. The city contains also a new exchange, a mint, and barracks. There is an Italian opera-house, and the performances are considered little inferior to those of Lisbon. There are numerous public fountains, and a handsome new suspension bridge crosses the river.

The town of Villa Nova do Porto is somewhat to the east of the city, on the south bank of the river. It is chiefly inhabited by wine-coopers and other people employed by the merchants of Oporto; and between that town and the suburb of Gaya, on a small plain along the bank of the river, are the immense vaults where the wines are kept.

The principal trade of Oporto consists in wine, chiefly red, which is made in the province of Tras os Montes, and in some districts of Entre Douro e Minho. It is exported in large quantities to various parts of Europe and America, but the greatest consumption is by the inhabitants of Great Britain, where it is known as Port Wine. Oporto exported in 1850 to all parts 37,487 pipes of wine, which was a decrease of 4101 pipes on the exportation of 1849. The customs duties for the year ending June 1849 amounted to 1,891,347 dollars. There are other articles of export, such as oil, sumach, linen, lemons, and oranges. The imports are woollen, cotton, iron, and hardware manufactures, mainly from England; salt-fish, hemp, and flax; wheat and rice from the United States. There are some manufactures of hats, silks, linen stuffs, and pottery, besides rope-walks and dockyards.

Oporto was occasionally the residence of the ancient kings of Portugal, until Alfonso I., assisted by a fleet of English crusaders under the command of William Longsword, wrested Lisbon from the hands of the Almoravides in October, 1147. During the middle ages Oporto was famous for the strength of its fortifications. The walls were high and strong, and flanked by towers, but the city has now extended much beyond them. It was taken by the French in 1808, and retaken by the Anglo-Portuguese in 1809. It became afterwards, in 1831-33, the scene of a fierce contest for the throne of Portugal between Don

Pedro, the ex-emperor of Brazil, and his brother, Don Miguel, who had usurped the crown from his niece, Dona Maria. During the siege, which lasted upwards of one year, the town of Oporto was partly destroyed by the artillery of the assailants; and several wealthy mercantile houses were entirely ruined by the complete stoppage of trade, and the wanton destruction of property by the troops of the usurper, who on their retreat from before the lines of Oporto blew up with gunpowder several wine-cellars belonging to the merchants of the city.

(Mifano, *Diccionario de España y Portugal*; La Clède, *Histoire Générale de Portugal*, vol. ii.; Link, *Travels*.)

OPPELN, one of the four governments of Prussian Silesia, comprises the greater part of Upper Silesia, and almost wholly consists of hills and mountains. It is bounded N. by the government of Breslau, E. by Poland, S. by Galicia, and W. by Austrian Silesia. Its area is 5143 square miles, and the population in 1847 was 937,313, nine-tenths of whom are Catholics. It has extensive forests of fine timber, and abounds in valuable minerals—coal, iron, zinc, &c. This part of the province is less fertile and much colder than Lower Silesia; the valleys however are very fertile, although the grain-produce of the country is insufficient for the consumption. Cattle and sheep are numerous. Many of the mountaineers are weavers of linen. Hardware, steam-engines, leather, and woollen goods also are manufactured. The snow falls early and lies late. There are many tarns and ponds which give rise to numerous small streams. The Oder traverses the country in its whole extent. The Vistula runs on the south-eastern boundary. The Neisse, a feeder of the Oder, drains the west of the government, and forms part of the boundary on the north-west. [SILESIA.] The government is traversed by the railway from Vienna to Berlin through Breslau, from which branches run to Neisse and Craoow.

The administrative capital of the government, *Oppeln*, is situated on the Oder, 51 miles S.E. from Breslau by the Breslau-Vienna railroad, and has about 8000 inhabitants, who manufacture linen, tape, leather, and earthenware, and trade in timber, zinc, lead, hardware, woollen cloth, and Hungarian wines. The town is walled and entered by four gates, and connected by bridges with an island in the river which is laid out as a park. It possesses several churches, a synagogue, a gymnasium, and a school of midwifery. *Neisse*, at the confluence of the Biela with the Neisse, a feeder of the Oder, is about 50 miles W. by S. from Oppeln, and has a population of 12,000. It is a clean well-built fortified town, but the site is marshy and unhealthy. The episcopal palace, six Catholic churches, a Protestant church, a synagogue, and town-hall, are the principal buildings. This town has a gymnasium, a royal manufactory of arms, a powder-mill, several breweries, and manufactures of linen and woollen stuffs, ribands, stockings, and yarn. A branch railway, 29 miles in length, connects Neisse with the Brieg station on the Breslau-Vienna railway. The other towns are:—*Gleiwitz*, 50 miles by the Craoow railway S.E. from Oppeln, which has a population of 7400, a gymnasium, and great iron-foundries: there are valuable coal-mines in the neighbourhood. *Lobschütz*, 30 miles S. from Oppeln, has a gymnasium, a handicraft school, manufactures of linen, woollen cloth, stockings, and leather; and a population of 5781. *Ratibor*, a station on the Breslau-Vienna railroad, on the left bank of the Oder, is a walled town, entered by four gates, with a gymnasium, and a population of about 8000, who manufacture cloth, linen, earthenware, beer, leather, &c.

OPPENHEIM. [HESSE DARMSTADT.]

OPPIDO. [CALABRIA.]

ORAN. [ALGÉRIE.]

ORAN-ELF. [BOTHNIA.]

ORANGE, the Principality of, included the town and neighbourhood of Orange in the south of France. René de Nassau, nephew and successor of Philibert de Chalon, prince of Orange, was killed at the siege of St. Dizier in 1544, and left his heritage to his cousin William of Nassau, the founder of the republic of the Dutch United Provinces. After the death of William III., king of England, the principality passed to Frederick, king of Prussia, William's eldest sister's son, whose successor, Frederick-William, ceded it to Louis XIV. at the peace of Utrecht. The principality then merged in the province of Dauphiné, and is now included in the department of Vaucluse.

ORANGE, the ancient *Arausio*, an ill-built town, with a tribunal of first instance and a college, is situated in the French department of Vaucluse, near the left bank of the Rhône, in a beautiful plain watered by the Aigue and several other small streams, in 44° 8' N. lat., 4° 48' 38" E. long., at a distance of 16 miles by railway N. from Avignon, 147 feet above the sea level, and has 9264 inhabitants in the commune. The town has some manufactures of printed cottons, handkerchiefs, serge, and silk; it has also a good trade in wine, brandy, oil, madder, saffron, honey, wool, corn, truffles, essences, &c. It abounds in Roman remains. A triumphal arch, commonly called the Arch of Marius, 60 feet high, consisting of a central arcade and two smaller lateral ones, separated by four Corinthian pillars, spans the high road at the northern entrance to the town, and is justly dear to archaeologists for the beauty of its architecture and the rich sculptures of its illustrative bas-reliefs. The northern façade of the theatre, which still stands in the centre of the town, and presents a gigantic rectangle 435 feet long and 115 feet high, is a most magnificent piece of masonry. It consists of five stories, and is built of large uncemented stones. The basement story has a grand entrance gateway in the centre supported

by Corinthian pillars with capitals of white marble; on each side of the principal entrance are 9 arcades separated by Doric pilasters. The third story consists of 21 sunk arches of beautiful workmanship. The fifth story presents a row of large projecting square stones, corresponding to a similar row at the top of the fourth story, and pierced by holes intended to receive the poles which sustained the awning (*velaria*) that covered the spectators in the interior of the theatre. The interior has been lately cleared of rubbish and of the huts that were built in it, and now presents a perfect view of the several parts of a Roman theatre, but deprived of all its ornaments. (*Dictionnaire de la France*.)

ORANGE RIVER. [CAPE OF GOOD HOPE.]

ORANMORE. [GALWAY.]

ORBEC. [CALVADOS.]

ORCHIES. [NORD.]

ORCHOMENUS, called 'the Minyeon,' and afterwards 'the Boeotian,' was a city on the western shore of the lake Copais, in Boeotia. In the earliest period of Grecian history it was known as a place of great power and wealth. (Homer, 'Iliad,' ix. 381.) Its ancient magnificence is attested by the treasury of Minyas in it, which is described by Pausanias as being equal to any similar building which he had seen, and by the subterranean outlets of the Lake Copais, the remains of which exist to this day. [BOEOTIA.] In the earliest times Orchomenus was the chief city of the Minyans, to whom the greater part of Boeotia, including Thebes itself, was subject. In the sixtieth year after the Trojan war, the Æolian Boeotians, who had been expelled from Thessaly, drove out the Minyans from Orchomenus, which was then with its territory added to Boeotia. (Thucyd., i. 12; Strabo, ix. 401.) About the time of the Peloponnesian war Orchomenus was one of the most powerful states of the Boeotian confederacy. Its government was oligarchical. After the peace of Antalcidas (B.C. 387), Orchomenus was confederate with Sparta, and had in it a Lacedæmonian garrison. (Plutarch, 'Pelop.,' 16.) In the year B.C. 368, the Thebans destroyed Orchomenus, slaying the men, and selling the women and children into slavery. It was rebuilt after the destruction of Thebes, and is mentioned by Dicaarchus about twenty years after the death of Alexander.



Coins of Boeotia. British Museum. Actual size.

ORCHOMENUS. [ARCADIA.]

ORCIÈRES. [ALPES, HAUTES.]

ORDOBAD. [GEORGIA.]

ORDUÑA. [BASQUE PROVINCES.]

OREBRO. [SWEDEN.]

OREGON, a territory of the United States of North America, lies between 42° and 46° N. lat., 110° and 125° W. long. It is bounded E. by the Rocky Mountains, which separate it from the territory of Nebraska; N. by the territory of Washington; W. by the Pacific Ocean; and S. by the state of California and the territory of Utah. The area is about 230,000 square miles. At the census of 1850 the territory of Oregon included the country since separated from it and formed into the territory of WASHINGTON, and comprised altogether an area of 341,463 square miles, with a population of 13,294, or 0.04 to the square mile; but no account was taken of the native Indians, who in 1853 were estimated at 23,000.

Surface and Hydrography.—The territory of Oregon is traversed from south to north by the ranges of the Cascade and the Blue mountains, while a third range, that of the Rocky Mountains, forms its

eastern boundary. The Cascade, or Coast, or as it is sometimes called President's range, is a continuous and very lofty range rising at a distance of 100 to 150 miles from the coast; and almost entirely cutting off direct communication between those portions of the territory which lie east and west of it. Except where the Columbia, which forms here the northern boundary of the state, breaks through the range, the few passes which exist are so difficult as to be of little use to the traveller. The higher peaks are from 12,000 to 14,000 feet above the level of the sea. The country west of this range is a good deal broken by spurs from the main chain. The greater part of this broken country is thickly timbered, in many parts there being dense forests of fir, pine, spruce, oak, ash, and other valuable trees, with close undergrowths of hazel, &c. The valleys and plains afford much excellent farming land, the soil consisting in some places of a black vegetable loam, in others of clays and gravel. The uplands form good pastures. The harbours along the coast are, with the exception of that formed by the mouth of the Columbia, of little value; most of the other rivers have bars at their mouths, over which only vessels of light draught can pass. The coast itself is formed by steep sandy cliffs and beaches and is broken by projecting headlands which rise precipitously from the sea; the principal of these are named Cape Orford, Cape Gregory, Cape Perpetua, and Cape Look-Out, but they afford little shelter, and have mostly numerous rocks scattered about them, while everywhere a heavy surf sets in upon the beach.

The Blue Mountains, which traverse the middle of the territory, are more broken and irregular than the Cascade and Rocky ranges. On the south-west the Blue Mountains are united with the Cascade Mountains by offsets which form the valleys of the Clamet and Umpqua rivers, while the main chain forms the valley of the Willamette. Other offsets, diverging eastward, connect this range with the Rocky Mountains. This middle section of the state differs considerably from that west of the Cascade range. The hills are barren, but in the valleys of the Columbia, Willamette, and Saptin rivers the soil is generally fertile, and in some places extremely rich. Much of the country in the vicinity of the Columbia and Saptin rivers consists of rolling prairie land, and affords good pasturage. The southern portion of this middle section is for the most part broken and desert, with scarcely a tree or vegetable. The general elevation of the section is about 1000 feet above the sea.

The Rocky Mountains have been noticed elsewhere. [AMERICA; NEBRASKA; HUDSON'S BAY TERRITORIES.] They are of great altitude, and only one practicable pass has been discovered over them along this territory. This, known as the Great South Pass, occurs at the south-eastern extremity of Oregon, and is that crossed by the great stream of overland emigration to Utah and California. The country immediately west of the Rocky Mountains is everywhere broken by great spurs from the main chain, and though in some places partially timbered, is for by far the greater part rocky, barren, extremely variable in climate, and incapable of permanent settlement.

The principal river of Oregon is the Columbia, which forms for a considerable distance the boundary between this territory and Washington, and is not only common to both territories, but receives all the rivers of both which rise east of the Cascade Mountains. Its northern and longest branch rises in the Rocky Mountains near 50° N. lat., 116° W. long., its extreme upper course thus belonging to the British territory. It then traverses Washington first in a north-west, and then in a generally northern direction to its confluence with the Saptin, or Lewis River, soon after which it turns to the west and forms the northern boundary of Oregon. At the confluence of the Saptin it is 1286 feet above the sea, and 3500 feet wide. From this point to the Cascade Mountains its course is very rapid and it receives numerous affluents especially from Oregon. The Columbia breaks through the range of the Cascade Mountains in a series of falls and rapids, which are quite impassable by boats even during floods, and to avoid which portages have been constructed. The gorge of the Cascade Mountains through which the river flows is of the grandest kind of natural scenery. For about 40 miles lower the navigation is unimpeded, when rapids again occur. But for the remainder of its course, about 120 miles, the only impediments are the sandy shoals which limit the navigation to vessels drawing 12 feet of water. About 20 miles from its mouth the Columbia increases greatly in width, and at its outlet in the Pacific, the width between capes Adams and Disappointment is 7 miles, but a sand-bar extends from each cape so as to render the navigable channel both narrow and difficult. The Saptin, Snake, or Lewis River, sometimes called the southern fork of the Columbia, is formed by the union of many small branches which rise in the Rocky Mountains between 42° and 43° N. lat., and flows first west and then south through Oregon, passing into Washington near 117° W. long., after a very serpentine course of nearly 800 miles. The Saptin in its course through Oregon receives numerous affluents, all or nearly all of which belong entirely to this territory. Of these the principal are the Waptiacos, Fayette, and Sickly, on the right, and the Malheur on the left. Most of these rivers are very rapid, and run in deep channels, but are of little value for navigation. The Willamette, which rises on the west side of the Blue Mountains near 43° 30' N. lat., is one of the most important tributaries of the Columbia; it has a generally northern course and enters that river nearly opposite to Fort Vancouver, considerably below where it

becomes navigable; is itself navigable by small vessels for a considerable distance; and drains one of the most fertile valleys in the territory. The rivers which rise west of the Cascade Mountains have mostly a short course and are of little service for navigation. The principal are the Umqua and the Clamet. The Umqua, which after the union of its two head branches, flows nearly west to the Pacific, into which it falls by Cape Gregory, about 43° 54' N. lat., is in its lower course a wide but comparatively shallow stream, and like all the other rivers of Oregon which fall into the Pacific, has its mouth obstructed by a sand bar. The Clamet, the most southern river of Oregon, is also the longest south of the Columbia, but there are few settlements along its banks, and its navigable capabilities are very limited.

Of the geological features of Oregon only very partial examinations have been made. The mountain ranges belong generally to the igneous and palæozoic formations. Granite, trap, basalt, hornblende, and other eruptive and metamorphic rocks occur very widely, with slates, limestone, sandstone, &c. Gold is found in the sands of several of the rivers which flow from the Cascade Mountains to the Pacific; and it is said to have been also found in various places east of that range. Other minerals, especially iron, lead, and tin are also said to occur, but none of them have, we believe, been worked. We have not heard that coal has been found, though it is known to exist in Washington. Saline springs occur in the middle section of the territory, and near its south eastern corner occur several soda and magnesia springs.

Climate, Productions, &c.—The climate is very varied in the different sections of the territory. Along the Pacific, and generally west of the Cascade range, it is mild and genial during the entire year. The winter is very short and far from severe, and snow seldom lies long on the ground. In the middle section the changes of temperature are much greater, and the winters much colder; but the air is more bracing and the climate appears to be generally healthy. It is said that no dew falls in this section. In the vicinity of the Rocky Mountains the changes of temperature are extremely great and rapid. In the south-eastern part of the territory along the line of the great emigration route, the climate is very variable, but rain seldom falls, and there is little snow.

Wheat is the principal grain crop; but a considerable quantity of oats is also grown. Maize is cultivated but not to any great extent. The other grains are scarcely cultivated at all. Peas and beans, potatoes, and a few other vegetables are raised. Small quantities of tobacco, flax, &c., are grown. Most of the European fruits flourish in the valleys of the Columbia, Willamette, &c. At present however the chief dependence of the settlers is perhaps upon the rearing of stock, which with scarce any attention thrive abundantly on the excellent pasture. Horses, horned cattle, sheep, and swine are already very numerous; and butter, cheese, and wool receive much attention from the agriculturists.

Oregon was formerly exceedingly rich in fur-bearing animals, but their numbers are rapidly diminishing; beavers, musk-rats, and martins are the chief which are left. Their collection is still carried on almost exclusively by the officers of the Hudson's Bay company. In the forests bears, wolves, foxes, deer, elks, antelopes, and other game are still very abundant. Vast quantities of aquatic birds frequent the rivers in the spring and autumn. Along the coast whales are found; and edible fish are extremely abundant both along the coast and in the rivers: the Columbia especially swarms with fish, which form the chief food of the Indians. The principal fish taken are salmon, sturgeon, cod, ray, carp, smelt, and innumerable other small fish, with crabs, oysters, mussels, and other shell-fish.

At present manufacturing industry is chiefly confined to the production of the articles required in a very thinly peopled agricultural country, and those connected with the shipping trade. The commerce of Oregon is not unimportant, a considerable coasting trade being carried on with California; the exports consist of large quantities of lumber, boards, flour, and provisions generally. There is also a good deal of trade carried on with New York, Boston, &c. The direct foreign trade is of little consequence.

Divisions, Towns, &c.—The territory of Oregon is divided into ten counties. Salem is the political capital. All the towns are as yet but small: we notice some of the principal places; the population is that of 1850:—

Salem, the capital, stands on the right bank of the Willamette; it has a small population, and little trade, but contains the state buildings, &c.

Astoria, on the Columbia, 8 miles from its mouth, population 252, is one of the oldest American trading places in Oregon, having been founded by Mr. J. Astor in 1811, but its present increase is very slow. *Milton City*, Washington county, population 692, is one of the rising towns of Oregon. *Oregon City*, on the right bank of the Willamette River, 35 miles N.E. from Salem, population 692, is the chief town of the Willamette Valley, the best settled and most flourishing district in Oregon. The city possesses a great amount of water power, and appears likely to become a place of considerable importance. *Portland*, on the left bank of the Willamette, above its confluence with the Columbia, 47 miles N. by E. from Salem, population 821, is also a busy and flourishing place, being the port of entry of an extensive and rich country.

The constitution was enacted by Congress in 1846; by it the right

of voting is vested in every white male inhabitant of Oregon, 21 years of age, and a citizen of the United States, or who shall in the usual manner declare his desire to become one. The legislature consists of a council of 9 members, elected for three years; and a house of representatives of not less than 18 nor more than 30 members elected for one year. All laws passed by this legislature must be submitted to Congress for approval. The governor is appointed for four years.

The coast of Oregon was visited both by the English and Spaniards in the 16th century, and it has been much disputed to the mariners of which country the honour of the discovery is to be ascribed. Spanish writers claim its discovery for Ferrello, the pilot of Cabrillo, who they assert reached 43° N. lat. in 1543; while those who claim for England the honour of the discovery show that Drake in 1579 attained to 48° N. lat. The mouth of the Columbia, although Heecets in 1775 and Vancouver early in 1792, suspected the existence of an important river from the general appearance of the bay into which it empties itself, was not actually discovered until later in 1792, when a Captain Baker of the English merchant service and a Captain Gray, the master of an American merchant vessel, entered the estuary of the river. On the priority of Gray's entry the United States government some years later founded its claim to the territory drained by the river and its tributaries; but the river was actually ascended for the first time by Lieutenant Broughton, R.N., who a few months after Captain Gray had entered its mouth, went up it for above 100 miles, and formally took possession of the country in the name of his sovereign George III. The sovereignty of Oregon was in 1789-90 a matter of grave dispute between the governments of England and Spain, but the question was terminated in 1790 by the Convention of Madrid, by which the right of exclusive possession was relinquished by both countries. The Americans subsequently formed a trading settlement at Astoria, which during the war in 1814 was taken possession of by the English, but given up at the close of the war. After the treaty with Spain in 1819 the United States government first set up a claim, founded on the right of discovery, and also on their having by the treaty succeeded to the Spanish right of occupancy, to the exclusive possession of Oregon; and the claim involved the English and American governments on more than one occasion in very serious disputes. The question was not finally settled till 1846, when a treaty was concluded between the two powers, giving to the United States the entire country up to the parallel of 49° N. lat., including therefore the whole tract since formed into the territories of Oregon and Washington, but reserving to England the free navigation of the Columbia River as a line of communication with the Hudson's Bay Territory; and Oregon was constituted a territory by Act of Congress August 14th, 1848.

(*Statistical Gazetteer of the United States; American Almanac; Seventh Census of the United States; Wilkes, Narrative of the United States Exploring Expedition; Greenhow; Falconer; Wallace; Twiss; Nicolay, &c.*)

OREGRUND. [SWEDEN.]

OREL, a government of Great Russia, situated between 51° 50' and 55° N. lat., 32° 50' and 39° E. long., is bounded N. by Kaluga, N.E. by Tula, E. by Tambow, S.E. by Woronetz, S. by Kursk, S.W. by Tschernigov, and N.W. by Smolensk. Its area is 18,176 square miles; the population was stated to be 1,502,900 in 1846.

The country has a considerable elevation, but it contains no mountains. There are some chains of calcareous hills, and some eminences along the banks of the rivers. The soil is generally sandy, and extremely well adapted to all kinds of grain: in some parts it is composed of compact clay and loam. There is very little unproductive land, and few heaths and morasses. A portion of the surface belongs to the basin of the Volga; but the greater part is included in the basin of the Dnieper, and slopes to the south. The principal river is the Desna, which comes from Smolensk, passes through the circles of Briänsk and Trubtschewsk, where it becomes navigable, and, having received several other rivers, runs into the government of Tschernigov. The second river is the Oka, which rises on the frontier of Kursk, and would be navigable at Orel if the stream were not obstructed by numerous mills. It receives several small rivers, by which it is so enlarged, that during the whole summer it is navigable for flat-bottomed boats of 250 to 400 tons: no part of it is obstructed by rocks. The third principal river is the Sosna, the source of which is near that of the Oka; it runs to the north-east, receives on both sides several smaller streams, and falls into the Don on the frontier of Woronetz. There are no large lakes, but the province is extremely well watered by streams. It is of a very uniform temperature and very healthy. A general failure of the crops is extremely rare. The waters are frozen at the end of November, and thaw in the beginning of March.

All kinds of corn are cultivated, a little flax, much hemp, and some tobacco. Horticulture is pretty general; culinary vegetables and fruits are cultivated; also abundance of hops, apples, and cherries, and in some parts pears and plums. There are woods and copses in all the circles. The commonest trees are birches, alders, fir, aspens, limes, elms, and willows. Oak-forests cover the banks of the Desna, but there is so much waste that they are rapidly diminishing. Foxes, hares, and quails are abundant. The horses are a fine breed, fit both for draught and the saddle, and there are many studs, which are supplied with stallions from other countries. The oxen are large and

strong, and are used for draught. The sheep furnish good wool. Swine are very numerous. The inhabitants keep likewise great quantities of bees. The mineral products are lime, millstones and grindstones, alabaster, saltpetre, and some bog-iron. No use is made of the peat which is found in the government.

The country-people make for themselves almost everything that they have need of. There are however some iron-works, mills, &c. In the towns there are manufactories of coarse woollen cloths, linen, sail-cloth, table-linen, leather, cordage, paper, colours, glass, earthenware, soap, &c. There are numerous brandy distilleries. The chief articles of exportation are bar-iron, spirits, bass mats, cordage, corn, flour, hemp, fir masts, balks and planks, tobacco, horses, oxen, tallow, honey, wax, &c. All articles of foreign produce are procured from Moscow.

The inhabitants are partly Great Russians, partly Little Russians and Cossacks; the great majority are of the Russian Greek Church, and the head of the clergy is the bishop of Orel and Siäwsk.

Orel, the chief town of the government, is situated in 52° 56' 40" N. lat., 36° 6' E. long. It stands on the river Oka, where it is joined by the Orlik. The houses are in general of wood, and the interior of the town is gloomy. Up to the 17th century, Orel seems to have been an insignificant place; but it was then fortified, and a citadel built, part of which still remains. During the wars with the Poles, and in the time of the false Demetrius, it was frequently taken and retaken. Since that time it has rapidly increased; in 1840 the population was estimated at 40,000. Great part of the city was destroyed by fire June 7, 1848, when 1237 houses, four bridges, and several large corn granaries were burnt. Orel is well situated for trade; it is the entrepôt for the corn of Little Russia, and the place from which Moscow draws its chief supply. Other exports are corn, hemp, wine from the southern provinces, tallow, butter, honey, wax, wool from Little Russia, hogs' bristles, and leather. There are some manufactories of linen, cordage, and soap. The annual fairs are very well attended. Besides the buildings belonging to the crown, there are 20 churches, two of which are of wood, 2 convents, and a bazaar. The streets are very badly paved. The town, which is a bishop's see and the seat of government, has a gymnasium, a district school, and a seminary for the education of priests for the Greek Church. In the vicinity there are public gardens prettily laid out, and commanding good views.

The other principal towns in this government are Siäwsk, which is the see of a bishop, and has 5000 inhabitants, a seminary for 400 pupils, and manufactories of earthenware, colours, &c.; Briänsk on the Desna, with 5000 inhabitants, has a seminary, a cannon foundry, tanneries, and much trade with Kherson; Karatschew, with 6000 inhabitants; Trubtschewsk, on the Desna, an ancient town, with 3500 inhabitants; Dmitrowsk, with 3000 inhabitants; Liwny, on the Sosna, with 6000 inhabitants; Jelez, on the Sosna, with 8000 inhabitants, has a great trade in iron wares and corn; Mzensk, at the junction of the Mezna and the navigable river Sudzha, has 6000 inhabitants; Bolchow, on the Nugra, a well-built town, with 14,000 inhabitants. These towns, including Orel, are the capitals of circles of the same names. There are 12 circles in the government.

ORELLANA. [AMAZONAS.]

ORENBURG, a government of Russia, partly in Asia and partly in Europe, is situated between 47° and 56° N. lat., 50° 20' and 64° 20' E. long, and is bounded N. by the government of Perm, N.W. by Wiatka; W. by Casan, Simbirsk, Saratov, and Astrakhan; E. and S. by the Kirghiz steppe, and N.E. by Tomsk and Tobolsk. The area of the government is 118,094 square miles. If the country of the Uralian Cossaks, which is generally looked upon as a dependency of Orenburg, and is by some included under that name, be added, the total area of Orenburg will amount to 143,317 square miles. The area given above is taken from the last official return. But since that return was issued a new government named SAMARA has been formed by imperial ukase (December 18, 1850), on the left of the Volga, from districts formerly belonging to Simbirsk, Orenburg, and Saratov. A large portion of Orenburg comprised between the Obchei-Siert Mountains, drained by the Samara and the Kindel (which unite before they join the Volga), and measuring 21,393 square miles, is now included in the government of Samara. Accordingly the area of the government of Orenburg is reduced to 96,701 square miles, with a population of 1,192,323. It is divided into 12 circles.

Towards the south, in the country of the Cossaks of the Ural, the surface is a steppe, which is destitute of trees, and only produces the plants peculiar to saline countries. Beyond the mountains it is a plain intersected by morasses and a great number of lakes; on the European side of the mountains the surface is undulating, remarkably varied, and often very picturesque. To the north, where the Ural chain enters the government, it is called the Baschkirian Ural; the part which runs directly south, parallel with the river Ural to its sudden bend from east to west, is called the Gouberlin Mountains, branches of which, stretching from east to west, extend into the government, and form what is called the Obchei-Siert. The base of the Ural chain is granite; the upper rocks are calcareous and quartz, sometimes bare and covered with erratic blocks, and sometimes covered with a sufficient depth of sand and earth for the trees to take root. Immense caverns open into the interior of these mountains. The whole of the western or European part of the government is fertile. The principal river is the Ural, which forms part of the

boundary between Europe and Asia. It rises in the Ural Mountains in the district of Troitsk, and forming in part of its course the western boundary between Orenburg and Astrakhan, discharges itself by several mouths into the Caspian in 47° N. lat. Its entire course, which is rapid and winding, but without falls, is above 1600 miles; its breadth, which is only 60 feet at Oraknia, and 150 feet at Orenburg, increases to 480 feet, but the water is so shallow that it is navigable only for very light vessels. Other rivers are the Kama, the Sakmara, which falls into the Ural, and the Belaia, at the conflux of which with the Ufa, the chief town Ufa is situated. There are numerous lakes, salt as well as fresh, on both sides of the Ural Mountains. The climate varies considerably between the north and the south; and it is much more rigorous to the east than to the west of the Ural chain. In the steppes the heat in summer is very great. The winter is generally cold, and even in summer the nights are cool. Whirlwinds and hurricanes are frequent, and transitions from heat to cold are sudden. The want of rain and the swarms of locusts are very distressing, especially in the south.

Natural Productions.—Agriculture is tolerably flourishing, and is favoured by the goodness of the soil. The chief grains are rye, barley, oats, buckwheat, and millet. The inhabitants grow but little flax, hemp, tobacco, and vegetables. The forests are of immense extent, but there is an enormous consumption of wood in the forges, for making charcoal, for the preparation of tar and potash, and for building houses and bark. Game is abundant in the forests, and the lakes abound in water-fowl. The golden eagle of the Ural is tamed and trained for the chase. The chief wealth of the government consists in its horses and cattle. The former, which are of Tartar or Baschkirian breed, are handsome and strong; the Baschkirs and Metscheriaks have herds of 200, 1000, and even 2000 horses; the Russians, the Cossaks, and the Tartars, of 50 or 100 horses. All have great numbers of oxen, goats, and more especially sheep, of which a nomad will have from 500 to 4000, and the stationary inhabitants 400 to 500. The Christians possess great numbers of swine; the nomad rears camels or dromedaries. The fishery in the Belaia and the Kama suffices for the consumption of the inhabitants; and that in the Ural is a source of considerable advantage to the Cossaks. This government possesses likewise great mineral wealth—gold in the Ural Mountains, copper, iron, and a great quantity of salt, which is procured from the mines of Iletz, where the rock-salt is found 4 or 5 feet under the sand in beds covered with gypsum; the Cossaks however obtain their salt from the lakes. The other mineral products are asphalt, sulphur, vitriol, marble, alabaster, agates, &c.

The population is extremely mixed. The great majority are Russians; next to them are the Turks or Tartars, and the Baschkirs (about 15,000 families). Almost the whole of these ignorant, rude, and warlike people inhabit a district at the foot of the Ural chain, which is called after them, Baschkiria. They live by the breeding of cattle and bees, by the chase, and agriculture. They dwell in the summer under tents made of felt, and in winter in villages. Other components of the population are Finns, Cossaks, Teptjars, Metscheriaks and Kalmuks, Tchonvaches, Tchoremises, Mordwins, Kissilbaches, and Armenians.

The women are extremely skilful in weaving and dyeing. The working of the mines employs a great number of hands. But manufacturing industry properly so-called is exerted chiefly on operations connected with mining, in smelting-houses and foundries of the Ural Mountains, in the manufactory of arms at Zlutoust, and in the numerous tanneries, potash factories, and distilleries. Some woollen cloth is manufactured for the army. The tallow-melting houses in the government are numerous.

The commerce of the government is carried on partly with the nomad tribes, who exchange their horses, cattle, furs, carpets, and blankets of felt or wool, for manufactured goods, brass, copper, and iron articles, and partly with the Kirghises and people of Bokhara, whose caravans come to Orenburg or Troitsk, the two chief commercial towns, where there are custom-houses. Through the same channel many goods are exported to Kliwa, Bokhara, Tashkend, and the Kirghiz steppe, the caravans numbering altogether several thousand camels exclusive of horses. The articles exported to the interior of Russia in Europe are chiefly the mineral products, many of which are sent to the ports on the Baltic. The caravans from Bokhara bring raw and manufactured silk and cotton, and also Cashmere and Persian shawls, indigo, Chinese goods, tea, &c. Asiatic produce is brought to the fair of Nijnei-Novgorod by way of Orenburg, the merchandise being forwarded thence in waggons.

For public instruction Orenburg depends on the university of Casan, but education is very limited. The Mohammedans study at the high school of Gargali. Most of the Christian inhabitants are of the Russian Greek religion. The Tartars, the Baschkirs, Kalmuks, Teptjars, and Metscheriaks are Mohammedans.

The civil government is organised like those in Great Russia, but does not extend to the Kirghises and Cossaks. These are under a military governor, whose chief business is to provide for the security of the frontier, which is defended towards the Kirghiz steppe by a line of fortresses, and by the Cossaks, the Metscheriaks, the Baschkirs, and the Kalmuks, who in consideration of this service are exempt from all taxes to the government. The forts on the line of the Orenburg

Cossaks extend from Iletakaja-Kreposth to the river Tobol in the north, at the distance of 3 miles from each other. From Iletakaja-Kreposth southward to Gurief on the Caspian, is the line of the Cossaks of the Ural, defended in like manner by a long series of small forts.

Orenburg, formerly the capital of the government, is situated in 51° 46' N. lat., 52° 31' E. long., in a vast plain near the conflux of the Sakmara and the Ural: it is of an oval form, regularly built, and well fortified. The population is stated to amount to 20,000. There are nine Greek churches, one Lutheran church and school, a military academy for 80 pupils, a great European bazaar with 180 shops in the town, and a bazaar on the Asiatic side of the river with 492 shops in the Kirghis territory, a league from the town, which is the depôt for the merchandise of Central Asia and of Russia. The Kirghises bring annually between 300,000 and 400,000 broad-tailed sheep, horses, skins, carpets of divers colours; the Bokharians bring gold in grains, Persian gold and silver coin, lapis lazuli, precious stones, black lamb-akins. The military governor resides here.

Ufa, the present capital, a fortified town at the conflux of the Ufa and the Belala, has 6000 inhabitants, half of whom are Tartars. The public institutions and buildings are a gymnasium, a poor-house, a lunatic asylum, seven churches and two convents. It is the see of the bishop of Orenburg, and the residence of the Mohammedan Tartar Mufti.

Among the other towns are *Wosresensk*, population 3500; *Alenzelinsk*, in the north of the government on a feeder of the Bielala, population 30,000; *Serjinsk*, population 3000; and *Traitskaja*, or *Troitsk*, a free-port in the Asiatic part of the government: population, 3000. *Troitsk* is a fortified town on the left bank of the Oul, a feeder of the Tobol. The steep banks of the river are united by a bridge which connects the town with the Kirghis steppe, and leads to a fortified bazaar, in which the products of the steppes of Bokhara and other countries of Central Asia are exposed for sale.

ORENSE. [GALICIA, Spanish.]

ORFA, or URFAH. [MESOPOTAMIA.]

ORFORD. [SUFFOLK.]

ORGÈRES. [EURE-ET-LOIR.]

ORGON. [BOUCHES-DU-RHÔNE.]

ORIGNY-EN-THIÉRACHE. [AISNE.]

ORIHUELA. [VALENCIA.]

ORINOCO, a large river of South America, which has its origin, according to the most recent information, not in the centre, but on the southern declivity of the eastern part of the mountain system called Parima. These mountains spread over a great part of the eastern portion of the republic of Venezuela, and the north-east districts of the empire of Brazil. In length they extend nearly 1200 miles, between 51° and 68° 30' W. long. Their width varies between 140 and 450 miles, between the parallels of 1° and 8° N. lat. According to a rough calculation, this mountain system covers a surface of about 400,000 square miles. The mountains are separated from the shores of the Atlantic by a low and flat country varying in width between 30 and 70 miles. The southern portion, as far as is known, is a mass of rock, of which the general level has an elevation of from 1500 to 2000 feet above the sea. Few of the hills and ridges rise more than some hundred feet, and a very few summits attain more than 1000 feet above their base. The country along the water-courses is thickly wooded, as well as the greater part of the country between them; but many of the level tracts are savannahs without trees, or only covered with low bushes, which however display a great luxuriance of vegetation. West of 59° W. long., and near 4° N. lat., a continuous range begins, which runs westward to 64° W. long. nearly under the same parallel, and west of 64° W. long. inclines more to the south, so that at its termination near 66° W. long. it reaches nearly to 3° N. lat. This range is called Sierra Pacaraima. In its eastern part it rises from 1500 to 2000 feet above its base, and from 3000 to 4000 feet above the sea-level. Farther west it rises several thousand feet above the sea, and terminates with the Cerro Maraguaca and the Cerro Duida, whose summits attain an elevation of about 10,000 feet. Along the southern base of the Sierra Pacaraima the Rio Parime runs eastward and the Rio Tokoto westward, and by their junction near 60° W. long. the Rio Branco, an affluent of the Amazonas, is formed.

The source of the Orinoco has never been visited by Europeans, nor has any information respecting it been obtained from the natives, who are an aboriginal race known as the Guaiacas, and who have hitherto prevented all access to foreigners. It is supposed that this river rises near 64° W. long., and between 3° and 4° N. lat. Humboldt advanced up the stream as far as the mission of Esmeraldas, and he says that some monks had penetrated several miles farther to the confluence of the river Chiguire, where the Orinoco is so narrow that the natives have made a bridge over it of creepers at the foot of a cataract. Schomburgk confirms this account.

At this point the river runs in a general western direction, and several miles farther down it divides into two arms, of which that which flows to the south-west is called Cassiquari, and after a rapid course of nearly 100 miles joins the Guainia, or Rio Negro, thus forming a natural water-communication between the Orinoco and the Amazonas, into which latter river the Guainia falls. [BRAZIL.] The Orinoco continues a wide river, running in a western direction along the southern base of the Parime Mountains until it approaches 68°

W. long., when it is joined by the Atabapo from the south and by the Guaviare from the west. From the confluence of the last-mentioned river its course lies to the north, along the western base of the Parime Mountains, and in this part its navigability is interrupted by the Raudales of Maypures and Atures, between 5° and 5° 40' N. lat. The Raudales are a peculiar kind of cataract. The bed of the Orinoco at Maypures and Atures, which is nearly 8500 feet wide, is divided into numerous narrow channels by rocks and rocky islands, between which the water runs with great rapidity, and forms a succession of small cascades. The highest of these cascades does not exceed 9 feet, and the river descends at Maypures in about 6 miles only about 30 feet. But the velocity with which the confined body of water runs in the narrow channels renders it impossible to ascend the raudale. The Raudale of Atures is only half a mile long, and of a similar description. Below these raudales the river continues to flow between low but rocky banks. Opposite the mouth of the river Meta, which joins it from the west, is a powerful whirlpool round an isolated rock, called the Stone of Patience, from the circumstance of its generally taking two days to pass it at low water.

Some distance farther down the whole bed of the river is narrowed by rocks which advance into it from both sides, and the stream flows rapidly through the Narrow of Baraguan, which is 1393 yards wide. From the junction of the Apure the course of the Orinoco lies eastward to the point where it empties itself into the Atlantic Ocean. In this part of its course the navigation for boats is rendered dangerous by the floating rafts, which consist of forest-trees torn from their natural seat by the inundations of the river, and covered with aquatic plants; but vessels of 300 tons can ascend as high as the mouth of the Apure. Near the town of Angostura the river again runs between rocks for a short distance, but though in one place it is not more than 710 yards wide, this narrow (Angostura) may be passed without danger. Below Angostura vessels of considerable burden ascend the river with the trade-wind, which blows constantly from November to May; but the numerous sand-banks are dangerous when the water is low, especially after the month of January.

Several islands occur in the Orinoco below Angostura. They are generally of moderate size, partly low and partly rocky. About 130 miles from its mouth the delta of the Orinoco begins. The river sends off to the north a branch which soon divides into a great number of other branches, all known by the general name of Bocas Chicas (small mouths). They are all narrow when compared with the principal branch of the river, called Boca de Navios, but most of them are deep enough to admit vessels of considerable size. Of late these branches have been much frequented by smugglers, but they can only be navigated under the guidance of the Indians who inhabit the islands of the delta, and who are well acquainted with the numerous channels which the river has formed in the soft alluvial soil of the delta. The Bocas Chicas empty themselves partly into the Atlantic and partly into the Gulf of Paria, between the continent of South America and the island of Trinidad. Nine of them are rather large rivers: their names, enumerating them from east to west, are—Cano de Lauran, Cano de Nuina, Cano Chico de Mariusas, Cano Grande de Mariusas (navigable), Cano de Macareo (navigable), Cano de Cucuina (narrow, but deep), Cano de Pedernales (unavigable), Cano de Manamo Chico, and Cano de Manamo Grande. The three last mentioned fall into the Gulf of Paria. The Boca de Navios, or principal branch of the Orinoco, runs eastward to the ocean, and is divided for a distance of about 40 miles into two channels by a series of islands which lie nearly in the middle of the stream. These channels are known by the Indian names of Zaupana and Imataca, and their eastern extremity is not quite 30 miles from Cape Barima, which is situated at the mouth of the river. Both are navigable, but that on the south, called the Channel of Imataca, though wider has less water; it is however commonly used by large vessels. Each of these two channels is more than 2 miles wide, and the whole width of the river, including the islands, considerably exceeds 5 miles. From this point farther down the breadth continues to increase, and at the mouth, between Runta Barima on the south and the island of Cangrejos on the north, it is more than 60 miles wide. The navigable channel, which lies in the middle, is crossed by a sand-bar with 17 feet of water, and in breadth varying from 2½ miles to 3 miles or a little more. Within the bar the water deepens on the side of the island of Cangrejos to 4 and 5 fathoms, and the navigable channel is more than 12 miles wide. Though no arms branch off from the Boca de Navios to the south, the low country which extends from the Punta Barima to the mouth of the Essequibo River, and is watered by several small streams, is traversed by narrow natural canals called 'etabbos,' which generally lie parallel to the shores of the Atlantic, and connecting the small streams, constitute an internal water-communication for small boats between the Orinoco and Pomeroun rivers.

The tributaries of the Orinoco are very numerous, and many of them have both a long course and a great volume of water. Those which join it on the left are navigable through nearly the whole of their course, and are rarely impeded by rapids; but the rivers which fall into it on the right, originating on the elevated region of the Parime Mountains, descend from them by numerous rapids and cataracts, so as to be, at least for a great part of their course, entirely unfit for navigation. We shall only mention a few of them.

The Guaviare rises near 3° N. lat., in the declivities of the Paramo de Summa Paz, a portion of the great chain of the Andes, but the upper part of its course is not known. The lower course of the Guaviare does not seem to oppose any obstacles to navigation, but as no European settlements have yet been established on the banks, it is only navigated by the native tribes. It falls into the Orinoco near 4° N. lat., after a course of more than 500 miles.

The Rio Meta, which joins the Orinoco near 6° N. lat., originates with its numerous branches in the Andes east of Bogota, the capital of New Granada, and is said to be navigable for about 100 miles from that town. The most northern of its affluents however, the Rio Casanare, is navigated, as it originates not far from one of the most frequented mountain-passes of the Andes, that of Toxillo, which leads to the valley of the Rio Sogamozzo, north of Bogota. English manufactured goods, sent from Trinidad, are carried up the Orinoco, Meta, and Casanare, and over the mountain-pass to Bogota and the adjacent tracts. The course of the Rio Meta exceeds 500 miles, and that of the Casanare perhaps 300 miles.

The Rio Apure, which joins the Orinoco between 7° and 8° N. lat., enters it by a great number of channels, and brings to it the waters of innumerable large streams, which partly originate on the eastern declivity of the Andes north of 6° N. lat., and partly descend from the southern slope of the maritime mountains of Caracas. This river receives all the waters which descend from a mountain range more than 500 miles in length. The Apure itself rises in the Sierra de Merida, and runs more than 100 miles along its base to the south-west, and afterwards from west to east, collecting in its course all the waters which descend from the Andes. Before it joins the Orinoco, after a course of about 450 miles, it enters an extremely low and level country of considerable extent, which for several months of the year is changed into a temporary lake. Through this alluvial country it has cut a number of channels, by which it discharges its own waters and those brought down by other rivers from the maritime mountains of Caracas. Almost all the rivers descending from the last-mentioned range unite at one place, a little above St. Jayme, and form a large body of water, which, about 30 miles lower down, falls into the Apure, about 50 miles from its mouth. All these rivers are navigable through nearly the whole of their course; they drain the Llanos, a country rich in pasturage but without agriculture. The Apure is navigated up to its junction with the Rio San Domingo, and the latter is then navigated to a small place called Torunos, at some distance south of the town of Varinas.

Among the rivers which join the Orinoco from the right, only the Caroni requires to be mentioned; it drains a long valley in the Parime Mountains, rising east of the source of the Orinoco, and north of the upper branches of the Rio Branco, an affluent of the Guainia, in the Sierra Pacaraima, and running mostly in a northern direction. The current is very swift, and much interrupted by rapids; near its mouth it descends by a cataract 15 feet high. The Caroni runs more than 300 miles.

The whole course of the Orinoco, so far as it is known, is estimated by Humboldt to be nearly 1300 miles. The tides are perceptible as far as Angostura, or nearly 250 miles from its mouth, in the month of April, when the river is lowest. At the confluence of the Caroni, more than 150 miles from the mouth, the water at that time rises 15 inches. During the rainy season the Orinoco inundates the greatest part of the Llanos, or plains which lie to the north of it, and likewise a portion of the plains which extend west of its middle course to the base of the Andes. Immediately after the vernal equinox the rising of the water is perceptible: at first it rises slowly, and sometimes the river sinks again in April. It attains its highest level in July, and remains stationary from the end of July until the 26th of August, when it begins to decrease progressively, but more slowly than it increased. It is lowest in January and February. At Angostura the mean rise does not exceed 24 or 25 feet, but in the upper part of its course it rises several feet higher.

(Humboldt's *Personal Narrative, &c.*; Depon's *Voyage à la Partie Orientale de la Terre Ferme dans l'Amérique Méridionale*; Schomburgk, *London Geographical Journal*, vol. x.)

ORISSA. [HINDUSTAN; CUTTACK.]

ORKNEY ISLANDS, Scotland, a group of islands lying to the north of the north-eastern extremity of Scotland, between 58° 44' and 59° 24' N. lat., 2° 23' and 3° 24' W. long. They are separated from the mainland by the Pentland Frith, which is about 7 miles wide at its eastern entrance between Duncansby Head and the island of South Ronaldshay. The flux and reflux of the water during the run of the tides through this strait is broken by the Pentland Skerries, which lie about 4 miles N.E. from Duncansby Head, and 3 miles S. from South Ronaldshay; and farther westward by the islands of Swona and Stromna. [CAITHNESS-SHIRE.] Strong currents are thus produced in various parts of the frith at the same time, a circumstance which causes so much sea in gales of wind as to render the strait dangerous to deep-laden vessels. There is a lighthouse on the Pentland Skerry.

The Orkneys consist of 67 islands and islets, 27 of which are inhabited; the remainder, called 'holms,' are pasture-grounds. The largest of these islands, called Pomona, or Mainland, extends from south-east to north-west about 18 miles, and divides the group into two portions. The islands between Pomona and the mainland of Great Britain are

called the South Isles, and those north of Pomona the North Isles. Eight of the South Islands and three of the Skerries, and 15 of the North Isles, are permanently inhabited. They contained in 1851 a population of 31,455, namely:—

South Isles.—Swona and Pentland Skerry, 57 inhabitants; South Ronaldshay, 2465; Burra, 559; Flotta and Fara, 441; Hoy, 1565; Gremsay, 236; Pomona, or Mainland, 16,757; Hunda, 5.

North Isles.—Shapinsha, 899 inhabitants; Weir, 62; Eagleshay, or Egilaa, 192; Rousa, 937; Enhallow, 24; Eday and Fara, 1016; Stronsa, Papa Stronsa, and Lingsholm, 1211; Sanda, 2004; North Ronaldshay, 526; Papa Westra, 371; Westra, 2088.

Coast-line, Surface, &c.—Some of the islands have rocky shores presenting abrupt precipices towards the west. In Hoy these precipices rise to the height of 1000 feet. Other islands rise from the shore in low rounded hills covered with heath, and with a considerable depth of peat-mould. Others are low and flat, with sandy shores. There are few trees on any of the islands. In the neighbourhood of the town of Kirkwall, and on Pomona generally, there has of late years been considerable planting. According to a rough estimate, the surface of the islands is 150,000 acres, of which less than one-third is cultivated and used as pasture; the remainder is waste or covered with water. The island of Sanda, which is flat and low, is the most fertile. Wart Hill, on the island of Hoy, has an elevation of 1556 feet, and is considered the highest land in the islands; Wideford Hill, on Pomona, also rises to a considerable elevation. The coasts of Pomona and the South Isles are very irregular in their outline, and contain several secure and spacious harbours. The harbours are not however much used except by fishing-boats. The principal stations for the herring-fishery are St. Margaret's Hope in South Ronaldshay, and Papa Sound in Stronsa. On the island of Hoy there is an excellent and spacious harbour called Long Hope. Stromness and Long Hope are most frequented by shipping. Small lochs are numerous in the islands. The Loch of Stennis in Pomona is by far the most important, being about 14 miles in circumference. The roads are good.

Climate, Soil, and Agriculture.—As the Orkneys lie open to the Atlantic, and are exposed to the west-south-western gales, which are the prevalent winds, the climate is rather wet than cold. Frost rarely lasts many days, and the harbours are open all the year round. The winter is disagreeable on account of the frequent rains and storms. The spring season also is usually wet and stormy. The summer is generally pleasant, the heat moderate, and the weather steady. The early part of the autumn is likewise agreeable, but in November the bad weather commences.

The soil of some of the islands is of inferior quality, but that of others is excellent. Agriculture is limited to the raising of oats and that kind of barley which in Scotland is called bere or big, and to the cultivation of potatoes, turnips, and a few other vegetables. Barley and bere are exported. Of late years improvements have taken place, the opening of a regular steam communication with Aberdeen and Edinburgh having given a stimulus to the rearing of cattle, for which the islands are peculiarly adapted. Cattle are numerous, but small: on several of the larger farms the Angus and short-horned breeds have been introduced with success.

Geology, &c.—The geological character of the islands is very simple; the whole group, with the exception of a small granitic district near Stromness, consisting of rocks belonging to the old red-sandstone formation. The prevailing rock is a species of sandstone flag, much charged with argillaceous matter. It occurs in distinct strata, usually slightly inclined, forming hills of small elevation inland, which however often present magnificent cliffs round the coasts. The colour varies from pale greenish to blackish gray. Occasionally it contains bitumen, and it is the repository of remarkable fossil fishes. Connected with the sandstone flag are beds of common sandstone of a yellowish or tile-red colour. These form the chief part of the mountains of Hoy, the highest point in Orkney, and also several headlands in Pomona and Eday. Dykes of basalt and greenstone traverse these rocks in Hoy and Pomona. The granite tract appears in the form of a chain of moderate hills, occupying a length of six miles, and a breadth of from half a mile to a mile, and ends at Stromness. It is everywhere in immediate contact with a coarse conglomerate, consisting of nodules of quartz and fragments of granite and sandstone imbedded in an arenaceous base.

Divisions, Towns, &c.—The Orkney and Shetland Islands form one county or stewardry, which returns one member to the Imperial Parliament. The Orkneys have a resident sheriff-substitute. The only towns requiring notice are Kirkwall and Stromness. *Kirkwall*, the chief town of the islands, and a royal and parliamentary burgh, is situated on a bay on the north coast of Pomona, in 59° 0' N. lat., 2° 57' W. long. It is governed by 2 bailies and 10 councillors, of whom one is provost. The population of the parliamentary burgh in 1851 was 3451. It unites with Cromarty, Dingwall, Dornoch, Tain, and Wick, in the return of one member to Parliament. The town consists chiefly of a long narrow street; it contains several good houses and shops, and is lighted with gas. Kirkwall is the chief place of trade in the island. On December 31st, 1853, there were registered as belonging to the port—22 vessels under 50 tons, aggregate burden 560 tons; and 21 above 50 tons, aggregate tonnage 1925. During 1853 there entered the port 187 sailing-vessels of 9813 tons, and 51 steam-vessels of 15,942

tons; and there cleared 213 sailing-vessels of 11,171 tons, and 51 steam-vessels of 16,026 tons. The cathedral of St. Magnus at Kirkwall is one of the most remarkable specimens of middle-age architecture in Scotland. The erection of the cathedral appears to have been commenced by Earl Hacon in 1138, but probably only a small portion was completed by him. The nave, northern side, and most of the lower part of the building, is Norman, or transition to the early English style. The upper part is chiefly early English. It is a cruciform structure, 226 feet long and 66 feet wide. The building is used as the parish church. Close to the cathedral are the ruins of the bishop's palace, and of the palace of Earl Patrick Stewart, the last feudal earl of Orkney, who was executed for high treason in the reign of James I. There are in the town a chapel of ease, a Free church, a spacious new chapel for the United Presbyterians, a chapel for Independents, and an Endowed Grammar school of great antiquity. *Stromness*, a burgh of barony and sea-port, situated towards the south-western extremity of Pomona, in 58° 58' N. lat., 9° 18' W. long., has also a good harbour. The population in 1851 was 2055. The town, which is irregularly built, contains Established, Free, and United Presbyterian places of worship; two schools, supported by subscription; a public library; and a museum of natural history. It has considerable trade. The port is subordinate to Kirkwall.

History, Antiquities, &c.—The Orkneys were early taken possession of by the Northmen, and remained subject to the kings of Norway and Denmark till 1468, but had their own earls, who governed them almost as independent sovereigns. The islands were the general rendezvous of the piratical fleets which so often devastated the coasts of England and France. In 1468 they were mortgaged to Scotland for 50,000 florins, the dowry of Queen Margaret of Denmark; the pledge was never redeemed, and from that time the islands have belonged to Scotland.

The inhabitants are partly of Scotch and partly of Norwegian descent. While the islands belonged to Denmark the Norwegian language was exclusively in use, but the Norse has been long extinct. A few relics of the Udal tenure, the universal tenure of land among the free nations of the north, may however still be found. In character, manners, and language, the inhabitants now differ little from the Scotch lowlanders.

Throughout the island are to be found numerous traces of the early and pre-historic races of Europe, the most interesting memorial of whom is perhaps what is called the 'Standing Stones of Stennis.' The dwarf-stone of Hoy is well known. Cromlechs, tumuli, and Pict-houses (as they are called) have been found in various localities. The remains of the more important ecclesiastical and feudal period have been already referred to, in addition to which may be mentioned Noltland Castle in the island of Westra, of which the massive gate-house and fragments of the walls are still standing.

Industry.—Some years ago the inhabitants of the islands derived considerable profit from the preparation of kelp. The manufacture is now almost extinct, and the consequence has been an extension of agriculture, and the rise of the herring- and cod-fisheries into a branch of industry of great importance. Upwards of 700 boats are now employed in the herring-fishery. The cod-fishery is prosecuted in the months of May and June, before the great shoals of herrings appear on the coast, and is also of great importance. The women find some occupation in straw-plaiting. A number of young men leave the country to enter the merchant navy. A few also go every year with the whale-ships to Davis's Straits.

Religious Worship and Education.—Since the commencement of the present century a great improvement has taken place in the character of the instruction given to the inhabitants of the Orkney Islands. The religious movements of the Scottish mainland have extended their influence to the islands, and the three great divisions of Presbyterians are fully represented. The Established Church has 21 congregations, the Free Church 14, and the United Presbyterians have 12; there are also some congregations of Independents. In the united county of Orkney and Shetland in 1851 there were 147 day schools with 6501 scholars, and 180 Sabbath schools with 6527 scholars.

ORLEANAIS, a former province of France, now forms the departments of LOIR-ET-CHER, LOIRET, and portions of those of EUVE-ET-LOIRE, and NIÈVRE. It was divided into Orleanais proper, capital Orléans; Gâtinais, of which Montargis was the chief town; Beauce, capital Chartres; Dunois, chief town Château-Dun; Vendômois and Blaisois, of which the respective capitals were Vendôme and Blois; and Sologne, of which the chief town was Romorantin.

ORLÉANS, a city in France, capital of the department of Loiret, is situated on the right bank of the Loire, 76 miles by railway S. by W. from Paris, 70 N.E. from Tours, in 47° 54' 9" N. lat., 1° 55' 48" E. long., at an elevation of 381 feet above the sea, and had 43,405 inhabitants in the commune at the census of 1851. This town occupies the site of the ancient *Aurelianis*, which according to D'Anville had the earlier name of Genabum, a town plundered and burnt by Julius Cæsar ('Bell. Gall.' vii. 3-11); but some recent antiquaries contend that *Gien* occupies the site of Genabum. It was besieged by Attila in 451, but relieved by the Romans commanded by Aëtius, who defeated Attila under its walls. Orléans subsequently passed into the hands of the Franks, and became the capital of a petty kingdom. The Northmen captured it in 865, and again in 865.

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On the accession of Hugues Capet, who had inherited the duchy of Orléans, the town became one of the most important places under the crown. It was besieged for seven months in 1428 by the English under the Duke of Bedford, but they were obliged to raise the siege with disgrace by Joan of Arc, and never after recovered their superiority. At this time the town gave the title of duke to a branch of the house of Valois, which afterwards came to the throne in the person of Louis XII. The town suffered much during the religious wars of the 16th century.

Orléans stands in a plain gently sloping down to the river: the circuit of the ramparts, which are now converted into a promenade, forms an arc of a circle about three miles in extent. The side of the town along the bank of the Loire is about a mile and a half, and the length of the principal street from the north entrance to the town to the bridge over the Loire is about three-quarters of a mile. Orléans is surrounded by numerous country-houses, and has large suburbs, of which that of Olivet is on the south side of the river. Some parts of the town are well laid out, with wide and clean streets and well-built houses. The line of street from the Paris road to the bridge is on the whole the finest, especially that part which lies between the bridge and the Place du Martroy, in which is erected a statue of Jeanne d'Arc. But in the older parts of the town the streets are ill laid out and ill paved; and the houses are built generally of wood. The bridge over the Loire is 1089 feet long and consists of 9 arches, of which the central one has 108 feet span. There is a handsome quay near the bridge; and between the bridge and the suburb of Olivet is a public walk. This suburb abounds with country-houses and with nursery-grounds.

The gothic cathedral of Sainte-Croix is one of the finest religious edifices in France. The present structure was commenced by Henri IV., and has been only lately finished. The architecture has excited much admiration, especially that of the portal entrance; the two towers of the front are of surpassing elegance and lightness. The church of St.-Agnan, the finest except the cathedral, is a beautiful gothic building, although now without nave or steeple. The church of St.-Pierre-le-Puellier, the oldest in the town, is remarkable only for its antiquity. Other remarkable structures in Orléans are—the church of St.-Euverte, now used as a storehouse, while the tower is turned into a shot-foundry; the chapel of St.-Jacques, now a salt-store; the town-house, which was long converted into a museum and picture-gallery, has been recently repaired; the house of Agnes Sorel in the Rue-du-Taboury; the court-house; and the house of François I. in the Rue-de-Recouvrance. The town has a public library of 26,000 volumes, a theatre, and a botanic garden. A new bronze statue of Jeanne d'Arc is about to be erected in front of the newly-repaired town-hall.

The chief manufactures of Orléans are—hosiery, refined sugar, vinegar, bleached-wax, blankets, and counterpanes. To these articles of manufacture must be added cotton- and woollen-yarn, fine woollen-cloths, flannels, hats, files, rasps, and other tools, glue, leather, tin-ware, and earthen-ware. There are numerous breweries and dye-houses. Trade is carried on in the above articles, and in wine, brandy, corn, flour, wool, hides, iron, salt, hoops, dye-stuffs, saffron, fire-wood, timber, oak-planks, coals, groceries, and spices. Its situation on the Loire, which is navigated by small steamers and communicates with the Seine by means of canals, and on the railway, to which the lines connecting Bourdeaux, Nantes, Lyon, and the south of France with Paris converge—renders Orléans the centre of a very considerable commerce and of a large transit trade.

Orléans gives title to a bishop, whose see is the department of Loiret. It is the seat of a High Court, which has jurisdiction over the departments of Indre-et-Loire, Loiret, and Loir-et-Cher. The University-Academy of Orléans has been recently suppressed by a law passed under the Empire, and the department of Loiret is now included within the limits of the University-Academy of Paris. The town also possesses tribunals of first instance and of commerce, a commercial court, an exchange, a college, a council of prud'hommes, a theological college, and gratuitous schools of design and architecture.

(*Dictionnaire de la France.*)

ORLEANS, NEW. [NEW ORLEANS.]

ORLEANSVILLE. [ALGÉRIE.]

ORLETON. [HEREFORDSHIRE.]

ORMSBY, GREAT. [NORFOLK.]

ORMSKIRK, Lancashire, a market-town and the seat of a Poor-Law Union, in the parish of Ormskirk, is situated in 53° 34' N. lat., 2° 52' W. long., distant 42 miles S. by W. from Lancaster, 219 miles N.W. by N. from London by road, and 212½ miles by the North-Western and East Lancashire railways. The population of the town of Ormskirk in 1851 was 5548. Ormskirk Poor-Law Union contains 21 parishes and townships, with an area of 58,736 acres, and a population in 1851 of 38,316. The town of Ormskirk is lighted with gas. The church is mostly modern, with a few portions of late perpendicular character: it has a large western tower at the end of the nave, and another tower and spire at the west end of the south aisle. There are chapels for Wesleyan Methodists, Independents, and Unitarians. Near the town is a large Roman Catholic chapel. The Free Grammar school, founded in 1614, has an income from endowment of about 1500*l.* a year, and had 27 scholars in 1852. There are also united charity schools, two literary societies, a dispensary, and a savings bank. Hand-loom silk.

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weaving, rope-making, and brewing are the chief occupations. The town-hall was erected in 1779. A market is held on Thursday; fairs are held on Whit-Monday and Tuesday, and on September 10th.

ORMUS, or more properly HORMUZ, an island at the entrance of the Persian Gulf, is about ten miles from the Persian coast, and about twelve miles in circumference. It is a mere barren rock, without vegetation and without soil. Its conical shape and the isolated position of the numerous small hills of which the island consists lead the spectator to attribute its origin to volcanic agency. The rugged hills which line the eastern shores of the island are covered to a considerable distance from their base with an incrustation of salt, which in some places is as transparent as ice. In other places the surface is covered with a thin layer of dusky-red coloured earth, which owes its colour to oxide of iron, with which the whole surface of the island is impregnated. As the island contains no fresh-water springs the inhabitants use the rain-water collected in tanks, which were constructed above 800 years ago. There is excellent anchorage on the north-eastern shore, opposite the town. The fortress is situated about 800 yards from the shore, on a projecting point of land, which is separated from the island by a moat. On the plain which stretches from it to the hills are the ruins of the once famous town of Hormuz. The Imam of Muskat has possession of the island. He derives a revenue from the salt, which is exported in large quantities.

Albuquerque took possession of Hormuz in 1507, and of the town which was then on it, with the view of preventing the Arabs from sending aid to the petty sovereigns on the coast of Malabar, with whom they carried on a lucrative commerce. The Portuguese made Ormuz the deposit of all kinds of Indian goods, and in a short time a populous and rich commercial town rose upon it. The buildings covered a space 3 miles in length along the sea-shore and 2 miles in width. The town contained 4000 houses and 40,000 inhabitants, and its commercial relations extended over all Persia and Mesopotamia to Bokhara and Samarkand in Turkistan. In 1622 Shah Abbas, assisted by the English, took Hormuz from the Portuguese, demolished the town, and transferred its commerce to GOMBRON.

ORNANS. [DOUBS.]

ORNE, a department in the north of France, is bounded N. by the department of Calvados, E. by those of Eure and Eure-et-Loir, S. by those of Sarthe and Mayenne, and W. by that of Manche. It lies between 48° 12' and 48° 58' N. lat., 1° 0' E. and 0° 47' W. long. Its greatest length from east to west is 84 miles; the average width is 28 miles. The area is 2855.6 square miles. The population in 1841 was 442,072; in 1851 it had fallen to 439,884, which gives 186.74 to the square mile, or 12.18 above the average per square mile for the whole of France.

The department is formed out of the old duchy of Alençon, the northern part of Perche, and a portion of the south of Normandie; and it is named from its chief river, the Orne. It is traversed from east to west by a range of wooded hills, which forms part of the watershed between the English Channel and the Loire. The highest points in this chain do not exceed 1868 feet. The larger portion of the department lies to the north of the range, from which numerous lateral chains spring off in a general north or north-western direction, inclosing between them fertile and well-watered valleys. A small portion of the department, drained by the Iton and the Rille [EURE], slopes towards the north-east. The other more important rivers to the north of the principal range are—the Touque, the Dive [CALVADOS], the Aure [EURE], and the Orne, which gives name to the department. The Orne rises near Sées, and runs through the department past Argentan in a north-west direction, till it enters Calvados, where it turns north-by-east, passing Caen; here it becomes navigable and enters the English Channel about ten miles below this town, after a course of about seventy miles. Its principal feeders are the Noireau, the Aize, and the Odon. That portion of the department which belongs to the basin of the Loire is drained by the MAYENNE and the SARTHE; this last-named river rises near Sées, and runs for some way along the southern boundary. There is a great number of ponds in the department and several mineral springs, of which that at *Bagnoles*, 10 miles from Domfront, is famous for the cure of skin-diseases and of rheumatism. The department is crossed by 8 imperial and 14 departmental roads, and by the railway now in course of construction from Le-Mans to Caen, which passes through Alençon, Sées, and Argentan, and is joined at Sées by a branch line from Chartres.

The climate is in general temperate but damp. The spring brings cold east winds, white frosts, and rain; the summer is dry and warm, but terminates with storms in September; in autumn the rains begin to fall about the middle of October, then succeed white frosts till the end of November; in the depth of winter there are continual fogs with much rain and snow. The chief grain crops are wheat, mixed corn, rye, and oats, of which in ordinary years the produce suffices only for about two-thirds of the consumption. No wine is produced; cider is the chief beverage. The number of apple- and pear-trees, which are planted along the roads, round the fields, or in quincunxes, amounts to several millions. The pasture-land of the department is of considerable breadth, and in general of good quality; great numbers of lean cattle, purchased in the neighbouring departments, are fattened for the Paris and Rouen markets; good butter and middling cheese are made. The plain of Alençon is famous for its saddle-horses of

the purest Norman breed; in the rest of the department a large number of cart-horses, also of the Norman breed, are reared. Poultry of all kinds, especially geese, are abundant.

The western side of the department is occupied by primitive rocks; the eastern side by chalk; and the valleys of the Sarthe and Orne by formations that intervene between the chalk and the new red-sandstone. Several iron-mines are worked; marble, granite, porphyry, building-stone, marl, kaolin, porcelain-clay, and quartz-crystals are found; these last, after being carefully cut, get the name of Alençon Diamonds. The number of smelting-furnaces and forges at the several iron-works amounts to 49.

Besides pig- and bar-iron the industrial products include sheet-iron and copper, wire of different kinds, pins and needles, linen, canvass, lace, thread, hair-cloth, cotton and woollen-yarn, glass, paper, beet-root sugar, pottery, and leather. There are several large bleach-works in the department. Other articles of commerce are—corn, clover-seed, cider, flax, thread, linen, wax, honey, horses, fat-cattle, pigs, poultry, goose-feathers, oak staves, timber, and firewood.

The department is divided into four arrondissements, which, with their subdivisions and population, are as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Alençon . . .	6	108	72,298
2. Argentan . . .	11	248	106,854
3. Domfront . . .	8	70	138,657
4. Mortagne . . .	11	171	122,075
Total . . .	36	597	439,884

1. Of the first arrondissement and of the whole department the capital is ALENÇON. *Carrouges*, 16 miles N.W. from Alençon, has smelting furnaces and forges for manufacturing the iron-ore raised from the mines in the neighbourhood; a fine feudal castle, of the 14th century, still inhabited; and 2145 inhabitants. *Sées*, 13 miles N. by E. from Alençon, is a well built episcopal town on the Orne, with one of the finest gothic cathedrals in Lower Normandie, a handsome episcopal palace, a college, two ecclesiastical seminaries, and 4474 inhabitants.

2. In the second arrondissement, the chief town *Argentan*, situated on a hill above the Orne, 22 miles N. from Alençon, is a clean well-built town, surrounded by old ramparts which form a pleasant walk, and afford a fine view of the valley of the Orne. It has tribunals of first instance and of commerce, a college, and 5425 inhabitants in the commune; also linen factories, bleach-works, and tan-yards, besides some trade in corn, hides, cattle, poultry, and cheese. The old castle, now converted into a prison, the churches of St-Germain and St-Martin, are the most remarkable buildings. *Vimoutier*, 17 miles N.E. from Argentan, is the centre of an important linen manufacture, and has large bleach-works, tan-yards, a tribunal of commerce, and 4110 inhabitants.

3. In the third arrondissement the chief town *Domfront*, situated 80 miles W. by N. from Alençon, has a tribunal of first instance, a college, and 2773 inhabitants in the commune. The town, built on a steep rock above the Varennes, a feeder of the Mayenne, is ill-built, with narrow, crooked, and steep streets. The ancient church of Notre-Dame is the only important structure. In the neighbourhood there are iron-forges, glass-works, and paper-mills. *Athis*, 15 miles N. from Domfront, has 4000 inhabitants, who manufacture broadcloth, casimirs, and other woollen stuffs. *La-Ferté-Macé*, E. of Domfront, has manufactures of cotton, tape, twist, combs, tobacco-boxes, brandy, leather, and tiles. The population of the commune is 5197. *Flers*, N. of Domfront on the road to Caen, is the centre of a large linen manufacture, and has 6118 inhabitants in the commune. The old castle of Flers, which was burned during the Chouan war, has been lately restored. *Tinchebrai*, in the north-west of the department near the source of the Noireau, has a commercial court and 3783 inhabitants, who manufacture nails, hardware, ironmongery, cotton and woollen stuffs, paper and leather. Robert duke of Normandy was defeated and taken prisoner in a great battle before Tinchebrai, Sept. 27, 1105, by his brother Henry I. of England.

4. The fourth arrondissement is named from its chief town *Mortagne*, which is situated on the sides and summit of a high hill, 20 miles E. by N. from Alençon, and has a tribunal of first instance, a college, and 5012 inhabitants. Some of the streets are steep; but most of them are wide, and the houses well built. The high-road from Paris to Brest winds round the hill and up to its very summit, where it traverses the *Place-d'Armes*, the principal square of the town. The court-house, the large prison, the markets, and the fountains, which are fed with water raised from a great depth by a steam-engine, are the most note-worthy objects in the town. Here also linen is the staple manufacture; pottery and leather are also manufactured; and there is some trade in corn, hemp, sheep, pigs, horses, and cattle. *Bellême* is a well-built town, situated 11 miles S. from Mortagne, on a hill near the forest of Bellême, and has 3143 inhabitants. It was formerly one of the chief towns of Perche, and had strong fortifications, some of which remain. Calico, cotton yarn, linen, canvass, and paper, are the chief industrial products. *L'Aigle*, prettily situated on the slopes of two hills, 17 miles N. from Mortagne, is a well-built, clean, and

improving town, with a commercial court, a consultative chamber of manufactures, and 5505 inhabitants. The town is traversed by the Rille, and still preserves some remains of its inclosing walls and ditches. The castle, situated in the centre of the town, is a large brick building, more remarkable for the beautiful gardens and the magnificent lime-trees that surround it than for its architecture. The churches of St. Martin, St. Barthélemy, and St. Jean, and the town-hall are among the chief buildings of the town. The largest pin-factory in France is in this town, which has also important manufactures of nails, needles, card-wire, ribands, woollen-yarn, leather, and hardware. In the neighbourhood there are several copper, tin, and iron-foundries. Longni, E. of Mortagne, has tan-yards, iron-smelting furnaces and foundries, and 2946 inhabitants.

The department forms the see of the Bishop of Sées; is included in the jurisdiction of the High Court, and within the limit of the University-Academy of Caen; and belongs to the 2nd Military Division of which Rouen is head-quarters. It returns 3 members to the Legislative Assembly of the French empire.

ORONSA. [ARIZLISHIRE.]

ORONTES, or AZY, RIVER. [SYRIA.]

OROTAVA. [CANARIES.]

ORPIERRE. [ALPES, HAUTES.]

ORSCHA. [MOHILEV.]

ORSETT, Essex, the seat of a Poor-Law Union, in the parish of Orsett, is situated in 51° 30' N. lat., 0° 21' E. long., distant 20 miles S. by W. from Chelmsford, and 22 miles E. from London. The population of the parish of Orsett in 1851 was 1592. The living is a rectory in the archdeaconry of Essex and diocese of Rochester. Orsett Poor-Law Union contains 18 parishes and townships, with an area of 41,177 acres, and a population in 1851 of 10,030. Orsett is quite an agricultural village. The parish church, a commodious building in the transition style from early English to decorated, is handsomely fitted up. The Independents have a chapel. There are National schools, a Diocesan Commercial school, a literary and agricultural society, and a savings bank. Petty sessions are held monthly.

ORSOON, the name of two fortified towns on the Danube, one in the Military Frontier, the other nearly opposite, belonging to Turkey.

ORTHEZ, a town in the French department of Basses-Pyrénées, 25 miles N.W. from Pau, and 37 miles E. from Bayonne, is pleasantly situated on the right bank of the Gave-de-Pau, in 43° 29' 25" N. lat., 0° 48' 25" W. long., at an elevation of 892 feet above the level of the sea, and has a tribunal of first instance, a college, and 6924 inhabitants. There is a suburb on the left bank of the river, which communicates with the town by an ancient gothic bridge. On the only pier of this bridge is a tower. The streets of the town are well laid out, and the houses well built. There are, on a height commanding the town, some ruins of the ancient castle of Moncade, in which Gaston Phoebus, count of Foix, lived and died. This castle was also the prison of Blanche of Navarre who was poisoned by her younger sister after two years of captivity. It was also for a time the residence of the mother of Henri IV., Jeanne de Navarre, who founded a Calvinist college in Orthez, and rendered Calvinism the dominant religion, endowing it with the property of the Catholic Church. The town has manufactures of woollen stuffs, linen-yarn, leather, linseed oil, &c. There are also dyehouses, copper foundries, and saw-mills. The commerce in hides, hams, wool, goose feathers, flax, timber, slates, cattle, and marble is considerable. The French under Marshal Soult were defeated after an obstinate battle, by the allied army, commanded by the Duke of Wellington, near this town, Feb. 27, 1814.

ORTONA. [ABBUSO.]

ORVIE'TO, the chief town of the Delegazione of Orvieto, and the residence of a cardinal bishop, in the Papal States, is built on a steep hill, which rises above the river Paglia, an affluent of the Tiber, about 16 miles N.E. from Bolsena, and has 8000 inhabitants. It is chiefly remarkable for its handsome gothic cathedral, begun about the end of the 13th century, and finished towards the middle of the 14th century. This church was built to commemorate the miracle of the Bleeding Host mentioned in the article BOLSENA, and of which it contains memorials in the magnificent silver Reliquary in the chapel of the Santissimo Corporale. The facade, one of the finest in Italy, is ornamented with sculptures and mosaics. The interior contains a very large collection of the sculptures of the 16th century, and is enriched by many beautiful paintings and other works of art, including the History of Antichrist, the Last Judgment, Hell and Heaven of Luca Signorelli, which were studied, admired, and imitated by Michel Angelo and Raffella. The other remarkable buildings of Orvieto are the town-house and the Jesuits' college, and St. Patrick's well (Pozzo di San Patrizio), excavated in the tufa rock on which the town is built. The country around Orvieto is fertile, and produces a delicate white wine, which is in great repute at Rome. Orvieto is evidently of Etruscan origin; the city *Herbanum*, mentioned by Pliny, is said to have occupied the site, but nothing certain is known of its history. Etruscan remains exist here. The city has given title to a bishop since A.D. 509. It was called *Urbs Vetus* in the time of the Longobards. The province of Orvieto contains 300 square miles, with 26,450 inhabitants in 1850.

ORZINUOVI. [BRESCIA.]

OSACCA. [JAPAN.]

OSIMO. [ANCONA.]

OSNABRÜCK (generally written *Osnabury* in English) is a province of the kingdom of Hanover. It is divided into the following parts:—The principality of Osnabrück, 903½ square miles; the lower county of Lingen, 126½ square miles; the circles of Meppen and Emsbüren, 693 square miles; and the county of Bentheim, 399 square miles. The area of the whole is 2122 square miles, and the population according to the census of December 3rd, 1852, amounted to 261,965, consisting of 145,497 Catholics, 89,227 Lutherans, 26,519 Calvinists, 684 Jews, and 38 undefined Christians. The whole country is a part of the plain of northern Germany, and is generally poor and sandy. The chief produce is live stock, hemp, and flax; and the chief manufactures woollen stockings and linen.

Osnabrück was formerly a bishopric, being the first see that was founded in Saxony by Charlemagne. After the Reformation many of the inhabitants embraced the Lutheran faith, and it was decided by the treaty of Westphalia that it should be governed alternately by a Roman Catholic and a Protestant bishop, the latter to be always a prince of the house of Brunswick-Lüneburg. As the Catholic bishop was generally an old canon and the Protestants always chose a young prince, the country remained for a long time under the electoral house of Brunswick: the last bishop of that house was the late Duke of York. In the year 1802 the country was made over to Hanover as a hereditary temporal principality, in consideration of certain territorial cessions. It was afterwards annexed first to the kingdom of Westphalia and then to the French empire, and was recovered by its ancient sovereign on the fall of Napoleon.

Osnabrück, the capital, is situated in 52° 16' N. lat., 8° 1' E. long., in a valley on the river Hase. It is surrounded with a wall and ditch, and has five gates. Like most of the old German towns it is irregularly built. The most remarkable public buildings are—the palace, built in 1665, the cathedral, the Roman Catholic church of St. John, the Lutheran churches of St. Mary and St. Catherine, and the fine town-hall, in which the treaty of Westphalia was concluded at the same time as at Münster. The inhabitants, amounting to about 12,000, have manufactures of coarse woollens, leather, linen, and tobacco. A railway, in course of construction to connect Emden with the Cologne-Minden line, passes through Osnabrück.

OSSA, MOUNT. [THESSALY.]

OSSOLA. [NOVARA.]

OSSORY, Ireland, a bishop's see, in the archiepiscopal province of Dublin, comprises nearly the whole county of Kilkenny, a considerable part of Queen's County, and a small portion of King's County; and contains 69 benefices. The chapter consists of a dean, precentor, chancellor, treasurer, archdeacon, and seven prebendaries. The see, which derives its name from an ancient principality, was founded in the 5th century at Saigair, now Seikyrau, or St. Kyran parish, in King's County. In 1052 it was removed to Aghadoo in Queen's County, and near the close of the 12th century to Irishtown, part of the present city of Kilkenny. By the Church Temporalities Act the see was united to the dioceses of Leighlin and Ferns; and the income of the bishop was fixed at 4200*l.* The cathedral church and bishop's residence are in the city of KILKENNY.

OSTENDE, a fortified town and sea-port of Belgium, in the province of West Flanders, is situated in 51° 14' N. lat., 2° 55' E. long., 12 miles W. from Bruges, 88 miles by railway through Bruges, Ghent, and Malines W. by N. from Brussels, and contains about 15,000 inhabitants. The town is clean and well-built. It contains a citadel, 5 squares, 3 churches, a prison, an hospital, and a town-hall, which is a large and plain but handsome building. The town stands upon a plain, and is entered by four gates. Of late years it has been much frequented during the summer as a watering-place; the sea-bathing is good, and there are excellent baths. The ramparts form an agreeable promenade, but the finest public walk is the Digue, or break-water, built nearly parallel to the seaward rampart of the town. The water at Ostende is bad.

Ostende has great facilities for carrying on trade with the interior by means of canals and railways. The Ostende and Bruges Canal allows vessels of 300 tons to pass through it to Bruges. The Nieuport Canal terminates at Ostende; and by the canal from Bruges to Ghent, which is a continuation of the cutting from Ostende to Bruges, and which communicates with the Schelde, Ostende is connected with the heart of the kingdom of Belgium. The importance of the town has very considerably increased since the introduction of railways, by which it is connected not only with all the important towns of Belgium but also with those of Germany and France. It is also the principal landing place for travellers between England, Belgium, and Germany. There were 22,665 passengers to and from England in 1849; in 1850 the number was 26,322. Passenger and mail steamers ply regularly to Dover. The number of ships (not including steamers) that entered the harbour in 1849 was 464, and the departures numbered 425. The harbour is safe, but the entrance to it is rather intricate. The imports consist chiefly of colonial produce, wool, wine, and British manufactured goods: the exports are, agricultural produce, linens, leather, oak bark, tallow, and salt.

Ostende was a small village in the 9th century, but two centuries later the port was much frequented. Old Ostende was destroyed by the sea in 1384. In 1372 the present Ostende was merely a fishing-

place. It was inclosed with walls by Philip the Good in 1445, and fortified in 1583 by the prince of Orange. The Dutch surrendered the town to the Spaniards after a long siege in 1604. It was taken by the allies in 1706, and in 1715 it was ceded by Holland to the emperor of Germany. Louis XV. took it in 1745, and restored it in 1748. In 1794 it was taken by the French, and remained in their possession until 1814, having been unsuccessfully attacked by the English in 1798.

OSTER. [CZERNIGOF.]

OSTERODE. [GRUBENHAGEN.]

OSTERSUND. [SWEDEN.]

OSTIA, OSTIUM TIBERINUM, the name of the former port of Rome, situated at the southern mouth of the Tiber, is 16 miles from the capital. The ancient town of Ostia, which was situated below the fork of the river, spread in a semicircular form along a bend made by the left or southern branch, on a piece of ground slightly elevated above the surrounding sand and marshes. Ostia was founded by Ancus Martius, according to Strabo. Under the Roman empire it was a large town, but the site is now marked by mere shapeless masses of ruins. Ostia was destroyed by the Saracens in the 5th century, and has since then remained in a ruined state. The present town was founded by Pope Gregory IV., A.D. 830, at the distance of more than a mile from the ancient city. Under Pope Leo IV. it became famous for the defeat of the Saracens. In the 14th century it was occupied by Ladislaus, king of Naples. The fortifications were restored by Pope Martin V. The present castle was built by Cardinal della Rovere. The French, who had seized it, were defeated in 1494 by the Cardinal, afterwards Julius II., whose trophies are still in the cathedral. There are now about 100 inhabitants at Ostia in winter, and about 10 in summer. There is a small cathedral in good taste, a bishop's palace, and a few other habitable buildings. The castle of Ostia consists of massive semicircular towers, united by a curtain and surrounded by a ditch. The episcopal palace has been recently converted into a museum of antiquities by cardinal Pacca. Ostia has given title to a bishop since Apostolic times. The bishop of Ostia is always a cardinal, and he has the privilege of consecrating the Pope after his election. The see has been united to that of Velletri since 1150. Of the remains of ancient Ostia the most interesting are the ruins of an ancient temple and of a theatre; in the arena of the latter many early Christians suffered martyrdom. A great number of fine statues, busts, and sarcophagi were discovered among the ruins of the ancient city by excavations made within the century. The mouth of the Tiber is now three miles distant from the present town. (Gell, *Topography of Rome and its Vicinity*.)

OSTIAKS. [SIBERIA.]

OSTROWA GORELY. [ALEUTIAN ISLANDS.]

OSTUNI. [OTRANTO, TERRA DL.]

OSUNA. [SEVILLA.]

OSWALDTWISTLE. [LANCASHIRE.]

OSWEGO. [CANADA; NEW YORK.]

OSWESTRY, Shropshire, a market-town, municipal borough, and the seat of a Poor-Law Union, in the parish of Oswestry, is situated in 52° 51' N. lat., 3° 3' W. long., distant 18 miles N.W. from Shrewsbury, 171 miles N.W. by W. from London by road, and 182 miles by the North-Western and Shrewsbury and Chester railways. The population in 1851 was 4817. The borough is governed by 6 aldermen and 18 councillors, one of whom is mayor; and returns two members to the Imperial Parliament. The living is a vicarage in the archdeaconry and diocese of St. Asaph. Oswestry Poor-Law Union, which is regulated by the provisions of a local act, contains 14 parishes and townships, with an area of 74,160 acres, and a population in 1851 of 22,775.

Oswestry is traditionally said to have received its name from Oswald, king of the Northumbrians, who was slain here in a battle with Penda, king of the Mercians, whence the place was called Oswald's Tree. In the vicinity of the town is a remarkably fine spring of water, which bears the name of Oswald's Well. The first charter was granted to the town in the reign of Henry II., by William, Earl of Arundel, the lord of the manor. The son of this nobleman having taken part with the barons against King John, the king in 1212 reduced the town to ashes. Edward I., in 1277, ordered it to be surrounded by a wall and ditch. Some portions of this wall are yet standing. The town is lighted with gas, and paved, and is increasing in extent, particularly on the English side. It contains a town-hall; a small jail, erected in 1825; a theatre, and a handsome new market-place. The church, erected in the early part of the 17th century, is a commodious structure, with a tower. The Wesleyan, Primitive, and Welsh Methodists, Baptists, Independents, and Welsh Independents have chapels. The Free Grammar school, which is of very ancient foundation, had 48 scholars in 1853. There are also National, British, and Infant schools; a savings bank, a dispensary, and a house of industry. Markets are held on Wednesday and Saturday, and fairs eight times in the year. In the vicinity are corn-mills, paper-mills, and coal-mines. Malting and brick-making are carried on. The trade of the town is facilitated by the Ellesmere Canal. Races take place annually, in the month of September.

OSYTH, ST. [ESSEX.]

OTAGO. [ZEALAND, NEW.]

OTAHUTE. [SOCIETY ISLANDS.]

OTAVALO. [ECUADOR.]

OTLEY, West Riding of Yorkshire, a market-town, in the parish of Otley, is finely situated on the right bank of the river Wharfe, in 53° 55' N. lat., 1° 42' W. long., distant 29 miles W. by S. from York, 205 miles N.N.W. from London by road. The population of the town of Otley in 1851 was 4522.

The principal establishments in the town are a worsted-mill, a paper-mill, and a flour-mill. The town is lighted with gas. The parish church, erected in 1507, has an open roof, and a painted east window. The north door has a plain Norman arch. There are chapels for Wesleyan, Primitive, and Reform Methodists, Independents, Plymouth Brethren, Mormons, and Roman Catholics; a Grammar school, with a small endowment; National and Infant schools; a mechanics institute; and a savings bank. Quarter sessions and a county court are held. The market on Friday is well supplied with corn, cattle, and agricultural produce; cattle-fairs are held every alternate week from Ladyday to Michaelmas. An agricultural show is held annually in spring.

OTRANTO, TERRA DL, a province of the kingdom of the Two Sicilies, occupies the whole Iapygian, or Messapian peninsula, which forms the south-eastern projection, or heel, of Italy. It is bounded N.W. by the provinces of Bari and Basilicata, and by the sea on every other side. Its greatest length is about 100 miles; its general breadth varies from 25 to about 35 miles, but south of 40° N. lat. the width diminishes rapidly as it approaches Capo di Leuca, the extremity of the peninsula. The area of the province is 2871 square miles; the population was estimated in 1851 at 409,000. The peninsula is traversed in its length by a ridge of low calcareous hills, which are an offset of the Apennines of Basilicata, and terminate in Cape Leuca. There are no rivers properly so called in this peninsula, but the springs and drainings of the hills on both sides form streams, most of which are absorbed by the soil or lose themselves in marshes before they reach the sea. Nearly the whole of the low tract of land along the sea-coast on both sides of the peninsula is unwholesome; but the interior being more elevated and dry is wholesome, and produces oil in abundance, wine, corn, and pasture for cattle. The oil is of the best quality; it is stored in large tanks excavated in the limestone rock at Gallipoli, from which port it is chiefly exported. The best tobacco grown in Italy is produced on the table-land above the Capo di Leuca. Cotton is cultivated with success. Figs, almonds, carobs, oranges, lemons, and other fruits are grown. Mules are bred in great numbers.

The population is distributed among four districts, Lecce, Taranto, Brindisi, and Gallipoli, which are subdivided into 180 communes. Brindisi, Otranto, and Taranto give titles to archbishops. The province is within the jurisdiction of the High Civil Court of Trani; in other respects its administrative and local governments resemble those of the other provinces of the kingdom as already explained under the head of NAPLES, Kingdom of.

The principal towns of the province of Otranto are—BRINDISI; LECCE; TARANTO; and Gallipoli. Gallipoli, a town of considerable commercial importance, is built on an insulated rock connected with the mainland by a stone-bridge of 12 arches, in about 40° 3' N. lat., 17° 57' E. long., on the eastern shore of the Gulf of Taranto. It contains, together with the suburb called Lizza, about 13,000 inhabitants, is a bishop's see, has a good roadstead and a harbour. Gallipoli is the most trading sea-port in this part of the kingdom. It has ample cisterns cut in the rock for containing the oil, which is the chief produce of the country. The oil is purchased from the growers in this and the neighbouring provinces, and stored here for export. Gallipoli exports oil, wool, wine, and other products of neighbouring provinces. Besides the oil-tanks and the bridge, the most noteworthy objects in the town are a fountain decorated with ancient bas-reliefs, and the castle built by Charles of Anjou. The palm grows luxuriantly about Gallipoli. Gallipoli is the ancient *Callipolis*. The tunny fishery employs many persons. Otranto, the ancient *Hydruntum*, once a flourishing town, has been long in a decaying state chiefly in consequence of malaria. The present population hardly exceeds 2000, and the surrounding country is marshy, unhealthy, and uncultivated. Otranto has an old cathedral, a castle, and a harbour which is not very safe. When Otranto was taken by the Turks in 1480 the city had a population of 20,000, of whom 12,000 were massacred; of the rest some were set free on paying a ransom, and the remainder sold as slaves. The Turks were driven out of the city and out of Italy the following year by the Duke of Calabria. In the cathedral (which was occupied by the Turks for a stable) are several antiquities, including some ancient mosaics. From Otranto on a clear day the opposite coast of Epirus and the lofty Acroceraunian Mountains may be seen.

Of the other towns the following may be mentioned:—*Alessano*, near Capo di Leuca, with about 7000 inhabitants. *Copertino*, on the road from Gallipoli to Lecce, population 4000, was famous formerly for its castle, built by Alfonso Castriot, a descendant of Scanderbeg. *Francavilla*, on the road from Taranto to Brindisi, and a short distance N.W. from Oria, has with its dependent villages a population of 13,500. The town was formerly the property of St. Charles Borromeo. The also flourishes in the vicinity. *Manduria*, a few miles S. by E. from Oria, on the road from Taranto to Lecce, is a handsome town of about 6000 inhabitants, many of whom are proprietors of estates

in the neighbourhood. About half a mile from the town is a well in the tertiary rock, which preserves a constant level, however much may be taken out of it. This well, which is locally called the Bath of Venus, is described by Pliny. Manduria retains its ancient name; of its massive ancient walls there are considerable remains. Archidamus, king of Sparta, who came to Italy to aid the Tarentines against the Leucanians, fell in battle near Manduria B.C. 388. *Martano*, midway between Lecce and Otranto, has a population of 3000. This town and the neighbouring village of Calimera are inhabited by descendants of Albanian colonies, who still retain the Greek language. *Mesagne*, a town of 7000 inhabitants, situated in a wide plain to the west of Brindisi, on the road to Taranto. Some think that this town occupies the site of the ancient *Messapia*. The plain between Mesagne and Brindisi is naturally fertile, but it is now entirely uncultivated. The hills east of Mesagne are covered with trees. *Nardo*, a few miles N.E. from Gallipoli, on the road to Lecce, is a well-built town, with a population of about 9000. The country about it is covered with olive plantations; the town itself has manufactures of cotton-stuffs and snuff. Nardo occupies the site of the ancient *Neritum*; it gives title to a bishop in conjunction with Gallipoli. The marshes between Nardo and the sea were formerly remarkable for their phosphorescent exhalations, which gave rise to many superstitious notions among the peasantry. *Oria*, midway between Brindisi and Taranto, is an episcopal city of 6000 inhabitants, built on the site of the ancient *Hyria*, mentioned by Herodotus (vii. 170). It stands on a steep hill, crowned with an old castle and surrounded by lime plantations, vineyards, gardens, and orchards. The city has a considerable trade in agricultural produce, honey, and wax. *Ostuni*, N.W. of Brindisi, and about four miles from the Adriatic, is a flourishing town with about 11,700 inhabitants, several handsome churches and large convents. *San Vito*, south of Ostuni: population, 4700. *Ugento*, an episcopal city of 2000 inhabitants, retains the name of the ancient *Ugentum*, and is situated a few miles N.W. from the Capo di Leuca, the ancient Iapygian promontory. Near Lecce was *Rudias*, the birthplace of the Roman poet Ennius.

Many of the 'masserie,' or farm-houses of the province, are built like forts, and occupy a considerable extent of ground, in which the country people, in the case of a landing being made by the Turkish corsairs, to which they were exposed for some centuries, could take refuge with their cattle and valuable effects. A wall, high and strongly built, forms a quadrangle, against one side of which the dwelling-house is built, containing two or three habitable rooms and sometimes a chapel; the granaries, stables, and outhouses are on the other side, and in the middle of the inclosure is a round or square tower two stories high, standing quite alone.

The peninsula of Otranto was anciently called by various names. Properly the south-eastern part of it was called Iapygia, the northern Messapia, and the southern, about Tarentum, the country of the Salentini. The whole was called *Calabria*, from the inhabitants, the Calabri, who were most probably a branch of the great Ocean stock. The Greeks formed settlements along the coasts in early times.

OTTAJANO. [NAPLES, Province of.]

OTTAWA. [CANADA; ILLINOIS.]

OTTERTON. [DEVONSHIRE.]

OTTERY ST. MARY, Devonshire, a market-town in the parish of Ottery, is pleasantly situated on the left bank of the river Otter, in 50° 45' N. lat., 3° 17' W. long., 11 miles E. by N. from Exeter, and 161 miles W.S.W. from London. In 1851 the population of the town was 2534. The town is under the management of a Local Board of Health. The living is a vicarage in the archdeaconry and diocese of Exeter.

The river Otter is here crossed by an elegant iron-bridge 80 feet in span, erected in the room of a stone-bridge which was washed away in 1849. The church, formerly collegiate, is a large cruciform edifice in the early English style (1336), with an aisle of perpendicular character, and two towers for transepts. It has recently been restored. There is a Lady chapel. In the church are several ancient monuments, and an altar-tomb with the effigy of an armed knight under a rich monumental arch. There are chapels for Wesleyan Methodists, Independents, and Plymouth Brethren; also National, British, and Infant schools. The King's school, founded in 1546, has an endowment of about 70*l.* a year, and had 30 scholars in 1850. Samuel Taylor Coleridge was a native of the town. The chief occupations are the making of Honiton lace and of silk, especially shoe-ribands and handkerchiefs. The market is on Thursday; fairs are held three times a year.

OTTOMAN EMPIRE. [TURKEY.]

OUDE, a kingdom of Hindustan, is bounded S. by Allahabad, N. by Nepal, E. by Bahar, and W. by Delhi. Its greatest length south-south-east to north-north-west is about 200 miles; its greatest breadth east by north to west by south is about 130 miles. The area is estimated at 23,738 square miles. The population is estimated at about 3,000,000.

Oude was formerly a soubah, or subordinate government, of the Mogul's dominions. By various treaties between successive viziers and the East India Company, Oude became one of those dependent states over which the British government have supreme political control. In 1819 the reigning prince renounced his nominal allegiance to the Mogul, and assumed the title of King. Oude forms a portion

of the plain of the Ganges. The general character of the country, and the capital city, Lucknow, are noticed under HINDUSTAN.

OUENARDE. [FLANDERS, EAST.]

OUGHTERARD, Galway, Ireland, a small market-town and the seat of a Poor-Law Union, is situated on both sides of the Feogh rivulet, in 53° 27' N. lat., 9° 18' W. long., 17 miles N.W. by N. from Galway, 161 miles W. from Dublin. The population in 1851 was 982. Oughterard Poor-Law Union comprises 14 electoral divisions, with an area of 172,745 acres, and a population in 1851 of 18,896. The town has a neat appearance, and contains a small parish church, a spacious Roman Catholic chapel, a National school, a court-house, an infantry barrack, a dispensary, Union workhouse, and bridewell. Oughterard is resorted to by invalids for its chalybeate spring. A lead-mine and a quarry of very fine green variegated limestones are in the neighbourhood. The Feogh above the town forms a series of small rapids called the Salmon Leaps, and below the town it passes through a natural tunnel in the limestone rock. Thursday is the market-day. Quarter and petty sessions are held in the town.

OUGEIN. [HINDUSTAN.]

OULAN ADASSI ISLAND. [BLACK SEA.]

OULCHY. [AIGNE.]

OUNDLE, Northamptonshire, a market-town and the seat of a Poor-Law Union, in the parish of Oundle, is situated on the left bank of the river Nen, in 52° 3' N. lat., 0° 28' W. long., distant 28 miles N.E. from Northampton, 78 miles N. by W. from London by road, and 97½ miles by the North-Western and Northampton and Peterborough railways. The population of the town in 1851 was 2689. The living is a vicarage in the archdeaconry of Northampton and diocese of Peterborough. Oundle Poor-Law Union contains 37 parishes and townships, with an area of 69,822 acres, and a population in 1851 of 15,655.

The town is nearly surrounded by the river Nen, which is here crossed by two bridges on opposite sides of the town: the 'North bridge,' over which the road to Peterborough passes, is a fine bridge of several arches; connected with it is a causeway, raised on arches over the adjoining flats. The town-hall and the new railway hotel are the chief buildings. The church, which is large and handsome, consists of a nave with side-aisles, chancel, large transepts, and a tower and spire 200 feet high. The building dates from the 13th to the 16th century. The Wesleyan Methodists, Independents, Baptists, and Roman Catholics have places of worship. Sir W. Laxton's Free Grammar school, founded in 1536, is under the charge of a head master and seven other teachers; it has an income from endowment of 156*l.* 12*s.* a year, and had 111 scholars in 1853. The Grocers' Company are the patrons. Connected with this school and in the lower part of the building is Laxton's hospital for seven poor men and a nurse. Latham's hospital and Blue-Coat school provides almshouses for 18 poor women, and clothing and education for 30 poor boys. There are National, Infant, and British schools, a parochial lending library, a young men's society, and a savings bank. The market-day is Thursday; fairs are held three times a year.

OUREM. [ESTREMADURA, Portuguese.]

OURIQUE. [ALEMTEJO.]

OUSE RIVER. [CAMBRIDGESHIRE; CANADA; YORKSHIRE.]

OUSEBURN, GREAT, West Riding of Yorkshire, a village and the seat of a Gilbert Poor-Law Incorporation, is situated near the head of the river Ouse, in 54° 3' N. lat., 1° 18' W. long., distant 13 miles N.N.W. from York, and 212 miles N.W. from London. The population of the parish of Great Ouseburn in 1851 was 629. The living is a vicarage in the archdeaconry of Richmond and diocese of Ripon. Great Ouseburn Poor-Law Incorporation contains 40 parishes, townships, and chapelries, with an area of 52,008 acres, and a population in 1851 of 12,187. The village contains the parish church, rebuilt, except the tower and part of the chancel, in 1823; an independent chapel; and a parish school. A small obelisk here marks the source of the Ouse.

OVADA. [AOQUIL.]

OVAR. [BEIRA.]

OVER. [CHESHIRE.]

OVERTON. [FLINTSHIRE; HAMPSHIRE.]

OVERYSSEL, a province of the kingdom of Holland, situated between 52° 6' and 53° 52' N. lat., 5° 40' and 7° 5' E. long., is bounded N. by Friesland and Drenthe, E. by Hanover and Westphalia, S. by Guelderland, and W. by Guelderland and the Zuyder-Zee. The area is 1282 square miles; the population at the census of December 31, 1853, amounted to 227,683. It is a low level country, containing a few hills, which the inhabitants call mountains. The soil is wet and marshy, especially in the eastern part, where are the extensive peat moors of Echter and Hardenberg. There are likewise several sandy heaths, but near the Yssel there is some rich land which yields rye, buckwheat, hemp, and fruits. The chief river is the Yssel, which runs along the frontier of Guelderland, and is 500 feet in breadth; it is joined at Deventer by the Schiepsbeek, and falls into the Zuyder-Zee below Kampen; other rivers are the Zwarte-Water, the Vechte, and the Linda. The Willemsvaart Canal unites the Yssel and the Zwarte-Water. The Yssel is navigated by steam-boats from Arnheim to Kampen, and other steamers ply thence across the Zuyder-Zee to Amsterdam. The province contains several small lakes. The climate

is moist, and rather unhealthy. The products are some corn, flax, rape-seed, pulse, potatoes, garden fruits, plums in great abundance, and some wood, especially oak and alder. There are great numbers of wild geese, fish, and bees. The inhabitants derive their chief subsistence by cattle breeding and by digging peat for exportation. The pastures are very rich, especially in the western parts of the province, and great numbers of oxen, sheep, and horses are bred. Considerable profit is derived from the breeding of bees and the fisheries. The manufactures are linen, woollens, cotton, paper, wicker-ware, and mats: there are iron-works at Deventer.

Towns.—*Zwolle*, the capital of the province, is a well-built town on the *Zwarte-Water*, between the *Yssel* and the *Vechta*. It is defended by a rampart, which is planted with avenues of trees, and by very strong outworks. It has three gates; leading to as many suburbs, eight churches, a house of correction, and a Latin school. The inhabitants number about 17,000, and carry on a considerable trade in grain, seeds, cattle, wool, skins, &c. Besides the ordinary handicrafts there are tanyards, sugar and salt refineries; and woollen, cotton, and linen factories. *DEVENTER*. *Almelo*, on the *Aa*, a feeder of the *Regge*, which is a tributary of the *Vechta*, has about 3500 inhabitants, who manufacture woollens and linen. *Kampen*, is a fortified seaport town near the mouth of the *Yssel*, with a population of about 9000, who manufacture woollen-cloth. It is a place of considerable trade; steam-boats ply regularly up the *Yssel* to *Arnhem* on the *Rhine*, and across the *Zuyder-Zee* to *Amsterdam*. *Hasselt*, on the *Zwarte-Water*, N. of *Zwolle*, is a fortified town, with about 2000 inhabitants. Among the other towns are the following:—*Enschede*, 3000 inhabitants; *Ommen*, 2000 inhabitants; *Raalte*, 5000 inhabitants in the commune; and *Steenwyck*, 3500 inhabitants.

OVIEDO, a city of Spain, capital of the ancient province of Asturias and modern province of Oviedo, is situated between the *Nalon* and its affluent the *Nora*, in 43° 22' N. lat., 5° 57' W. long., about 245 miles N.N.W. from *Madrid*, 65 miles N. by W. from *Leon*, and 20 miles S.S.W. from the small port of *Gijon* on the *Bay of Biscay*. It is the see of a bishop, and the residence of the provincial authorities, and contained in 1850 a population of 10,500.

The four principal streets of Oviedo branch from a large and handsome plaza near the centre of the city, and terminate in *alamedas*, or public walks, which extend respectively S. towards *Leon*, N. towards *Gijon*, E. towards *Santander*, and W. towards *Grado*. Several other regular streets connect these four main thoroughfares, and the whole of them are well-paved and kept clean. Many of the houses are old, but they are solidly built, and the architecture is in many parts picturesque. An aqueduct, well-constructed of freestone, and supported on 41 arches, brings an abundant supply of pure water, which is delivered from 11 public fountains. The cathedral is not large, but is a very beautiful specimen of gothic architecture. The main portion is of the 14th century, subsequent to the building of the cathedral of *Leon*, to which in plan and size it bears some resemblance, but the style of architecture is lighter and more pleasing. The western façade is striking, though one of the two towers is unfinished, and is terminated by a spire of later workmanship. The interior has been disfigured by modern alterations, especially the side-chapels. The chapel to the *Virgin*, now called *La Capilla del Re Casto* (*Alonso II.*, who died in 843), contains the remains of this king and of several other of the early princes and kings of Asturias and Oviedo. The churches of *San Tirso* and *San Juan* are ancient; also the two churches of *Santa Maria* and *San Miguel*, on the side of a hill called *La Cuesta de Naranco*, a short distance from the city, are very curious and interesting from their great antiquity and their peculiar style of architecture. The convent of *San Francisco* is now converted into a hospital, and the ex-college of *San Vicente* is used for government-offices. The convent of *San Pelayo* has also been converted to secular uses. The university is a handsome structure, is well endowed, and possesses a large and valuable library. The city also contains an episcopal palace, a theatre, a military hospital, public reading-rooms, and several schools. The manufactures consist of linens, woollens, hats, leather, and fire-arms. A magnificent road extends from *Leon* to *Oviedo*, and is continued to the small port of *Gijon*. The commerce however is very limited.

The origin of Oviedo is generally assigned to *Fruela I.*, grandson of *Pelayo*, who is supposed to have built it in A.D. 759, soon after his accession to the throne of Asturias. According to other authorities, Oviedo was a considerable town before the time of that sovereign, who is said only to have made it the capital of his new conquests from the Moors. During the early part of the middle ages Oviedo was known throughout Christendom as the City of the Bishops ('*Civitas Episcoporum*'), owing to the great number of dignitaries of the church who took refuge there. Oviedo was originally the seat of a bishop, but a council having been held there in 901, the bishopric was by the Pope elevated into an archbishopric. The dignity however was in the course of time transferred to the church of *Santiago*, and Oviedo became a bishopric as before.

(Ford, *Handbook of Spain*; Flores, *España Sagrada*; Madrid, 1754.)

OVIGLIO. [ALEXANDRIA.]

OWHYEE. [SANDWICH ISLANDS.]

OWSTON. [LINCOLNSHIRE.]

OXBOROUGH. [NORFOLK.]

OXFORD, the capital of Oxfordshire, an episcopal city, municipal and parliamentary borough, and university town, is situated near the junction of the *Cherwell* with the *Thames*, in 51° 45' N. lat., 1° 16' W. long., distant 54 miles W.N.W. from *London* by road, and 68 miles by the *Great Western railway*. The population of Oxford in 1851 was 27,973. The city is governed by 10 aldermen and 30 councillors, one of whom is mayor; but a co-ordinate jurisdiction over the night police, the markets, &c. is held by the university authorities. Oxford returns two members to the Imperial Parliament. The livings are in the archdeaconry and diocese of Oxford. For poor-law purposes the city is managed under the provisions of a local Act.

The origin of Oxford is unknown. In the Danish ravages Oxford was repeatedly injured or destroyed. *Edmund Ironside* resided at Oxford, where he died in the year 1016. *Canute*, his successor, held the great council of the nation here several times. On the invasion of England by *William the Conqueror*, the townsmen of Oxford refused to admit the Normans, and in the year 1067 the town was stormed by *William*, and the townsmen burdened with a great increase of taxation. A castle was built by *Robert de Oilli* on the site now partly occupied by the county jail and the house of correction. The foundation of *Oseney Abbey* by *Robert de Oilli*, nephew of the builder of the castle, and the erection of a new hall or palace by *Henry I.*, who was educated in Oxford, contributed to the prosperity of the town. In 1142 the empress *Maud* was besieged in Oxford castle by *Stephen*. After enduring a siege of nearly three months, and when the provisions in the castle had been exhausted, the empress, on the night of the 20th December, escaped with three attendants, and the castle surrendered next morning. The accommodation between *Stephen* and *Henry II.*, by which the civil war between these princes was terminated, took place at a council held at Oxford. In the reign of *Edward III.* and subsequently there occurred quarrels between the students and the citizens, as noticed under OXFORD UNIVERSITY.

The doctrines propagated by *Wickliffe* occasioned, in the reigns of *Richard II.* and *Henry IV.* and *V.*, much discussion at Oxford, giving rise to tumults which, with the civil war of the *Roses*, several years later, much depressed the place, and a dreadful pestilence soon after the accession of *Henry VII.* nearly depopulated the city and the colleges. In *Mary's* reign, *Bishops Ridley* and *Latimer*, and *Archbishop Cranmer* suffered martyrdom at Oxford, in front of *Balliol College*. Near the spot where the martyrs suffered a beautiful memorial cross, in the decorated gothic style, was erected in 1841, from the designs of *Scott* and *Moffatt*; it is called the *Martyrs' Memorial*. The structure is hexagonal, and consists of three stories, resting upon a platform reached by steps. The height is 73 feet. Statues by *Weales* of the three martyrs occupy the second story.

In the civil wars of *Charles I.*, after once or twice changing masters, Oxford became the head-quarters of the king, who collected here those members of parliament who adhered to him. The members of the University supported the royal cause with great zeal; but Oxford was at last obliged to surrender, after the battle of *Naseby*, to the Parliamentarians under *Fairfax*.

In the reign of *Charles II.* two parliaments were held at Oxford, in 1665 and 1681. In the reign of *James II.* the University firmly resisted the illegal proceedings of that prince, who paid Oxford a visit, and sternly rebuked and then expelled the contumacious members, whom however, from motives of fear, he afterwards restored.

The city lies on a point of land nearly insulated. On the E. it is bounded by the *Cherwell*, S. by the main channel of the *Thames*, here popularly called the *Ise*, and W. by the smaller channels of that river. A long bridge or succession of bridges over the arms of the *Thames*, and also over the *Oxford Canal*, is called the *Seven Bridges*. Oxford is irregularly laid out; the two principal lines of street are *Bridge-street*, *Fish-street*, the *Corn-market*, and *St. Giles's-street*, which form one line running from south to north, from the *Abingdon road* to the *Woodstock* and *Birmingham road*; and (*Magdalene*) *Bridge-street* and *High-street*, which run from the *London road* on the east into *Fish-street* and the *Corn-market* on the west, thus forming a junction with the line just described. *High-street*, which bends with a graceful curve, and is 3000 feet long, and in parts 85 feet broad, presents a splendid series of scholastic and ecclesiastical structures alternating with quaint old houses, and with shops of modern style. For picturesque effect this street is unrivalled in the kingdom. The town is nearly surrounded by meadows.

Oxford has much increased of late years; new streets, elegant houses, both in rows and detached, and a number of smaller tenements have been erected. The streets are well-paved and cleansed, and are lighted with gas. The public buildings, which are numerous, are mostly noticed under OXFORD UNIVERSITY.

The cathedral, which is the chapel of *Christ's College*, and noticed under that head, is mostly of Norman date, cruciform, with a tower and spire at the intersection of the nave and transepts. The length of the building is 154 feet; its breadth 102 feet. On the north of the choir are the *Dean's chapel* and the *Lady chapel*; on the south side are the cloisters of perpendicular character, the chapter-house of the early English period, and some other apartments. In the interior are many interesting monuments. The cathedral has been newly roofed, and otherwise repaired and restored. *St. Mary's*, the University

church, is a singularly interesting edifice: the tower and spire, and the chancel are of the decorated style, but the body of the church is perpendicular; the south porch, an incongruous addition with twisted pillars, was erected by Archbishop Laud. The spire is the finest feature of the exterior; it has elaborate pinnacles, with statues in niches, and bold crockets and finials. St. Martin's, or Carfax church, the tower of which, with its illuminated clock, fronts the High-street, is usually regarded as the city church, it being attended by the mayor and corporation. St. Peter's-in-the-East is the oldest church in the city. It has a crypt of early Norman date; the chancel is wholly and the nave partly Norman; the south aisle is of the decorated character. A few years back it was admirably restored. St. Mary Magdalene's church has some beautiful decorated features. When the Martyrs' Memorial, which stands close to it, was built, this church was carefully restored, and a new aisle, called the Martyrs' aisle, added. St. Giles's church is partly of early English date. St. Michael's church is ancient but of different dates. St. Aldate's church is partly of the decorated style. All Saints' church, erected from the designs of Dean Aldrich early in the 18th century, is a curious mixture of classic and gothic forms. At the time of the Census of 1851 there were 82 places of worship in Oxford, of which 19 belonged to the Established church, 4 to Methodists, 3 to Baptists, 2 to Independents, and 1 each to Quakers, Swedenborgians, Roman Catholics, and Jews. There were 81 day schools, of which 23 were public schools with 2322 scholars, and 58 were private schools with 1121 scholars. There are a book-club, a reading-room, a savings bank, a house of industry, a medical dispensary, and a pauper lunatic asylum for the city and borough.

Some remains of Oxford castle and of the ancient town wall, as well as of the works raised for the defence of the town in the civil war of Charles I., are still in existence. The town-hall erected in 1745, and subsequently improved, is a spacious stone building. There is a town-jail or bridewell. The county-hall was erected in 1840 at a cost of 15,000*l.* The other public buildings are the music-hall and the Radcliffe infirmary. The market-days are Wednesday and Saturday. Fairs are held three times in the year. The prosperity of the town depends to a great extent on the University. Considerable traffic is carried on by the river, by the Oxford Canal, which here communicates with it, and by railway. Oxford has railway communications with the south and west of England, and with Wales by the Great Western railway; and with the north and east of England, the midland counties, and Scotland by means of the North-Western railway and connected lines. Quarter-sessions for the city, weekly petty sessions, a mayor's court, and a county court are held.

The see of Oxford was founded by Henry VIII. in 1542; the seat of it was at first fixed in the abbey church of Osney, but removed in 1546 to Christ church in Oxford. The diocese includes the counties of Oxford, Berks, and Bucks, each of which constitutes an arch-deaconry. The chapter consists of the bishop, the three archdeacons, a dean, chancellor, and eight canons. The income of the bishop is 5000*l.*

OXFORD UNIVERSITY. The origin of the University of Oxford is unknown. It has been said by many of our elder writers that it was founded by Alfred the Great. This statement is now generally admitted to be fabulous, but it appears certain that Oxford was a place of study in the reign of Edward the Confessor, if not earlier.

The first places of education in Oxford appear to have been schools for the instruction of youth. These schools were either claustral, that is, appendages to convents and other religious houses; or secular, such as were kept by, or hired and rented of, the inhabitants of Oxford. When many of these secular scholars resided in one house, it got the name of Hall or Hostel (terms which are not yet out of use), and governors or principals were appointed to superintend the disciplines and the affairs of the house. It is difficult to discover any traces of a regular plan of education in Oxford before the foundation of the first college by Walter de Merton. The statutes of this founder for his college are well digested: and they have been adapted with little alteration to succeeding times in other colleges as well as his. In the reign of Stephen, Vacarius, a Lombard by birth, established a school of Roman law at Oxford. In the time of Henry III., we are told by Wood in his 'Annals' (vol. i. p. 206) that the number of students amounted to 30,000; and even when Merton college was founded, they are said to have amounted to 15,000. (Gul. Rishanger, in Chron. suo manuscript. Bibl. Cott., Claud., D. vi., quoted by Wood, ut supra, p. 266.) These numbers are evidently great exaggerations, but there is no doubt that the University was then frequented by a great number of students, and many foreigners resorted to it from Paris and other places.

The earliest charter of privileges to the University of Oxford as a corporate body is of the 28th Hen. III. (Pat. 28 Hen. III. m. 6, 'Libertates concessas Cancellario Universitatis Oxon.'). It was followed by numerous other charters, some of fresh privileges, and others of general confirmation of the privileges formerly granted. The regulation of the assise of bread and beer, and the supervision of weights and measures, were granted to the chancellor of the university by Pat. 32 Edw. III., m. 5.

The same jealousy of the authority of the University which existed in early times among the townsmen of Cambridge, prevailed at Oxford

also. The quarrels between the scholars and the townsmen often broke out into open violence, sometimes accompanied with bloodshed. Matthew Paris makes mention of these riots as early as 1240. On several occasions the scholars quitted the University for a time. At one period they retired to Northampton, at another to Stamford. The most serious riot on record was on the day of St. Scholastica the Virgin, February 10th, 1354-55, when many lives were lost. Grosteste, Bishop of Lincoln, in whose diocese the University then was, placed the townsmen under an interdict, from which he released them in 1357, upon condition that the commonalty of Oxford, every year after, should celebrate an anniversary on St. Scholastica's day, in St. Mary's church, for the souls of the clerks and others killed in the conflict; and that the mayor for the time being, the two bailiffs, and three score of the chiefest burghers, should personally appear on the said day in St. Mary's church at mass, and offer at the great altar a penny each. The mayor and commonalty at the same time gave a bond to pay a hundred marks yearly to the University, as a compensation for the great losses occasioned by the fray; but the bond was not to be enforced so long as the mayor and 62 burghers came yearly and performed the penance. The penance was mitigated in the reign of Elizabeth, and still more subsequently, but the citizens were not wholly absolved from it till 1825, when the University seal was affixed to an instrument which entirely released them from its observance.

This University has been long governed by statutes, or bye-laws, originated by the university authorities, and confirmed by the charters of the kings of England. Those at present in force were drawn up in 1629, and confirmed by a charter from King Charles I., in 1635. The corporation of the University is styled 'the chancellor, masters, and scholars of the University of Oxford.' The highest officer is the chancellor, who is elected by the members of convocation. At first the election was for one, two, or three years; but afterwards for life. The person chosen was a resident member of the University, and always an ecclesiastic until the time of Sir John Mason, in 1553, who was the first lay-chancellor. Since the time of Archbishop Sheldon, in 1667, it has only been conferred upon noblemen of distinction who have been members of the University. The vice-chancellor is elected for four years, by annual nomination. He is always a resident member of the University, and president of one of the colleges. The other principal officers are the seneschallus, or high steward; two proctors, whose duty is to inspect the conduct of the members of the University as to all matters of discipline and good order; four pro-proctors; a deputy steward; a public orator; an assessor; a registrar; librarians of the Bodleian and Radcliffe libraries; keepers and curators of the theatre, museums, galleries, &c.; and six commissioners of the markets.

The constitution of the University differs scarcely at all from that of CAMBRIDGE. There are 19 colleges and five halls at Oxford. As at Cambridge the colleges are corporate bodies; but at Oxford the halls are not incorporated, and consequently whatever estates or other property they possess are held in trust by the University; in all other respects they possess equal privileges. Previous to the Act 17 and 18 Vict. cap. 81, passed August 7th, 1854, every student at the University was obliged to have his name entered on the books of some college or hall, but by the 25th section of that Act the vice-chancellor is empowered to license Members of Convocation to open their residences, if within a mile and a half of Carfax, for the reception of students who shall be matriculated, and admitted to all the privileges of the university, without being entered as members of any college or hall. The Act also provides that after the first day of Michaelmas term 1854 no oath is to be taken or declaration made on matriculating, or on taking the degree of B.A. Each of the colleges and halls furnishes members both for the legislative and executive branch of university government. The whole business of the University is transacted in two distinct assemblies, termed 'Houses,' namely, the House of Congregation, and the House of Convocation, which are constituted much like the regent and non-regent houses at CAMBRIDGE. The chancellor, or vice-chancellor, or, in his absence, one of his four deputies, and the two proctors, or, in their absence, their respective deputies, preside in both houses, where their presence is necessary on all occasions. The business of the congregation includes the reception of statutes framed by the hebdomadal council, and their transmission, if approved, to the house of convocation. The power of convocation extends to all subjects which are connected with the affairs of the University. In the enacting of new or the explaining of old statutes, some restriction is imposed. If the statute to be explained be a royal, or, as it is commonly called, a Caroline statute*, the royal permission is first to be obtained. As in congregation, so also in convocation, the chancellor or vice-chancellor singly, and the two proctors jointly, are officially invested with an absolute negative upon all proceedings except in elections. In both houses, when the negative of the vice-chancellor, or of the proctors, is not interposed (an interposition almost as rare as the royal veto in parliament), every question is decided by the majority. For the better government of the University, there is an hebdomadal council, consisting under the provisions of the Act of 1854, of the chancellor, vice-chancellor, the provosts, six heads of

* The Caroline statutes transmitted by Charles I., and confirmed by convocation, are those which relate to the hebdomadal meeting, to the nomination of what are called collectors in Lent, to the election of proctors, and to the proctoratorial cycle.

colleges or halls, six professors of the university, and six members of convocation of not less than five years' standing. This council deliberates upon matters relating to the privileges and liberties of the University, and inquires into and consults respecting the due observance of statutes and customs. All the letters of the chancellor, in the case of dispensations, which are addressed to convocation, must be sanctioned by the hebdomadal meeting before they are recited in the house. By the Act of 1854 the various colleges and halls are empowered to revise and if deemed requisite to propose alterations in the statutes referring to headships, fellowships, and other college emoluments; in default of the colleges or halls attending to these matters within a specified time, the university commissioners are empowered to do so; any alterations proposed being submitted to the Queen in Council for approval. The University is empowered to propose such alterations as it may deem expedient in reference to any gift or endowment of more than fifty years' standing.

In 1603 King James I., by diploma dated March 12th, granted to the Universities of Oxford and Cambridge the privilege of choosing two representatives in parliament. The members are chosen by the vice-chancellor, doctors, and regent and non-regent masters in convocation.

The number of members on the books in January 1854 was 6259. There are four university terms in a year—Michaelmas term, which begins on the 10th of October, and ends on the 17th of December; Hilary term, which begins on the 14th of January, and ends the day before Palm Sunday; Easter term, which begins on the 10th day after Easter Sunday, and ends on the day before Whit Sunday; and Trinity term, which begins on the Wednesday after Whit Sunday, and ends the Saturday after the Act, which is always on the first Tuesday in July.

Before a candidate can proceed to the examination for Bachelor of Arts, he must have kept 16 terms, unless he be a member of the peerage, or the eldest son of a baronet or knight, and matriculated as such, in which case three years are sufficient. But in point of fact the terms are so reckoned that residence for 12 terms only is necessary for any candidate. The candidates have to make responsions, as it is termed, that is to undergo a previous examination publicly, by the masters of the schools. The final examinations for the degree of B.A. are held twice a year, beginning on the 2nd of November, and on the Friday which follows the second Sunday after Easter. After the candidates have been examined, the names of those who have honourably distinguished themselves are distributed in alphabetical order into four classes, under the two great divisions of 'Literæ Humaniores' and 'Disciplinæ Mathematicæ et Physicæ.' In 1850 an entire remodelling of the examination statutes took place, by which, in 1852, and henceforward, it became necessary for the candidates to undergo three public trials before proceeding to their B.A. degree, and the range of subjects is made to include law and modern history, and is otherwise considerably extended.

The public buildings belonging to the University are the schools with the Bodleian library, the theatre, the Ashmolean museum, the Clarendon, Radcliffe's library, Radcliffe's observatory, the University press, the University galleries, and Taylor institution. The Divinity school, with the room above forming part of the Bodleian, was completed about the year 1480; the rest of the schools, with the remainder of the Bodleian, early in the 17th century. The Bodleian Library was first laid open to the public on November 8th, 1602. It is a very fine apartment, and contains a noble collection of printed books and manuscripts. Attached to it is the picture gallery of the University. The theatre was built by Wren, for Gilbert Sheldon, archbishop of Canterbury and a chancellor of the University, in 1669, at an expense of 15,000*l.* The upper part of this building was used for the university press till 1713. The Ashmolean Museum was built at the charge of the University, in 1683, in order to contain the Tradescant collection of rarities presented to the University by Elias Ashmole. The Clarendon was completed in 1712, partly from the profits arising from the sale of Lord Chancellor Clarendon's 'History of the Rebellion,' the copyright of which was given to the University. The printing for the University was carried on in this building from 1713 to 1830, when it was removed to the newly-erected printing-house. The basement story of the Clarendon contains at present a police-room, and the remainder of the building is appropriated to offices for the despatch of university business, and lecture-rooms for the professor of experimental philosophy and the readers in mineralogy and geology. The munificent founder of Radcliffe's Library was John Radcliffe, M.D., who, by his will, dated 13th September, 1714, appropriated 40,000*l.* for the building and for the purchase of the site; 100*l.* per annum for the purchase of books, and 150*l.* per annum for the librarian. James Gibbs was the architect. The building was completed in 1747. It is appropriated to the reception of books in medicine and natural history. In the area of this library a few antique marbles are deposited, with a selection of casts from the best statues of antiquity. Here also is preserved the Corsi collection of specimens of the marbles employed in the ornamental architecture of both ancient and modern Rome. The Radcliffe Observatory was erected out of the funds bequeathed by Dr. Radcliffe, by the trustees of his will. It comprises a dwelling-house for the observer, apartments for observation and lectures, as well as rooms for an assistant-observer,

and it is amply supplied with astronomical instruments. Owing to the great increase of the printing business the present University Press was commenced in 1826. It is a very extensive quadrangular structure, containing, besides the printing-rooms, houses for the superintendents, an engine-house, strong-room for standing type, &c. The University Galleries and Taylor Institution form a magnificent range of buildings, erected from the designs of Mr. Cockerell, for the purpose of carrying into effect the will of Dr. Randolph, who left a sum of money to the University, "for erecting a building for the reception of the Pomfret statues," &c., and that of Sir R. Taylor, who bequeathed a sum for "establishing a foundation for teaching the modern languages," and erecting a proper edifice for the same. The building contains also the drawings of Michel Angelo and Raffaello, purchased for the University, the models and casts of Chantrey's statues, presented to the University by his widow, and pictures, engravings, and other works of art, presented at various times to the University. The botanic garden, containing about 5 acres, was originally the burial ground of the Jews in Oxford.

The professors of the University are, like those of Cambridge, paid from various sources; some from the university chest, others by the crown, or from estates left for that purpose. They are—the Regius professors of divinity, ecclesiastical history, pastoral theology, civil law, medicine, Hebrew, and Greek; the lady Margaret's professor of divinity; the Savilian professors of geometry and astronomy; Dr. White's professor of moral philosophy; the Camden professor of ancient history; Tomline's prælector in anatomy; a professor of music; two professors of Arabic, one of whom is called the Lord Almoner's reader; a botanical professor; a professor of poetry; a Regius professor of modern history; a professor of Anglo-Saxon; the Vinerian professor of common law; a clinical professor; the Aldrichian professors of anatomy, of the practice of medicine, and of chemistry; a professor of political economy; a professor of Sanscrit; Lee's lecturer in anatomy; Ireland's professor of the exegesis of Holy Scripture; and readers in experimental philosophy, in mineralogy, in geology, and in logic.

The following are the colleges and halls of this University; with the date of foundation and a few other particulars:—

University College, traditionally said to have been founded by Alfred the Great, was restored by William of Durham, who died in 1249. The present foundation consists of a master, 13 fellows, 17 scholars, together with some exhibitioners and a Bible clerk. The buildings occupy a conspicuous position in the High-street, with a frontage of 200 feet. Bishop Horne, Dr. Radcliffe, Sir William Jones, and lords Eldon and Stowell are among the eminent men educated at University College. The number of members on the books in 1854, was 277.

Balliol College was founded by John Balliol (father of John Balliol, king of Scotland) and Devorguilla his wife, between 1263 and 1268. The foundation consists of a master, 12 fellows, and 14 scholars, besides several exhibitioners. John Wickliffe was master of Balliol College; among the more eminent of its list of scholars are Bishop Tunstall, Lord-keeper Coventry, John Evelyn, and Bradley the astronomer. The number of members on the books in 1854 was 353.

Merton College, first founded at Maldon, in Surrey, in 1264, was removed to Oxford before 1274, by Walter de Merton, bishop of Rochester and Lord High Chancellor of England. The foundation consists of warden, 24 fellows, 14 post-masters, 4 scholars, 2 chaplains, and 2 clerks. The buildings consist of three courts; the older parts containing some of the most ancient and curious structures in Oxford. Among the more eminent members of this college are Duns Scotus, Bradwardine, Wickliffe, Bishop Jewel, Anthony à Wood, Dr. William Harvey, and Sir Richard Steele. The number of members on the books in 1854 was 185.

Ezter College was founded in 1314 by Walter de Stapledon, bishop of Exeter and Lord High Treasurer of England. The present foundation consists of a rector and 25 fellows, besides several scholars and exhibitioners. The new front of the college, rebuilt in 1835, which is the principal architectural feature, is 220 feet long. Among the more eminent scholars of Exeter College are Sir William Antony Ashley, Lord Shaftesbury, and John and Charles Wesley. The number of members on the books in 1854 was 487.

Oriel College was founded by Edward VI. in 1526 for a provost and 10 fellows; the present foundation consists of a provost, 18 fellows, and 24 scholars and exhibitioners. Sir Walter Raleigh, Frynne, Chief Justice Holt, Bishop Butler, and Joseph Warton are among the more eminent scholars of this college. The number of members in 1854 was 406.

Queen's College was founded in 1340 by Robert Eglesfield, confessor to Philippa, Queen of Edward III. (from whom it was called Queen's College), for a provost and 12 fellows; the fellows have been since increased to 16, and there are several scholars and exhibitioners. The buildings consist of two courts occupying an area of 300 feet long by 220 feet wide, and are among the most prominent ornaments of the High-street. Among the more eminent men educated at Queen's College are Cardinal Beaufort, Henry V., Bernard Gilpin, bishops Compton, Nicolson, Gibson, and Tanner, Archbishop Potter, Halley, Addison, Tickel, and Collins. The number of members in 1854 was 278.

New College was founded in 1386 by William of Wykeham, bishop

of Winchester and Lord High Chancellor of England, for a warden, 70 fellows and scholars, 10 chaplains, 3 clerks, and 16 choristers. The buildings of New College form the most complete example of a college erected by the ablest architect in the best age of English architecture. Some additions to the original buildings were made by Wren. Archbishops Chichele and Warham; bishops Beckington, Kenn, and Lowth, Nicholas Harpesfield, and Pitts the biographer are among the more eminent of the scholars of New College. The number of members in 1854 was 196.

Lincoln College was founded by Richard Fleming, bishop of Lincoln, in 1427, for a rector and 7 fellows. The present foundation consists of a rector, 12 fellows, 9 scholars, 12 exhibitioners, and a Bible clerk. Bishop Sanderson, and Sir William Davenant are among its eminent men. The number of members in 1854 was 212.

All Souls College was founded in 1437 by Henry Chichele, Archbishop of Canterbury, for a warden, 40 fellows, 2 chaplains, and 4 Bible clerks. The buildings are extensive and magnificent, consisting, besides the original quadrangle, of a second one erected after the designs of Hawksmoor, and admitted to be one of his most successful works. Linacre, Leland, Sir Anthony Shirley, Archbishop Sheldon, bishops Brian Duppa, Jeremy Taylor, and Reginald Heber, Dr. Sydenham, Sir Christopher Wren, Young, the author of *Night Thoughts*, and Sir William Blackstone were members of this college. The number of members in 1854 was 116.

Magdalene College was founded in 1456 by William of Waynesfeete, bishop of Winchester and Lord High Chancellor of England, for a president, 40 fellows, 30 scholars, called demies, a schoolmaster, an usher, 4 chaplains, a steward, and organist, 8 clerks, and 16 choristers. The buildings are among the most splendid in Oxford, and the gardens are without a rival. Cardinals Wolsey and Pole; bishops Warner, Hough, and Horne, Lily the grammarian, Foxe the martyrologist, Hampden, Heylin, Addison, Gibbon, and Chandler are among its more eminent members. The number of members in 1854 was 200.

Brasenose College was founded in 1509. The present foundation consists of a principal and 20 fellows. It numbers among its more eminent members Sir Henry Saville, Sir Henry Spelman, Lord Chancellor Egerton, Burton, the author of the *Anatomy of Melancholy*, Sir William Petty, Elias Ashmole, and Dr. Whitaker. The number of members in 1854 was 431.

Corpus Christi College was founded in 1516 by Richard Fox, bishop of Winchester and Lord Privy Seal, for a president, 20 fellows, 20 scholars, and 2 chaplains; there are besides 4 exhibitioners. The buildings exhibit some excellent examples of the perpendicular style. Among its more eminent scholars are Bishop Jewel, Nicholas Udell, Richard Hooker, Thomas Jackson, and Dr. Arnold. The number of members in 1854 was 145.

Christ Church College was originally founded by Cardinal Wolsey in 1526 for a dean, sub-dean, 100 canons, 10 public readers, 13 chaplains, an organist, 12 clerks, and 13 choristers. Upon the disgrace of the cardinal, Henry VIII. seized upon and suspended the foundation. In 1535 he re-established it upon a small scale, but "this was suppressed in 1545; and in the year following the episcopal see was removed from Oseney to this college, and the church of St. Frideswide was constituted a cathedral, by the name of the Cathedral Church of Christ, in Oxford, for the maintenance of a dean, 8 canons, 8 chaplains, a schoolmaster, an organist, 8 clerks, and 8 choristers; together with 100 students, to which number one more was added in 1664." (*University Calendar*.) The buildings of this college are by far the most extensive, and on the whole the grandest in Oxford. The front of the college is 400 feet long, the great quadrangle is 264 feet by 261 feet. The hall, the most magnificent in Oxford, and one of the finest in the kingdom, is 115 feet long, 40 feet wide, and 50 feet high, and contains a noble collection of portraits of the most famous scholars of Christ's College. In another room is a collection of paintings by the early Italian masters. The college church is, as above stated, the cathedral of Oxford. The grounds, which are very extensive, and stretch for some distance along the Thames, form one of the most popular promenades of both collegians and citizens. This college claims the honour of receiving as its guest the monarch who may visit the University. Among the more eminent of its scholars are Bishops Prideaux and Sanderson, and other divines; of statesmen, Sir Dudley Carleton, Godolphin, Lord Bolingbroke, Wyndham, Lord Mansfield, Canning, Sir Robert Peel; of philosophers, philanthropists, and scholars, John Locke, William Penn, Robert South, and Camden; of poets, Sir Philip Sydney, Ben Jonson, and Otway. The number of members on the books in 1854 was 777.

Trinity College was originally founded by Edward III., but having been suppressed at the Reformation, it was refounded by Sir Thomas Pope in 1554 for a president, 12 fellows, and 12 scholars; there are also 3 scholarships of subsequent endowment. Among its more eminent scholars are Sir James Harrington, author of *Oceana*, John Selden, Archbishop Sheldon, Chillingworth, Derham, author of *Physico-Theology*, the first Earl of Chatham, and Thomas Warton. The number of members on the books in 1854 was 290.

St. John's College was founded in 1555 by Sir Thomas White, alderman of London. It consists of a president, 50 fellows and scholars (all except 13 elected from Merchant Taylors' School), a chaplain, an organist, 6 singing men, 8 choristers, and 2 sextons. The buildings

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are spacious and handsome, and the grounds are celebrated as well on their own account as for the beautiful views obtained from them. Among the more eminent members of the college are archbishops Laud and Juxon, Shirley the dramatist, Bulstrode, Whitelocke, Sherrard the botanist, and Dean Tucker. In 1854 there were 329 members on the books.

Jesus College was founded in 1571 by Dr. Hugh Price. The present foundation consists of a principal, 19 fellows, and 18 scholars. The number of members in 1854 was 167.

Wadham College was founded in 1613 by Nicholas Wadham, and Dorothy his wife, for a warden, 15 fellows, 15 scholars, 2 chaplains, and 2 clerks; there are also several exhibitioners. The buildings, which cost the founder 10,816*l.*, form a very pleasing example of the later perpendicular style, and the grounds are very beautiful. Among the more eminent scholars of Wadham College are bishops Wilkins, Sprat, and Seth Ward, Sir C. Wren, Dr. Kennicot, and Harris, author of *Hermes*. The number of members on the books in 1854 was 305.

Pembroke College was founded in 1624, nominally by James I., but at the cost of Thomas Tesdale and Dr. Wightwick. The present foundation consists of a master, 20 fellows, and 16 scholars. The buildings have been recently restored, enlarged, and improved. Among the more eminent of the scholars are Sir Thomas Browne, Pym, Shensstone, Dr. Samuel Johnson, and Archbishop Newcome. The number of members on the books in 1854 was 218.

Worcester College was founded in 1714 by Sir Thomas Cooke, of Bentley in Worcestershire. The present foundation consists of a provost, 21 fellows, 16 scholars, and 3 exhibitioners. The number of members on the books in 1854 was 351.

St. Mary Hall was originally a dependency on Oriel College. The present foundation consists of a principal, vice-principal, and 3 scholars, but the number will hereafter be increased to six. The number of exhibitioners varies. The number of members on the books in 1854 was 119.

Magdalene Hall became an independent hall in 1602. The site of the present building, originally that of Hertford College, having lapsed to the crown, was obtained in 1816 by the president and fellows of Magdalene College, who erected a handsome building for the use of the principal and other members of Magdalene Hall, who removed there on its completion in 1822. The number of members in 1854 was 265.

New Inn Hall was restored for the purposes of academical instruction by the late principal, Dr. Cramer, afterwards Dean of Carlisle, who erected, at his own expense, a handsome building with suitable offices, for the reception of students. The number of members on the books in 1854 was 45.

St. Alban Hall, originally belonging to the nuns of Littlemore, passed some time after the dissolution to the warden and fellows of Merton College, who established it as an academical hall. The number of members on the books in 1854 was 10.

St. Edmund Hall was, by the Canons of Oseney, devoted to academical purposes in 1269. Some time after the dissolution of religious houses it passed to Queen's College. The number of members on the books in 1854 was 94.

OXFORDSHIRE, a midland county of England, is bounded N.E. by Northamptonshire, E. by Buckinghamshire, S. by Berkshire, W. by Gloucestershire, and N.W. by Warwickshire. It lies between 51° 28' and 52° 10' N. lat., 0° 50' and 1° 44' W. long. The county is very irregular in form. The longest straight line that can be drawn on the surface of the county measures 51 miles, and extends from the Warwickshire border near Upton House to the Thames at Lower Caversham. The area of the county is 739 square miles, or 472,887 statute acres. The population in 1841 was 163,127; in 1851 it was 170,363.

Surface and Geology.—The surface of Oxfordshire is for the most part level or gently undulating. A long range of hills runs from the left bank of the Evenlode, in the west of the county, northward to Chipping Norton, and thence eastward to the neighbourhood of Deddington. A low offset runs north-westward near Great Rollwright, and connects the range with a group of hills that occupies a considerable district on the north-west boundary, and forms part of the watershed between the Severn and the Thames. Broom Hill, one of the highest of these, and the most north-western point in the county, is 836 feet high. The most southern part of the county is occupied by the Chiltern Hills. The north-western slope of these hills is the steeper. Nettlebed Hill, near Nuffield, is 320 feet high; Nuffield Common has an elevation of 757 feet. The Chilterns were formerly occupied by a forest or thicket of beech-trees, which are the trees best adapted to the soil. A large part of the surface is now occupied as arable land or as sheep-walks. The only other hills worth mention in the county are those to the east of Oxford, between the Cherwell and the Thames. Shotover Hill, the highest of these, has an elevation of 599 feet.

The Chiltern Hills are composed of chalk; from their northern base the lower formations of the cretaceous group crop out. The upper green-sand is almost lost in the chalk marl which overlies and in the gault which underlies it: the gault has been sometimes designated Tetsworth clay, from the village of Tetsworth, near Thame. The upper division of the oolitic series, comprehending the Purbeck, Portland, and Kimmeridge beds, crops out from beneath the iron-sand.

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To the east of Oxford the coral rag, one of the formations of the middle division of oolites, forms the elevated platform between the valleys of the Cherwell and the Thame. This formation extends across the Thames into Berkshire. The blue clay, or Oxford clay, which separates the coral rag from the lower oolites, occupies the middle part of the county. On the eastern side of the county the Portland beds of the upper series of oolites rest immediately on the Oxford clay.

The rest of the county, except the valley of the Cherwell above Banbury, is occupied by the lower division of the oolites. The forest marble, another formation of this division, has obtained its name from Whichwood Forest, near Burford, where it is found. It is a limestone susceptible of a tolerable polish, and occasionally used as a coarse marble. The calcareous slate of Stonesfield, near Woodstock, is remarkable for the singular variety of its organic remains, among which are the spoils of birds, land animals, *Amphibia*, sea-shells, and vegetables. The great oolite is quarried near Burford, and these quarries supplied the stone of which St. Paul's cathedral (London) is built. The lower division of the oolites forms the mass of a well-defined range of hills rising from the valley occupied by the Oxford clay. The greater part of the county north of Deddington and Chipping Norton is occupied by ferruginous sands and sandstone, denuded of the great oolite which usually caps them. The district occupied by these oolitic and arenaceous formations contains some of the highest hills in the county.

Hydrography and Communications.—Oxfordshire belongs almost entirely to the basin of the Thames. The Stour, an affluent of the Upper Avon, rises just within the north-western boundary at Drayton; and the Ouse, in the upper part of its course, skirts the north-eastern boundary, and receives the Ousel, one of its smaller tributaries, from that part of the county. The Thames first touches the county a little below Lechlade in Gloucestershire, where the navigation commences, and quits it a little below Henley. The length of its course along this county is about 70 miles. [THAMES.]

The *Windrush* rises in the Cotswold Hills, and after flowing through Gloucestershire enters Oxfordshire, passes Burford and Witney, and flows by several channels into the Thames. The *Evenlode* rises near Moreton-in-the-Marsh in Gloucestershire, and enters Oxfordshire about 9 miles from its source, having previously skirted the border for a short distance: its course through Oxfordshire is generally south-east and south. It falls into the Thames about a mile and a half east of Ensham. The Glyme, one of the tributaries of the Evenlode, after passing Woodstock flows through Blenheim Park, where it expands into a large sheet of water. The *Cherwell*, or *Charwell*, rises near the village of Charwellton, in Northamptonshire, and flows southward into the Thames at Oxford. It receives a number of small tributaries. The *Thame* rises at Stewkley, between Aylesbury and Fenny Stratford in Buckinghamshire, and flows south-west to the town of Thame, where it touches the border of Oxfordshire; for about 5 miles farther it skirts the border, and then entering the county flows through it about 10 miles into the Thames at Dorchester. It is navigable from Thame to Dorchester.

The Oxford Canal, the only one in the county, commences at Longford in Warwickshire, where it unites with the Coventry Canal. It enters Oxfordshire near the northern extremity of the county, some miles north of Banbury, and follows the valley of the Cherwell southward to Oxford, where it terminates in the Thames.

The county is well provided with common roads. The principal coach-roads are the following:—The road which enters the county at Henley-upon-Thames, and runs through Bensington to Oxford, and thence by Witney into Gloucestershire; the road which runs by Tetworth and Shotover to Oxford, and thence by Woodstock to Gloucestershire; the road to Birmingham, which runs through Bicester and Banbury.

The Great Western railway runs for about three miles along the left bank of the Thames in this county, passing through Goring and South Stoke; and from the Didcot station, which is in Berkshire, a line runs northward to Oxford and Banbury, whence it is continued by Leamington and Warwick to Birmingham. The city of Oxford is connected with the London and Birmingham line at Bletchley by the Buckinghamshire railway, which passes through Bicester and Winslow, where it is joined by the Buckingham and Brackley line, which runs north-west through these towns to Banbury. Oxford is also connected with Worcester and Wolverhampton by the Oxford, Worcester, and Wolverhampton railway.

Climate, Soil, Agriculture.—The climate of this county is, on the whole, colder than its situation in the central part of the island would lead one to expect; still the county may be reckoned amongst the most productive agricultural counties of England, and some of the land is of a quality which can scarcely be surpassed anywhere.

The soil may be divided into four distinct classes—the rich red loam, the stonebrash, the chalky and the irregular loams, and sands and gravels, which cannot be classed with any of the foregoing. The red land is partly in old grass, in which state it is very valuable, and partly cultivated as arable land. The stonebrash district, which extends from the borders of Gloucestershire across the country to the north of Oxford and Witney, is of inferior fertility to the red land; but it is easily worked, and, having a porous subsoil, it is not often

injured by rain. The soil is formed of decomposed chalk and sandstone. The chalk district, in the south-east of the county, is generally covered to a certain depth with a light calcareous loam. The low lands in the valleys through which the rivers flow are in many places covered with the finest herbage, and maintain much cattle. A part also is cultivated as arable land, and produces great crops of barley, clover, beans, wheat, and turnips. Besides these distinct soils, there are many of a mixed nature varying in texture and quality without any regularity. Where they rest on a porous subsoil, they are mostly fertile. Some few consist of poor sands or wet clays, which form the extremes, and are very unproductive until they are corrected and improved by marling or draining.

The farmers of Oxfordshire, as well as of most other parts of England, have very generally adopted the modern system of cultivation by rotation of crops, and new or improved implements of husbandry are generally in use. All the usual crops are raised.

The fattening of calves, by allowing them to suck the cows, is preferred by some farmers to making butter. On the butter-farms many pigs are fattened on the skimmed milk. The farm-horses in Oxfordshire are mostly good and active. The cows are of various breeds; Devonshire and Alderneys are common. The improved short-horns are the favourite breed both for the dairy and for calves. Sheep are an important object with the Oxfordshire farmer, and are in general well managed. Large hogs are prized; enormous boars are reared and fattened to be converted into brawn.

Divisions, Towns, &c.—Oxfordshire is divided into 14 hundreds, as follows:—Bampton, west; Banbury, north; Binfield, south-east; Bloxham, north; Bullingdon, central and east; Chadlington, north-west; Dorchester, central; Ewelme, south; Langtree, south; Lewknor, south-east; Piton, south-east; Ploughley, north-east; Thame, east; Wootton, central; and the city and liberties of Oxford.

Oxfordshire contains the city and university of OXFORD, the borough and market-towns of BANBURY and WOODSTOCK, and the market-towns of BAMPTON, BICESTER, BURFORD, CHIPPING NORTON, HENLEY-UPON-THAMES, THAME, WATLINGTON, and WITNEY, all of which will be found under their respective titles, except Watlington, which we notice here.

Watlington, population 1884 in 1851, about 15 miles S.E. from Oxford, has a small market which is held on Saturday, and two yearly fairs. The market-house is a substantial brick building. The church is ancient and of mixed styles. The Wesleyan Methodists and Independents have places of worship, and there are National schools. The making of pillow-lace employs a considerable number of females.

The following are some of the more important villages, with the populations of the respective parishes in 1851:—

Adderbury, population 2310, about 19 miles N. by W. from Oxford, is on the Sorbrook, a feeder of the Cherwell. The church, a good gothic edifice, with a lofty octangular spire, stands on an eminence. The chancel was built by William of Wykeham. The Wesleyan Methodists have a chapel, and there are an Endowed and a National school. *Bensington*, or *Benson*, population 1231, about 12 miles S.S.E. from Oxford, is on the left bank of the Thames, a little above Wallingford, Berkshire. It forms part of the parliamentary borough of Wallingford. Bensington, now a mere village, was a place of some importance in early times. The West Saxons built a castle here for the defence of their frontier; this castle was reduced by the Mercians under Offa in 776. The church, which is ancient, has an east window of decorated character. There are National schools, and an ancient hospital or almshouse. *Bloxham*, population 1577, about 21 miles N.N.W. from Oxford, is situated on a branch of the river Cherwell. The church is a handsome building, with an elegant tower and spire, 195 feet high; the west door has some curious carving in stone representing the Day of Judgment; near the east end of the church is a stone cross. There are chapels for Wesleyan Methodists and Baptists, a National and an Infant school. *Caversham*, population 1752, is pleasantly situated on the left bank of the Thames, about a mile N. from Reading. The church is ancient. There are a chapel for Dissenters and schools supported by subscription. *Chalgrove*, population 616, about 10 miles S.E. from Oxford, has a church of Norman character built of stone. In Chalgrove Field a monument has been erected to the memory of John Hampden, who was mortally wounded in a skirmish with the Royalists there. *Charlbury*, population 3179, about 15 miles N.W. from Oxford, a decayed market-town, has a parish church, partly Norman; chapels for Wesleyan Methodists and Quakers; an Endowed Grammar school; British and Infant schools; and a Girls school. Brewing, malting, and glove-making are carried on. Four yearly fairs are held. *Chinnor*, population 1257, about 18 miles E.S.E. from Oxford, at the foot of the Chiltern Hills, has a handsome church of Norman character, with a clerestory, and at the west end a square-roofed tower. The Independents have a chapel. Lace-making is carried on, and once a fortnight a feast or market for the sale of lace is held. Chairs, of the kind called Windsor chairs, are manufactured. *Cuddesden*, population 1542, about 8 miles E. by S. from Oxford, contains the bishop's palace, and a handsome building recently erected for the Diocesan Training school. Cuddesden Palace has been repaired and enlarged by the present bishop. A chapel in the decorated style has been added. The windows of the chapel are fitted with painted glass. The east window was presented by Prince Albert. *Deddington*, population 2178, is 17 miles N. by W. from Oxford. There are here the earth-

works of an ancient castle. At one time Deddington was a market and corporate town, and sent members to Parliament. Two annual fairs are held. The church is ancient. The Wesleyan Methodists and Independents have chapels, and there are National schools, a paper-mill, a flour-mill, and an extensive patent axletree manufactory. *Dorchester*, population 1061, about 9 miles S.S.E. from Oxford, at the junction of the Thames with the Thames, appears to have been the Dorocina of Richard of Cirencester. Foundations of an ancient town-wall have been dug up. In Dorchester and its neighbourhood many coins and other relics of antiquity have been found. The town was in the 7th century made the seat of a bishopric, which comprehended the two kingdoms of Mercia and Wessex. This bishopric was subsequently diminished by the formation of new sees, but was still the largest in England when the seat of it was removed to Lincoln in 1086. Of the castle not a vestige remains. In 1140 an abbey of Black Canons was founded here; some parts of the building yet remain. The church of Dorchester is a very large and curious edifice; the building is imperfect, and the plan of it irregular; at the west end is a low tower. The door at the western end of the northern aisle is Norman, but the greater part of the church is of later date. On the north side of the chancel is the celebrated Jesse window, of richly-painted glass; the stone frame-work represents the genealogy of the Saviour from Jesse, the father of king David. The Grammar school for six boys was founded in 1656. There are also National schools. A fair is held annually on Easter Tuesday. There is a modern bridge over the Thames at Dorchester built of Headington stone. *Ensham*, population 1941, is 6 miles N.W. from Oxford, near the left bank of the Thames. A richly-endowed abbey existed here at an early period. Besides the parish church there are chapels for Baptists and Primitive Methodists, and National, Free, and Infant schools. Rope-making, paper-making, malting, and brick-making are carried on. *Goring*, population 993, about 20 miles S.S.E. from Oxford, pleasantly situated on the left bank of the Thames, has a very ancient and curious church, a chapel for the Countess of Huntingdon's Connexion, and an Infant school. Numerous Roman coins, vases, and other antiquities have been found here. A station of the Great Western railway is at Goring. *Long Handborough*, population 1153, about 10 miles N.W. from Oxford, consists chiefly of one long street irregularly built. Many of the inhabitants are engaged in making gloves for the glove-makers of Woodstock. There is a chapel for Wesleyan Methodists. *Kiddington*, population 1494, about 5 miles N. from Oxford, has a commodious and handsome cruciform church, with a square tower surmounted with an elegant spire; a chapel for Wesleyan Methodists; a National school; and a Training school for female teachers. Malting is carried on. *Nettlebed*, population 754, about 18 miles S.E. from Oxford, a rural village, situated on a considerable eminence, has a handsome parish church, rebuilt in 1846; chapels for Wesleyan Methodists and Baptists; and a Free school for girls. A fair is held on the Monday previous to October 29th. A considerable amount of beech-timber is grown in the neighbouring woods. *Hook-Norton*, population 1496, is about 24 miles N.W. by N. from Oxford. The church, a commodious edifice, with a fine tower, was repaired a few years back. There are chapels for Wesleyan and Primitive Methodists, Baptists, and Quakers; and National and British schools. Near the village are the remains of an ancient encampment. *Whitchurch*, population 893, about 24 miles S.S.E. from Oxford, on the left bank of the Thames, occupies a picturesque situation on the declivity of a hill. The church is a fine building of Norman and early English dates. There are National schools. *Wroxton*, population 789, about 26 miles N. by W. from Oxford, has a parish church in which are some interesting monuments, particularly one of alabaster in memory of the first Earl of Downe and his lady. The Wesleyan Methodists and Independents have places of worship, and there are National schools. Near the church is Wroxton Abbey, a mansion built in 1618, on the site of an Augustinian priory founded in the 13th century.

Divisions for Ecclesiastical and Legal Purposes.—The county is in the diocese of Oxford, of which it forms an archdeaconry, and in the Oxford circuit. The assizes are held at Oxford, where the county jail and house of correction stands. Quarter sessions are held at Oxford and Banbury; county courts at Banbury, Bicester, Chipping Norton, Henley, Oxford, Thame, Witney, and Woodstock. Before the Reform Act Oxfordshire returned nine members to Parliament, namely, two for the county, two for Oxford city, two for Oxford University, two for the borough of Woodstock, and one for the borough of Banbury. Three members are now returned by the county, the place of election continuing as before at Oxford; two for the city of Oxford; two for the University; and one for Woodstock.

History and Antiquities.—The county was probably divided between the two Celtic nations, the Catyuechiani and the Dobuni; of whom the former held the eastern and the latter the western parts. The Dobuni were in subjection to the Catyuechiani, and upon the approach of the Romans, under the proprietor Aulus Plautius, readily submitted to him. In the Roman division of the island Oxfordshire was included in the province of Flavia Cesariensis.

The most remarkable monument of this or an earlier period is the singular group of Rollrich or Rowldrich stones, about three miles north-west from Chipping Norton. These stones form a ring of about 100 feet diameter, and appear to have been originally 60 in number;

there are now however only 24 that are more than one foot above the level of the soil, nor do any rise more than five feet above the ground, except one, precisely at the northern point, which exceeds seven feet. The ancient British or Roman roads which crossed this county were—Icknield-street; Akeman-street; and three roads of minor importance. At Aloxester are the remains of a square camp, or station, with a ditch and bank, the sides facing the four cardinal points. [BROESER.] Roman urns, coins, and other antiquities have been found at various places. There are traces of a Roman camp near Chadlington, in the neighbourhood of Chipping Norton; and of another near Kiddington, between Chipping Norton and Woodstock, which is in excellent preservation, though little noticed. Tessellated pavements and other Roman remains have been dug up at Steeple Aston, at Stonesfield, and some other places.

After the Romans withdrew from the island Oxfordshire was the scene of many conflicts, first between the Britons and the Saxons, and at a later period between the kings of Wessex and Mercia, of which latter kingdom it formed a part. Upon the division of the kingdom between Edmund Ironside and Canute (1016), Oxfordshire appears to have fallen to Canute; and about this time two great councils or assemblies of Danes and English were held at Oxford. At the time of the Conquest Oxfordshire was included in the earldom of Gurth, the brother of Harold. Of the Saxon and Danish period there are several memorials in the encampments and earth-works, which may be traced in different parts of the county. Of this description are the works at Dyke Hills near Dorchester; at Knollbury Banks near Chadlington, to the south of Chipping Norton; and at Mongewell, on the Thames, below Wallingford. There are several barrows in the county, chiefly on the north-western side.

In the reign of Richard II. Robert de Vere, earl of Oxford, was defeated at Radcot Bridge, near Bampton, by the insurgent nobles (1387). In the War of the Roses a great battle was fought near Banbury (1469), between the northern insurgents, under Robin of Redesdale, and the Yorkist, or royalist army, under Herbert, earl of Pembroke. The earl was defeated and taken, and next day beheaded by the rebels. Of the Anglo-Norman period there are several memorials in the ruins of castles and religious edifices, but none of them of great extent. Of Oxford and Banbury castles there are scarcely any traces: Dorchester Castle has entirely disappeared. Of Bampton Castle there are some remains. [BAMPTON.] Broughton Castle, near Banbury, is surrounded by a broad and deep moat, crossed by a bridge of two arches. An ancient tower forms the entrance to the court, and several other parts of the ancient edifice are standing, to which some additions of a later date have been made. There are castellated or other ancient mansions at Castleton, near Chipping-Norton; the High Lodge, near Woodstock; at Astall, or Asthall, near Witney; in Holton Park (the old mansion), between Stokenchurch and Oxford; and at Stanton Harcourt, near Bampton, where is a kitchen resembling the abbot's kitchen at Glastonbury. There are some fragments of Minster Lovel House, near Witney.

The chief ecclesiastical buildings are the churches of Oxford (the cathedral especially), Burford, Henley, Dorchester, and Witney. Ifley church is principally Norman, with an addition to the chancel of early English character, and some inserted windows of decorated and perpendicular date. The Norman portion is remarkably well executed: it has a groined chancel, three fine doorways, and a handsome west end. It has been recently restored. Of monastic remains there are few. Of Osney abbey, and of Godstow nunnery, near Oxford, the ruins are small: Godstow has some historical interest, from its being the scene of the early life of Rosamond, daughter of Lord Clifford, the 'Fair Rosamond' of Henry II., the place where she retired after Henry's marriage, and of her interment.

In the civil war of Charles I. this county was the scene of several severe contests. The taking of Oxford and its being made the headquarters of the king are noticed under OXFORD. Sir John Byron, a royalist, also took Banbury and Broughton castles, the former with a strong garrison. In 1643 a severe skirmish took place at Caversham Bridge between a body of the parliamentary army and a body of the king's troops, under Prince Rupert and General Ruthven; and about two months after occurred the skirmish of Chalgrove-Field, near Watlington, in which Hampden was mortally wounded. Several other contests took place in the county during the civil war.

Among the many extensive parks and splendid mansions in Oxfordshire are—Nuneham Park, the seat of G. V. Harcourt, Esq., on the left bank of the Thames, at a short distance east of Abingdon; Cudresden Palace, the residence of the bishops of Oxford, which has been rebuilt and enlarged by the present bishop, with the addition of a decorated gothic chapel, lighted through painted windows of great beauty; Ensham Hall, north-east of Witney, the seat of the Earl of Maclesfield; Bletchington Park, the seat of Lord Valentia; Ditohley Park, east of Charlbury, the residence of Lord Dillon; Cornbury Park, between Whichwood Forest and the Evenlode, which contains the mansion of Lord Churchill; Middleton Park, west of Bicester, the seat of the Earl of Jersey; Heythorp Park, east of Chipping Norton, a residence of the Earl of Shrewsbury; Aynho Park, east of Deddington, the seat of — Cartwright, Esq.; Wroxton Abbey, west of Banbury, the mansion of Colonel North; Upton House, the residence of Lord Villiers, situated in the extreme north-west of the county; and

Blenheim, the princely residence of the Duke of Marlborough. Blenheim is the most magnificent seat in the county. The estate was purchased by the nation, and presented to the great Duke of Marlborough. Vanbrugh was the architect of the mansion, which is a somewhat singular though a very picturesque and magnificent pile. In it is a noble collection of paintings, including a large number of works by Rubens. The park is a very extensive and beautiful one.

Statistics: Religious Worship and Education.—According to the Returns of the Census in 1851 it appears that there were then in the county 504 places of worship, of which 266 belonged to the Church of England, 116 to Methodists, 50 to Baptists, 43 to Independents, 13 to Quakers, and 8 to Roman Catholics. The total number of sittings provided was 110,666. The number of day schools was 591, of which 247 were public schools, with 16,674 scholars, and 344 were private schools, with 6924 scholars. Of evening schools for adults there were

18, with 383 pupils. Of Sunday schools there were 814, of which 221 were in connection with the Church of England, 45 with Methodists, 28 with Independents, and 16 with Baptists. The total number of scholars was 19,776. Of literary institutions there were 3 in the county, with 297 members, and 201½ volumes in the libraries belonging to them.

Savings Banks.—In 1853 the county possessed 7 savings banks, at Banbury, Bicester, Burford, Henley-on-Thames, Oxford, Thame, and Woodstock. The total amount owing to depositors on 20th Nov. 1853 was 349,677*l.* 4*s.* 11*d.*

OXUS, RIVER. [BADAKHSHAN; BOKHARA; KHIVA.]

OYONNAX. [AIN.]

OYSTERMOUTH. [GLAMORGANSHIRE.]

OZARK MOUNTAINS. [ARKANSAS; MISSOURI.]

P

PAAMUTO ISLANDS. [ARCHIPELAGO, *Dangerous.*]

PACIFIC OCEAN, THE, extends between America on the east, and Asia and Australia on the west. It received this name from Magalhaens, the first European who traversed it, and who, having experienced bad weather and heavy gales in the Strait of Magalhaens, sailed into the wide expanse of this ocean with a moderate south-east trade-wind, and enjoyed fair weather without interruption. He accordingly called it the Pacific. It is also called the South Sea, because vessels sailing from Europe can only enter it after a long southerly course. The name of South Sea has been limited in later times to the southern portion of the Pacific.

The Pacific is the greatest expanse of water on the globe, of which it covers nearly one-half of the surface. The area is roughly estimated at nearly 100,000,000 of square miles. Behring's Strait, its most northern boundary, lies between East Cape in Asia and Cape Prince of Wales near 66° N. lat., and is less than 40 miles wide. From this point southward the coasts of both continents, which inclose the Pacific, recede rapidly from one another; and at 54° 30' N. lat., between the western point of the peninsula of Alashka and Cape Krotzkoi Noes in Kamtchatka, they are upwards of 1200 miles apart. Near the northern tropic, Cape San Lucas in California is about 8500 miles from the coast of China east of Canton; and this may be considered as nearly the average width of the Pacific between the tropics. Near the southern tropics, Sand Cape in Australia is about 8200 miles from the northern coast of Chili. Towards the southern extremity the Pacific is divided from the Atlantic by a line drawn from Cape Horn to the antarctic circle, and from the Indian Ocean by another line drawn from South-West Cape in Tasmania (Van Diemen's Land) to the same circle.

The Pacific does not, like the Atlantic and Indian oceans, send off branches which penetrate deeply into the adjacent continents; but extensive peninsulas project from the continents which border on it on the Asiatic side, and these, together with some adjacent rows of islands stretching far into the sea, separate considerable portions of it from the main body of the ocean. Only two peninsulas project from the American continent. The peninsula of California divides the Gulf of California, and the peninsula of Alashka with the Aleutian Islands divides the Kamtchatka Sea from the Pacific. The peninsula of Kamtchatka, which projects from the continent of Asia, divides the Kamtchatka Sea from the Sea of Okhotsk, which latter is separated from the open expanse of the Pacific by the Kurile Islands. The western shores of the Sea of Okhotsk are partly formed by the island or peninsula of Tarakai (or Saghalien), which projects at a very acute angle from the continent of Asia; and the islands of Jeso and Nipon and the peninsula of Corea inclose the Japan Sea on the north, east, and south. The Yellow Sea, or Hoang-hai, which is farther south, is separated from the Pacific by a series of islands which extend from the most southern extremity of the island of Kiusiu to the northern extremity of Formosa. This remarkable formation continues still farther south, and the Chinese Sea, which extends from the island of Formosa on the northern tropic to the equator, must be considered as the last link in this chain of sea-basins. On the north the Chinese Sea is separated from the Pacific by a single row of islands, and farther south by a double and triple row. Thus we find that, though the continent of Asia forms the western boundary of the Pacific north of the equator, no part of it is immediately washed by that ocean, and its shores can only be reached by passing through one of these subordinate sea-basins.

This peculiarity of formation in the western parts of the Pacific appears to be mainly, if not exclusively, the effect of volcanic agency. The whole of the long series of peninsulas and islands which border the Pacific on the west, from the peninsula of Kamtchatka to the island of New Zealand, with the exception of Australia, contain active volcanoes or exhibit unequivocal traces of volcanic influence; so that in fact we may say that the western part of the Pacific is traversed by a volcanic chain which extends from the neighbourhood of the northern polar circle nearly to the southern tropic. Another series of volcanoes surrounds the Pacific on the east, but they are situated on

the continent of America. These volcanoes do not constitute a continuous chain; they rather occur in extensive groups at great distances from one another, but each group by itself may be considered as a chain, and the intermediate country shows evident traces of recent volcanic influence. These volcanoes are noticed generally under AMERICA, and more specifically under the countries in which they are situated. The chain of the Aleutian Islands, which contains more than 20 active volcanoes, connects as it were the American volcanoes with those of Asia. The most western volcano, situated on the island of Little Sitkin, is not much more than 600 miles from the series of volcanoes which line the eastern coast of Kamtchatka.

Though the Pacific covers nearly half of the surface of the globe, it receives the drainage of a comparatively small portion of the land. In South America the watershed between the rivers which run into the Pacific and the Atlantic is nowhere more than 100 miles from the shores of the Pacific; while for the greater part it is only about 50 or 60 miles, and in some places much less. Thus the Pacific receives hardly more than one twenty-fifth part of the drainage of South America. In the Mexican isthmus, as far west as the isthmus of Tehuantepec, the watershed continues at a short distance from the Pacific, never receding more than 40 miles, and frequently approaching it within less than 10 miles. West of the Isthmus of Tehuantepec it gradually recedes farther, and at 20° N. lat. it is more than 300 miles from the shores of the Pacific; but farther north it again approaches to a distance varying between 120 and 200 miles. The countries of the Mexican isthmus, which send their drainage to the Pacific, probably constitute not more than one-eighth of that division of America. In North America (north of 32° N. lat.) the watershed lies much more towards the interior of the continent, being between 35° and 45° N. lat., about 750 miles from the Pacific; but farther north it is only about 350 miles from it. The area of the countries of North America whose drainage runs to the Pacific probably does not exceed one-fifth of the whole surface. According to this rough estimate, the Pacific receives not quite one-tenth of the drainage of America.

In Asia the watershed between the rivers which fall into the Arctic Ocean on one side, and into the Pacific on the other, is likewise at no great distance from the latter, north of the mouth of the river Amur; but the basin of this river extends above 1200 miles into the interior of Asia, and it is followed on the south by the basins of the rivers Hoang-ho and Yantse-kiang, which reach somewhat farther inland. The basins of these three rivers, added to those of a few others of inconsiderable extent, may comprehend nearly one-seventh part of the area of Asia, and so much of the drainage of that continent enters the Pacific. In Australia the line which divides the waters which run into the Pacific from those which flow off in another direction is hardly anywhere 100 miles from the great ocean, except in the north-eastern district, where it is about 400 miles: it may be estimated that about one-ninth of the drainage of that continent is poured into that sea.

The eastern, northern, and southern portions of the Pacific Ocean are remarkably free from islands. In an extent of sea far exceeding the Atlantic in area, and bordering on the western shores of America, only a few isolated islands occur, and one considerable group, the Galapagos Islands. Between the coast of South America and Australia, south of 24° S. lat., only the large islands called New Zealand are situated; and in their vicinity there are a few small groups and islets: in the remainder of this vast extent of sea hardly four or five islands, or diminutive groups, are known to exist. But that portion of the sea lying between the two tropics, and extending from the western boundary of the Pacific eastward to 135° W. long., or over more than half the width of the ocean, is abundantly diversified with islands of various dimensions. To the north of the equator the islands and groups, though numerous, are much less so than to the south of the line. The islands of the Pacific are both low and elevated. The low islands are of very small extent, and are based on coral reefs, which encircle a small space of sea. This inclosed space resembles a lagoon, and these islands are often called Lagoon Islands. In close proximity to the coralline islands soundings have been made of great depth, clearly proving them to be the crests of lofty submarine

mountains, with sides of remarkable steepness. Captain Fitzroy found no bottom, within a mile and a half of Keeling Island, with a line of 7200 feet. The volcanic islands are of moderate extent, and generally rise to a great elevation in their centre. Besides the different groups which lie in a line along its western boundary, and which have been already mentioned, several groups of volcanic islands are dispersed in the ocean. The groups of this description north of the equator are the Bonin Sima, Ladrone, and Sandwich Islands. The Galapagos are traversed by the equator. South of the equator are the volcanic groups of the Marquesas, Society, Navigator, and Friendly Islands, and the solitary Easter Island. Some of these volcanic islands are encircled by coral-reefs, as the Society, Navigator, and Friendly Islands; others have not such a circle of reefs, as the Sandwich, Ladrone, Bonin Sima, Galapagos, New Georgian Archipelago, and New Hebrides. The islands which do not belong to the volcanic or lagoon islands are few in number: the largest of them is New Caledonia. A portion of the Pacific has a peculiar character. Flinders calls it the 'Corallian Sea,' and determines its extent by assigning Papua and Luistade as its northern boundary; whilst the north-eastern coast of Australia up to Sandy Point (21° 40' S. lat.) incloses it on the west, and on the south a line drawn from Sandy Point to the Island of Pines near the southern coast of New Caledonia. On the east it seems to terminate at some distance from the New Hebrides. It extends more than 1000 miles in length, and about 600 miles in width. The whole space is covered with innumerable coral-reefs and banks, which have only a few feet of water on them, and are very dangerous to the navigator. This is probably both the largest and the most extraordinary reef in any part of the world. It is divided from the continent of Australia by a space of sea free from islands, in general from 20 to 30 miles, and in some places from 50 to 70 miles wide. This arm of the sea has generally a depth of between 10 and 20 fathoms, but this depth increases towards the south to 40 and even 60 fathoms.

Our knowledge of the winds and currents of the Pacific is far from being so complete as that which we possess of the winds and currents of the Atlantic. Still enough has been ascertained to make us acquainted with the principal facts.

The north-east trade-wind seems to be more regular than in the Atlantic, and its northern boundary does not vary so much. From a careful comparison of the observations of the most judicious navigators made at different seasons, it appears that in summer this wind extends to 27° N. lat., in winter to 26° N. lat., and in spring only to 20° N. lat.; and that from these limits it does not recede more than three degrees. The southern boundary of the north-east trade-wind varies at different seasons between 1° and 11° N. lat.; the mean boundary is between 5° and 6° N. lat.

The south-eastern trade-wind extends in winter to 25½° S. lat., and in summer to 20½° S. lat. But according to numerous statements, it appears that this wind is by no means so regular along its southern border as in the Atlantic, and that it is frequently interrupted by winds from the west and south-west. The northern boundary of this wind also varies considerably at different seasons and under different circumstances: it may however be taken to extend generally in summer to about 2½° N. lat., and in winter to nearly 4° N. lat., while in autumn it reaches beyond 5½° N. lat. In spring these winds recede to one degree south of the equator. Captain B. Hall observes that towards their northern boundary these winds blow from the south, but farther south gradually draw more to the east, and at their southern limit are quite easterly.

In the Pacific the central line of the region of variable winds and calms is about six degrees north of the equator, but the boundaries vary greatly; it may however be said generally to range from 4° to 8° or 9° N. lat. In passing this region the navigator meets with calms interrupted by short squalls, and accompanied by a little rain.

The south-east trade-wind is only met with from 300 to 400 miles from the coasts of South America. In the intervening space the wind always blows in the direction of the Andes from the south, changing during the day a few points to the west, and in the night freshening off from the land. These winds are always very light, and sometimes interrupted by calms. North of Guayaquil the winds always blow from the south-south-east, and are steady. The north-east trade-wind is only met with at a distance of above 700 miles from the land. In the tract of sea lying between their eastern limit and the coast different winds prevail in the different seasons. From June to November, both included, the prevailing wind is from the north-west and west; it is very boisterous, and frequently comes in heavy gales and tornados or furious squalls, which are accompanied by deluges of rain and most dangerous thunderstorms; they are sometimes interrupted by calms. These winds set in earlier at the eastern parts of the isthmus than in the western. At Panama they are expected in March, and at San Blas in the middle of June. During this season the navigation along this coast is very dangerous; there are also few good harbours, and even most of them are abandoned by the inhabitants on account of their unhealthiness. In the opposite season, from December to May included, the prevalent winds between Panama and Cape Blanco de Nicoya are north-west and northerly, and they are pretty steady. From Cape Blanco de Nicoya to some distance east of Acapulco the winds blow from east and north-east, generally with moderate strength, but they are sometimes interrupted by hard gales from the north-east,

which are called Papayagos, and are experienced between Cape Blanco (9° 30' S. lat.) and Cape Santa Catherine. They last for several days, with a clear sky overhead and a dense red haze near the horizon. Other gales of a similar description from the north sometimes occur in this season east of Acapulco, opposite the isthmus of Tehuantepec, whence they are called Tehuantepec gales. West of Acapulco, and from 60 to 100 miles from the land, the winds are variable; but the prevailing winds blow between south-south-east and west-south-west. Nearer the coast, land and sea breezes are met with, blowing from the north-west during the day, and from north-east at night. They are experienced also east of Acapulco to a distance of about 100 miles.

The trade-winds also cease at a considerable distance from the eastern coasts of Asia, and in the tract of sea bordering on these coasts they are replaced by variable winds blowing generally from north-west, south-west, and south-east. Along the coasts of Australia the winds are very variable.

In the region south of the trade-winds the weather and the turn and succession of the winds are remarkably uniform. North-westerly winds prevail, bringing clouds and rain in abundance. South-westerly winds succeed them, and partially clear the sky with their fury; then the wind moderates, and blows from the south-east quarter, where, after a short interval of fine weather, it dies away. Light airs spring up from the north-east, freshening as they wear round to the north, but soon shifting to the usual quarter, north-west; and between that point and the south-west they shift back sometimes for weeks before they take another turn round. It never blows hard from east, rarely with any strength from north-east, but occasional gales may be expected in winter (between June and August) from south-east. Heavy tempests blow from west-north-west to south-west. In the region north of the trade-winds the winds usually blow from the south-west and west, and frequently in gales. When not strong they are accompanied with heavy fogs. In the subordinate basins along the coasts of Asia—the Yellow, Japanese, and Okhotsk seas—easterly winds are rather prevalent.

We turn now to the Currents of the Pacific. Near the southern polar circle a considerable portion of the surface of the ocean is in motion at first towards the north, or north-east, and forms a current of cold water known as the Antarctic Current, or Antarctic Drift Current. North of 60° S. lat. it turns more to the east, and sets towards the coast of South America, where about the parallel of Chiloe it divides into two branches, the southern of which runs off southward, and continues along the southern coasts of Tierra del Fuego to Cape Horn westward, round which it passes with an average rate of a mile an hour, and joins probably the South Atlantic Connecting Current. This is known as the Cape Horn Current. As the current sets rather from the land, it diminishes the dangers which attend the navigation along such a rocky coast. But the current is not wide, and from 20 to 30 miles from the land it is hardly perceptible. The northern branch of the Antarctic Current is known as the Peruvian or Humboldt's Current, and runs northward along the western coast of America as far north as Punta de Pariña, or Cape Blanco (near 5° S. lat.). The current extends about 100 miles from the coast, and is of moderate velocity, generally not exceeding a mile an hour. It is remarkable on account of the cold water which it carries from the south to the north; and it is doubtless to this current that Peru owes its comparatively cool climate. The difference of the temperature of the water within the current and that of the surface of the ocean without the current is considerable. At Callao the former indicates 62° Fahr., whilst in the same latitude, but about 300 miles from the coast, the temperature of the sea is between 77° and 80° Fahr. From the Punta de Pariña the current recedes from the coast, running off in a north-western direction to the islands of Galapagos, enlarging in width, but increasing in velocity to from 2 to 5 miles an hour. Though the current has now reached the equator, its temperature has not increased. Along the southern shores of Albemarle Island, one of the Galapagos, Captain Fitzroy found that the thermometer immersed in the sea only indicated 60°, while on the northern shores it stood at 80°. The low temperature of the water is believed to be the cause of no coral-reefs being found about the Galapagos, the coral insects being unable to sustain so great a degree of cold. From the Galapagos the current runs westward towards the centre of the ocean, and mingles imperceptibly, somewhere about 107° 30' W. long., with the southern portion of the great mass of inter-tropical waters, having a constant westward motion, and known as the Great Equatorial Current.

The Great Equatorial Drift Current flows on both sides of the line, forming a belt 3000 miles wide. But it is divided into a southern and a northern branch, which are separated by a counter current flowing in the opposite direction. The southern branch, or South Equatorial Current, for it would be more correct to view the two so-called branches as two distinct currents, has its southern limit about 26° S. lat. Its general flow is north of west, and it has its greatest velocity towards its western end. On its southern side among the Archipelagos its drift is considerably disturbed, in some places, as among the Feejee group and the Solomon Islands, it being diverted even eastward. A portion of the current, which off the New Hebrides sets off strongly to the north-west, is called Rossel's Drift by German geographers, but it scarcely appears needful to regard it as a distinct current. The

northern part of the South Equatorial Current seems to pass by New Guinea and into the Indian Ocean. The southern part striking against Australia by Moreton Bay, is diverted southward and forms what has been called the Australian Current. It sweeps round the south-eastern coast of Australia at the rate of one to two miles an hour, but at the southern extremity of the coast turns east to the island of New Zealand, which again turns it to the north. It thus appears to rotate between New Zealand and Australia, maintaining a high temperature, while the interspace, in which no distinct current is found, is the favourite 'middle ground' of the whalers of Australia and New Zealand. On the south of Van Diemen's Land is a warm drift current, which appears to be a connecting current between the Pacific and Indian Oceans, corresponding to the Southern connecting current of the Atlantic.

The northern branch of the Equatorial Current, or as it is more correctly called the Northern Equatorial Current, has its northern limit about 24° N. lat. At its eastern extremity it is comparatively weak, but, like the Southern Equatorial Current, strengthens as it proceeds west; its greatest velocity appears to be on its southern border. At its western extremity the Philippine Islands form an impenetrable obstacle, and it turns with considerable strength to the north. In this direction it sweeps along the Japan Islands at the rate of from two to four miles an hour, receiving the name of the Japanese Current. It thence proceeds past the Kurile Islands, where a portion of it seems to make its way into the sea of Okhotsk, and a somewhat larger portion passes into the Sea of Kamtschatka, and with considerable velocity through Behring's Strait; but the main body proceeds eastward to the north-west coast of North America, by which it is turned southward, and passes along the coasts of Washington, Oregon, and California, to about 30° N. lat., where it turns westward and rejoins the North Equatorial Current. The fact of the North Equatorial being a revolving and re-entering current was first established by Mr. Findlay in 1852, though indications of it had been long before made by scientific geographers and navigators of Europe and America. The still central space around which this Northern Equatorial current flows forms the great North Pacific whaling ground, corresponding to the smaller whaling ground between Australia and New Zealand, around which the Australian current revolves. A narrow current, called the Mexican Coast Current, runs southward along the coasts of Mexico and Central America from California, while as it approaches Panamá a counter-current runs northward closer in-shore; these appear to be currents connecting the Japanese and Peruvian currents, but there is a good deal of confusion and obscurity in relation to the currents about the Bay of Panamá. We must not overlook a current which is set down in the maps of Berghaus, &c., outside the Peruvian Current, about 25° N. lat., 80° W. long. It is called Mentor's Counter Drift Current, from the Prussian vessel by whose commander it was observed; but its existence does not appear to have been corroborated by subsequent navigators, and it may have been only a temporary drift caused by transient circumstances.

Another great current whose existence has only recently been established, is the Equatorial Counter Current, a great belt of water moving with considerable velocity in an easterly direction across the entire breadth of the Pacific, and occupying the region of the equatorial calms between 5° and 9° or 10° N. lat. This current traverses from east to west the middle of the broad space appropriated to the Great Equatorial Current, and, as already mentioned, divides it into a northern and a southern current, between which it flows in a direction opposite to both. Its velocity is greatest at its eastern end, towards which it has been found to be from two to three miles an hour.

Of the progress of the tidal-wave of the Pacific, our knowledge is but imperfect. According to Dr. Whewell its general direction is from east to west, but its heights are small. He traces it along the western coast of America from Acapulco southward along South America to Cape Horn; and again northward from Acapulco along the coast of North America, and thence westward by the Aleutian Archipelago to Kamtschatka.

The warmth equator, or line of greatest heat of the water of the Pacific, is by no means coincident with the terrestrial equator, being north of it east of 150° W. long., and south of it west of that meridian. On this line the minimum heat, 81° 7', occurs between the Galapagos and Sandwich Islands; and the maximum, 88° 5' at New Guinea. The current which sets northward through Behring's Strait prevents the ice of the Arctic Polar Sea from passing southward into the Kamtschatka Sea. On the opposite side the floating masses of ice of the Antarctic Polar Sea are frequently met with towards the American coast between 50° and 60° N. lat., 140° and 200° W. long., and even north of 50° N. lat. Farther west, in the sea south of Australia, it is supposed that ice never passes beyond 60° S. lat.

(*Voyages of Cook, Flinders, Basil Hall, Kotzebue, Krusenstern, Borchgrevink, Fitzroy and Darwin, Wilkes, Belcher, Tesson, Du Petit Thouars, Lartigue, &c.; Humboldt, Essai Politique sur la Nouvelle Espagne; Meyen, Reise um die Welt; Krusenstern, Atlas de l'Océan Pacifique; Duperré, Carte du Mouvement des Eaux à la surface de la Mer dans le Grand Océan; Jeffery and Roe, General Chart of Terra Australis; Physical Atlases of Berghaus, Johnston, and Petermann; Findlay, in Journal of Geographical Society, vol. xxiii.; Maury, Investigations of the Winds and Currents of the Sea; and Explanations and*

Sailing Directions to Accompany the Wind and Current Charts issued by the United States Hydrographic Department, 1854; Admiralty Manual; and Sailing Directions for South America, &c.)

PACKINGTON. [LEICESTERSHIRE.]

PACTOLUS. [LYDIA.]

PACY. [EURE.]

PADANG. [SUMATRA.]

PADASJARVIZ KOUSOMA. [FINLAND.]

PADDINGTON. [LONDON.]

PADERBORN. [MINDEN.]

PADIHAM. [LANCASHIRE.]

PA'DOVA, one of the Venetian provinces of Austrian Italy, is bounded N. by Treviso, E. by Venice, S. by Rovigo, and W. by Vicenza and Verona. The province consists almost entirely of a plain crossed by the rivers Brenta, Bacchiglione, Gorzone, and others, and sloping to the eastward towards the lagoons of Venice. The Adige forms the southern boundary of the province, and divides it from the province of Rovigo. The length of the province is about 40 miles from north to south, and its greatest breadth is about 30 miles, but in places it does not exceed 15 miles. The area is 831 square miles. The population is 312,765. The province of Padova is the most fertile and the most densely peopled of the Venetian provinces. It is divided into 12 districts, which contain 103 communes. A number of canals, some for navigation and others for irrigation, intersect the province, which produces wheat, Indian corn, pulse, oil, wine, flax, hemp, chestnuts, potatoes, fruits, and hay. The other products of the country are live stock, silk, wool, wax, and honey. The manufactories are few, and consist chiefly of tanneries, silk spinneries, woollen cloth, and hats.

The principal towns are the following:—PA'DOVA; *Este*, a town of about 8000 inhabitants, has given name to an illustrious sovereign family; *Montagnana*, with about 8000 inhabitants, has some tanneries and hat manufactories; *Abano*, with 3000 inhabitants, is noted for its mineral waters; *Battaglia* is also frequented for its mineral springs. Near Battaglia is the village of Arquà, where Petrarch died.

PA'DOVA (called by the English *Padua*), the chief city of the province of Padova in Austrian Italy, is situated in a fertile plain, in 45° 25' N. lat., 11° 55' E. long., 21 miles by railway W. by S. from Venice. The river Bacchiglione flows by its walls. Padova is fortified with walls, ditches, and bastions, and is above 6 miles in circumference; but it is thinly inhabited, the population not exceeding 50,000. Most of the streets, especially in the old part of the town, are narrow and lined with arcades; it has however some fine squares and handsome gates. The principal buildings are—the cathedral, begun in the 12th century, and having a fine baptistry; the episcopal palace; the churches of Sant' Antonio, Santa Giustina, Santa Croce, the church of the Eremitani, and many others, adorned with fine paintings and sculptures; the university, containing an anatomical theatre, a cabinet of natural history, an observatory, and a library of 70,000 volumes; several colleges; the palace del Capitano; the palace Giustiniani, the Caffè Pedrocchi, one of the most splendid coffee-houses and assembly-rooms in Europe; and the court-house or palace of justice (originally called the Palace of Reason), a vast structure, of which the great hall measures 300 feet long, 100 feet wide, and 100 feet high. The botanical garden and the Prato della Valle, or public promenade, are adorned with numerous statues. Among the antiquities none are prized more highly than the so-called monuments of Antenor (the fabled founder of the city) and Livy the historian.

Patavium, on the site of which Padova stands, was considered in Roman times one of the oldest towns of Italy. At the fall of the Roman empire, it was destroyed by Attila, and the inhabitants removed to the islands in the lagoons, where they founded Venice. Patavium was rebuilt by Narses, ravaged by the Longobards, and restored by Charlemagne. It afterwards governed itself for a long time as a free municipality with its consuls and podestats. In the 13th century Ezzelino da Romano usurped the sovereign power, but after his death the Paduans not only regained their freedom, but extended their authority over several adjacent provinces. Soon after the Carrara became lords of Padova, until 1406, when Venice took it by force and united it to its territory.

PADRIES. [SUMATRA.]

PADSTOW. [CORNWALL.]

PADUA. [PA'DOVA.]

PADUCAH. [KENTUCKY.]

PÆSTUM, POSEIDO'NIA, an ancient town of Lucania, about 4 miles S.E. from the mouth of the Silarus, near the coast of the Gulf of Pæstum, now the Gulf of Salerno. The surrounding country, which is low and marshy, lies between the sea and an offset of Mount Alburnus, which divides it from the valley of the Calore, an affluent of the Silarus. The sulphureous springs which are in the neighbourhood form stagnant pools, and a stream, called Fiume Salso, which flows past the walls of Pæstum, by overflowing the low grounds adds to the unwholesomeness of the atmosphere. The remains of Pæstum are about 25 miles S.S.E. from the town of Salerno; they consist of the town walls, two fine doric temples, another building, and a small amphitheatre.

The origin of Pæstum is involved in obscurity. According to Solinus it was a colony of the Dorians; others say that it was first a

Phœnician settlement, and that it was afterwards colonised by the Dorians; while Strabo and others ascribe its foundation or enlargement to the Greeks of Sybaris, who gave it the name of Poseidonia. Coins have been found at Pæstum, in which the town is called *Phistuma*, and some bear the double epigraph 'Phistalis' and 'Poseidon.' Whoever were the founders, there is reason to believe that Pæstum existed as a town before it was colonised by the Sybarites.

The coins of Poseidonia show by their devices, which consist of anchors, oars, rudders, and other nautical implements, that the inhabitants were a seafaring people. Strabo says that the Lucanians took Poseidonia from the Sybarites, and the Romans afterwards took it from the Lucanians. At the end of the war against Pyrrhus, the Romans (who called it Pæstum, which seems to be the Latinised form of the ancient name) are stated to have sent a colony to Poseidonia. (Livy, 'Epit.,' xiv.) It assisted Rome in the great contest against Hannibal; and is numbered among the eighteen Latin colonies which did not forsake Rome in the time of danger. (Liv. xvii., 10.) It never became eminent however as a Roman colony. In the time of Strabo the city was declining and malaria was gradually creeping over its vineyards, fields, and gardens. The fall of the empire hastened the ruin of the city. Under the Lombards it became a dependency of the duchy of Benevento and subsequently an important town of the principality of Salerno. The Saracens destroyed the city in the 9th century and such of its citizens as escaped, accompanied by their bishop (for Pæstum was one of the first cities of southern Italy to embrace Christianity), fled to the hills, and there founded the town of Capaccio Vecchio. This town is still the residence of the bishop, who retains the title of bishop of Pæstum. The ruins of the deserted city were plundered by Robert Guiscard, who carried away its columns, bas-reliefs, and monuments to construct the cathedral of Salerno.

During the middle ages the remains of Pæstum lay unnoticed, though not unknown, as some people have gratuitously stated, for the temples are conspicuous objects from almost every part of the Gulf of Salerno, and there is nothing between them and the sea to obstruct the view. When Carlo Borbone, having conquered Naples towards the middle of the 18th century, became the resident sovereign, he revived the taste for the arts and antiquities. Count Felice Gazola of Piacenza, an officer in his service, admired the temples and other remains in that solitary region, and took drawings of them. Mazocchi, in 1754, in his work on the 'Heracleian Tables,' inserted a dissertation on Pæstum and its history. Winkelmann, who visited Pæstum in 1768, has made some remarks on the temples in his 'Anmerkungen über die Baukunst der Alten.' In 1767 appeared in London the first English description of Pæstum, 'The Ruins of Pæstum,' fol., with four plates, anonymous, which was followed by Major's work, which had the same title, in 1768. There are many subsequent works on the ruins of Pæstum, the most important of which is Father Antonio Paoli's 'Pæstanae Dissertationes,' Italian and Latin, fol., Rome, 1784, with sixty-three plates, including Gazola's drawings, coins, and a topographical map. The 'Magna Græcia' of Wilkins also contains descriptions and architectural drawings of the temples.

The remains of Pæstum are three temples, all in the Doric style; they agree in their general character with other Greek temples, consisting of a cella surrounded by external colonnades. The larger temple, called the Temple of Neptune, is 195 feet long and 79 feet wide. It is peripteral and hexastyle, there being six columns in front and twelve on each side, and upon these 36 columns rest an architrave and frieze. The cella, which is open to the sky, forms an inner court, with a range of seven doric columns on each side supporting an architrave, on which stands a second range of smaller columns of the same order. The columns of the outer peristyle are 6 feet 10 inches in diameter at the base, 28 feet 11 inches high including the capitals. The upper diameter, below the capital, is only 4 feet 9 inches. The smallest of the three temples, called the Temple of Vesta, and also the Temple of Ceres, is 107 feet long and 47 feet wide. It is also hexastyle peripteral, the peristyle being composed of six columns in front and eleven on each side. It differs in several respects from the larger temple. The second temple, in point of size, is usually called the Basilica. It has a peristyle of fifty columns, nine at each end and sixteen in the flanks, exclusive of the angles. It is the only known structure that has nine columns in each front. It was divided in its breadth by an internal range of columns, three of which remain.

Besides the ruins just noticed there remain also some traces of the aqueduct which supplied the city with water, and of the amphitheatre. The walls, built of large polyhedral masses of travertine, are still standing. They form an irregular pentagon, three miles in circuit, and in many places twelve feet high. Remains of eight towers and four gateways may be distinctly traced. The eastern gateway is almost perfect; its arch, nearly 50 feet high, is entire. Outside the northern or Salerno gateway are several ancient Greek tombs.

PAGANICO. [ABRUZZO.]

PAIGNTON. [DEVONSHIRE.]

PAIMBŒUF. [LOIRE-INFÉRIEURE.]

PAIMPOL. [CÔTES-DU-NORD.]

PAINSHAW. [DURHAM.]

PAINSWICK. [GLOUCESTERSHIRE.]

PAISLEY, Renfrewshire, Scotland, a parliamentary burgh and market-town, situated on both banks of the White Cart, about 3 miles above the junction of that river with the Clyde, 8 miles W. by S. from Glasgow, in 55° 53' N. lat., 4° 26' W. long. The population was 47,952 in 1851. The town is governed by 4 bailies and 12 councillors, of whom one is provost. It returns one member to the Imperial Parliament.

In the time of Agricola, the Romans had a station here, but the town of Paisley owes its existence to the priory, founded in 1160, on the eastern bank of the Cart, by Walter, high-steward of Scotland. In 1219 Pope Honorius raised the priory into an abbacy. With the growth of this establishment there arose a small town on the opposite bank of the Cart, which James IV., in 1488, erected into a free burgh of barony. The town contains several good streets, and is lighted with gas. Of the public buildings the most interesting is the nave of the old abbey church, which is all that remains of the ancient monastery. It was repaired in the last century, and is now used as the parish church of the Abbey parish. Its style is partly of the middle of the 14th century. The Abbey of Paisley was the family burial-place of the High Stewards of Scotland before their accession to the throne. At the south side of the nave is a small chapel, which contains a tomb surmounted by the recumbent figure of a woman, said to represent Marjory, daughter of Robert the Bruce, wife of the founder of the abbey, and mother of Robert II. The great extent of the ancient abbey can be traced by the remains of its foundation. The other churches of the establishment are—the High church, the Middle church, St. George's, the Gaelic church, and three chapels of ease. The Free Church and United Presbyterian bodies each possess six places of worship. There are chapels for Episcopalian, Roman Catholic, and others. Between the old and Sneddon bridges, on the western bank of the river, is situated the county-hall, a stone building erected in 1818; it comprises a court-house, council-chamber, a debtor's prison, a bridewell, and a chapel.

The municipal corporation undertook the improvement of the navigation of the Cart, in the year 1787. The bed of the river was deepened, a short canal constructed, and the Cart is now navigable up to the town for vessels of 180 tons burden. The town is connected with Glasgow by the Glasgow, Paisley, and Ardrossan Canal. A short railway extends to a steam-boat pier on the bank of the Clyde, a little above the mouth of the Cart, and by the Glasgow and Paisley railway the town has direct communication with all parts of the kingdom.

In 1707 the principal articles made in the town were coarse linen and chequered cloths; the making of thread, the manufacture of silk gauze, of crape dresses, and of damask and embroidered shawls, were subsequently introduced. Many of the principal establishments of the town are now exclusively engaged in the various branches of the cotton manufacture, particularly muslins. The staple manufactures are now shawls of silk and cotton, plaids, scarfs, chenille and Canton crape shawls and handkerchiefs. There are several brass foundries, breweries, distilleries, a large soap-work, several bleach-fields, a large silk-throwing mill, &c.

Although Renfrew is the county town, Paisley has long been the seat of the sheriff's court. There is a weekly market on Thursday, and several fairs are held in the course of the year. Besides the parochial and burgh schools, there are—an academy, an infant school, and an endowed school. There are in the town a provident bank, established in 1815; a public dispensary; an infirmary; a mechanics institution; and several subscription libraries.

PAKS. [HUNGARY.]

PALACHY. [COIMBATORE.]

PALAIR. [HINDUSTAN.]

PALAIS. [BELLE-ÎLE-EN-MER.]

PALATINATE, LOWER and UPPER. [BAVARIA.]

PALATINE, MOUNT. [ROME.]

PALAWAN. [SOOLOO ARCHIPELAGO.]

PALAZZO. [BASILICATA.]

PALEMBANG. [SUMATRA.]

PALENCIA. [LEON.]

PALERMO, the metropolitan province of the island of Sicily, extends along the western part of the northern coast of Sicily, and is bounded E. by the province of Messina, W. by that of Trapani, and S. by the provinces of Girgenti and Calatanissetta. Its area is 1984 square miles, and the population in 1851 was 514,717. The province is divided into four districts, named from their chief towns, Palermo, Corleone, Termini, and Cefalù. It is the most populous of the seven administrative divisions of the island. The surface consists partly of naked hills and partly of fertile valleys, among which that called the Conca, or 'shell,' of Palermo, is one of the finest regions in the world. The general slope of the ground is to the north, from the mountain range, the Mount Nebrodes of the ancients, which crosses the island from east to west, to the sea-coast. Numerous short watercourses run in that direction; they are dry, or nearly so, in summer, but become impassable torrents in the rainy season. The principal are the river Termini, the Fiume Torto, and the Fiume Grande between Termini and Cefalù. The principal productions of the country are corn, oil oranges and lemons, manna, sumach, liquorice, almonds, pistachio nuts, and silk. The principal towns are the following:—

PALERMO. *Termini*, on the site of the ancient *Therma*, is a walled town of 15,000 inhabitants, with a harbour, a castle, and an old cathedral. The inhabitants are employed in the tunny, anchovy, and sardine fishery, and in the coast trade. The ruins of the ancient *Himera* are about 8 miles distant, at the mouth of the *Fiume Grande*. [*HIMERA*.] The hot mineral waters of *Termini* are much frequented, and supply the adjoining baths. *Cefalu*, a town of 8000 inhabitants, built on the sea-coast at the foot of a high cliff, with a handsome collegiate church. *Corleone*, an inland town, with 13,000 inhabitants, chiefly employed in agriculture. *Monreale*, 5 miles west of Palermo, with 13,000 inhabitants, and a splendid Benedictine abbey, founded in 1174, the church of which has become the cathedral of the archiepiscopal see of Palermo. It is rich in marble and paintings, and contains the tombs of the Norman kings William I. and II. *Carini*, near the site of the ancient *Hycara*, 9 miles west of Palermo, has 6000 inhabitants. *Piana dei Greci*, 15 miles south of Palermo, is an Epirote colony, with about 5000 inhabitants and a Greek church.

The small island of *Ustica*, situated about 40 miles from the coast north by west of Palermo, contains about 2000 inhabitants. It has a small port named *Santa Maria*, which is defended by batteries. The island produces good wine.

PALERMO (the ancient *Panormus*), the capital of the island of Sicily and the second city of the united kingdom of the Two Sicilies, is situated on a deep bay on the northern coast of Sicily, in 38° 8' N. lat., 13° 22' E. long., in a fine and fertile plain between two mountain ridges and the sea, and has about 180,000 inhabitants. The town is an oblong parallelogram, surrounded by walls furnished with bastions. It is rather more than four miles in circumference, the suburbs not included. A fine street, called *Il Cassaro*, a corruption of the Arabic word *Al-kaasr*, 'the palace,' runs through its length from the sea to the royal palace, which is at the inland extremity of the town, and is crossed at right angles towards its middle by another handsome street, called *Strada Maqueda*. The square before the royal palace is adorned with a bronze statue of Philip IV. of Spain. Another smaller square, in the centre of the town, between the palace of the senate and the university, is decorated with a curious fountain enriched with statues and figures of various animals, which spout the water into several basins. The houses of Palermo are built nearly in the same style as those of Naples, with flat roofs and terraces, and balconies with Venetian blinds. The royal palace is an old fortified building, with a fine hall, a spacious court, and a splendid chapel, built by King Roger in 1129, and enriched with mosaics. On the summit of the palace is the observatory, from which Father Piazzini discovered the planet *Ceres* in 1801. The cathedral, a magnificent gothic structure, built about the end of the 12th century, is adorned with marble columns and statues; it contains the mausolea of Roger, the Norman founder of the monarchy, and other exalted personages. The church 'del Gesu' is remarkable for its architecture and for the richness of its marble decorations, its paintings, and sculpture. Palermo has many other churches deserving of notice, all rich with marble, paintings, and mosaics. The church of the Capuchins is remarkable for its vaults, in which the bodies of the deceased monks and other persons are seen dried up standing in niches in various attitudes, and with their garments on, some being two or three hundred years old. The university, founded in 1447, has a library of 40,000 volumes, a museum of antiquities, with some fine statues and a fine collection of Græco-Sicilian medals. Besides the great hospital, Palermo has several other hospitals, a foundling hospital, a lunatic asylum, and other beneficent institutions. Some of the palaces of the nobility are remarkable for their architecture. The promenade along the sea-side, called *La Marina*, leads to the fine public gardens called *La Flora*, with a botanical garden. Palermo has two theatres, several barracks for soldiers, and a castle (*Castellamare*), which commands the roads. The harbour of Palermo is formed by a mole 1300 feet in length, terminating in a lighthouse and battery. An interior port is reserved for the marine.

Palermo is an archbishop's see, and the residence of the king's lieutenant-general over all Sicily. It has a supreme court of justice for the whole island, a court of appeal for the province, and a commercial tribunal. There are several monasteries and convents in the city. For public instruction, besides the university, there are at Palermo a college, a ladies college, and a nautical school. There is also a veterinary college.

The neighbourhood of Palermo contains many delightful villas and mansions of the nobility. To the west is the royal mansion and park of *Bocca di Falco*, beyond which is the handsome Benedictine convent of *San Martino*, situated on a hill. The church is adorned with paintings and marble, and the convent contains a good library, a museum of Sicilian antiquities, and a collection of medals. The *Monte Pellegrino*, Mount *Ereeta* of the ancients (a strong position of the Carthaginians during the first Punic war), is a broad rocky abrupt mass which rises north-west of Palermo, and forms a striking feature of the landscape. It is now famed among the natives for a grotto or cave, to which *Santa Rosalia*, a princess of the Norman blood royal, in the bloom of youth retired, in order to lead a contemplative and ascetic life. The cave is become a sanctuary, and every year on the 15th July there is a solemn procession to this place from Palermo, and the town is illuminated for several days. This is the most brilliant season

for seeing Palermo to advantage, as people flock to it from every part of the island.

Panormus was originally a Phœnician and afterwards a Greek colony. It became subject to the Carthaginians, until the first Punic war, when the consuls *Aulus Aquilius* and *C. Cornelius* besieged and took the town. It afterwards became a Roman colony.

The Arabian Emirs who ruled Sicily for several centuries made *Panormus* the capital of the island, and the Norman kings after them fixed their residence there. The Aragonese kings of Sicily resided at Palermo. When Sicily became united to the kingdom of Naples, Palermo lost its court, but retained the rank of capital of the kingdom of Sicily. The court of Naples however resided here from 1806 to 1814.

PALESTINE (**PALESTINA**) is the name commonly applied to the whole land anciently inhabited by the Israelites, including the country of the Philistines. It is derived from a Hebrew word signifying 'the land of the Philistines.' The country was originally called the Land of Canaan (*Exodus*, vi. 4). The Romans generally called it *Ju-deea*. It was adjacent on the south-west to the desert which lies east of the delta of Egypt, on the south and south-east to Arabia, on the east and north to Syria. Its frontier towns were *Dan* on the north and *Beersheba* on the south. On the west it is bounded by the Mediterranean Sea. Its southern boundary on the east was a stream which is called in Scripture the River of Egypt (probably the brook of *El-Arish*), from the mouth of which the southern boundary extended eastward through the Arabian Desert to a point about 25 geographical miles south of the Dead Sea. The northern boundary was formed by the mountains of Lebanon; the eastern by the river Jordan and its lakes. The country lay therefore between 30° 40' and 33° 36' N. lat., 33° 45' and 35° 30' E. long. Its length from north to south is about 180 geographical miles; its breadth increases gradually from the northern boundary, where it is not more than 20 miles, to the southern, where it is not less than 90 miles: the average breadth is about 50 miles. This description applies to the country originally intended in Scripture by the term 'the Land of Promise,' &c.; but the name of Palestine is used in history in a wider sense, embracing a considerable territory to the east of the Jordan, the addition of which increases its average breadth to about 65 miles. The southern limit of this eastern territory was the river *Arnon*, which falls into the DEAD SEA. The whole country contained about 11,000 square miles.

Mountains.—Palestine is a very mountainous country. A mountain range commences in Syria south of the *Orontes*, and stretches to the south as far as the sources of the Jordan, where it divides into two branches, which continue their course nearly parallel to each other, and inclose between them the valley of the Jordan and its lakes. These two ranges diverge from each other at the head of the Gulf of Akaba; the one running along the eastern coast of that gulf and terminating on the shore of the Red Sea; the other along the western coast of that gulf and terminating in the mountains of Sinai.

The mountains of Lebanon, which are a part of this mountain system, form the northern boundary of Palestine. They consist of two parallel ranges, inclosing a fertile valley of the average width of fifteen miles, which was the ancient *Coele-Syria* (*Hollow Syria*), and is now called 'El Bekka' (the valley). The western range inclines towards the sea, and terminates at the mouth of the *Leontes*, near Tyre; the eastern extends southward into Palestine, and divides into two branches, as above described. The name of Lebanon is applied in Scripture indifferently to either or both of these ranges: by the Syrian-Greeks the western was called *Libanus*, and the eastern *Anti-Libanus*. Lebanon is by far the highest part of the Syrian mountains. The summit of the western range is quite barren; but the lower slopes, especially on the western side, are inhabited and cultivated. Among the trees which grow upon them are the remains of the celebrated cedars of Lebanon. *Anti-Libanus* is in general not so high as the western ridge; but at the point where it divides into the two branches which inclose the basin of the Jordan, it rises above all the other summits of Lebanon, forming the *Jebel-es-Sheikh*, the *Hermon* of Scripture, whose summit is covered with snow for the greater part of the year. The eastern range is more barren, and has fewer inhabitants than the western. As this range passes into Palestine it diminishes in height, and becomes less rugged and more fit for tillage; but at the Dead Sea it consists of desolate rocks.

Almost all the mountains of Palestine may be regarded as belonging to the two principal ranges which include the basin of the Jordan. The most remarkable are the following:—*Mount Tabor*, the highest mountain in Lower Galilee, stands on the north-east of the plain of *Esdraelon*. It is entirely detached from the surrounding mountains, and is nearly of a hemispherical figure. On its summit is a plain of about half an hour in circuit, which is inclosed by an ancient wall. This mountain is said by an old tradition to have been the scene of our Saviour's Transfiguration. A range of fertile hills about five miles south-south-west of Tabor is generally considered to be the *Mount Hermon* mentioned in the *Psalms* (xlii. 6; lxxxix. 12): it is called the *Little Hermon*, to distinguish it from the great peak of the same name in *Anti-Libanus*. To the south and south-east of Tabor are the mountains of *Gilboa* of Scripture, a sterile range of hills about 1000 feet above the level of the sea: they bound the valley of the Jordan on the west for some miles. The range of *Carmel*, the termination of

which forms the only very prominent headland on the sea-coast of Palestine, lies almost due west of Mount Tabor. The promontory in which it terminates incloses the Bay of Acre on the south, whence the ridge runs inland to the south-east till it joins the principal range. It is only of moderate height, and is covered with forests and grass. To the south of the plain of Esdraelon lie the mountains of Samaria, which are beautifully wooded, chiefly with olive-trees, and covered with towns and villages. Of these mountains perhaps the highest are those of Ebal and Gerizim, which are separated from each other by a valley 200 or 300 paces broad. From these mountains were delivered the curses and the blessings of the Law. The Samaritans had their temple on Mount Gerizim, which they esteemed the holiest of mountains. Judæa, or the southern part of Palestine, is full of hills, which are divided by valleys and torrents, and are for the most part of moderate height. They are composed of a friable rock, particles of which are washed down by the torrents, and form terraces on the slopes of the mountains. In ancient times these terraces were planted with the olive, the fig-tree, and the vine. At present the rocks are for the most part barren and desolate. In the eastern part of Judæa, on the borders of the Jordan and the Dead Sea, is a wilderness of mountains, the most rugged and desolate in all Palestine. This mountainous country, which is the highest in Judæa, bears the name of Quarantania, from a tradition that this was the wilderness in which Christ fasted forty days and nights; the highest summit among these mountains is called the Mountain of Temptation, and is pointed out by tradition as that from which the devil showed our Saviour the kingdoms of the world. The most mountainous part of Judæa is the district round Jerusalem. [JERUSALEM.]

From the Jebel-es-Sheikh, already noticed, the mountains on the east side of the Jordan continue southward for about twenty-five miles under the name of Jebel-Heish, and terminating at a point about ten miles to the east of the Lake of Gennesareth. To the south of this mountain, for about twenty-four miles, is an open country, equally divided by the river Yarmak (ancient Hieromax), and containing the pasture-lands of Argob and Baahan. To the south of this district lies the land of Gilead, the mountains of which are the most considerable on this side the Jordan: they are for the most part well wooded, chiefly with the oak and wild pistachio. To the south of the river Jabbok (Zerka) the mountains are less elevated though broader. About six miles to the south of the river Jabbok is a ridge running east and west for about seven miles, the name of which (Jelaad) bears a trace of the ancient name of the country. As the principal chain approaches the latitude of the Dead Sea, it diminishes in breadth; and somewhat below the head of that sea it widens out again, and forms the mountains of Seir. [IDUMÆA.] Among the mountains at the head of the Dead Sea, and to the north of the river Arnon, was Nebo, from the summit of which Moses was permitted to see the promised land.

Geology and Mineralogy.—The mountains of Syria and Palestine are composed chiefly of a hard compact limestone, of a whitish or pale yellow colour, disposed in strata variously inclined, and affording a great number of caverns, to which frequent allusion is made in the Scriptures. The limestone rocks of which Lebanon is composed are of a whitish colour, from which circumstance the name of the mountain is supposed to be derived. The rock which lines the valley of the Jordan is of a texture much less compact than that of the mountains of Lebanon or of central Palestine; and it diminishes in compactness as we approach the Dead Sea. In the neighbourhood of Um-Keis, the ancient Gadara, to the south-east of the Lake of Gennesareth, there is a considerable quantity of black basaltic rock among the calcareous stone which prevails on the east of the Jordan between Yarmak and the Zerka. This black basaltic rock is also found in large quantities in the plain of the Haouran, farther to the east. In the mountains south of the Zerka the calcareous stone is interspersed with layers of sandstone of different colours, and large blocks of black basalt. The hills about Jerusalem are of a hard light-coloured limestone, which, as we approach the Dead Sea, is exchanged for white or grayish limestone of a looser texture, containing layers of a reddish micaceous stone. [DEAD SEA.] The black basaltic rock of the Haouran extends along the whole eastern border of the country. In the parts near the Jordan it is generally found in detached masses. Traces of basalt are also found on the west of the Lake of Gennesareth. Slate is found about the Dead Sea. In many places the limestone is covered by chalky rocks, containing corals, shells, and other marine exuvia. In the chalky beds about the summit of Carmel are found hollow stones lined with sparry matter, which resemble petrified olives and other fruit. This chalky formation appears very conspicuously in the White Cape (Ras-el-Abaid) below Tyre. There are indications of coal in various parts of Lebanon. Salt is obtained in abundance from the Dead Sea and the Mediterranean. The water of the Dead Sea is intensely salt. Fragments and beds of salt are found about its shores. [DEAD SEA.] Saltpetre is found in the district of the Haouran.

In modern times the mineral wealth of the country has been almost entirely neglected. Iron abounds in the Lebanon and Kersoun Mountains, and traces of it are found in other parts. Of copper there is no mention in modern times, though from the description of Moses (Deut. viii. 9) it seems to have been found in ancient times. Palestine possesses neither tin, lead, nor gold; but some traces of silver have

been found. There are celebrated mines of asphaltum in the neighbourhood of Hasbeya, near the sources of the Jordan.

The indications of volcanic action are chiefly confined to the basin of the Jordan and its lakes; and they are most frequent about the Lake of Tiberias and the Dead Sea. Hot springs, lava, and pumicestone are found about the Dead Sea. There are hot-springs at Tiberias, on the western side of the Lake of Tiberias, and at other places round the lake, which has itself a striking resemblance to the crater of a volcano. In the neighbourhood of the Dead Sea are still mines of asphaltum ('alime pits') of which the vale of Siddim was full in ancient times (Gen. xiv. 10), and other traces of the 'brimstone, salt, and burning,' by which the cities of the plain were overthrown. Palestine has been the scene of repeated earthquakes.

Valleys, Plains, and Deserts.—The chief valleys of Palestine are longitudinal, and run from north to south. The transverse valleys have a general east and west direction, being formed by the offsets of the principal mountain ranges. The chief plain country is the low land along the Mediterranean. The chief valleys are to the east of that range, and are the Bekka before mentioned, the basin of the river Jordan, and the great valley of Araba extending from the Dead Sea to the Ælanitic Gulf.

The flat country along the coast varies considerably in breadth, and is diversified by elevations which are offsets from the central mountains. The soil of this part of the country is very fertile, being composed of a rich brown mould. The climate along the coast is very warm. To the south of Cæsarea is the celebrated vale of Sharon, which is terminated in the neighbourhood of El-Arish by a sandy desert (the wilderness of Shur and Paran) which extends westward to Egypt, and eastward to the peninsula of Sinai.

The country between the mountains of Libanus and Anti-Libanus formed the Coele-Syria of the Greeks and Romans. Its length is about 90 miles, and its average breadth about 11 miles: it is the richest and most beautiful part of Syria.

The great valley of the Jordan extends about 175 miles from the sources of the river in the north, to the southern extremity of the Dead Sea. It is bounded on both sides by mountains, which on the east rise almost precipitously from the bed of the river till near the head of the Dead Sea, where the valley becomes wider: on the west there is a fertile vale between the river and the mountains, averaging about a half or three-quarters of a mile in breadth, except at the Lake of Gennesareth, where the mountains come close up to the shores. The valley of the Jordan is in fact a great longitudinal cleft, which traverses the country from north to south, and in its lowest part, the surface of the Dead Sea, is 1312 feet below the level of the Mediterranean. The valley is very warm, and singularly fertile. The name of the valley of the Jordan is usually restricted to the Ghor or the part between the Lake of Tiberias and the Dead Sea, which is about 65 miles long, and 5 or 6 miles wide in the northern half, but it grows much wider towards the Dead Sea, near which it spreads out into the plain of Jericho on the west and the plains of Moab on the east of the Jordan. The plain of Jericho is about 18 miles long by 7 or 8 miles broad, and is bounded on the west by an amphitheatre of mountains, which, by concentrating the sun's rays, cause a great degree of heat in the plain, which is further increased by the sandy nature of the soil, and by the low level of the plain. The plain immediately surrounding the Dead Sea consists on the eastern side for the most part of a sandy desert, with a few cultivated spots; on the western side the soil is rich, the heat great, and water abundant, but on the immediate borders of the lake it is a dreary waste. The great valley of Araba, which extends from the south of the Dead Sea to the head of the Ælanitic Gulf, is not within the limits of Palestine properly so called.

The valleys of Galilee are generally small, but beautifully wooded. The valley of Abilene lies beyond the hills which skirt the coast between Cape Nakhoora and Acre. South-east of this is the valley of Zebulon, between 3 and 4 miles long by 1 mile broad, which contains some of the finest pasturage in the whole country. To the east of this, and about the same length, is the vale of Sepphoris. The vale of Nazareth is a kind of hollow inclosed by mountains on every side, and abounds with fig-trees and gardens. Behind the hills which bound the north-western part of the Lake of Gennesareth is an extensive plain, forming a rich pasture-ground, which is much frequented by the Bedouins. It is called Dothan, from a village of that name.

On the borders of Galilee and Samaria lies the great plain of Esdraelon, called in Scripture the plain of Megiddo, and the valley of Jezreel. It is exceedingly fertile, and well adapted for growing corn. It has been the scene of some of the most remarkable battles recorded in the Jewish history, and of great battles in later times. Samaria is less mountainous than either Galilee or Judæa; it is beautifully wooded, and full of fertile plains. The valley of Jennin—through which lies the common route from Galilee to the city of Samaria—is about 13 miles long and 2 miles in its extreme width. About 4 miles south of Samaria is the vale of Shechem, between the mountains of Ebal and Gerizim, which is said to be watered by 365 springs. It opens out into a very fine plain which leads into the valley of Leban, after traversing which we enter into the kingdom of Judæa. This, in its present state, is the least fertile part of all Palestine, being full of rugged mountains, and deficient in water and soil. The stony

valley of Bethel lies about 8 miles to the north of Jerusalem. The valley of Jeremiah, in the north-east of Judæa, is long and sterile. It is connected by a narrow pass with the valley of Elah, which is pointed out by tradition as the scene of David's victory over Goliath. This is one of the pleasantest parts of Judæa. East of Jerusalem lies the valley of Jehoshaphat. [JERUSALEM.] To the south of Jerusalem on the road to Bethlehem lies the valley of Rephaim, which is upwards of 6 miles long. Near Hebron is the valley of Mamre, where was the sepulchre of Abraham. South of Jerusalem is the vale of Sorek, about 40 miles long, celebrated for its grapes and wine. Between the Dead Sea and the centre of Judæa lie the deserts of St. Saba and Engeddi.

On the east side of the Jordan lie the rich pasture-lands of Argob and Bashan, extending from Mount Hermon to the river Yarmak, a few miles south of the Lake of Gennesareth. South of this was the land of Gilead, the limits of which are not precisely defined, but it may be considered as lying between the rivers Yarmak and Jabbok. It is mountainous, and more so in the northern than in the southern part. Some portions of it are very fertile, and others are beautifully wooded. South of the Jabbok was the land of Moab, of which only a small part, that namely to the north of the Arnon, belonged to Palestine. This portion was occupied by the Amorites when the Israelites took possession of the country.

The south of Palestine is skirted by the great sandy desert which extends to Egypt and Sinal. It bears various names, of which that of the Desert of Paran seems to be used in the widest extent.

Lakes and Rivers.—There are no considerable rivers on the sea-coast of Palestine, the greater number of the streams being only mountain torrents which flow down from the hills that run parallel to the coast. The *Leontes* ('Litany') is not, strictly speaking, a river of Palestine. It rises at the base of the Lebanon Mountains in the neighbourhood of Baalbec, and flows in a south-westerly course to the Mediterranean, into which it falls a little to the north of Tyre. The most important river of Palestine is the *Jordan*, which rises nearly in the latitude of Tyre, and flows southward through the valley between the two great mountain ranges already noticed, and, after traversing the lakes of Semechonitis (Bahr-el-Huleh) and Gennesareth, falls into the Dead Sea. Its source, or what is generally considered to be its source, is a cave on the north-east side of the village of Panias, or Banias. The true source however seems to be a stream which rises in the hill of Tel-el-Kadi, about 3 miles north-east of Panias. After a course of about 15 miles, the river runs into the Bahr-el-Huleh, the waters of Marom of the Old Testament, and the Lake Semechonitis of Josephus. The size of this lake varies with the season of the year. Josephus makes it 7 miles long by half that breadth, which appears to be about the average size. The reeds which are used for writing grow on its margin. There are numerous water-fowl upon it, and it abounds in fish. The waters are muddy, and are said to be unwholesome.

After a course of 10 miles from the point where it quits this lake, the Jordan enters the Sea of Tiberias, Lake of Gennesareth, or Sea of Galilee of the New Testament. This lake is from 12 to 15 miles long, and from 6 to 9 miles wide. It is surrounded by mountains, and all travellers describe its scenery as exceedingly beautiful. The water is cool and clear, and contains a great quantity of excellent fish. Its margin is the resort of innumerable birds. The course of the Jordan is distinctly traced in a smooth current right through the middle of the lake.

The Jordan flows from the southern angle of this lake through a narrow valley, the level of which is lower than that of the large valley around it, which we have before spoken of as the valley of the Jordan (El Ghor). This lower valley is about three-quarters of a mile in breadth, and is covered with trees and luxuriant herbage. In the winter it is inundated by the river. In the summer the Jordan is fordable in many places. Its course when it leaves the lake is very rapid, but it diminishes in speed as it proceeds. At its junction with the Dead Sea it is 200 or 300 feet broad. The whole course of the river is about 150 miles, taking into account the windings of the stream.

The very remarkable lake which receives the waters of the Jordan occupies the site of the plain of Siddim, where stood Sodom and the other cities which God destroyed by fire in the time of Lot (Gen., xiv. 3; xix. 24, 25). The Dead Sea and its desolate shores are already fully noticed in the article DEAD SEA.

The following are the most important tributaries of the Jordan and its lakes. On the eastern side the Yarmak, or Maudhur, the Hieromas of the Romans, and the Jabbok (Zerka), both of which flow westward into the Jordan, the former entering it a little to the south of the Lake of Gennesareth, the latter at a point about half-way between that lake and the Dead Sea; and the Arnon (Modjeb), which flows into the Dead Sea, dividing Palestine from the land of Moab. On the western side, the Brook Daphne, which flows into the Lake Semechonitis; the Brook Capernaum which flows into the Lake of Gennesareth; the Brook Aenon, which rises in the mountains of Ephraim and flows into the Jordan between the Lake of Tiberias and the Dead Sea; and the Brook Kedron, which flows from the Mount of Olives into the Dead Sea.

The chief rivers which fall into the Mediterranean are the Belus,

which flows into the modern Bay of Acre a little to the south of Ptolemais; the Kishon, which flows from Mount Tabor through the plain of Jezreel, and falls into the same bay at the foot of Mount Carmel; the Chorseus and Kanah, which fall into the sea on the north and south of Cæsarea respectively; the Jarkon, which falls into the sea at Joppa; and the Eahool and Besor, which fall into the sea near Askelon and Gaza respectively. The extreme southern limit of the coast is formed by the River of Egypt, which is supposed to be the Brook El-Ariah.

Climate.—The climate of Palestine is temperate and the weather is not very variable. There are, properly speaking, only two seasons. The winter lasts from October to the beginning of April, and is distinguished principally by continual showers, which are called in Scripture the early and the latter rains. In summer, which lasts from June to September, there is a continuance of clear weather, with scarcely any rain; but very heavy dews fall in the night.

Political Divisions.—The political divisions of the country were very different at different periods of its history. The first notice we possess of the country is when Abraham came from Mesopotamia to dwell in it. It was then inhabited by the Canaanites, who were divided into the families of the Sidonians, Hittites, Jebusites, Amorites, Gargasites, Hivites, Arkites, Sinites, Arvadites, Zemarites, and Hamathites. Of these, the Sidonians inhabited the strip of coast about Sidon, between Lebanon and the Mediterranean, being a part of the district known in history under the name of Phœnicia; the Hittites dwelt about Hebron; the Jebusites about Jebus or Jerusalem; the Amorites in the mountains west of the Jordan; the Gargasites about the upper part of the river round Gergesa; the Hivites in the country to the north of Shechem; the Arkites around Aroa, and the Sinites near them; the Arvadites in the little island Aradus; the Zemarites and Hamathites about Simyra and Hamath. The Philistines inhabited the sea-coast in the south-west of the country. The land of Canaan having been conquered by the Israelites after their departure from Egypt, Joshua divided it by lot among the twelve tribes. Reuben, Gad, and half the tribe of Manasseh had their possessions on the east of the Jordan; the other tribes were located on its western side. Reuben was bounded on the south by the river Arnon, and on the north by the tribe of Gad, which inhabited part of the land of Gilead about the river Jabbok. On the north of Gad the half tribe of Manasseh extended to Mount Hermon and the sources of the Jordan. The whole of the southern part of the country, between the Dead Sea and the Mediterranean, was at first allotted to Judah; but this district being disproportionately large, the western part of it was given to Simeon and Dan. The small territory of Benjamin was bounded by Dan on the west, by Judah on the south, and by the Jordan on the east, and contained within its limits the city of Jerusalem. Ephraim possessed the country about Shechem, between the Mediterranean and the Jordan. To the north of Ephraim lay the second half of the tribe of Manasseh, also extending from the Mediterranean to the Jordan and on the coast as far north as Mount Carmel. Issachar had the valley of Jezreel, to the north and east of Manasseh. Zebulon lay next to the north, bounded by Asher on the west and by the Lake of Gennesareth on the east. The land of Naphthali lay about the sources of the Jordan, north of Zebulon and east of Asher, which last tribe possessed the sea-coast about Tyre and a part of the valley of Lebanon.

These tribes were united into one kingdom under Saul and David. By the conquests of David the territory of the Hebrews was extended to the Euphrates and the Atlantic Gulf. But these conquests are never included under the name of Palestine. By the revolt of Jeroboam, Palestine was divided into the two kingdoms of Judah and Israel, of which the former included the territories of the tribes of Judah, Benjamin, Dan, and Simeon, having for its northern boundary a line drawn from a point on the Jordan a little north of the Dead Sea, westward to the Mediterranean at Joppa; the latter included all the rest of Palestine to the north of this line.

The kingdom of Israel was overthrown, and the people carried captive by the Assyrians. The country, being thus depopulated, was next inhabited by the neighbouring heathen people and by colonies from other parts of the Assyrian empire, who, mixing with the scattered remains of the tribes of Ephraim and Manasseh which were left about Samaria, formed the people spoken of in the New Testament as the Samaritans, who were regarded by the Jews as an impure race, and between whom and the Jews there always existed a strong mutual hatred.

In the year B.C. 588, Nebuchadnezzar overthrew the kingdom of Judah and carried the greater number of its inhabitants into captivity. Many were however left in the land as subjects of the Babylonish empire. Upon the conquest of Babylon by Cyrus, Palestine fell under the dominion of the Persians, under whom it was divided for the purposes of government into small circles, each of which had its governor. By an edict of Cyrus, the Jews were permitted to return to Judæa and to rebuild Jerusalem and the Temple, but they still remained subject to Persia. When Alexander the Great invaded Asia, Palestine submitted to him without a struggle. After his death the possession of it was the subject of fierce contests between the Greek kings of Egypt and of Syria. Having been driven to revolt by the oppressions of the Syrian kings, the Jews, under the leading of the

Maccabees, recovered their independence, and restored the kingdom of Judah.

In the year B.C. 63 the country was conquered by Pompey, and it remained thenceforward in subjection to the Romans, by whom the part of it west of the Jordan was divided into the three provinces of Judæa, Samaria, and Galilæa. Judæa nearly coincided with the ancient kingdom of Judah; its northern boundary was at the parallel of Joppa. Samaria extended to the north as far as the plain of Esdraelon. Galilæa lay north of Samaria, reaching up to Lebanon, and having Phœnicia along its western border: it was divided into Upper and Lower Galilæa, the former containing the northern and the latter the southern half of the province. The former was also called Galilæa of the Gentiles, as it was inhabited by Syrians, Greeks, Phœnicians, and Egyptians, as well as Jews. On the east of the Jordan lay the province of Peræa, between the Arnon and the Hieromax; and to the north of this the districts of Batanæa, Trachonitis, Auranitis, and Gaulanitis, which commonly had one governor with Palestine. The whole country was considered by the Romans as a part of Syria, though it sometimes had a separate governor.

Under Constantine, Palestine was divided into Prima, Secunda, and Tertia. Palestina Prima included the country of the Philistines, Samaria, and the northern part of Judæa; its capital was Cæsarea. Palestina Secunda included Galilæa and part of the country east of the Jordan; its capital was Scythopolis. Palestina Tertia (also called Salutaris) contained the southern part of Judæa and the whole of Idumæa; its capital was Petra.

Towns and Villages.—In Upper Galilæa, near the sources of the Jordan, was Dan, more anciently called Laish, the most northern town of Palestine. In its immediate neighbourhood stood, in the time of the Romans, Cæsarea Philippi, or Panias. At the point where the Jordan enters the Lake of Gennesareth stood Bethsaida. This city was beautified by Philip the Tetrarch, who called it Julia. On the western side of the same lake were Capernaum, Chorazin, and Magdala. On the same side of the lake, but in Lower Galilæa, was Tiberias (*Tabariak*); to the west of which lay Cana (*Kana*); and farther to the west Sepphoris (*Saffurek*), the principal city of the district, which was enlarged by Herod, who called it Dio Cæsarea; south-east of Sepphoris was Nazareth (*Nasarak*); near the source of the Kishon was Nain. The city of Esdraelon, the ancient Jesreel, stood in the great plain of the same name; west of it was Shunem. In the south-east corner of Galilæa was Bethshean (*Bisna*), afterwards Scythopolis.

The most ancient city of Samaria was the Shechem, or Sichem, of the Old Testament, the Sychar of the New Testament, which stood in the valley between Mounts Ebal and Gerizim. The Romans erected close to it the city of Neapolis, which still retains the name of *Nablous*. Near to Shechem, on the south-east, was Jacob's Well. A few miles to the north of Shechem lay Samaria, which was built by Omri, who transferred the capital of the kingdom of Israel from Shechem to this city. It was rebuilt and beautified by Herod, who called it Sebaste in honour of Augustus, which name it still bears. In the time of the Romans the chief city of Samaria was CÆSARÏA (*Kaisariak*), on the sea-coast, which was built by Herod on the site of an insignificant place called Turris Stratonis. On the coast, north of Cæsarea, was Dora (*Tortura*), and near it En-dor; south of Cæsarea was Apollonias (*Om Khaled*), a Greek town. To the south-east of this was Antipatris, formerly called Capharsaba; and south of this was Saron, whence the Vale of Sharon obtained its name.

The chief city of Judæa was JERUSALEM, in the neighbourhood of which were the villages of Bethphage and Bethany, on the Mount of Olives, and Emmaus (afterwards called Nicopolis), farther to the north-west. Near Emmaus were Ajalon and Gibeon; and farther to the north Ephraim and Luz, or Bethel. To the east of Bethel, and in the north-eastern corner of Judæa, lay Jericho, which is sometimes called in Scripture the City of Palm-Trees. Between it and the Jordan was Gilgal; south of Jericho was Engeddi. Bethlehem, or Ephrath (*Bait-el-Lahm*), was about five miles to the south of Jerusalem. Farther south of Jerusalem lay Hebron (*El-Khalil*). Joppa (*Jaffa*) was the frontier town of Judæa and Samaria on the sea-coast; to the east of it lay Lydda, or Dioepolis (*Lud*). South-east of Joppa was Arimathea (*Ramla*), and near it Modin, the residence of Mattathias, the father of the Maccabees. On the east of the Jordan, in the district of Batanæa, &c., were—Canatha (*Kannaytra*); Hippos, on the Lake of Gennesareth; Gaulan, or Golan, one of the cities of refuge; and Gamala, on the same lake. In the north of Peræa, near the Lake of Gennesareth, was Gadara (*Om Keis*); and to the south-west of it Pella, built by the Macedonians; and farther south Gerasa, now *Jereesh*; and Jabesh-Gilead. Jereesh contains a large mass of noble ruins of the Roman period, consisting of fortifications, hot baths, and a naumachia, which is now converted into a corn-field. On the Jabbeek stood Ramoth-Gilead, one of the cities of refuge, and on a branch of the same river, Amathus (*Amata*). In the southern part of Peræa was Heshbon (*Esban*), the chief city of the Amorites; farther to the west Bethoran, which was beautified by Herod Antipas, who called it Livias; near it was the citadel of Machærus, where St. John the Baptist is said to have been beheaded.

PALESTRINA, the ancient *Præneste*, a town in the Campagna, 20 miles E. from Rome, built on the south-west slope of a high hill, which is an offshoot of the Apennine ridge that skirts the valley of the

Tiber on the east, and divides it from the high land of Abruzzo. It is naturally a strong position, and has been fortified from the oldest times. The ancient *Præneste* extended above the site of the present town, its citadel crowning the summit of the hill. There are remains of the ancient walls, built in the Cyclopean or polygonal style, of large irregular blocks of stone. A church, dedicated to St. Peter, has been raised on the site of the citadel. The modern town is half-way up the slope of the hill, on the site of the ancient Temple of Fortune, and about 700 feet above the sea. It is a bishop's see, and has about 5000 inhabitants, who manufacture coarse woollen cloth. The palace, belonging to the family of Barberini, contains the celebrated mosaic found among the ruins of the Temple of Fortuna. Many statues and other remains of antiquity have been found at Palestrina.

Præneste was a town of the Latins, and of older date than Rome. In the war of the Latins against Rome after the expulsion of Tarquinius, Præneste allied itself to Rome. (Livy, ii. 19.) More than a century later it sided with the Volsci against the Romans; but after the victory of Cincinnatus on the banks of the Allia, A.U.C. 375, it submitted to Rome by capitulation. (Livy, vi. 28, 29.) Thirty years later Præneste was included in the great Latin league against Rome, which was defeated by L. F. Camillus; the territory of the Prænestini was confiscated (Livy, viii. 12-14), and their town became subject to Rome like the rest of Latium. The younger Marius, being defeated by Sulla, took refuge in Præneste, where, after an unsuccessful attempt to escape, he ordered a slave to run him through the body. The town then surrendered, when Sulla ordered an indiscriminate slaughter of the inhabitants. Octavianus Cæsar sent a colony of veterans to Præneste. The Temple of Fortune was the great attraction of the place, and people repaired from all parts of Italy to consult the oracle. The temple was built on a magnificent scale, and richly adorned. Præneste was a favourite residence of the wealthy Romans during the summer heats.

In the middle ages Palestrina became the chief stronghold of the powerful baronial family of Colonna, who often disputed with the popes the possession of the Campagna and of Rome itself. Boniface VIII. took Palestrina and destroyed it, but after his death the Colonna recovered and fortified it again. Eugenius IV. in 1437 retook it from them. At last Urban VIII. gave it to his relatives the Barberii.

PALIANO. [FROSINONE.]

PALISSE, LA. [ALLIER.]

PALLANZA. [NOVARA.]

PALLATTIA. [KARIA.]

PALMA. [CANARIES; CORDOVA; MALLORCA.]

PALMA NOVA. [UDINE.]

PALMELLA. [ESTREMADURA, Portuguese.]

PALMI. [CALABRIA.]

PALMYRA, TADMOR. Both these names are derived from the palm-trees which once grew in the neighbourhood of this ancient city. Palmyra is situated in an oasis of the Syrian desert, nearly half-way between the Orontes and the Euphrates, and about 140 miles E.N.E. from Damascus, in 34° 24' N. lat., 38° 20' E. long., according to Major Rennell. ('Comparative Geography of Western Asia.')

The circumstance of Palmyra being situated in an oasis sheltered by hills to the west and north-west, and supplied with wholesome water, and on a line leading from the coast of Syria to the regions of Mesopotamia, Persia, and India, must have pointed it out in very early times to the caravans as a convenient halting-place in the midst of the desert. The Phœnicians were probably early acquainted with it, and may have suggested to Solomon, with whom the king of Tyre was in alliance, the idea of establishing an emporium there. We read in the Second Book of Chronicles (viii. 4), that Solomon "built Tadmor in the wilderness, and all the store cities which he built in Hamath." Hamath was a town and territory extending along the banks of the Orontes, and bordering on the Syrian desert. After this we read no more of Tadmor in the Scriptures; but John of Antioch, probably from some tradition, says that it was destroyed by Nebuchadnezzar. The first notice which we have of it in Roman history is that M. Antony, being in Syria, marched to surprise it, expecting a rich booty, but the inhabitants disappointed him by transporting their goods beyond the Euphrates.

In the time of Pliny it was the intermediate emporium of the trade with the East, a city of merchants and factors, who traded with the Parthians on the one hand and the Romans on the other. The produce of India found its way to the Roman world through Palmyra. It afterwards became allied to the empire as a free state, and was greatly favoured by Hadrian and the Antonines, under whom it attained its greatest splendour.

Odenatus, a native of Palmyra, having rendered great services to the Roman empire in a war against the Persians, assumed, with the consent of Gallienus, the title of King of Palmyra, and Gallienus conferred upon him the command of all the forces in the East. Odenatus obtained several victories over the Persians, but being at last treacherously killed, his wife Zenobia, an aspiring woman, assumed the crown, and styling herself Queen of the East, asserted her sovereignty over Mesopotamia and Syria. Zenobia remained undisturbed for several years, during the latter part of the reign of Gallienus and the subsequent reign of Claudius. But after Aurelianus was proclaimed emperor, he resolved to put down Zenobia, who had extended her

conquests over Asia Minor, and after defeating her at Antioch and at Emesa, Palmyra surrendered to him, when he put to death her minister Longinus. An insurrection subsequently took place, when he returned to Palmyra, and carried on an indiscriminate slaughter of the inhabitants. This is averred by his own letter to Probus, whom he appointed governor of the place, and which has been preserved by Vopiscus. Zenobia appeared as a captive in the triumphal procession of Aurelian at Rome, after which she was allowed to reside at a country-house near Tibur, where she spent the remainder of her life. Syncellus says that she married a Roman senator, and had children by him. A Latin inscription at Palmyra, copied by Wood and Dawkins, shows that the place was garrisoned by the Romans under Diocletian, who built or restored several edifices. Justinian is mentioned by Procopius as having fortified Palmyra and placed a garrison in it. The Moslems took it under the kalifate of Abu Bekr, Mohammed's successor. (Ockley, 'History of the Saracens.') We hear no more of Palmyra after this till the 12th century, when Benjamin of Tudela visited it. He says it was encompassed by a wall, and that there were in it 4000 Jews. Among them Isaac, surnamed Græcus, and Nathan and Uziel, have the pre-eminence. (Purchas, ix., ch. 5.) The latest historical notice of Palmyra is its plunder in 1400 by the army of Tamerlane. It has been in a ruined and desolate state for centuries past, and the spot is inhabited by a small tribe of Beduin Arabs, who have built their hovels in the peristyle of the great temple.

The first appearance of Palmyra is very striking. Its innumerable columns and other ruins, extending nearly a mile and a half in length, and unobstructed by modern buildings, contrast by their snow-white appearance with the yellowish sand of the desert. But, examined separately, few of these remains can be called beautiful as works of art. The largest columns do not exceed 4 feet in diameter and 40 feet in height. There is a great sameness in the architecture, all the columns being Corinthian, with the exception of those which surround the Temple of the Sun, which are Ionic and fluted. (Irby and Mangley, 'Travels in Syria, &c. in 1817-18.') The most interesting remains of Palmyra are perhaps its sepulchres, which are outside of the walls of the ancient city, and are built in the shape of square towers, from three to five stories high, each forming a sepulchral chamber, with recesses divided into four or five compartments for the reception of the dead bodies. Some of the chambers are ornamented with sculptures and fluted Corinthian pilasters, and the walls are stuccoed white. The ceiling, on which the paint is still perfect, is ornamented like that of the peristyle of the Temple of the Sun at Baalbec, with the heads of various deities disposed in diamond-shaped divisions. Remains of mummies and mummy-cloths are found resembling those of Egypt. The lines of the streets and the foundations of the houses are distinguishable in some places. Small rows of columns denote the areas of the open courts of private houses, as at Pompeii. The inscriptions found at Palmyra are either Greek or Palmyrene, with the exception of one in Hebrew, and one or two in Latin. On the inscriptions of Palmyra see the work 'Inscriptiones Græcæ Palmyrenorum cum Annotationibus Edw. Bernardi et Thomæ Smithi,' Utrecht, 1698, and that of the orientalist Father Giorgi, 'De Inscriptionibus Palmyrenis quæ in Museo Capitolino adservantur Interpretandi Epistola,' Rome, 1782. Giorgi makes out a Palmyrene alphabet, which Barthélemy had attempted to do before him, but not successfully. The ancient commerce of Palmyra has been discussed by Heeren. Wood and Dawkins visited Palmyra about the middle of the last century, and published a description of its remains, with plates, folio, London, 1758. Since that time Volney, Cassas, Bankes, Irby, and other travellers have visited the same.

PALOS. [SEVILLA.]

PAMIERS. [ARIEGE.]

PAMPHY'LIA, a province of Asia Minor, formerly called Mopsopia according to Pliny ('Hist. Nat.,' v. 26), extended along the coast of the Mediterranean from Olbia to Ptolemais (a distance of 640 stadia according to Strabo, xiv., p. 667): it was bounded on the north by Pisidia, on the west by Lycia and the south-western part of Phrygia, and on the east by Cilicia. Pamphylia was separated from Pisidia by Mount Taurus, and was drained by numerous streams which flowed from the high land of Pisidia. The eastern part of the coast is described by Captain Beaufort as flat, sandy, and dreary, but this remark does not apply to the interior of the country, which, according to Mr. Fellows's account ('Excursion in Asia Minor,' p. 204), is very beautiful and picturesque. The western part of the coast is surrounded by lofty mountains, which rise from the sea and attain the greatest height in Mount Solyra on the eastern borders of Lycia. The western part of the country is composed, according to Mr. Fellows, "for thirty or forty miles, of a mass of incrustated or petrified vegetable matter, lying embosomed as it were in the side of the high range of marble mountains which must originally have formed the coast of this country. As the streams, and indeed large rivers, which flow from the mountains, enter the country formed of this porous mass, they almost totally disappear beneath it; a few little streams only are kept on the surface by artificial means, for the purpose of supplying aqueducts and mills, and being carried along the plain fall over the cliffs into the sea. The course of the rivers beneath these deposited plains is continued to their termination at a short distance out at sea, where the waters of

the rivers rise abundantly all along the coast, sometimes at the distance of a quarter of a mile from the shore."

The Pamphylians, according to Herodotus (vii. 91), were descendants of the people who followed the fortunes of Amphilocheus and Calchas after the destruction of Troy. They were subdued by Croesus (Herod., i. 28), and afterwards formed part of the Persian empire, and supplied Xerxes with thirty ships in his expedition against Greece (Herod., vii. 91). Under the Syrian kings it formed a separate province, including Pisidia; and the same appears to have been the case under the Roman empire, though it seems to have been sometimes united to the province of Galatia. (Tac., 'Hist.,' ii. 9.)

Though Pamphylia was of small extent, it contained several towns of considerable importance. Attalia, the modern Adalia, and Perge were visited by St. Paul (Acts, xiii. and xiv). Mr. Fellows, who visited Adalia in 1838, speaks of it as a small but clean town, built on a cliff which rises sixty or eighty feet above the sea, and informs us that it contains numerous fragments of ancient buildings, columns, inscriptions, and statues, which are generally built into the walls of the town with care and some taste. East of Attalia was Perge, in the neighbourhood of which was a celebrated temple of the Pergæan Artemis. Perge was situated between and upon the sides of two hills, with an extensive valley in front, and backed by the mountains of the Taurus. It contains several ancient ruins, of which the principal are—a large theatre, of the width of 330 feet, a stadium, or course for races, and two or three temples. At Side, beyond the Melas, there are some ruins, among them a large theatre, described both by Captain Beaufort and by Mr. Fellows. There were some other towns, of which the site even is in most cases doubtful.

PAMPLONA. [NAVARRA.]

PANAMÁ, THE ISTHMUS OF (*New Granada*), constitutes the most eastern and the narrowest portion of the long isthmus by which the two Americas are united. It extends, together with the province of Veragua, which is contiguous to it on the west, from 77° to 83° W. long., between 7° 20' and 10° N. lat. When measured along its curve the length from east to west is nearly 500 miles, but its width varies from 30 to 100 miles. Its area is nearly 30,000 square miles. The population was in 1853 estimated at about 140,000, of whom about 8000 were Americans, settlers, &c.; 14,000 descendants of Spanish colonists; and the remainder metis, mulattoes, negroes, and native Indians.

Surface, Soil, Climate, &c.—It was formerly assumed in geographical works that the Andes of South America extended through the Isthmus, but this is now ascertained not to be the fact. [ANDES.] West of 77° 30' W. long. no range of mountains, nor even an isolated elevation of moderate height occurs, and the whole isthmus throughout has a summit level comparatively little elevated above the sea, though the surface of the country is a good deal broken. The low country extends westward for more than a hundred miles to the western extremity of Mandingo, or San Blas Bay. The average width of this part of the isthmus does not exceed forty miles, and opposite San Blas it contracts to less than thirty miles. The shores on both oceans are rocky, and the whole region appears to consist of an immense mass of rock. The rocks however are covered by a thick layer of vegetable mould, and are clothed with lofty forest-trees. The shores of the Caribbean Sea are difficult of access for large vessels, being lined with numerous small rocky islands called 'keys.' Two rivers drain the isthmus. They are called respectively Chucunaque and Chepo, and rise near 78° 30' W. long. The *Chucunaque* runs east-south-east about eighty miles, and turning west by an abrupt bend falls into the Bay of San Miguel; the *Chepo*, or *Ballano*, runs west-north-west, and empties itself into the Gulf of Panamá, about twenty-four miles east of the town of Chepo, making a turn to the south. Both rivers are navigable for large river barges as far as the places where the great bend occurs. With all the advantages which this region possesses from its great fertility and the vicinity of two great oceans and navigable rivers, it is thinly inhabited, and chiefly by a tribe of Indians, the Mandingoes, or San Blas Indians, who resist all attempts to penetrate into the interior, though they receive in a friendly manner the vessels which visit the coast. The small town of Chepo, above the bend of the river of that name, is the most considerable settlement of the whites and negroes, but the inhabitants have little communication with their neighbours the Mandingoes. The country appears to be very unhealthy, owing to the swampiness of the soil and the consequent humidity of the atmosphere. This moisture of the air indeed maintains a most luxuriant vegetation, but the great quantity of vegetable matter, which is annually reproduced and decomposed, increases the miasma which exhales from a swampy soil under the influence of a vertical sun.

At the western extremity of Mandingo Bay some hills commence, which gradually attain the elevation of mountains, and extend in a continuous chain as far west as a line drawn across the isthmus from Navy Bay, or Port Limones, to the town of Panamá, a distance of about fifty miles. These hills advance close to the shores of the Caribbean Sea, where they surround the town of Puerto Vela, but they remain a few miles distant from the Pacific, and are separated from it by a level prairie destitute of trees. They occupy nearly the whole width of the isthmus, but are divided longitudinally into two ridges, between which lies the valley of the river Chagres. The southern ridge does not exceed 1000 or 1100 feet in height, but the

northern rises much higher. These hills are generally covered with thick and almost impenetrable forests. The valley of the Chagres is rather narrow, but the river itself is navigable to a considerable extent. [CHAGRES.] The climate in this portion of the isthmus differs considerably in the north and in the south. At Puerto Velo, on the northern coast, the rains are almost continuous, and generally descend in torrents, a circumstance which renders that place very unhealthy. At Panamá and in the valley of the Chagres the seasons are pretty regular. From December to March inclusive rain scarcely ever falls. From April to June showers occur at regular intervals. As the season advances the rain increases, and is incessant during July, August, September, and October. In November the nights are always rainy and cloudy, but during the days the sky begins to break. At Panamá the thermometer in the rainy season is 82° during the night and 87° during the day. In the dry season the temperature rises to 90° and even 93° in the day-time, and the days are very sultry; but the land-winds at night are cool, coming chiefly from the adjacent mountains.

West of the vicinity of Panamá to the Gulf of Parita the country exhibits different natural features. It is, properly speaking, a plain which rises from both oceans with a very gentle ascent towards the middle of the isthmus. In the northern part numerous isolated hills however, rising from 300 to 500 feet above their base, are dispersed over the surface of this plain. In the middle of the region merely a few isolated ridges of hills of inconsiderable height occur. The hills are generally covered with trees, but the plains and low grounds which surround them are savannahs, or prairies, destitute of trees, but covered with grass, which supplies pasture to numerous herds of cattle and horses. Though the vegetation of this region is generally much less vigorous than in the country farther east, there are several cultivated tracts and others which may be cultivated. The climate also is more healthy. The principal rivers of this region are the Trinidad and the Caymito, or Chorrera. The Trinidad enters the Chagres about twenty-four miles from its mouth, after a course of about sixty miles. It rises near the south coast, not far from the town of Chorrera, and is navigable in the greatest part of its course as far up as the town of Capua. The Caymito, or Chorrera, is formed by several petty streams which descend from the eastern declivity of the table-land of Veragua, and though its course is short, it is navigable to the town of Chorrera. There is a harbour at its mouth, but the anchorage is bad and exposed.

West of this region is the table-land (mesa) of Veragua. Its eastern ascent is formed by lofty mountains which rise abruptly, and frequently exhibit an almost perpendicular face of bare rock. The surface of the table-land itself is very uneven, and several summits on it rise to a great height. The Peak de Veragua is stated to attain nearly 9000 feet. In some places however there are plains of considerable extent. The general elevation of this table-land appears to be at least 3000 feet above the sea. It approaches the Caribbean Sea within a few miles, and is separated from it by a narrow and slightly hilly tract. But on the side of the Pacific the mountains approach close to the sea, and between the Gulf of Parita and the Bay of Montijo project in a wide and mountainous peninsula into the Pacific. This peninsula terminates in the capes called Punta Mala and Punta Mariata. Little is known of the interior, but it is more populous than the lower part of the isthmus, and is probably favourable to agriculture and to the health of the inhabitants. The rivers which descend from this table-land are interrupted by rapids and cataracts, and bring down great quantities of earthy matter, which they deposit at their mouths. All these rivers accordingly have a bar, with a very few feet of water on it, which renders them incapable of receiving vessels above 100 tons burden.

The most western portion of the Isthmus of Panamá begins at the western declivity of the table-land of Veragua, and extends to the boundary line of Costa Rica. The northern part is occupied by the Chiriqui Lagoon, a sheet of water above ninety miles in length from east to west, and on an average twenty miles wide. It is separated from the Caribbean Sea by a series of low, swampy, and wooded islands, between which there are three deep passages for vessels. The middle portion of the lagoon is occupied by low woody islands, but at each extremity a considerable space is free from islands, and affords excellent anchorage, as the lagoon is deep, and the swell of the Caribbean Sea is broken by the intervening islands. The country contiguous to the southern shores of the lagoon, for a distance of about twenty miles, is low and swampy, the soil being covered with a thick layer of alluvium produced by the annual inundations during the rainy season. At the back of this low tract, which is generally wooded, the country rises, and though it contains plains of some extent, it continues to rise gradually for forty or fifty miles from the lagoon, where it is bordered by a continuous ridge of high ground. This chain, which is called the Cabecaras Mountains, rises above 4000 feet above the sea, but it is of very inconsiderable width. The southern slope of this ridge is much more rapid, occupying only about ten miles in width, and terminating on the Pacific in tolerably level tracts, which however are many feet above the level of the sea. The whole country north of the Cabecaras Mountains is a continuous forest of lofty trees, but along the Pacific there are several woodless tracts. It is only in the last-mentioned district that the whites have formed a few establishments, the extensive country north of the Cabecaras Mountains being in possession of the native tribes, especially the

Valientes. This may be attributed to the climate, which on the coast of the Pacific resembles that of Panamá, being subject to regular changes of the seasons, and therefore healthy. But the low country about the Lagoon of Chiriqui is drenched with rain nearly all the year round: the more elevated tract however between it and the Cabecaras Mountains has more regular weather, and is considered tolerably healthy. The numerous rivers which run from the northern slope of the mountains into the Chiriqui Lagoon are impeded by many rapids and cataracts until they reach the low country, where their course is gentle, and where they may be navigated by large boats; but they have bars across their mouths, with little water on them.

The coast along the Caribbean Sea from the Bay of Candelaria to the Bay of Mandingo, does not present a single harbour for large vessels. It is lined by a continuous series of small keys, or rocky islands, lying from half a mile to a mile from the continent. The inner passage thus formed is full of coral rocks and reefs, but the water is so clear that they are easily seen and avoided in the day-time, and it affords a safe anchorage during the prevalence of the north-western winds (from December to April), as the swell of the sea is broken by the islands. The first harbour which occurs on this coast is that of Puerto Billo, or Velo, which is about 2 miles long, and on an average 1000 yards wide. It is of considerable depth, and, being surrounded by high hills and mountains, affords excellent and safe anchorage for vessels; but though it once was a place of great trade, it is now rarely visited, on account of its excessive unhealthiness. About 20 miles farther west is the Bay of Limones, or Puerto de Naos, now best known as NAVY BAY, which has an entrance 5 miles wide, free from danger, is several miles deep, and affords secure anchorage for 300 vessels. A few miles farther west is the deserted harbour of CHAGRES. Farther westward there is no harbour, except those afforded by the Chiriqui Lagoon.

The harbours on the shores of the Pacific are all within the Gulf of Panamá. The opening of this Gulf is between Punta Francisco Salano on the continent of South America and Punta Mala, where it is about 150 miles wide, which breadth it preserves for about 10 miles northward, when it begins to contract. In the northern and narrower portion of the gulf there is a group of islands, called Archipelago de las Perlas, on account of the pearls which were formerly procured in the adjacent sea in great abundance, and still are obtained to a considerable amount. The largest of these islands, called Isla del Rey, rises to a considerable elevation. Most of the rivers which fall into the gulf admit vessels of considerable burden. They have indeed bars across their mouths, on which there is rarely more than 2 feet of water at low tides, but as the tides here rise 18 feet, the bars may be passed at high-water, and inside of them the harbours are deep. The rivers most visited by vessels are the Pacora, about 18 miles east of the town of Panamá, and the Rio Grande, which enters the sea about 2 miles west of that town.

Great additional interest has been imparted to Panamá by the construction across the Isthmus of the railway connecting the coasts of the Atlantic and Pacific Oceans. The great commercial advantages likely to be afforded by a ship canal, which should connect the two oceans, and so shorten the voyage from the ports of Europe and the United States to the ports on the Pacific, China, &c., early directed attention to the narrow neck of land which connects North and South America. The Isthmus of Panamá was one of the first places which suggested itself, but the belief that it was traversed by the chain of the Andes, seemed to interpose an almost insuperable obstacle to such a work. Humboldt, as may be remembered, suggested the Gulf of Darien as the most likely place; while others looked rather to the west, and saw in the Lake of Nicaragua and the Rio de San Juan a line marked out as it were by nature for the purpose. In 1827 however, Bolivar, president of the republic of Columbia (of which Panamá then formed a department), directed Mr. Lloyd, an English engineer, to survey the country, not apparently for the purpose of forming a canal, but with a view of improving the communication across the Isthmus. His report showed how difficult the formation of a ship canal would be, but he pointed out how excellent a harbour was the unfrequented Bay of Limones, or Navy Bay, a few miles east of Chagres, and how readily a short canal might be cut through the low country from it to the navigable river Chagres. That river would then be ascended to its junction with the Trinidad River, and the latter to a place which appeared well adapted for the formation of wharfs and landing places, thence he proposed to form a railway to Panamá or Chorrera. Subsequent events destroyed all hope of any such scheme being carried out by the government, while however feasible it might appear, it hardly presented sufficient promise of success as a commercial enterprise to induce foreign capitalists to undertake its execution. But the remarkable discoveries of gold first in California and subsequently in Australia, again called attention to the subject, and the project of an Atlantic and Pacific Canal or railway was eagerly canvassed. Mr. Lloyd's survey was remembered and its general correctness verified; but as rapidity of transit was now the chief desideratum a company was formed in New York for constructing a railway quite across the Isthmus and nearly over the route which he had indicated; and American and English capital was freely embarked in the undertaking. A town named Aspinwall was founded in NAVY BAY, and this was made the starting point of the railway on

the Atlantic side: its Pacific terminus was fixed at Panamá. The works were commenced in 1850, but their progress was greatly impeded by the difficult character of the country through which much of the line passes, and the insecurity of life and property owing to the revolution in New Granada. [NEW GRANADA.] But the enterprise was conducted with energy and perseverance, and all difficulties were overcome. The first section was opened in 1850; a second portion in 1852; at the close of 1853 about 38 miles were in operation; and by the end of 1854 the whole was completed. The line was formally opened for traffic on the 28th of January, 1855. Its entire length is about 50 miles; the summit level is only 250 feet above the level of the sea; and the entire cost has been about 1,400,000.

Productions.—This isthmus is very rich in vegetable productions, especially in trees, useful as timber, dye-woods, or for cabinet-work, and domestic purposes. Some of them bear eatable fruits. It also produces all the fruits and esculent vegetables cultivated in other intertropical countries. The cultivated grains are rice and maize. The sugar-cane is grown, but not extensively. Coffee and cacao are cultivated for domestic consumption; and some cacao is exported. The caoutchouc-tree, milk-tree (Palo de Vaca), sarsaparilla, and vanilla plant grow in the woods. The *Styrax officinalis* is very abundant, and its gum sells very dear. Cattle, horses, and mules are reared in those districts where there are natural prairies or savannahs. The woods are inhabited by numerous wild animals: tiger-cats, which seldom exceed the size of a small Newfoundland dog; lions, bears, racoons; sajinos, or a species of wild boar, deer, conejos, which are somewhat like our rabbits, but larger; hosts of monkeys; wild turkeys, both black and coloured, and many other birds. The sea abounds with fish, especially sharks, which are eaten, alligators, and turtle. There are gold-mines in the mountains near Puerto Velo, but their produce is insignificant. Gold is also said to be found on the northern declivity of the table-land of Veragua, and in the country of the Valientes. Copper and iron are abundant, and tin and mercury are stated to occur.

The Isthmus formerly constituted one of the departments of the republic of New Granada, that of Istmo, but is now included within the department of Cauca. [NEW GRANADA.] The towns are principally of small size.

Panamá, the principal town, stands on a tongue of land which extends a considerable distance into the Gulf of Panamá, in 8° 57' N. lat., 79° 29' W. long.: the population is about 10,000. The principal streets extend across the peninsula. The houses are of stone, generally two or three stories high, substantially built, and the larger houses have courts, or patios. The public edifices are, a fine cathedral, four convents, a nunnery, and a college. As the sloping shores contiguous to the ground on which the town stands are dry at low-water to a considerable distance, the anchorage is 6 or 7 miles distant, where it is protected by a number of islands, the largest of which is called Perico, a name which is also applied to the harbour. These islands are high and well cultivated, and supplies of ordinary kinds, including excellent water, may be obtained from most of them. Panamá since becoming the port for the traffic with California has greatly increased in importance as a place of trade; its commercial intercourse previously was for the most part with the ports of South America and especially with Guayaquil.

Aspinwall and **Chagres** are noticed under NAVY BAY and CHAGRES.

On the isthmus, west of Panamá, there are several towns of some local importance. **Chorrera**, on the Caymito or Chorrera, at its outfall in the Gulf of Panamá, has 3000 inhabitants; **Natá**, on Parita Bay, has a population of 4000; and **Los Santos**, on the south-western side of the Gulf of Panamá, about 3500 inhabitants. Neither of these places has a harbour. In the province of Veragua, the capital, **Santiago de Veragua**, in the interior, has about 4000 inhabitants; the town of **La Mesa**, 4000; and **Santiago de Alange**, 2000.

Inhabitants.—A great portion of the isthmus, perhaps one-third, is still in the exclusive possession of the aborigines. These tribes occupy both extremities of the isthmus. Nearly the whole of the isthmus east of the Bay of Mandingo is inhabited by several small tribes, comprehended under the collective appellation of Mandingo or San Blas Indians. They are an active hardy race of people, very jealous of their independence, and hostile to the whites who have settled near them. They cultivate plantains, bananas, maize, and mandioc. They also rear many fowls. The adjacent sea and the rivers abound in fish and turtle, and the forests in eatable animals. The western portion of the isthmus, which surrounds the Chiriqui Lagoon, is inhabited by the Valientes, a collective name given by the Spaniards to different tribes inhabiting that part of the country. They are much taller than the Mandingo Indians, and seem to have made greater progress in civilisation. Their extensive plain-grounds, maize-fields, and mandioc-plantations exhibit a great deal of industry and care; and among other things they plant the cacao-tree, the produce of which is extensively used.

The countries inhabited by the Mandingo and Valientes Indians are annually visited by vessels from Jamaica and elsewhere, which export considerable quantities of tortoiseshell, sarsaparilla, and fustic, and also some cacao; they import manufactured cotton goods, outlass-blades, and a variety of toys and small articles. The port of Chagres was formerly visited by European and American vessels, but it is now

abandoned for Navy Bay. There is a considerable trade carried on there and at Panamá, and large quantities of the manufactured goods of Europe and America, with sugar, wine, &c., are imported; but the articles of export are of little comparative value. The transit trade is of great and growing importance, and will no doubt in a short time produce marked changes in the country.

PANARIA. [LIPARI ISLANDS.]

PANAY. [PHILIPPINE ISLANDS.]

PANEAS, or **BANIAS**, a village of Palestine, situated at the foot of the Jebel Heish, the Mount Hermon of Scripture, is supposed to be on or near the site of the Dan of the Jews. Its name was changed to *Cæsarea Philippi* by Philip the Tetrarch, son of Herod, in honour of the emperor Tiberius and himself. The village contains only about 150 houses, inhabited by Turks, Greeks, Druzes, and Arabs. It stands on a triangular-shaped piece of ground inclosed by the river of Banias and the Jordan, and backed by the mountains at the foot of which, to the north-east of the village, the river of Banias takes its rise in a spacious cavern beneath a precipitous rock. This precipice has several niches, in one of which the base of a statue still remains; and each of them had an inscription in Greek characters, which are now so nearly effaced as to be unintelligible. The cavern and Paneium, or sanctuary of Pan, within it, are described by Josephus ('Jewish War,' iii. 10-7), from whom it appears that the fountain or spring was considered as the source of the Jordan, and the outlet of the small lake Phiala. Around the spring are great quantities of large hewn stones, which probably belonged to the Temple of Augustus, built by Herod. Philip also added greatly to the town; indeed Josephus (ii. 9, 1) calls him the founder of Cæsarea in Banias.

Although these springs are by far the most copious they are not the most distant from the Dead Sea, and cannot be considered as the true source of the Jordan, which may be placed at about 4 miles N.E. of Banias, near the foot of a hill called Tel-el-Kadi. [PALESTINE.]

The river of Banias flows on the north side of the village, where there is a well-built bridge, and some remains of the ancient town; but the principal part of the old town appears to have stood on the opposite side of the river, where the ruins extend nearly a mile from the bridge. No walls remain, but great quantities of stone and architectural fragments are scattered about; there are also some granite columns entire. On the south side of the village are the ruins of a very strong turreted castle, surrounded by a ditch and wall; and about four miles to the eastward of the village, on an eminence, are the ruins of another castle, once evidently a strong fortress, and apparently coeval with that in the village. It is surrounded by a wall ten feet thick, and flanked with numerous round towers built with equal blocks of stone about two feet square, and has only one gate on the south side. This castle, which is called the Castle of Banias, contains the ruins of many private habitations; and at both western corners there is a succession of strongly-built low apartments like cells, dark, vaulted, and provided with loop-holes for musketry; there are also four wells in this castle full of water. Banias is about 23 miles E. by N. from Tyre.

(Burckhardt, *Travels in Syria*; Pococke, *Description of the East*; Seetzen, *Travels*; Mangles and Irby; Pliny, v. 15.)

PANGUTURAN. [SOOLOO ARCHIPELAGO.]

PANGBOURN. [BERKSHIRE.]

PANJAB. [HINDUSTAN.]

PANNAIR, RIVER. [HINDUSTAN.]

PANNO'NIA, the name of a province of the Roman empire, was bounded N. and E. by the Danube, S. by Illyricum and Mœsia, and W. by Noricum. It was separated from Mœsia by the Savus (Save), and from Illyricum by an imaginary line drawn a few miles south of the Save; but the boundaries between Noricum and Pannonia differed at various times. Pannonia would thus correspond to Sclavonia, parts of Hungary, Lower Austria, Styria, Croatia, and to those parts of Turkish Croatia, Bosnia, and Servia which immediately touch upon the Sava.

The Pannonians belonged to the Celtic, or perhaps the Germanic race. They were first attacked by Augustus, B.C. 35 (Dion Cass. xlix. 36, 37; Liv., 'Ep,' 181), and were subdued during his reign by Tiberius, and reduced to the form of a province. (Vell. Pat., ii. 110, et seq.) We learn from Tacitus ('Ann.,' i. 16), that at the death of Augustus there were several legions stationed in Pannonia, which was then regarded, and continued to be so till the end of the Roman empire, as one of the most important provinces of the empire, on account of its bordering on the powerful nations of the Quadi and Iazyges.

Under the early Roman emperors Pannonia only formed one province; it was afterwards divided, but at what time is uncertain, into two provinces—Pannonia Superior and Pannonia Inferior; the former comprising the western and the latter the eastern part of the original province. A new division of the provinces was made by the emperor Galerius, by whom Pannonia was divided into three provinces, which division appears to have continued till the downfall of the Roman empire.

The principal rivers of Pannonia were the Narabo or Arrabo (Raab), the Dravus (Drave), and Savus (Save), all of which flow into the Danube. The two most important ranges of mountains were the Pannonii Montes, a continuation of the Sarmatian range, which passed through the northern part of the province in a south-westerly direc-

tion, and joined Mount Cotius; and the Claudii Montes, which separated the valleys of the Save and the Drava.

Very little is known of the position of the different tribes which inhabited Pannonia. The powerful nation of the Boii dwelt in the north-western part of the province; and after their extermination by the Getae that part of the province was called Deserta Boiorum. (Pliny, iii. 27.)

Pannonia possessed several towns of importance, the inhabitants of which appear to have principally depended for their support upon the numerous legions which were quartered in different parts of the province. Following the course of the Danube, the first town we come to after leaving Noricum is Vindobona (Vienna), called Vianiomina by Pliny (iii. 27), who places it in Noricum. At the time of Ptolemaeus it was called Juliobona, and was the station of a legion. It is called by most later writers Vindobona; but in the 'Notitia Imperii' it is written Vindomana. The next town of importance below Vindobona on the Danube is Carnuntum, which, in the early part of the Roman empire, was the most important place in the north of Pannonia. The amber which was collected in the northern part of Europe was brought to this town, and thence conveyed to the different parts of the Roman empire. It was the head-quarters of the army of Marcus Antoninus in the war which he carried on with the Marcomanni. (Eutrop. viii. 6.) Its ruins are in the neighbourhood of Altenburg. Below Carnuntum on the Danube was Brigantium or Bragetium (Fusto), called by Ammianus Marcellinus (xxx. 6), Bregetio, the station of a Roman legion, where the emperor Valentinian died, while making preparations for a war against the Quadi. Following the course of the Danube, we next come to Aquincum or Acincum (Buda or Ofen), the principal town in the province of Valeria and the station of a legion. South of Acincum on the Danube, in the province of Savia, was Milatae or Milatia, afterwards called Bononia (Amm. Marc. xxi. 9; xxxi. 11); and below it were Acumincum or Aciminum (Peterwardein), and Taurunum (Semlin), the most easterly town in the province, near the confluence of the Save and the Danube.

The most important towns in the southern part of the province were Siscia (Sziasek), Cibale or Cibalis (Palaaha), and Sirmium (Schabacs), all on the Save. Siscia, which was upon the borders of Illyricum, was the most important town in Pannonia in the time of Augustus. Cibale or Cibalis was situated at a considerable distance below Siscia. It was memorable for the defeat of Licinianus by Constantine, and was the birthplace of the emperor Gratianus. (Amm. Marc. xxx. 24.) Sirmium, which was below Cibalis, was, under the later Roman emperors, the principal town of Pannonia.

On the Drave, near the confines of Noricum, was Petovio or Pstovio (Pettau), which is mentioned by Tacitus ('Hist.' iii. 1) as the winter-quarters of the 18th legion. Below Petovio, on the Save, were Jovia (Semevecs), and Mursia (Esseg), a colony founded by Hadrian. (Steph. Byz.) At Mursia the fleet of the Lower Danube was stationed, and near it Magnentius was defeated by Constantius. (Zonimus, i. 43.)

The only town of importance in the north-western part of the province was Sabaria (Steinamanger), a Roman colony founded by the emperor Claudius. (Pliny, iii. 27.)

PANORMUS. [PALERMO.]
PANTAI, RIVER. [BORNEO.]
PANTICOSA. [ARAGON.]
PAOLA. [CALABRIA.]

PAPAL STATES, called also *States of the Church*, is the name given to the dominions belonging to the See of Rome, of which the Pope is the monarch. This state occupies the central part of Italy stretching across the Peninsula in an oblique direction from the Mediterranean to the Adriatic. Its greatest length, from north to south, from the mouth of the Po at Goro to Monte Circeo, which is the most southern point, is about 260 miles. The breadth is very unequal. For a length of about 80 miles the southern part of the Papal States between the Neapolitan territory of Abruzzo and the Mediterranean has a width of only about 50 miles. For a few miles to the north of Rieti the width is greatest, extending from the Mediterranean to the Adriatic 130 miles; but in consequence of the projection of Tuscany eastward it grows rapidly narrower towards the north, so that in the latitude of Rimini the breadth is hardly 20 miles. Farther north the width is about 60 miles, from east to west, between the Adriatic to the frontier of Modena. The area of the States of the Church, exclusive of 484 square miles covered with water, roads, and buildings, is 15,881 square miles, and the population in 1850 numbered 3,006,771, besides about 10,000 Jews.

The northern provinces stretch from the Tuscan Apennines to the Po and the Adriatic, the ground sloping to the north and north-east, and merging into the wide plain of Lombardy. These provinces are the four legations of Bologna, Ferrara, Ravenna, and Forli, and have a population of about 950,000 inhabitants. This part of the country resembles the rest of north Italy in its climate and soil. In ancient times it was out of the limits of Italia proper, and formed part of Cisalpine Gaul; and even now the inhabitants rather resemble their Lombard neighbours than their fellow subjects, from whom they are divided by offsets of the Apennines, which approach close to the Adriatic coast in the neighbourhood of Rimini, where the Rubicon constituted the political boundary of Italy proper in the time of the Roman republic.

The eastern provinces extend from Rimini to the Tronto on the frontier of Naples, a length of 110 miles along the coast of the Adriatic. This division is bounded to the west and south by the central ridge of the Apennines, which separates it from the basin of the Tiber. This eastern division lies almost entirely on the eastern slope of the Apennines, the numerous offsets of which run in parallel ridges in a north-east direction from the central chain to the Adriatic coast, forming many transverse valleys watered by streams or torrents which have a short but rapid course. The distance from the central ridge or watershed to the Adriatic varies from 30 to 40 miles. The country is fertile and healthy, and is inhabited by an industrious and lively race of people. It is generally designated by the name of the *Marches*, but is divided into the provinces of Pesaro e Urbino, Ancona, Macerata, Camerino, Fermo, and Ascoli.

The southern division and the largest in extent, though not so densely peopled as the other two, is the most important, because it contains the metropolis, and includes the classical land of Latium and the other provinces which formed the early territory of ancient Rome. It extends south of the central ridge of the Apennines as far as the coast of the Mediterranean, being bounded on the west by Tuscany and by the kingdom of Naples on the east. This fine region comprises the ancient territories of Umbria, the Sabini, old Latium, and the western part of Etruria, and is now divided into the administrative provinces of Perugia, Spoleto, Rieti, Orvieto, Viterbo, Velletri, Frosinone, Civita Vecchia, and Rome. This extensive country is divided, with respect to its climate and productions, into two parts—the high lands and the valleys of the Apennines, including the valley of the upper Tiber, which are well cultivated and generally healthy; and the low lands of the Campagna and some other spots around the lakes of Perugia, Bolsena, and Bracciano, which are unwholesome and thinly inhabited. [CAMPAGNA DI ROMA.] There are few regions in Italy finer than the broad valley of Fuligno and Spoleto, the valley of Terni, the elevated plain of Rieti, and the rich territory around Perugia.

The area and population are distributed as follows over 20 provinces, 6 of which, called Legations, are governed by a Cardinal legate, and 14, called Delegations, are administered by dignitaries of lower degree:—

Legations.	Area in Square Miles.	Population in 1850.
Roma-e-Comarca	1,699	304,266
Bologna	1,292	367,340
Ferrara	1,053	229,862
Forli	683	203,007
Ravenna	674	175,338
Urbina-e-Pesaro	1,358	241,612
Velletri	629	59,356
Delegations.		
Ancona	424	172,393
Macerata	861	239,942
Camerino	311	88,055
Fermo	817	111,751
Ascoli	460	87,619
Perugia	1,447	222,926
Spoleto	1,130	123,765
Rieti	513	77,212
Viterbo	1,083	129,074
Orvieto	301	26,450
Frosinone	720	148,378
Civita Vecchia	373	20,365
Benevento	68	23,640
Total	15,381	3,006,771

The established religion is the Roman Catholic. The population includes about 10,000 regular clergy or monks, 8000 nuns, and about 32,000 secular clergy.

The central ridge of the Apennines runs through the States of the Church in a south-south-east direction, dividing the waters that flow into the Adriatic from those that join the Tiber. The road from Rome to Pesaro by Nocera crosses the Apennines between Gualdo and Cagli. Farther south-east there is a depression between Serravalle and Foligno through which passes the high road from Rome to Loreto and Ancona. South of this pass the Apennines form a lofty group extending to the eastward, and known by the name of Monte Sibilla, the *Mons Tetricus* of the ancients, which is 7200 feet high, and is the highest summit in the Papal States. The ridge then joins the mountains of Abruzzo in the kingdom of Naples east of Norcia. Two offsets detach themselves from the main ridge above the sources of the Nera, and run south, skirting the two banks of that river as far as its junction with the Tiber. The more eastern offset is intersected by the Velino, which makes its way through it by a fine waterfall not far from Terni. The whole fall of the Velino, from the level of the water above the cascade to its confluence with the Nera through a succession of rapids, is above 1000 feet. The country eastward of the Nera consists of high lands, which adjoin those of Abruzzo, and are a most interesting region, but seldom visited by travellers.

The southern division of the Papal State chiefly consists of the basin of the Tiber. This river rises at the foot of Monte delle Balze, in a

deep dell of the Tuscan Apennines, about 20 miles E.S.E. from the source of the Arno. The Savio, which flows by Cesena to the Adriatic, has its sources on the north side of the same mountain. The Tiber rises from two springs of limpid water in a wood of beech-trees, and, being swelled by mountain streams, flows in a south direction through a narrow valley between high mountains. The river passes by the towns of Pieve Santo Stefano and Borgo San Sepolcro, after which it receives the river Sovara, and soon after leaves the Tuscan territory and enters the province of Perugia. It then flows by Castello, and after a rapid course of about 50 miles from its sources it reaches the foot of the hill upon which stands the town of Perugia: it then flows through a fertile valley, receiving on its left bank the united waters of the Chiascio from the mountains of Gubbio, the Topino from Foligno, and the Maroggia, joined by the Clitumnus, from the valley of Spoleto; and lower down, on its right bank, the river Nestore, which comes from Città della Pieve on the borders of Tuscany. The river then enters a narrow gorge between two rocky ridges, on one of which stands the town of Todi, the ancient Tudertum or Tutere, a city of the Umbri and afterwards of the Etruscans, which is more than 1000 feet above the sea. The bottom of the river here falls about 2 feet in every 1000 feet, and the bed being confined and partly encumbered by stones and gravel brought down from the mountains, the waters rise in flood times as high as 24 feet, but the river is very shallow in the dry season. The navigation of the river, which from Perugia to Todi is carried on merely by rafts, becomes here totally interrupted. The Tiber, after receiving the Naia and other mountain streams, issues out of the gorge at the rapids called Passo del Forello, after which it enters a broad valley. It receives near Ovieto the river Paglia from the mountains of Tuscany, which is swollen by the waters of part of the Chiana. The river now assumes a more regular and less rapid course, flowing in a deep bed, and inclining to the south-west. It receives the Vezza from Montefiascone, and lower down the Nera, the largest of its affluents, near the town of Orta. The whole course of the Tiber, from its sources to the confluence of the Nera, is about 110 miles. From this point the regular navigation of the Tiber begins: boats of various sizes, some of which are 60 feet long and of 50 tons burden, carry to Rome wine, corn, charcoal, wood, and other produce of the upper country. In ascending the river they are towed up by buffaloes.

The Nera, the ancient Nar, a considerable river, rises in the high Apennines above Norcia, and increased by its affluents the Corno, Velino, Salto, and Turano, flows through a deep valley, passes the towns of Terni and Narni, and, after a course of about 70 miles, enters the Tiber near Orta.

After the confluence of the Nera, the Tiber flows through a valley between the Sabine Mountains on one side and offsets of Monte Cimino on the other: it receives on its right bank the united waters of the Treia and the Ricano, after which the valley becomes contracted between Mount Soracte on the west and the mountains of Poggio Mirteto on the east. After this contraction, it opens into the wide undulating plain of the Campagna. Three miles above Rome the Tiber receives the Anio, or Teverone, from the eastern Apennines, which has a course of above 60 miles. The course of the Tiber, from the confluence of the Nera to Rome, is about 70 miles, in which distance the width of its bed varies from 160 to 500 feet, the depth from 8 to 22 feet, and the fall is about one foot in every 3000 feet. Boats are three days in coming down from Orta to Rome, but in summer the navigation is often interrupted, owing to the shallowness of the water in several places. Within the walls of Rome the Tiber is about 300 feet wide and from 12 to 18 feet in depth. The river is never fordable in or near Rome. During heavy rains and floods the waters sometimes have risen more than 30 feet above the ordinary level, overflowing the lower parts of the city, and occasioning considerable mischief. The maritime navigation begins below Rome: the Tiber, after being confined by the quays and buildings of the town, spreads out to the width of 500 feet, until its bifurcation at Capo due Rami, a distance of 18 miles from Rome. Thence one branch of the river runs south-west into the sea below Ostia, a distance of about 5 miles, but is rendered useless for purposes of navigation by the accumulation of sand at the mouth. The other branch, which was widened by Trajan, and has been improved at various times by the popes, in order to keep open the communication between Rome and the sea, runs west for about four miles and enters the sea at Fiumicino, where the entrance is secured by two piers. In winter time vessels of from 130 to 190 tons, besides smaller ones, ascend the river to Rome; in summer there is often not more than 9 or 10 feet of water on the bar. Steam-tugs ply on the Tiber below Rome. The dreary sandy tract between the two arms of the river is called *Isola Sacra*, or Holy Island.

The basin of the Tiber below Rome is bounded on one side by the Alban Mount, and on the other by the offsets of Monte Cimino, which surround the basin of the Lake of Bracciano, the waters of which enter the sea by the river Arno. The Tiber, below Rome, receives only some small streams, the principal of which is the Galera, on its right bank. The basins of the lakes of Bracciano and Bolsena, which are separate from that of the Tiber, constitute, together with the basin of the river Fiora, near the Tuscan border, the greater part of the Patrimonio di San Pietro. In the opposite or south-east direction, the Alban Mount separates the basin of the Tiber from that of the

Promptine marshes; and farther north the mountains of Palestrina separate the basin of the Tiber from that of the Liris, of which the Sacco is an affluent. The total length of the river with its windings is about 200 miles. The Tiber is the largest and most important river of the peninsular part of Italy. Its waters from Perugia downwards to the sea are muddy and yellowish. The current as it enters the Mediterranean retains its colour to a considerable distance from the shore, and contrasts with the generally blue tinge of the sea-water, with which it does not mix for some miles.

The population of the States of the Church is Roman Catholic, with the exception of about 10,000 Jews, who live in the chief towns. The provinces, as before stated, are governed by a cardinal or other church dignitary, who is assisted by a council of laymen. There is also in every province a provincial council for local and financial affairs, which assembles for a fortnight once a year under the presidency of the delegate, or legata. For this purpose the communes appoint electors, who assemble at the head-town of their respective districts, and there choose the deputies to the council. One-third of the council is changed every two years. Every delegation or province is divided into districts, and every district into communes. Each commune consists of a town or large village, with the territory and hamlets belonging to it. At the head of each district is a governor (appointed by the Pope), who is also judge in the first instance, and is subordinate to the delegate in his administrative but not in his judicial capacity.

Every commune has a council, consisting of 48 members in the head towns, of 36 or 24 in the smaller towns, and of 18 in villages which do not contain more than 1000 inhabitants. The members of the council are taken in equal proportions from two classes, nobles and citizens or farmers. The councils deliberate upon the affairs of their respective communes, and make out, in August every year, an estimate in which are specified the probable expenditure of the following year and the means for meeting it, including any local taxes required. This estimate is forwarded to the governor of the province, who examines it, and then forwards it to Rome, where it is approved or modified. The estimate is then returned to the commune and published, upon which it becomes law, and no magistrate can depart from its provisions. The communal council appoints yearly, by a majority of votes, the local magistrates, all the officers and other servants of the commune, the secretary, the communal attorney, the receiver, the surgeon and apothecary (who for a fixed salary is obliged to attend the poor inhabitants gratis), the schoolmaster, the local police, &c. The councils are always presided over by the gonfaloniere or by the governor in the head town of a district. This system of municipal administration is more favourable to the liberties of the people than is commonly supposed. The communal councils are in fact more independent of the central authority than those of France. The common lands were sold by Pius VII. in order to supply the urgent wants and exactions of the French military. The ordinary revenue of the communes is now derived from taxes levied upon provisions coming to market, like the French octroi; and the extraordinary deficiency is made up by a capitation tax and a tax upon cattle. The expenditure consists of administrative, judicial, and police salaries, the repairs of the roads, public buildings, fountains, &c., the emoluments of the communal surgeon and apothecary, schoolmaster, and preacher who comes during Lent and Advent to deliver sermons adapted to those epochs. In the larger towns there are schoolmistresses, called *Maestre Pie*, paid by the commune for the elementary teaching of girls. There is however no general system of elementary instruction, and the proportion of illiterate people in the Papal States is much greater than in Lombardy.

The universities are those of Rome, Bologna, Perugia, Ferrara, and Macerata. There are also numerous colleges or gymnasia in Rome and the chief towns of provinces. Females of the higher classes are chiefly educated in convents.

With regard to the central government it is an elective monarchy. The Pope for the time being is the absolute sovereign of the state; he is assisted by a council of ministers and a council of state, over each of which the cardinal secretary of state presides. Laymen are appointed members of each of these councils. The governor of Rome is under the authority of the secretary of state, but is vested with great discretionary powers as to the police of the capital and its territory. The congregation or board called *Sacra Consulta*, consisting of cardinals and prelates, superintends the administration of the provinces, and is also a court of appeal for criminal matters. The territory of the state is divided into three military divisions, with an inspector at the head of each; the head-quarters are Rome, Ancona, and Bologna. The army consisted of 17,865 men in 1854, including 5144 police-gendarmes and 1778 custom-house guards. Many of the soldiers in the service of the Pope are Swiss.

The judicial department consists of a judge, called *Prator*, for civil matters in the head town of every province; two courts of appeal, one at Rome and the other at Bologna; and a supreme court, called *La Segnatura*, which sits at Rome. The ecclesiastical courts in each diocese judge of suits between clerical persons, and also between laymen who agree to bring their disputes before these courts. For criminal matters, there is a court in every province, presided over by the delegate; and two courts of appeal, one at Rome and the other at Bologna. The great evils of the system are frequency of

imprisonment on suspicion, and delay of trial. The penalties are imprisonment and hard labour either for life or for a term of years. Capital executions are resorted to only in very aggravated cases. Tribunals of commerce are established at Rome, Bologna, Ancona, and some other of the principal towns.

The revenue, according to the budget for 1854, amounted to 11,432,450 Roman crowns (worth 4s. 6d. each); the expenditure in the same year was estimated at 13,032,046 crowns. The interest of the debt, and other charges connected with it, amounted in 1851 to 4,800,000 crowns. The principal sources of the revenue are direct taxes, which amount to 2,800,000 crowns; customs duties; salt and tobacco monopolies, which bring in above 5,000,000 crowns; stamps and registry duty; post-office; and the lottery.

Agriculture, which is in a backward state, is the chief occupation of the population. A great extent of land is used for pasturage. The exports are—cattle, wool, cheese, lambskins, tallow, hemp, oil, some silk, vitriol, sulphur, pozzolana, potash, and cream of tartar. The salt-pans of Cervia and Comacchio, near the Adriatic coast, supply most of the salt for the consumption of the country. Vitriol is found near Viterbo; alum at La Tolla, near Civita-Vecchia; sulphur near Rimini; and coal near Pesaro, and at Sogliano, near Forlì. Wood and charcoal are the only fuel used.

The manufactures of the Papal State are of more importance than is generally supposed. One of the principal and oldest branches is that of woollen cloths, which are made in various towns of the state, and chiefly supply the internal consumption, especially of common or coarse cloth. The silk manufacture is carried on at Rome and Bologna. Tanneries are established chiefly at Ancona, Bologna, Pesaro, and Sinigaglia. Other industrial products are—paper, hats, soap, glass; and some cotton goods are manufactured at Rome. There are iron-smelting furnaces at Bracciano, Canino, and Conca, and iron-works in various other places. Plate-glass is made at Poggio Mirteto. Cables and ropes are made in the northern provinces, and exported to Greece and the Ionian Islands. Other manufactures are—wax-candles, catgut, liquorice, and refined sugar. The exports in 1852 were valued at 10,474,012 scudi, including the articles above named, and works of art and antiquity, sculptures, paintings, medals, mosaic, &c. The imports in the same year amounted to 10,218,426 scudi: they consist chiefly of tobacco, raisins and other dried fruit, colonial produce, salt fish, iron, lead, besides manufactures of fine cloth, silks, cottons, hardware, and articles of luxury from France and England.

The maritime trade is carried on chiefly by foreigners. This is the branch of industry most neglected by the natives of the Papal State. The navigation returns of the two ports of Civita-Vecchia and Ancona for 1852 give the total number of entries at 2311. Of these 1080, carrying 67,096 tons, were native vessels; and 1231, with 187,728 tons, were foreign, chiefly Austrian, Neapolitan, Tuscan, and Genoese. The departures in the same year were 2292, including 1082 native and 1210 foreign vessels. Even the coasting trade and the fishing along the greater part of the coast are carried on in great measure by foreign boats. The Neapolitans fish all along the Mediterranean coast, and the Venetians along that of the Adriatic. The Neapolitans supply Rome with fish, the consumption of which is very great in Lent.

The principal agricultural products are—wheat, barley, rye, and maize, which are produced in great quantity in the northern and eastern provinces; rice is cultivated in the low grounds; oil, wine, generally of ordinary quality, but some better sorts are made in the Marches, and on the hills of Albano, Orvieto, and Montefiascone; pulse and vegetables of every kind; fruit, including lemons and oranges, and chestnuts; hemp and flax, silk, tobacco, and timber and wood for fuel. There are forests of oak, cork-trees, elm, ash, and pine. The principal forests are on the sides of the Apennines, on the Mounts Cimino and Albano, on parts of the Monti Lepini, and along the sea-coast of the Mediterranean. The pine-forest near Ravenna, along the Adriatic shore, has been noticed by Byron in 'Childe Harold,' canto iv.

Horned cattle, including buffaloes, are numerous and remarkably fine, especially in the province of Perugia, the Campagna of Rome, and in the province of Ferrara. Very good cheese and butter are made. The sheep are reckoned at 2,000,000. Much cheese is made of ewes' as well as goats' milk. Pigs are reared in great numbers. Wild boars are numerous in the Pomptine Marshes. The horses are reckoned at about 500,000 in the whole state. The lakes and rivers abound with fish.

History.—After the fall of the western empire, and the re-conquest of Italy by Belisarius and Narses, Rome and the adjoining territory were administered by an officer called prefect, appointed by the Byzantine emperor, and subordinate to the exarch of Ravenna. Rome retained its municipal government, and the bishop of Rome, styled 'Præsul,' was elected by the joint votes of the clergy, the senate, and the people, but was not consecrated until the choice was confirmed by the Eastern emperor. The see of Rome enjoyed large revenues and benefices, the gifts of various emperors, besides the gifts and bequests of private persons. The people of Rome, forsaken as it were by the Eastern emperors, accustomed themselves to look upon their bishop as their chief defender and protector. The popes were the chief means of preserving Rome from being occupied by the Longobards. The Romans and the Italians in general refused to submit to the edict of

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Leo, the Isaurian, against images; and after the emperor was condemned by Pope Gregory II. in the council of Rome, A.D. 726, they refused to pay the usual tribute to the Eastern empire. (Paulus Diaconus, iv. 49.)

Rome now governed itself as an independent commonwealth, having its senate, its consuls and tribunes, and forming alliances with the dukes of Benevento and Spoleto, and with the Longobards. The pope was generally the mediator of these transactions. As the good understanding between the Longobards and the Romans was not however of long duration, the popes turned for protection towards the west, where the Frankish monarchy had attained great extent and importance. Gregory III., Zacharias, and Stephen III., wrote repeatedly to Charles Martel and his successor Pepin in the name "of the senate and the people of Rome," who, having renounced their allegiance to the Eastern emperor, wished to place themselves under the powerful protection of the kings of the Franks. And when Astolphus, king of the Longobards, devastated the territory of Rome, Pepin repaired to Italy with an army, and, having defeated Astolphus, obliged him not only to respect the duchy of Rome, but to give up the exarchate of Ravenna and the Pentapolis, not to the Eastern emperor, their former possessor, but "to the Holy Church of God and the Roman republic." The following list of the towns included in this grant is given by Anastasius:—Ravenna, Rimini, Pesaro, Fano, Cesena, Sinigaglia, Jesi, Forlimpopoli, Forlì, Montefeltro, Castel Sussubio, Acerragio, Monte di Lucaro, Corra, Castel San Mariano, Bobbio, Urbino, Cagli, Lucuolo, Gubbio, and Comacchio. Astolphus sent the keys of these towns to be deposited on the altar of St. Peter at Rome, but he did not give up the towns, and the possession of the Church and the Roman republic was merely nominal. The popes complained repeatedly of the non-fulfilment of the act of donation.

Charlemagne, urged by the entreaties of Adrian I., having come to Italy, defeated Desiderius, successor of Astolphus, and overthrew the kingdom of the Longobards. He assumed the title of Patrician of the Romans, and he confirmed his father's donation, and gave to the See of Rome the rents and fees of extensive domains in the exarchate and Pentapolis and other provinces, but retained himself the regal rights. The temporal power of the popes in those times was very little, being restrained on one side by the republican spirit of the people, and on the other by the imperial power, which regained the ascendancy whenever the emperor visited Rome. During the struggle between Pope Gregory VII. and the emperor Henry IV., an important addition was made to the temporal claims of the see of Rome by the donation of the Countess Matilda, who added to her paternal fiefs in the Modenes, Parmesan, and Mantuan territories, the rich succession of Godfrey, marquis of Tuscany, second husband of her mother Beatrix. She twice made donation of her territories, first to Gregory VII. and afterwards to Pascal II., which last is in her will dated 1102. Henry V., in 1116, the year after Matilda's decease, took possession of the whole of her property; but Matilda's donation continued long after to furnish to the see of Rome claims over a considerable part of northern and central Italy.

Innocent III. on his accession found the imperial power asserted over all Italy by Henry VI., in his double capacity of king of Lombardy and king of Sicily. The emperor had distributed the domains of Matilda as fiefs among his generals. But after the death of Henry in 1197, and of his wife Constance in the following year, their infant son Frederick was left to the guardianship of Innocent, who availed himself of the opportunity to assert the claims of his see founded upon the donations of Pepin and Charlemagne and of Matilda. He took possession of Spoleto and the Marches, and the towns of those provinces willingly opened their gates and swore allegiance to the see of Rome, their municipal franchises being guaranteed to them at the same time. These towns were Spoleto, Foligno, Nocera, Perugia, Gubbio, Todi, Rieti, Assisi, Città di Castello, Ancona, Fermo, Camerino, Sinigaglia, Osimo, Fano, Jesi, and Pesaro.

Rome and its duchy were still governed as a republic; but the people becoming tired of their senate abolished it, and substituted, after the example of other Italian cities, a foreign elective magistrate, whom they styled 'the Senator,' and to whom they gave the powers till then enjoyed by the senate. Innocent III. did not alter the form of the municipal institutions of Rome, but by the form of the oath which the senator took, that magistrate bound himself "to maintain the Pontiff in possession of his see and of the regal rights which should belong to St. Peter's Church, &c.; and lastly to provide for the safety of the cardinals and their household in every part of Rome and its jurisdiction."

Pope Nicholas III., after settling the disputes between Charles of Anjou and the emperor Rudolph of Hapsburg, urged the latter to define by a charter the dominions of the Holy See, and to separate them for ever from those dependent on the empire, and he sent to Rudolph copies of the donations of former emperors. Rudolph, by letters patent dated May, 1278, recognised the States of the Church as extending from Radicofani to Ceperano, near the Liris, on the frontiers of Naples, and as including the duchy of Spoleto, the march of Ancona, the exarchate of Ravenna, the county of Bertinoro, Bologna, and some other places. At the same time Rudolph released the people of all those places from their oath of allegiance to the empire giving up all rights over them which might still remain in the imperial

crown, and acknowledging the sovereignty of the same to belong to the see of Rome. This charter was confirmed by the electors and princes of the empire. (Raynaldus, 'Annales.') Several of the towns thus ceded, as Bologna, Perugia, Ancona, had long governed themselves as republics, and were possessed of considerable territories; while others constituted hereditary principalities, and the transfer of allegiance from the empire to the church made no alteration in their political condition.

The removal of the papal see from Rome to Avignon, at the beginning of the 14th century, where it remained for seventy years, tended greatly to weaken the loose bond between it and the provinces above-named. Accordingly we find during that period a number of petty princes and tyrants settled in central Italy often at war either among themselves or against the Visconti of Milan. The distant popes from Avignon sent legates with some mercenary troops to support the Guelph party, and to assert the authority of the papal see, but the towns and lords of Romagna stood their ground against them. At Rome, Rienzo put himself at the head of a popular movement, drove away the Colonna and other turbulent nobles, and proclaimed the republic, of which he was named tribune by popular acclamation. He re-established order, exterminated the robbers, and obliged the neighbouring barons to swear to maintain the new order of things. But Rienzo soon became intoxicated with vanity and pride, disgusted the people, offended the barons, and at last the pope sent a legate to supersede him. After seven months' power Cola di Rienzo was obliged to run away from Rome, at the beginning of 1348, and being arrested was taken prisoner to Avignon. Innocent VI., in 1353, sent Cardinal Gil Albornoz, a Spanish noble, who had distinguished himself in the wars of Spain against the Moors, at the head of an expedition which had for its object the reconquest of the States of the Church, and gave him Cola di Rienzo to assist him by his influence with the Romans. Albornoz defeated Ordelaifi of Forli, Malatesta of Rimini, Vico of Viterbo, and other petty princes, and restored the Romagna, the Marches, and the Campagna to the allegiance of the papal see. Cola di Rienzo, whom the cardinal had sent to Rome to second his views, was murdered there in a popular tumult in October 1354.

The popes returned to fix their court at Rome in 1371, and the government then assumed a more regular form, occasionally interrupted however by insurrections of the people of Rome. A great part of the territory, especially north of the Apennines, continued in the hands of petty princes or tyrants. Alexander VI., in the year 1500, sent his son, Cesare Borgia, who extirpated the tyrants of the Marche. Julius II., the successor of Alexander VI., put himself at the head of an army, conquered Romagna, Bologna, and Perugia, and from that time the Papal State acquired its present compact form. Ferrara was annexed to it in 1507, the duchy of Urbino in 1632, after the death of the last duke Della Rovere without issue, and in 1650 the duchy of Castro and Ronciglione.

In 1797 Bonaparte detached the four legations, Bologna, Ferrara, Ravenna, and Forli, and annexed them to the Cisalpine republic. In 1798 the French troops invaded Rome and drove away the pope. In 1801 the pope was restored to Rome and its territory, except the legations. In 1808 Napoleon detached the Marche, which he annexed to his kingdom of Italy, and in 1809 he took possession of Rome and the southern part of the Papal State and annexed it to the French empire. In 1814 the pope was restored to his dominions. Soon after his accession the present reigning Pope Pius IX., after a series of liberal concessions to his subjects, appointed a ministry, at the head of which was Count Rossi, and granted a constitutional parliament, consisting of 99 members popularly elected. The democratic party however were still unsatisfied. Count Rossi was assassinated at the very entrance of the Chamber of Deputies (Nov. 15, 1848); a democratic ministry was forced upon the pope, who however seized the earliest opportunity (Nov. 25) to escape from Rome to Gaeta, where he placed himself under the protection of the king of Naples. A provisional junta was instituted in Rome, and a constituent assembly called, which proclaimed a republican form of government, and declared the pope divested of all temporal power (Feb. 8, 1849). Against this the pope protested, and appealed to the great Catholic powers for intervention in his behalf. The National Assembly of the French Republic, Spain, and Naples sent troops in support of the rights of the Holy See; the French army under General Oudinot commenced to besiege the Eternal City on the 23rd of June. After considerable resistance the city surrendered unconditionally on the 3rd of July; the French took possession of the city, and soon after proclaimed the authority of the pope, who however did not return to Rome till April 12, 1850. Whilst the French were putting down the republican spirit in Rome the Austrians were similarly occupied in the Legations and Marche, and with equal success.

PAPASQUIARO. [MAXICO.]

PAPENBURG, a flourishing little town of 3620 inhabitants, in the Hanoverian province of Osnabrück, is situated near the edge of the Saterland Moor, about seven miles from the right bank of the Ems, with which it is connected by a canal. The town contains two Roman Catholic churches, three schools, and between 400 and 500 houses. The inhabitants gain their livelihood chiefly by building small craft and by trade. Besides saw-mills, sail-cloth, and rope-factories, there are brandy-distilleries and lime-kilns: the quantity of peat dug on

the moors is very great, and it forms an important article of export to the ports of the Baltic and the North Sea.

PAPHLAGONIA, a province of Asia Minor, was bounded N. by the Euxine, S. by the part of Phrygia afterwards called Galatia, E. by Pontus, and W. by Bithynia. It was separated from Bithynia by the Parthenius, and from Pontus by the Halya. (Herod. i. 6, 72.)

Paphlagonia is described by Xenophon ('Anab.,' v. 6, a. 6) as a country having very beautiful plains and very high mountains. It is traversed by two chains of mountains, running parallel to one another from west to east. The higher and more southerly of these chains, called Olgassys by Ptolemy, is a continuation of the great mountain chain which extends from the Hellespont to Armenia. Strabo (xii. p. 561, 562) however appears to give the name of Olgassys to the chain of mountains in the northern part of Paphlagonia, on which the Paphlagonians had built many temples. The country between these two chains of mountains is drained by the Amnias (Kara-Su), which flows into the Halya. There were several small streams which flowed from the mountains in the north of Paphlagonia into the Euxine, but the only river of importance besides the Amnias and Halya was the Parthenius, which is said by Xenophon to be impassable. (Xen., 'Anab.,' v. 6, a. 9.) In the neighbourhood of Pompeiopolis, in the central part of the province, was a mountain called Sandaracurgium, where, according to Strabo (xii. p. 562), sandaraca was obtained in mines which were worked by criminals, who died in great numbers in consequence of the unhealthiness of the labour. The sandaraca spoken of by Strabo was probably the same as sinopia, which was a kind of red ochre, obtained by the Greeks from Sinope, from which place it derived its name.

The Paphlagonians are said by Homer ('Il.,' ii. 851, 852) to have come to the assistance of the Trojans under the command of Pylæmenes from the country of the Heneti. They were subdued by Croesus (Herod., i. 28.) and afterwards formed part of the Persian empire. After the death of Alexander, Paphlagonia, together with Cappadocia, fell to the share of Eumenes. (Diod. Sic., xviii. 3.) It subsequently formed part of the kingdom of Pontus. Under the early Roman emperors it was united to the province of Galatia till the time of Constantine, who first erected it into a separate province.

The principal town of Paphlagonia was Sinope (Sinoub), a colony of the Milesians (Xen., 'Anab.,' vi. 1, a. 15), which was said to have been founded by Autolyous, a companion of Jason. It was built upon a rocky peninsula, and was for many centuries one of the most flourishing commercial towns in the Euxine. In the time of Strabo it was still a place of considerable importance. It was very strongly fortified, and possessed many handsome public buildings. The inhabitants were accustomed to catch off the coast great numbers of tunny-fish. Sinope maintained its independence till the 2nd century before the Christian era, when it was annexed to the kingdom of Pontus. Mithridates the Great, who was born there, made it the capital of his dominions, and adorned it with many public buildings. During the war which he carried on with the Romans it was taken by Lucullus. It was subsequently made a Roman colony. Diogenes the Cynic was born in this town. Sinope continued to be a considerable sea-port town till it was demolished by the Russian fleet under Admiral Nachimoff Nov. 30, 1853, on which occasion also the citadel was destroyed and the Turkish fleet in the roads burnt or sunk. The old walls of the town in part remain. The exports consist of timber, salt, oil, cordage, and fish.

PAPHOS. [BAFFO; CYPRUS.]

PAPUA, commonly called New Guinea, is an island of great extent, situated at the junction of the Indian and Pacific Oceans. It is separated by Torres Strait from the northern extremity of Australia; by the Strait of Gallowa from the small island of Sallawatty, which lies farther west; and by Dampier's Strait from New Britain, which is to the east of it. It extends from 10° S. lat. nearly to the equator. The most southern point, Cape Rodney, is in 10° 3' S. lat., and the most northern point, Cape Good Hope, in 0° 19' S. lat. From west to east it extends between 130° and 148° 30' E. long.; the most western point, Cape Salu, on Gallowa Strait, is in 130° 2' E. long., and the most eastern, Cape Rodney, in 148° 30' E. long. Its length from east-south-east to west-north-west, is nearly 1300 miles. Its width varies between 500 and 18 miles. The main body of the island, east of 135° E. long., constitutes a vast extent of continuous land, with a projecting peninsula at its eastern extremity, but between 135° and 133° E. long., a wide and open bay enters deeply into the land. This bay is nearly 200 miles wide at its entrance, in which some islands of considerable extent are situated, and penetrates about 200 miles southward into the body of the island. The southern extremity of this bay is separated from the Molucca Sea by an isthmus only about 18 miles wide. The island west of this isthmus consists of a projecting peninsula and deep inlets. According to a rough estimate, the surface of the island is about 260,000 square miles.

The surface and soil of this island are only known so far as they have been seen by navigators who have sailed along the coast. There are few places on which Europeans have landed, and in no place have they penetrated more than a few miles inland. The south-eastern peninsula, which terminates with Cape Rodney, is formed by a continuous chain of high hills, extending, according to Captain O. Stanley (in a paper read at the Geographical Society in February, 1851), for

300 miles, and of which some of the mountains attain a height of 10,000 feet, and one to as much as 12,800 feet. The declivities of the mountains are generally covered with wood, but these forests are free from underwood, which is rather a rare occurrence between the tropics. Small rivers are numerous, and there are probably some larger streams in the wider part of the island. In some places the surface is covered with good grass. Along the northern coast the sea is deep enough to be navigated by the largest vessels, and there are a few good harbours. On the south-eastern coast Captain Stanley found a ridge of shoal water at about 6 miles from the land, with strong currents in various directions. At a distance of from 10 to 20 miles from this coast there are numerous islands, which seem to lie in a row, and among which several are of volcanic origin. Dampier noticed three active volcanoes.

Along the southern shores, the country west of the isthmus is likewise mountainous, and the coast rather high and rocky, but it does not rise to any considerable elevation on the shores of MacCluer's Bay. The isthmus itself is formed by a chain of high hills. East of the isthmus, as far as Cape Buro (135° E. long., 4° S. lat.), the mountains advance close to the shore, and the sea can be navigated by large vessels. Cape Buro rises to a great height close to the sea; but east of this promontory the mountains recede farther inland. They are visible from the sea as far east as 138° E. long., but appear to be a great distance from the shore, which shows that they must attain a considerable elevation. Some navigators think that they have observed snow on them. No mountains appear east of 138° till we reach the peninsula in about 146°. The country between the sea and the mountains, and the whole country east of 138°, as far as it has been seen, is very low, and covered with extensive swamps, but generally occupied by lofty trees. This low coast cannot be approached, as it is lined by a broad belt of mud-banks. South of 8° S. lat., a wide and low promontory projects into the sea, between 138° 28' and 139° E. long. It is called *Valsche Caap* (Cape False), and up to 1835 was considered a part of Papua, but in that year a Dutch vessel discovered a strait between it and the mainland of Papua. Along the low shores are the mouths of some considerable rivers, but they are not accessible to vessels, on account of the extensive mud-banks at their mouths.

The natural productions of these islands are little known. The only animals are dogs, wild cats, and hogs, which are rather plentiful. Fish and turtle abound, and the inhabitants of the coast subsist chiefly on them. The ground appeared to Captain Stanley to be well cultivated, and the villages numerous. Lemons, limes, bamboo, and rattans seem to grow spontaneously. It is supposed that gold is found in the interior.

Papua is inhabited by two or perhaps three nations. The Papuas are rather stout, and not so short as the Australians. Their eyes are small and dark; the nose somewhat curved and projecting downwards; the lips thick, the mouth large, and the teeth exceedingly white; their hair is woolly; and their colour resembles that of the native Australian. The men wear a thin stuff, made of the fibres of the cocoa-nut-tree tied round their middle; and the women wear blue Surat cloth. The Haraforas live in huts, built between the branches of high trees, to which access can only be had by a ladder, which is drawn up during the night. They are said to be distinguished from the Papuas by a lighter colour, straight hair, and greater strength and activity of body. They are cannibals, and no person is permitted to marry until he can show the skull of a man whom he has killed. In this they resemble some tribes of Borneo and the Battas of Sumatra. They seem to have made some progress in agriculture, and they raise provisions, among which are plantains and kalavansas.

The Chinese and the inhabitants of the Ceram Laut and Goram Islands appear to carry on a very lucrative trade, the former on the northern and the latter on the southern coast. The Chinese import into Papua iron tools, especially chopping-knives and axes, blue and red cloths, China-beads, plates, basins of China, and other similar articles, and take in return, slaves, ambergris, trepang, tortoise-shell, small pearls, black loories, large red loories, birds of Paradise, and many kinds of birds which the Papuas have a peculiar way of drying. But the principal article of export is a bark called *masy bark*, which is taken to Japan, where the powder made of it is extensively used for rubbing the body. In Japan a pecul of this bark fetches thirty dollars. The harbour of Dory, near the western side of the Bay of Geelvink, is the most frequented by the Chinese.

The Portuguese discovered the western part of Papua soon after they had settled in the Moluccas, between 1512 and 1530. The Spaniard Seavedra visited it in 1528. Several other navigators discovered other parts of the coast. Our countryman Dampier discovered the strait which divides the island from New Britain, and sailed along the whole extent of its northern coast. In 1792 MacCluer surveyed the bay which bears his name; and in 1802 Flinders examined the country adjacent to Torres Strait, which was discovered by the Spaniard Torres in 1606. In modern times Koff, a Dutchman, has discovered and surveyed the south-western coast; and on his report respecting the advantageous trade which may be carried on with this island, the Dutch government founded a colony, and erected, in 1828, a small fortress on a spacious bay, called by the Dutch, Tritons Bay. The fortress, which is called Dubus, is situated in 3° 42' S. lat., 134° 15' E. long.

PARÁ, or with its full title, *Santa Maria de Belem do Gram Pará*,

is a town in Brazil, the capital of the province of Pará, in 1° 18' S. lat., 48° 22' W. long. It is built on the eastern banks of a wide river, formed by the confluence of the river Tocantins with the Tagipurú, or southern arm of the Amazonas, and called Rio do Pará. Opposite the town the river is about 7 miles wide, and this may be considered as its mean width to its mouth, a distance of more than 70 miles. On the south side of the town is the Rio Guamá, a considerable stream, which joins the Rio do Pará by a westerly course. The streets of Pará are wide and straight, and intersect one another at right angles. The houses are chiefly built of stone, but not high, consisting rarely of more than two floors and frequently of only one. The cathedral is large and has a fine appearance. The best edifice in the town is the College of the Jesuits, now the residence of the Bishop of Pará: a part of the building is occupied by the college, in which young persons study divinity. The church contiguous to the college has been converted into a hospital. The palace of the governor and the custom-house are also good buildings; and there are several churches and a theatre.

The commerce of Pará is considerable. The exports consist of sugar, rum, molasses, coffee, cacao, cotton, vanilla, copaiba, copal, dye-woods, India-rubber, indigo, arnotto, Brasil nuts, and various other articles, some of which are brought from the countries on both sides of the Amazonas, and frequently from a distance of 1000 miles and more. Pará sends articles of European manufacture by way of the Amazonas and Rio Tapayos to the western interior province of Matto Grosso, from which it receives gold in exchange.

The town was founded in 1615 by Francisco Caldeyra. In 1820 its population amounted to above 20,000; but in 1836 its prosperity was checked by an insurrection of the Indians of the province, who took possession of the town and kept it for about six months; the population is now estimated at 10,000, chiefly of European descent.

PARAGUAY, Republic of, South America, is situated nearly in the centre of that continent, between 20° and 27° 30' S. lat., 54° 30' and 59° W. long. It lies between the rivers Paraná and Paraguay; and is bounded E. and N. by Brazil; W. by the desert and unsettled country known as the Gran Chaco, claimed by the Argentine Confederation, but occupied by native Indian tribes; and S. by Corrientes. The area is about 75,000 square miles. The population is about 250,000.

Surface, Soil, Hydrography.—The northern part of the country is mountainous. From the Serra Selada, one of the mountain ranges which traverse the middle of Brazil from east to west, a branch called Sierra Amambahy detaches itself near 15° S. lat. and 55° W. long. This branch runs for some distance south-south-west, and then south, dividing the tributaries of the Paraná, which run east, from those of the Paraguay, which run west. It enters Paraguay near 20° S. lat., passes in a southern direction to the vicinity of 24° S. lat., where it turns eastward and terminates on the banks of the Rio Paraná, opposite the Salto Grande de Sette Quedas. [BRAZIL, vol. ii. col. 94.] Where it runs west and east this range is called Sierra Maracaju. That portion of Paraguay which lies on the east and north of this range is little known, being possessed by native tribes. It seems to have a very broken surface, exhibiting a succession of valleys and ranges of high hills, all covered with tall forest-trees. The rivers which descend from it are full of rapids and cataracts. The country west of the Sierra Amambahy is less mountainous, but has likewise a broken surface, and its rivers run with great velocity, though their course is less interrupted by rapids. It is also well wooded, and in general of great fertility, but few if any whites have settled in this part.

The remainder, or that part which is situated south of 24° S. lat., is one of the most fertile and most pleasant countries of South America. The greater part of the surface is a succession of hills and gently sloping eminences, and broad open valleys intersected here and there with lakes. The high lands which form the watershed between the affluents of the Paraná and those of the Paraguay, are throughout this southern and cultivated part of Paraguay much nearer to the Rio Paraná. The lower grounds and plains are in some tracts savannahs, and afford excellent pasture-ground; single palm-trees are dispersed over them. The hills and slopes however are wooded from the top to the bottom, and frequently with stately forest-trees. The vigorous vegetation shows the great fertility of the soil, which is still more evidently proved by the extent of cultivation. Though cultivation generally occurs only in detached patches and isolated tracts, no part of the interior of South America has a larger proportion of the soil under cultivation than the southern half of Paraguay. But there are some tracts less favourable for agriculture. Nearly thirty miles south of Assuncion begins a low tract of alluvial soil, which is covered with extensive marshes partly occupied by shallow pools of water. It is several miles wide, and extends along the Paraguay to its junction with the Paraná. Though in general destitute of trees, it is separated from the banks of the river by forests, which supply occupation to a small number of wood-cutters, the only inhabitants of this unhealthy tract. Near the place where the Paraguay joins the Paraná the country is more elevated, and its surface is overgrown with thorny acacias and underwood of every kind. But along the Paraná other tracts of marshy ground of a similar description extend as far as the island of Apipé, from which to the Salto de Sette Quedas the hills and elevated ground come close up to the banks of the river.

The rivers Paraná and Paraguay which inclose Paraguay on three

sides are described under ARGENTINE CONFEDERATION and BRAZIL. They differ greatly in their character as navigable rivers. The *Paraguay* is navigable in all its extent within this country, though its course is rather rapid at its northern extremity near the rocky barrier called Fecho dos Morros (21° 20' S. lat.). Vessels of 300 tons burden may ascend it as far as Assuncion, and smaller vessels several hundred miles within the boundary of Brazil. The *Paraná*, which runs along the eastern side of the country, is much less favourable to navigation. The great cataract, called Salto de Sette Quedas, near 24° S. lat., forms an insuperable impediment to navigation; and even lower down there occur several difficult passages, where the river descends in long rapids over rocky shoals. Vessels of 300 tons burden ascend to the island of Apipé, to take in timber. Some of the smaller rivers which join the Paraguay, are navigable to a short distance from their junction with it, but one of them, the Tibiquari, is navigable above a hundred miles. It drains the southern portion of the country, and falls into the Paraguay near 26° 30' S. lat.

Climate and Productions.—Paraguay enjoys the advantages of the intertropical rains. The rainy season occurs in the months when the sun is in the southern hemisphere. The rains are far less abundant than nearer the equator, but sufficient to bring the fertility of the soil into full action. Except in the marshy districts the climate is said to be very salubrious. At Assuncion the ordinary summer temperature is 85° Fahr., but it sometimes reaches 100°. In winter it falls to 45°; but the temperature depends greatly on the direction of the wind: north winds are hot; south or south-east, cold; westerly winds seldom occur, and never last more than two hours.

The natural productions of Paraguay include those of temperate and intertropical climates; and cultivation might embrace a wider range. But the long interruption of foreign intercourse and subsequent unsettled state of the country have prevented all chance of progress in agriculture, all the operations of which are still carried on in the rudest possible manner. The principal articles cultivated as food are maize, batatas, mandioc, yucca-root, and beans. The cultivation of the sugar-cane, tobacco, and cotton is rather extensive. Coffee and cacao grow luxuriantly; and the mulberry tree is indigenous. The principal fruit-trees are oranges and figs. The vegetables chiefly grown are onions, capsicums, and garlic. Water-melons and muskmelons are abundant and good.

Paraguay possesses great wealth in its forests, which contain numerous species of lofty timber-trees, and dye-woods for tanning and other purposes. Several of them produce gums and India-rubber, and others are used for cabinet-work. All the vessels that navigate the rivers Paraguay and Paraná are built of timber supplied by the forests of this country, and the ropes are made of the fibres of different native plants. The most remarkable of the trees is that which yields the famous herb called 'maté,' or Paraguay tea, which is in general use in all the southern countries of South America as a beverage. The country which separates the yerbales (or forests from which the leaf is procured) from the Paraguay is without cultivation, and covered with thorny trees intersected by marshy grounds.

As Paraguay does not contain such extensive prairies as those which occur in all the surrounding countries, the number of horses, mules, and cattle is not so great, but it is sufficient for the internal consumption. Most of the animals peculiar to South America are found in this country; and the monkeys commit great depredations on the fruit-trees and corn fields. Various kinds of birds, as parrots and paroquets, pheasants, toucans, humming-birds, and cockatoos, are numerous. The royal duck, or pato-real, is nearly as large as a goose, with a red and varied plumage. Wild bees are found in great numbers in the woods, and both honey and wax constitute articles of export. The large ants of this country have attracted the attention of naturalists on account of the extensive habitations which they build. The mineral productions are not known.

The manufactures are only of the comparatively few articles required for domestic consumption; and are carried on in the most primitive manner. The cotton for instance "is cleaned and spun by hand, and generally wove by itinerant manufacturers who carry about on horseback a portable loom, which they tie to a tree wherever it may be requisite to set it up for use."

The commerce of Paraguay might become of great importance were personal security established in the country, and the energy of the inhabitants directed to peaceful pursuits. The country is extremely fertile in itself, and capable of furnishing very varied agricultural products: the extensive forests supply immense quantities of valuable timber; and her rivers are the highways to a great portion of the mining regions of Bolivia and Brazil. Before its independence Paraguay exported goods to Buenos Ayres alone amounting in value to above \$50,000, consisting of 8,000,000 lbs. of maté, 1,000,000 lbs. of tobacco, besides cotton, sugar, molasses, spirits, &c. During the dictatorship of Francia in Paraguay the foreign trade, and even that carried on with the neighbouring provinces, was almost entirely destroyed; and not much progress has since been made towards its restoration, notwithstanding that treaties have been made with the Argentine Confederation, Brazil, and Bolivia, for the opening of the Rio de la Plata, the Paraná, and the Paraguay to each other's flags, and also permitting the free navigation of the rivers by foreign vessels. The chief exports at present are of maté, timber, sugar, cotton, tobacco, and hides.

Inhabitants.—In a few of the towns and their vicinity live a comparatively small number of whites; and a larger number of mestizos, or descendants of Spaniards and Indians, who differ little from them in appearance. Both these classes understand and commonly speak the language of the Guaranis. This tribe of aborigines forms the bulk of the population, and in manners and civilisation they approach nearer the whites who reside among them than any other of the aboriginal tribes of America. Some other tribes, as the Payaguas and Nalicunga, are dispersed among the Guaranis, but they consist of a small number of individuals.

Political Division and Towns.—The republic is divided into eight departments, called, after their capitals—Assuncion, Concepcion, Santiago, Villa-Rica, Curuguaty, Candelaria, San Fernando, and Santa Hermengilda.

Assuncion, the capital of the republic, population about 8000, is built near the left bank of the Paraguay River, in the form of an amphitheatre, and consists merely of one street of considerable length, with several connected lanes, and a great number of small houses, standing apart, and surrounded by groves of orange-trees. The cathedral is a building without any pretensions. The government-house is an extensive but tasteless edifice of only one floor. The best buildings of the town are a few convents. The inhabitants are mostly the descendants of Europeans and Indians, with a few negroes. *Cazapa*, in the interior, about 30 miles S.E. from Assuncion, population about 2000; and *Curuguaty*, about 40 miles N.E. from Assuncion, population about 3000, are said to be places of some trade. *Neembuco*, on the Paraguay, towards the southern extremity of the republic, population about 4000, is the chief trading town for foreign vessels. *Villa Reale de Concepcion*, also on the Paraguay, but considerably higher, population 4000, is the chief mart for the herb maté, the principal supply of which is obtained from the forests some distance east of the town. *Villa Rica*, in the interior, about 25 miles E.S.E. from Assuncion population about 3000, is the centre of the southern maté district.

History.—After the Spaniards had discovered the wide embouchure of the Rio de La Plata, they sailed upwards, and tried to establish a colony on the banks of the river. But two attempts of this kind failed. The settlements contained only a small number of settlers, who were soon destroyed by the warlike natives of the plains. In 1535, the Adelantado, Don Pedro de Mendoza, was sent with a considerable number of vessels to found a great colony. He sailed up the Paraná and Paraguay for nearly a thousand miles, until he came to Paraguay, where he founded the town of Assuncion. From this place the Spaniards by degrees spread over all the countries of South America south of 20° S. lat., and east of the Andes. In the 16th century the Jesuits were sent to those parts for the purpose of converting the natives to Christianity. Their success was not great until they obtained from the Spanish court a mandate (about 1690) forbidding all other Spaniards to enter their Missions without their permission. The Jesuits settled among the numerous tribe called the Guaranis, on both sides of the river Paraná, above the island of Apipé, and succeeded in bringing them to a certain degree of civilisation. When the Jesuits were expelled, in 1767, the Missions were inhabited by more than 100,000 civilised Indians, of whom perhaps less than half the number were in Paraguay. They afterwards dispersed through different parts of La Plata, but it seems that the majority settled in Paraguay, which after that time was entirely subjected to the viceroy of Buenos Ayres. In 1810, when an independent government was constituted in Buenos Ayres, Paraguay refused to acknowledge its authority, and defeated General Belgrano, who had been sent to bring Paraguay to obedience. The country soon after declared its independence. After some changes in the government, Doctor Gaspar Rodriguez de Francia, a lawyer, was in 1814 elected dictator. In 1817 he became dictator for life; and he ruled the country with an iron sway till his death in 1840. During his long and cruel despotism he adopted the policy of the Jesuits, absolutely prohibiting all intercourse with foreign countries, and placing the intercourse with the neighbouring provinces under the most irksome restrictions. No person who entered the country was permitted again to leave it without special permission from Francia himself. General Lopez, who has been dictator since 1844, has manifested a growing desire to open Paraguay to commercial intercourse, not only with the neighbouring provinces but also with foreign countries, and, as already mentioned, has entered into treaties by which the free navigation of the Paraguay, Paraná, and La Plata rivers is secured.

(Parish, *Buenos Ayres and the Provinces of the Rio de la Plata*, 2nd edit.; Robertson, *Letters from Paraguay*; Beaumont, *Travels in Buenos Ayres*; McCann, *Two Thousand Miles Ride through the Argentine Provinces*.)

PARAMARIBO. [GUYANA, Dutch.]

PARAMATTA. [WALES, NEW SOUTH.]

PARANA. [BRAZIL; ENTRE RIOS; PARAGUAY.]

PARENZO. [ISTRIA.]

PARGA, a town in the province of Albania in European Turkey, on the coast of the Ionian Sea, opposite to the Isle of Paxo, from which it is 12 miles distant, in 39° 17' N. lat., 20° 18' E. long. This place is first mentioned in the 15th century, when, amidst the wreck of the Eastern empire, the inhabitants of Parga sought safety in the protection of Venice, retaining however their own municipal council, the

appointment of their magistrates, and several other privileges. This state of things lasted till the fall of Venice, in 1797, when, in the partition of the Venetian territories between France and Austria, France kept for herself the Ionian Islands and the Venetian settlements on the coast of Epirus. But after the invasion of Egypt by Bonaparte a Turco-Russian fleet and army attacked the Ionian Islands, and took them from the French, and at the same time Ali Pasha of Epirus attacked the French garrison of Prevesa, and massacred it with circumstances of great atrocity. He likewise invaded Butrinto and Vonitza, from which the French had withdrawn, as well as from Parga. Parga however was strong by nature, and the inhabitants, being summoned by Ali to submit, boldly refused, but admitted a Turkish bey to reside among them, according to the stipulations of a treaty between Turkey and Russia, to protect them against any encroachments from Ali. Parga remained in this state of nominal subjection to the Porte till 1806, when war broke out between Russia and the Porte; and the inhabitants fearing that Ali would renew his attempts to subjugate them, applied for protection to the Russian admiral on the station, who sent them a garrison.

By the treaty of Tilsit, in 1807, the Ionian Islands being given up to France, the Russian troops which were stationed in them withdrew, including the detachment at Parga, which was now garrisoned by the French. In 1814, the English, having already driven the French out of the Ionian Islands, with the exception of Corfu, and placed a garrison in the island of Paxo, which lies in sight of Parga, Ali Pasha sent a considerable force against Parga, which invaded its territory, took some villages, and murdered or carried away the inhabitants, but the Parguinoles sallied out of their town, repulsed the Turks, and killed the bey, who was a nephew of Ali. The French garrison remained within the citadel, and did not take part in the action. The Parguinoles, seeing that they could no longer rely on the protection of France, applied to the English at Paxo, in March, 1814. General Campbell, who commanded in the Ionian Islands, sent a detachment with two frigates; and the Parguinoles having surprised the citadel and hoisted the English flag, the detachment was landed, and took possession of the fortress on the 22nd of March, and the French garrison was sent to Corfu. After the general peace that followed the downfall of Napoleon I., an agreement was entered into at Constantinople between the English minister and the divan early in 1817, for the delivery of Parga to the Porte, under the condition that those inhabitants who might choose to emigrate should have an asylum in the Ionian Islands, and that their immoveable property should be valued and paid for by the Porte previous to their embarkation. This arrangement was formally announced to the Parguinoles by a proclamation dated May 28, 1817. The primates and other inhabitants, numbering altogether above 3000, declared that all would leave the place rather than trust themselves to the Turks.

The proceedings for the estimation and payment of the property were protracted for nearly two years through the cavils of the Turkish commissioner and the intrigues of Ali Pasha, who wished to obtain Parga without paying the money. At last, in May, 1819, the whole population of Parga embarked in English vessels, having received the valued amount of their property, 150,000*l.*, and were settled at Paxo and Corfu. The Turks then occupied Parga.

The town of Parga stands on a rock forming a small peninsula. It has two ports, one of them anciently called *ἄλιον λιμὴν* 'the port of sweet waters, now Port Veliki. The town is walled and has narrow streets. The citadel on the summit of the rock is almost impregnable. It is surrounded by a fertile territory, and the townsmen export oil, tobacco, fruit, and tolerably good wine.

PARIA, THE GULF OF, extends between the island of Trinidad and the continent of South America, and has received its name from the adjacent portion of the continent, which was once called Paria, a name afterwards superseded by that of Cumana. The gulf has nearly the form of a quadrangle, extends about 100 miles, from 61° 30' to 63° W. long., and is about 40 miles across. A hilly promontory, projecting from the continent of South America more than 70 miles, separates the gulf from the Caribbean Sea, and terminates on the east with Cape Punta de la Peña, which is also called Cape Paria. Opposite this cape, and about 20 miles from it, is the most north-western point of the island of Trinidad. This opening contains four straits formed by three rocky intervening islands. The most western of these straits, called Boca de Dragon (Dragon's Mouth), is the widest, being about six miles across to the rocky island called Chacachacares, and is that commonly used by large vessels. The Isla de Huevos (Isle of Eggs) forms the second strait, called Ship Channel, which is only two miles wide, and is used by vessels leaving the gulf. Between the Isla de Huevos and the Isla de Monos (Isle of Apes) is the Huevo Channel, which is somewhat wider than the preceding, and is more used by vessels entering the gulf. The Monos Channel, between the Isla de Monos and the north-western point of Trinidad, is the narrowest, and the current in it is the strongest. It is only navigated by small vessels. As the current runs through all these straits northward, the gulf can only be entered with a strong breeze. The tides also, which rise about six feet, run with great force. The southern entry of the gulf is between the rocky cape called Punta Iccacos, in the island of Trinidad, and the low alluvial shores lying on both sides of the two most western of the mouths of the Orinoco,

called Cano de Pedernales and Cano de Manamo Grande. From these low shores a shoal extends nearly across the strait, which is called the Serpent's Mouth. The narrow entry into the gulf can only be passed with a strong south-west wind. The gulf itself may be considered as one of the most extensive and best harbours on the globe. It offers nearly everywhere excellent anchorage, especially along the coasts of the island of Trinidad, in from 3 to 30 fathoms water, and the ground is everywhere free of rocks.

PARIME MOUNTAINS. [BRAZIL; ORINOCO RIVER; VENEZUELA.]

PARIS, the metropolis of France and capital of the department of Seine, is situated on the river Seine, and about 110 miles in a straight line E.S.E. from its mouth. The church of St. Geneviève, the pavement of which is 199 feet above the level of the sea, stands in 48° 50' 59" N. lat., 2° 20' 57" E. long. The Observatory of Paris in the southern part of the city stands in 48° 50' 13" N. lat., 2° 20' 22" E. of Greenwich. The population according to the census of 1851 was 996,067 within the old walls and barriers; but reckoning the inhabitants of the suburbs inclosed by the new fortifications, the population exceeds 1,250,000.

Paris is mentioned by Cæsar under the name of Lutetia, which was the chief town of the Parisii, a Celtic tribe, and stood on the largest of the islands formed here by the Seine. On this island, called Ile-de-la-Cité, the cathedral of Notre-Dame now stands. In B.C. 54, Cæsar convoked an assembly of the nations of Gaul at Lutetia. The town was burnt in the following year by the Gauls to prevent its falling into the hands of the Romans; but it subsequently came with the rest of Gaul into their power, and was included in the province of Lugdunensis Quarta, or Senonia. For the next four centuries Lutetia appears to have been of little importance. About A.D. 360 it took the name of the tribe to which it belonged, Parisii. It was the seat of a bishop from 245; in 272 St. Denys, its first bishop, suffered martyrdom with his companions in the persecution of Valerian on the hill of Montmartre, which is said to have derived its name from this event. Lutetia was the favourite residence of Julian while he governed the provinces of Gaul. Under the Romans the buildings connected with the town extended beyond the island to both banks of the river. Several traces of Roman altars, tombs, and aqueducts have been discovered at various times on the site of Paris.

Childeric I. drove the Romans from Paris in 466. His son Clovis, after his conversion to Christianity, made Paris his capital in 508, and was buried there in 511. Paris gave name to one of the kingdoms into which the dominions of the Franks were divided. After 567 it ceased to be the residence of the kings of the Franks. Several of the churches and other religious establishments of Paris were founded in the reigns of the Merovingian princes. A small basilica dedicated to St. Stephen is said to have occupied part of the site of Notre-Dame before the Frankish invasion. Under Clovis was built over the grave of St. Geneviève a church, dedicated to St. Peter and St. Paul, which was afterwards incorporated with the abbey of St. Geneviève. Childeric who died in 558 laid the foundation of Notre-Dame, and of the abbey of St. Germain-des-Près and St. Germain-l'Auxerrois. The Paris of Merovingian times covered the Ile-de-la-Cité, which was surrounded by a wall pierced by two gates that opened upon two bridges corresponding to the Grand-Pont and the Petit-Pont, which now cross the northern and the southern arms of the Seine respectively. To the east of the street that united the two bridges lay the cathedral, the baptistery, and an hospital for the poor, which long after became the Hôtel-Dieu. On the northern side of the island, partly on the site of the Marché-aux-Fleurs, was a building called the prison of Glauconius; and between the cathedral and the present Palais-de-Justice was the commercial part of the city.

Charlemagne did not reside in Paris, but he established there in 779, with the assistance of the clergy, a school in which reading, writing, calculation, and singing were taught. Under his successors Paris became the patrimony of hereditary counts. In 845 the Northmen pillaged the city, which the inhabitants had deserted; in 856-7 they pillaged it a second time, and burnt some churches; in 861 they pillaged it a third time, and burnt more churches, to which and to the clergy the Northmen before their conversion to Christianity had a great aversion. At this time they broke down the Grand-Pont to enable their barks to ascend higher up the river, whither they repaired to plunder the towns on the Upper Seine. After their retreat, the bridge was repaired by Charles le Chauve. In 885 the Northmen under Siegfried again attacked the place. The assailants, to the number of 38,000, made several attacks, in which they were foiled by the bravery of Count Eudes; the emperor Charles Le Gros came with succour to the beleaguered city, but instead of fighting, he concluded a disgraceful treaty with the Northmen. It was to recompense the bravery of Eudes, that on the death of the emperor in 888, he was elected to the throne of France in an assembly of the grandees of the kingdom. The Northmen again appeared before Paris, and were defeated by Eudes with fearful slaughter at the battle of Montfaucon.

Hugues Capet, son of Hugues the Great, grandson of Robert, brother of Count Eudes, and founder of the Capetian dynasty, having become King of France in 987, continued to reside at Paris, which thus again became the capital. Hugues and his successors resided in the building now called the Palais-de-Justice. In the reign of Louis VI. (1108-1137), it is probable that the fortresses or prisons of

Le-Grand-Châtelet and Le-Petit-Châtelet on the north and south banks of the river, at the extremities of the two bridges from La-Cité to the mainland, were built: they were demolished, Le-Petit-Châtelet in 1782, and Le-Grand-Châtelet in 1802. By the same king, the suburbs on the north and south banks were inclosed by walls, and thus incorporated with the insular part of the city. This was the second inclosing wall that girt the city of Paris which then consisted of three parts—the town north of the Seine, the city on the island, and the university on the southern bank. Under Philippe Auguste, a new wall 8 feet thick, strengthened by 500 towers and by a deep fosse, was built, comprehending a much larger inclosure than those of former times, both on the north and south bank, and some of the principal streets were paved; the foundation of the present cathedral of Notre-Dame was laid; several other churches also, and the hospital de-la-Trinité were built.

In the reign of Jean II. (1350-64), the town had again outgrown its limits, and many edifices had been erected without the walls. In apprehension of an attack from the English after the battle of Poitiers (1356), new walls were raised on the north side of the Seine, comprehending a yet larger inclosure than those of Philippe Auguste; and on the south side the old walls were repaired and the ditches deepened. The island of Notre-Dame, now Île-de-St.-Louis, immediately above the Île-de-la-Cité, was also fortified, and the passage of the Seine both above and below the city was obstructed by strong iron chains.

The treaty of Troyes (1420) and the events connected with it, gave Paris into the power of the English Henry VI., under whom it was governed by the Duke of Bedford, from 1421 to 1436. In 1429 it was attacked by the troops of Charles VII. of France under the command of Joan of Arc, but the assailants were repulsed. In 1436 it was taken by the French under the Count of Richemont, constable of France, and the Count Dunois, with the aid of the townspeople. The English garrison was surprised and put to the sword, except a few who retired to the fortress of the Bastille (one of the great fortified gates erected in the line of the last-mentioned wall at the extremity of the Rue-St.-Antoine), and surrendered upon terms.

During the troubled period of the dynasty of Valois, the edifices, public and private, of the city were gradually improving in character. The population of Paris in the latter half of the 15th century is supposed by Dulaure to have been about 150,000. The police of the place was wretched; the environs and suburbs, and occasionally Paris itself, were infested with wolves. In the reign of François I. the fortifications of Paris were repaired and strengthened. Under Charles IX. (1566), the circuit of the walls was partially enlarged, in order to comprehend the palace of the Tuileries, then in course of erection, by Catherine de' Medici, the queen-mother. The residence of the king was at that time at the Louvre, originally a fortress of ancient date, which had been made a royal residence, and enlarged and adorned by the care of successive sovereigns. It was at this time being gradually rebuilt. The rebuilding of the suburb of St.-Germain, on the south side of the river, which had been ruined in the wars of the 15th century, was commenced and some of its streets paved in the time of François I.; and in the reign of Henri III. a bridge was erected (near where the Pont-Royal now stands) to connect the quarter of the Louvre with this suburb. This appears to have been the only bridge across the undivided stream of the Seine. There were five other bridges which connected the island of La-Cité with the main: the Grand-Pont (now Pont-au-Change), the Petit-Pont, the Pont-des-Moulins, connecting La-Cité with the north bank of the river a little below the Pont-au-Change; Pont-Notre-Dame, in a line with the Petit-Pont over the north arm of the Seine; and the Pont-St.-Michel, opposite the Pont-au-Change over the southern arm. In the reign of Henri II. the erection of the Hôtel-de-Ville was commenced, but it was not finished till more than half a century afterwards. The population of Paris in the time of Henri III. is estimated to have been about 200,000. In August 1572 Paris witnessed the terrible massacre of St. Bartholomew, in which it is said that nearly 5000 persons were killed. In 1588 the Parisians who had embraced the party of the League, barricaded the streets with chains, with the paving-stones torn up for the occasion, and with casks of earth; and manning the barricades with musqueteers, defeated the troops which Henri III. had brought into the city. Henri quitted Paris next day, and the city came into the power of the League. This revolt is known in history as 'the day of the barricades.'

Upon the assassination of the Guises at Blois (December, 1588), the Parisians broke out into a fresh revolt. Henri III. advanced to besiege Paris, which was now under the command of the Duke of Mayenne; but his assassination at St.-Cloud (August 20th 1589) arrested his purpose. The siege was formed on the 31st of the following October, by his successor Henri IV. The suburb of St.-Germain was plundered; but the siege was raised soon afterwards, and the king retired with his army. In the following May (1590) the siege was renewed, the suburbs were all taken in one night, and the gates strictly blockaded. The effect of this long siege on a population so vast was truly dreadful. The most loathsome articles were consumed for food; numbers perished, and parts of the city were almost reduced to solitude. Henri, moved with compassion, allowed 3000 of the poorer classes to pass out of the place, and repeatedly admitted

supplies of provisions to enter. The approach of a Spanish force under the Duke of Parma obliged him to raise the siege (August 30th); and he did not obtain possession of his capital till March 1594.

In the reign of Henri IV. Paris received many improvements. The Pont-Neuf was completed, the hospital of St.-Louis built, several of the quays constructed, and the palace of the Tuileries finished. All the bridges, except the Pont-Neuf, were at this time lined with houses. In respect of cleanliness and security from robbery, little improvement seems to have taken place. In the reign of Louis XIII. several new bridges were erected; the churches of St.-Roch, of the Oratoire, of Val-de-Grace, and the façade of St.-Gervais constructed; the hospitals of the Incurables, the Salpêtrière, and the Foundlings; an aqueduct to convey water from Arcueil to the city, the Sorbonne, and the college of Clermont, afterwards Louis-le-Grand, were built. The palace of the Luxembourg was built by Maria de Medici; the Jardin-des-Plantes (botanical garden) was laid out; and the Palais Royal was built and the Académie Française founded by Cardinal Richelieu. New walls were erected on the north-west side of the city, inclosing a considerable space north of the Tuileries, and extending the circuit of the inclosure nearly to the line of the present boulevards. The island of St.-Louis was entirely covered with houses, surrounded with quays, and joined to the mainland by two bridges. The Pont-au-Change was rebuilt, and a wooden bridge thrown over the river where the Pont-Royal now stands.

The city suffered so much during the troubled minority of Louis XIV. that in 1653 it was estimated that there were in Paris 40,000 paupers. In the long reign of this king, the extent of Paris was again extended, and splendid gates and barriers built; the old ramparts were levelled, and replaced on the northern boulevards by magnificent promenades planted with trees; the quays were repaired; more than 80 new streets were opened, and most of the old ones were widened and rebuilt. Instead of dismal posterns and narrow wickets, the gates of St.-Antoine, St.-Bernard, St.-Denis, and St.-Martin rose in the form of triumphal arches. The city was ornamented with the Places Vendôme, des-Victoires, and du-Carrousel. Perrault raised the colonnade of the Louvre; the Hôtel-des-Invalides was erected as an asylum for the aged soldier; and the infirm were tended in the Salpêtrière, which was enlarged and called the General Hospital, with the Bicêtre for a dependency.

At the beginning of this reign the streets of Paris were always dirty, lighted at night only by lanterns hung out in front of the shops; many were unpaved, and impassable even in summer except in heavy boots. Opposite the Tuileries was a wretched wooden bridge called Pont-Barbier; in several quarters were seen the heavy chains which served for barricades in the times of the League and the Fronde; and so impure was the air, that bright copper vessels were coated with verdigris in a single night. During the night cut-purses roamed the streets with impunity, and assassinations were not uncommon where every body went armed. The administration of Colbert and Louvois checked these evils. The disorders of the capital were in part remedied by increased efficiency of police; pages and lackeys were disarmed; and lanterns, each containing a large candle, were suspended in the middle of the streets. Under Louis XIV. also was completed the building of the Tuileries, the gardens of which were laid out by Le Notre; the Champs-Élysées were planted with trees; and many fountains were erected as decorations of the city, and affording abundant supplies of water to the inhabitants. In the interest of science, the Observatory was founded, the College of Quatre-Nations built, and the Royal Library organised; St.-Sulpice was commenced, and Val-de-Grace completed; the Châtelet was built as a special court-house for the city of Paris; and the Pont-Royal was opened, connecting the quarter of the Tuileries with the Faubourg St.-Germain, on the left bank of the Seine. Great encouragement was given to manufacturing industry during this reign; manufactories of plate-glass and tapestry were established, the latter being the famous manufactory of the Gobelins, established on the little river Bièvre, which traverses the south-eastern angle of the city, between the Jardin-des-Plantes on the north and the great hospital and gardens of the Salpêtrière on the south, and enters the Seine on the left bank a little above the bridge of Austerlitz. The population of Paris, at the close of the reign of Louis XIV., was fast approaching half a million.

From the commencement of the reign of Louis XV. to the period of the Revolution, Paris received considerable accessions both to its extent and the number of its public buildings. The church of Sainte-Genève (the Pantheon of the revolutionary period), the church of St.-Philippe-du-Roule, near the Barrière-du-Roule, in the north-west of the town, and the façade of St.-Roch were erected; the Mint, the École Militaire (military school), and schools of law (droit) and surgery were built; the corn-market (halle) and several other market-places were formed; fountains and theatres erected; a line of boulevards formed on the south side of the river; the Petit-Pont, which united the Île-de-la-Cité with the south bank of the river, rebuilt; the Place Louis XV. laid out, with a statue of that king in the centre; the Hôtel-d'Armenonville was repaired and converted into the post-office; a city post was established; the names of the streets were written up and the houses numbered; reflecting lamps were used for lighting the streets; many sumptuous hotels were built; and the erection of the Pont Louis XVI. was commenced. Paris was also surrounded by a

wall, which still exists, comprehending a much larger area than any previous inclosure, and designed to prevent the introduction of commodities without the payment of the octrois, or local taxes. For this purpose 58 barriers, flanked by handsome guard-houses, were erected. The faubourgs du-Roule, St.-Honoré, St.-Lazare, Poissonnière, and Chaussée-d'Antin were covered with good houses. The Palais-de-Justice was repaired; the Palais-Royal was completed; the École-de-Médecine, the Collège-de-France, the theatres Français, Italien, Feydeau, de-l'Odéon, and de-la-Porte-St.-Martin, the Rotonde of the Temple, and several halles and fountains were built; and the Marchés-des-Innocents and other markets were opened.

The local history of Paris during the Revolution is the history of the Revolution itself. In 1789 (July 14) the Bastille (which had been greatly enlarged, fortified, and used as a state prison) was taken and demolished by the Parisians. In October of the same year the king was brought from Versailles to Paris by the Parisian mob. On the attempt of the king to quit France (21st June, 1791) some rioting took place, and in the early part of 1792 fresh commotions occurred. On the 20th June the Tuileries was attacked by the populace, and the lives of the royal family endangered; on the 10th August that palace was again attacked, and the king's Swiss guards who defended it were slaughtered; and on the 2nd of September the mob broke into the various prisons and massacred those confined in them. The king was deposed, and the Legislative Assembly gave place to the Convention, in which the more violent of the revolutionists gradually obtained the ascendancy.

The guillotine was erected in the Place Louis XV. (now Place-de-la-Concorde), between the gardens of the Tuileries and the Champs-Élysées, and the king himself was one of the earliest victims (21st January, 1793). In June the Girondist party in the Convention was overthrown; the faction of the Mountain became supreme, the reign of terror commenced, and blood flowed in torrents. Executions took place daily in the Place Louis XV.: Charlotte Corday, the assassin of Marat, queen Marie Antoinette, Brissot, Vergniaud, and others, the most illustrious members of the Girondist party in the Convention, Egalité, duke of Orléans, Danton and Camille Desmoulins, Mountaineers themselves, Madame Elizabeth, sister of Louis XVI., and numerous others perished. The victims at one time amounted to fifty or sixty a-day, and occasionally exceeded that number. The guillotine was shifted from the Place Louis XV. to the Place-de-la-Bastille, and from thence to the Place-du-Trône, at the eastern extremity of the city, in the Faubourg St.-Antoine, whence it was brought back to the Place Louis XV. for the execution of Robespierre and his associates (28th July, 1794), which put an end to 'the reign of terror.' The Convention, freed from the tyranny which Robespierre had established, restricted the power of the terrible committees, abolished the commune of Paris, and reduced the clubs to subordination. The Polytechnic school, the Institute, and the Bureau-des-Longitudes owe their establishment to the Convention. In 1795 the Parisian rabble rose repeatedly against the government, but were put down by the armed force of the forty-eight 'sections,' into which Paris had been divided. In October, 1795, this armed force itself rose against the Convention, but was completely defeated by the troops of the line at Paris, commanded nominally by Barras, but really by Bonaparte. The government of France now passed into the hands of the two legislative councils and the executive directory. Under Bonaparte, successively first consul and emperor (December 2, 1804), Paris enjoyed an increasing prosperity and almost uninterrupted quiet till the year 1814.

Notwithstanding the extreme warlike activity of his reign, which hung the churches of Paris with the flags of all the continental powers of Europe, Napoleon I. did not neglect the decoration of his capital. All the houses which as yet stood on the edge of the quays were swept away, and the prospect of the river opened entirely to view; the quays were extended; the bridge of Austerlitz spanned the Seine opposite the Jardin-des-Plantes; the Pont-de-la-Cité joined the Île-St.-Louis to the Île-de-la-Cité; the Pont-des-Arts connected the Louvre with the Institute; and the Pont-de-Jena, the most western bridge of Paris, which crosses the river opposite the École-Militaire and Champ-de-Mars, was erected. The Ourcq Canal was commenced to bring the water of that river to the plateau of la-Villette on the north side of the city, nearly 100 feet above the level of the Seine. Numerous elegant fountains sprung up; halles and markets were established; and five large abattoirs were built at the extremities of the town. The Louvre was filled with masterpieces of painting and sculpture, collected by no very scrupulous means from the galleries of conquered countries. The great column of the grand army was erected in the Place-Vendôme. The Luxembourg palace was restored, and its gardens embellished and united to the Observatory by a magnificent avenue. The Chamber of the Legislative Body was built between the Palais-Bourbon and the Pont Louis XVI. The Bourse, the Tribunal of Commerce, and the Madeleine were commenced; churches were repaired, and the Pantheon, again become the church of Sainte-Genève, was restored to religious uses.

Paris after a gallant defence capitulated on the 30th of March, 1814, to the allied forces under the command of Prince Schwarzenberg. On the 31st the allied sovereigns who accompanied the prince and their troops entered; Napoleon was dethroned and the Bourbons restored. Next year Napoleon returned (March 20th), to Paris from Elba, but

the defeat of Waterloo brought the allied English and Prussian armies, under Wellington and Blücher, before the city. On the 8th of July, Louis XVIII. re-entered Paris, and the Bourbons were again restored. A long interval of tranquillity followed, during which the Ourcq, St.-Denis, and St.-Martin canals were finished for the supply of the north side of the city; and the colleges of Henri IV. and St.-Louis were enlarged; and the lighting, cleansing, and paving of the town improved. Then followed the reign of Charles X. (1824-30), during which the church of St.-Vincent-de-Paul was commenced, some other churches were repaired or rebuilt, a statue of Louis XIII. was erected on the Place-Royale, that of Louis XIV. on the Place-des-Victoires, the Pont-de-la-Concorde adorned with statues of the illustrious warriors and statesmen of France, and the bridges of Arcole, de-l'Archêvêché, and d'Antin were built. In 1830 came the Revolution of the three days (27th, 28th, and 29th) of July, which overthrew the Bourbon dynasty, and established that of Orléans. In this memorable struggle above four thousand barricades were formed. Of the Parisians, 788 were killed and about 4500 wounded. The revolution of 1830 placed the crown of France on the head of Louis Philippe, duke of Orléans, whose father was guillotined during the reign of terror in 1793. During this reign, which lasted till 1848, several important works were completed. Among the most important of these are the church of La-Madeleine, the Palais-des-Beaux-Arts, the church of St.-Vincent-de-Paul, the Hôtel-de-Ville, and the triumphal arch de-l'Étoile, at the head of the long avenue of the Champs-Élysées outside the barrier of Neuilly. Several new bridges and quays were constructed; the asylum for deaf-mutes was rebuilt, and the approaches opened to the church of Sainte-Genève, which was converted to a temple in honour of the great men of France; the monument of July was finished, and the statue of Napoleon I. replaced upon the column of the Grand Army in the Place-Vendôme. The remains of the emperor Napoleon I. were brought from St. Helena to Paris by the Duke de Joinville, and deposited in the Invalides. The Place-de-la-Concorde (Louis Quinze) was decorated with fountains and an obelisk, brought from Luxor in Egypt. The Places Louvois and St.-Sulpice were embellished with beautiful fountains. The Barrière-du-Trône was completed and adorned with colossal statues of St. Louis and Philippe Auguste. Several railway termini were erected; the artesian well of Grenelle was bored; the normal school built; and last not least, the city of Paris and its suburbs were surrounded by vast fortifications, protected by fourteen detached forts, at a cost of not less than twenty millions sterling.

In 1848 the stiff-necked opposition of King Louis Philippe and his ministers to electoral reform led to the erection of barricades and a new revolution, in which the troops soon fraternised with the people. The king abdicated (February 24) in favour of his grandson, the Count de Paris, son of the Duke of Orléans, who was killed by a fall from his gig in 1842, outside the Barrière-de-Neuilly. The count was not accepted: the republican chiefs then taking the lead appointed a provisional government, and proclaimed a democratic republic. A Constituent Assembly was convoked, which framed a constitution in form of a republic with a president for chief magistrate. The Red Republican party, dissatisfied with the comparative moderation of the assembly, formed numerous clubs, in which the wildest principles of socialism were advocated, subversive alike of property and society. In furtherance of these objects, a vast assemblage of clubbists, led on by Barbès and others, forced their way into the National Assembly, and proposed "a tax upon the rich to carry on war for Poland." They then seized the Hôtel-de-Ville, and proclaimed a provisional government (May 15, 1848); but ultimately the national guard forced their way in, and arrested the leaders of the movement, who were lodged in the Castle of Vincennes. The loss of their leaders however did not discourage the socialists. On the 23rd of June barricades were again thrown up in the streets, and firing continued in most parts of Paris during the night. On the 24th the troops, under generals Cavaignac and Lamoricière, succeeded with great loss in driving the insurgents from the left bank of the Seine. On the 25th all the positions of the insurgents in the centre of the city were taken, and on the 26th the Faubourg du-Temple was swept with cannons and howitzers, and the whole city was in the evening in the hands of the government by which General Cavaignac had been appointed dictator. It was in this bloody insurrection that the noble archbishop of Paris (Denis Affre) lost his life, having been shot down by an unknown hand when, during a temporary cessation of the battle, he mounted a barricade in order to prevent the further effusion of blood, and to make peace between the combatants.

The constitution framed by the assembly was solemnly proclaimed in front of the Tuileries (November 11, 1848), and Prince Charles Louis Napoleon Bonaparte elected President of the Republic, who took the oath of office on the 21st of December following in the National Assembly, which still continued its sittings till the meeting of the Legislative Assembly, May 27th, 1849. Under the vigorous administration of the Prince both the mad attempts of the Red Republicans were suppressed and the intrigues of the Legitimists and Orléanists baffled. At last the President, in order to put an end to the disquieting hopes of parties, issued a decree, December 2, 1851, dissolving the Legislative Assembly, re-establishing universal suffrage (which had been very considerably narrowed by the assembly), proposing the election of a president for ten years, and a second chamber,

or senate, and declaring Paris in a state of siege. The leaders of the Orléanist and Republican parties, Thiers, Changarnier, Cavaignac, Lamoricière, and others, were arrested and thrown into the Castle of Vincennes, and Paris was occupied with troops. The result of the Prince's appeal to the people was the maintenance of his authority on the bases proposed in his decree of December 2 by 7,439,216 affirmative votes against 640,737 negative ones. In the course of September in the following year the councils-general of the French departments prayed for the stability of the Prince's power, and the majority of them for the re-establishment of the empire. The necessary preliminaries for the proposed change in the constitution were taken by the Senate in November 1852, and a 'plebiscite' resuscitating the imperial dignity in the person of Louis Napoleon obtained 7,864,189 affirmative votes against 253,145 negative ones from the electors of France on November 21 and 22. Accordingly Louis Napoleon was proclaimed Emperor from the Hôtel-de-Ville on December 2, 1852, and took the title of Napoleon III., thus asserting the claim of the Duke of Reichstadt, son of Napoleon I., to be Emperor of the French.

The part of the valley of the Seine in which Paris stands is screened by two chains of hills. On the right bank the series sweeps round nearly in a semicircle, forming the hill of Bercy in the south-east, the heights of Charonne, Ménilmontant, Belleville (the western part of which is called the hill of Chaumont), La-Villette, and Montmartre. The hill of Montmartre slopes down westward to the plateau of Monceau, where the ground again rises to the hill of Chaillot at the extreme west of the city. The highest points are the hills of Montmartre, Ménilmontant, and Chaumont, which rise from 262 to 295 feet above the valley. On the south side the heights that screen the valley are lower. Opposite Bercy the bank of the river is level, but the ground rises slowly to the plateau of Ivry and the hill of Cailles, beyond which runs the Bièvre. North of the Bièvre the ground rises sensibly, and forms the hill of Sainte-Geneviève, which is covered with buildings. This hill is joined towards the south-south-west to the plateau of Mont-Souris, to the west of which the surface slopes down to Petit-Montrouge, and again rises near the barriers of Mont-Parnasse and Maine; thence there is a slight declivity to Vaugirard, between which and the Seine is the wide plain of Grenelle. At a distance of two and a half to five miles from these heights there is another and higher series of hills, comprising the heights of Villejuif, Rungis, Hay, Bagneux, Meudon, St.-Cloud, and Mont-Valérien, the highest point around Paris, being a few feet higher than Montmartre. A large portion of the southern part of Paris is built over vast caverns formed by quarrying the rock. These old quarries have been converted into catacombs, in which are deposited the bones of the dead collected from the cemeteries that formerly existed within the bounds of the city. The great cemetery of Paris is that of Père-la-Chaise, to the east of the city, on the slope of the hill of Charonne. There are cemeteries also on the hill of Montmartre.

The Seine enters Paris at Bercy, on the south-east, and flows with a gentle curve convex towards the north, and leaves the city at Passy, on the extreme west, after a course of about five miles. Near the middle of the distance it forms two islands, the Île-St.-Louis and the Île-de-la-Cité, which are covered with buildings. The former Isle of Louvier, which was used as a dépôt for firewood, is now united to the quay. In all its length the river is lined with broad stone quays, backed by many fine buildings. The quays, which have been recently enlarged, repaired, and levelled, are fenced with parapets, and furnished with numerous wharfs and landing-places. Barges of large tonnage are towed up the river from Rouen and Havre with colonial and other produce for the supply of the capital; steamers also ply on the Seine. In 1854 a vessel, built at Bordeaux for the purpose, sailed from Rio Janeiro direct to Paris, and unloaded her cargo on the quays. The winding course of the river however, and the difficulties of the navigation (SEINE), prevent Paris from being a sea-port; the advantages of such a position are already conferred upon the city by the railways that connect it with all the principal sea-ports of France. The Seine is kept clear from all impurities; it flows between its beautiful quays in a stream so pure that, after traversing the whole length of Paris, one may see the bottom in a clear day. There are numerous baths and swimming schools upon it, and places resembling roofed boats with open sides, in which linen is washed and got up. The river is spanned by above twenty bridges, many of which have been repaired or partly rebuilt since the re-establishment of the empire. The most celebrated of the bridges of Paris is the Pont-Neuf, which crosses the Seine at the north side of the Île-de-la-Cité, and is embellished with a statue of Henri IV. A new bridge, to be called Alma, is now (March, 1855) being constructed between the Pont-des-Invalides and the Pont-de-Jena, which is to be connected by new avenues with the barracks of the École Militaire and with the triumphal arch de-l'Étoile. The bridges of Paris afford many noble views, and the quays form cheerful and healthy promenades.

Commencing on the left bank of the Seine, at the distance of a mile and a half south from the terminus of the Orléans railway, which is in the Boulevard de-l'Hôpital, on the south side of the Jardin-des-Plantes, the great bastioned wall that girds Paris runs westward across the plain on the south side of the city, and a little to the northward of Ivry, Arcueil, Grand Gentilly, Montrouge, Vanvres, and Issy, striking the Seine again opposite Le-Point-du-Jour; here starting from

the right bank of the river, it sweeps round sharply to north-north-east along the eastern side of the Bois-de-Boulogne, which it separates from the suburbs of Auteuil and Passy; having crossed the high road to Neuilly about three-quarters of a mile west of the triumphal arch De-l'Étoile, it runs north-east and east, inclosing the plateau of Monceau and the heights of Batignolles and Montmartre; in the angle between the St.-Denis and the Ourcq canals, which it spans respectively a little north and east of the suburb of La-Villette, the wall turns south along the eastern side of Belleville and Père-la-Chaise, and to the east and south of Bercy, between which and Charenton it again reaches the right bank of the Seine. At distances varying from one to three miles from the wall a series of detached forts are built, one of which, Fort-de-Charenton, stands in the angle between the Seine and the Marne, near the Veterinary School of Alfort; five between Ivry and Issy command all the approaches on the south; the castle of Vincennes, and four forts erected among the hills that intervene between the Marne and the Ourcq Canal, command the approaches from the east; to the north of St.-Denis are two strong forts, one of which spans the great north road, and the other commands the Seine opposite Île-St.-Denis; on the left bank of the Seine, which to the west of the city runs parallel with the bastioned wall, and at a distance of between one and two miles from it, a strong fort with bomb-proof casemates, and large barracks, are built on Mont-Valérien.

The outline of Paris, defined by the wall of 1787, approximates to an oval, having its longer diameter from west-north-west to east-south-east about 5½ miles, and its shorter diameter 3½ miles. The circuit of the wall is 15 miles. The included area is 8500 acres. The number of barriers, or entrances, through this wall is about 50. Most of these barriers have toll-houses attached to them, at which the local duties on goods entering the capital are levied. Round this wall, on the outer side, is a road planted with fine rows of trees, forming the outer boulevards. Most of the barriers are approached by wide roads lined with double rows of trees, forming magnificent approaches to the city.

The wall of 1787 incloses several portions which, as being without the walls demolished by Louis XIV., were designated 'faubourgs,' or suburbs, and which still retain that name. Of these suburbs and quarters the following are the principal:—On the west, Chaillot, adjacent to the Champs-Élysées; on the north-west, the Faubourg St.-Honoré and the Faubourg Du-Roule; on the north, the Chaussée-d'Antin (one of the handsomest and most regularly-built quarters in Paris), the Faubourg Montmartre, the Faubourg Poissonnière, the Faubourg St.-Denis, and the Faubourg St.-Martin; on the north-east, the Faubourg Du-Temple; on the east, the Faubourg St.-Antoine; all these are on the right or north bank of the Seine. On the opposite bank, in the south-east part of the city, is the Faubourg St.-Victor; on the south part are the Faubourgs St.-Marcel, St.-Jacques, and St.-Michel; and in the south-west are the Faubourg St.-Germain and the quarter of Gros-Caillou. The suburbs which surround Paris on the outside of the wall of 1787 are—Auteuil and Passy on the west; Batignolles, Montmartre, and La Villette, on the north; Belleville, Ménilmontant, Charonne, and Bercy, on the east; Montrouge, Vaugirard, and Grenelle, on the south. All these suburbs, with a wide belt of fields, gardens, and uninclosed land, are now girt by the bastioned wall; they are noticed under the article on the department of SEINE.

Before 1789 Paris was divided into three parts, named City, Town, and University; and subdivided into 20 quarters. In the year just mentioned an ordinance of Necker divided it into 60 districts, each of which furnished a battalion of national guards, and elected a deputy of the Tiers-État. For this arrangement the Constituent Assembly in 1790 substituted the division into 48 sections. A few years later the city was divided into 12 arrondissements, each administered by a mayor and corporation, and subdivided into 4 quarters. This arrangement still subsists. The general government of the city is vested in two prefects—the prefect of the department of Seine, and the prefect of police.

The central part of the town, which is by far the oldest, has narrow crooked streets, formed by lofty houses, chiefly built of stone. The outer parts of the town are more regularly laid out. The old streets are without foot-pavements and the kennel is in the middle of the street. The streets are lighted with gas. Great improvements have been made of late years; pavements have been laid with flag-stones for pedestrians; all modern streets are provided with foot pavements, which have also been extended to the older streets that are wide enough to admit of them. The boulevards are a line of streets forming a circuit of smaller extent than the city wall. They indicate, on the north of the river, the line of the ramparts and ditches demolished and filled up by Louis XIV.; on the south side they are of later date, and take a wider circuit than the ancient walls. They are planted throughout with alleys of trees. The northern boulevards are the gayest thoroughfares in Paris: they are flanked by fine ranges of houses and adorned with numerous fountains. Here are some of the principal hotels, coffee-houses, and restaurants of Paris. On the north side of these boulevards are the Porte-St.-Martin and the Porte-St.-Denis, two splendid triumphal arches, erected in honour of the victories of Louis XIV.

The largest of the old places, or squares, are the Place-de-la-Concorde, the Place-Vendôme, the Place-des-Victoires, and the Place-du-

Trône (both circular), and the Place-Royale. These places are adorned with columns, statues, fountains, or other decorations. In the Place-des-Victoires is a statue of Louis XIV. In the Place Louvois, opposite the great library, in the Rue-Richelieu, is a splendid fountain, erected on the spot where the Duc de Berry was assassinated in 1820. The Place-du-Carrousel, to the east of the Tuileries, hardly any longer exists, having become absorbed in the great square inclosed by the Palace of the Tuileries and the Louvre, as will be explained below. There are numerous fine public walks, as the gardens of the Tuileries, the gardens of the Luxembourg, the Palais-Royal, the Champs-Élysées, the Avenue-de-Neuilly, and the numerous avenues in the neighbourhood of the École Militaire and the Invalides, which are streets lined with alleys of trees, like the boulevards. The Champ-de-Mars is a very large inclosure, attached to the École Militaire, and used for reviews; the Esplanade-des-Invalides is a garden, or pleasure-ground, extending from the Hôtel-des-Invalides to the Seine. To the west of the city outside the great bastioned wall is the Bois-de-Boulogne, which is laid out in magnificent drives and embellished with fine sheets of water, fountains, and jets-d'eau.

The Place-de-la-Concorde, an octagonal space, lies at the intersection of two magnificent perspectives, one between the church de-la-Madeleine and the Chamber of Deputies, the other between the Tuileries gardens and palace on the east, and the triumphal arch de-l'Étoile on the west at the head of the Champs-Élysées. It is splendidly paved, lighted, and decorated; allegorical figures of the principal provincial towns of France surmount the eight pavilions of the octagon. In the centre stands the obelisk of Luxor, which occupies the site of the guillotine in the first revolution, under which Louis XVI., Marie Antoinette, Charlotte Corday, Robespierre himself, and many others, illustrious and ignoble, fell during that bloody convulsion. A little west of the Place-de-la-Concorde the Avenue-de-Marigny leads past the Elysée palace, the front of which is in the Rue-du-Faubourg-St.-Honoré.

There is perhaps no city in the world which has such a number of handsome public buildings as Paris. A few of the principal structures are here briefly mentioned, to describe all would require not an article but volumes. The cathedral of Notre-Dame, crowned by its two gigantic towers, is considered one of the boldest and most successful existing specimens of gothic architecture. It was commenced A.D. 1010 and not completed till 1260. The extreme length externally is 442 feet; breadth 162 feet; breadth of nave 42 feet, length to transept 186 feet, transept 155 feet, width of front 134 feet, and height of towers 235 feet. The plan is divided into a nave and four aisles, besides a range of chapels on each side between the external buttresses. The whole building has been recently cleaned and renovated. Notre-Dame stands in the most ancient part of Paris, in the Île-de-la-Cité. The archbishop's palace, which stood on the south side of the cathedral, was destroyed at the revolution of 1830. On the Isle are also the Hôtel-Dieu, one of the best regulated hospitals in the world, making up 1000 beds; the vast Palais-de-Justice, which with its beautiful Sainte-Chapelle (built in 1238), has been recently thoroughly restored; the Place-Dauphine, a triangular space, in which is a fountain surmounted by a bust of Desaix, the hero of Marengo; and the prefecture of police. In the Palais-de-Justice all the law courts are united except the tribunal of commerce. The Conciergerie, distinguished by its two lofty towers, on the Quai-de-l'Horloge, is also in the Île-de-la-Cité: in the western of these towers Marie Antoinette was imprisoned.

The former Pantheon, one of the finest buildings in Paris, has been again restored to ecclesiastical uses by the present emperor and to its old title of the church of Sainte-Geneviève. It is a beautiful edifice with good general proportions and much grace and elegance in the outline. The exterior presents a design marked by grandeur and simplicity. A single large order, whose columns are 60 feet high, forms a Corinthian hexastyle crowned by a pediment filled with sculpture; there are however 12 other columns, besides 4 attached ones. The entablature is continued along the whole building, of which it constitutes almost the sole decoration, there being no windows, as the interior is lighted by the dome, and by large semicircular windows above the internal colonnades, which are not visible externally. The lower part of the dome is encircled by a Corinthian peristyle of 32 columns 36 feet high, on an unbroken podium, or stylobate. The dome is entirely constructed of stone 67 feet in diameter and 190 feet above the ground. The interior is a Greek cross in plan, the length from east to west being 295 feet, that of the transept 262 feet, and the breadth uniform, namely 104 feet. Instead of pier-arches, the aisles are formed by insulated Corinthian columns 40 feet high, thereby producing an air of great richness and lightness. The total length of the church, including the portico, is 352 feet. In close proximity to the church of Sainte-Geneviève, are the École-de-Droit, the fine church of St.-Etienne-du-Mont, the polytechnic school, the college Henri IV., and the college Louis-le-Grand, separated by the Rue-St.-Jacques from the Sorbonne.

The façade of the church of the Invalides consists of two small orders, above which rises a composite order of forty columns, surmounted by a balustrade and attic, behind which swells a magnificent dome, crowned with a lantern and spire. The dome is raised on the centre of a Greek cross on an octagonal base. It is double; the inner

dome, constructed with masonry, is spherical; the outer, with stone and brick, is spheroidal. Its diameter is 80 feet, and its height above the ground 173 feet. The entire elevation to the top of the cross is 342 feet. The dome of the Invalides forms a magnificent feature in some of the perspectives of Paris. Under the dome the magnificent tomb of Napoleon I., the noblest work of Visconti, is erected. This tomb and the grand altar, by the same architect, are among the finest specimens of architecture in Paris. To the west of the Invalides is the École Militaire, now converted into barracks; in front of which is the Champ-de-Mars, a vast parallelogram, 950 yards long and 456 yards wide, surrounded by a fosse, masonry, and terraces. Races are held here annually, and the troops are reviewed in the Champ-de-Mars. The beautiful bridge of Jena crosses the Seine at the north-west end of the Champ-de-Mars, leading to the Avenue-de-Longchamps outside the barrier. On the southern side of the Avenue-de-Saxe, which leads from the Place-de-Fontenoy (opposite the southern entrance of the École Militaire) to the great avenue south of the Invalides, are the abattoir and artesian well of Grenelle.

The church de-la-Madeleine is in exterior form a Corinthian peripteral temple, upon a noble scale. On the pediment is a magnificent bas-relief containing nineteen figures, representing Christ granting pardon to Mary Magdalene, surrounded by emblematic figures. The dimensions are 328 feet by 138 feet, independently of the projection of the flights of steps at each end, which make the total length of the base or sub-structure 418 feet; the stylobate, on which the columns are raised, is about 13 feet high; the height of the columns 62 feet; that of the entablature nearly 14 feet, and the entire height from the ground to the apex of the pediment 116 feet. There are in all 52 columns; eight at each end, and twenty along each side, those at the angles being reckoned again. The door of the south or principal entrance is 32 feet high by 16 feet wide, and is of bronze, with ten panels sculptured in relief, with subjects illustrative of the Ten Commandments. The interior, which is a simple nave, with three chapels on each side and a high altar at the apex end, measures 259 feet by 52 feet, and consists of three compartments, covered by as many flat domes, through which the building is lighted, there being no side windows. It is adorned with a small Ionic order, which also extends round the apex. The whole of the interior is decorated with white marble and gold. The roof is entirely of iron and copper, and no timber has been used in the construction of any part of the building. The vault is covered with magnificent paintings.

The Louvre, which has long ceased to be a royal habitation, though one of the noblest palatial structures in Europe, is nearly a square, of 576 feet by 538 feet, inclosing a court 394 feet square. The celebrated east front, or colonnade, is in a style of simple grandeur almost unprecedented. The great painting gallery extends from the Louvre to the Tuileries, in a line of more than 1456 feet. The interior of the Louvre is splendidly decorated. The walls of the long gallery are lined throughout with paintings of the French, Flemish, German, and Italian schools. In other parts of the structure are splendid collections of Egyptian, Greek, Roman, and Assyrian antiquities; an unrivalled collection of paintings of the Spanish school; a museum, containing models of everything relating to the marine, arsenals, forts, forges, vessels, &c., and a vast collection of royal armour and various articles belonging to or used by sovereigns of France from Childeric to Louis Philippe. The Louvre now forms one building with the Tuileries, as will be noticed in the sequel when speaking of the improvements made in Paris by Napoleon III. Opposite the colonnade of the Louvre is the church of St.-Germain-l'Auxerrois, originally founded by Childeric about A.D. 580. A little farther along the quay is the Place-de-Châtelet, in which the great Châtelet, built in 856, stood till 1802. In the centre of it is a fountain surmounted by a column 52 feet in height, and crowned with a gilt statue of Victory. The shaft of the column is encircled with bands, on which are inscribed the principal victories of Napoleon I.

The Luxembourg Palace, now the Chamber of Peers, was erected by Mary de' Medici, and is a good specimen of the Florentine style, where three orders are introduced with rusticated columns and pilasters. It consists of a centre and two wings, which latter are connected by a screen of arcades, in continuation of the lower order, decorated in the centre with a lofty pavilion or vestibule, in three orders, and covered by a dome. One of the most splendid features of the interior is the grand staircase leading to the hall of the Peers, a magnificent apartment, 80 feet in diameter, lighted from the roof and decorated with Corinthian columns and frescoes. The gardens are beautifully laid out and planted. The grand avenue is of great length and leads to the Observatory. Marshal Ney was shot in this avenue Dec. 7, 1815: on Dec. 7, 1854, a colossal bronze statue of the Marshal was erected on the spot. Not far from the Observatory are the Foundling Hospital and Orphan Asylum, established by St. Vincent de Paul in 1638; the cemetery of Mont Parnasse; and in the Rue-St.-Jacques the hospital of Notre-Dame-de-Val-de-Grace and its beautiful church, founded by Louis XIV. in 1645. Opposite the north-east angle of the Palace-de-Luxembourg is the Odeon theatre, the only theatre on the south side of the river. The Luxembourg contains a vast deal of fine statuary and a painting gallery. The grounds, like the gardens of the Tuileries and other places of public resort in Paris, are embellished with statues.

To the north of the Luxembourg gardens is the church and semi-

nary of St-Sulpis. The church, built on the site of a former ecclesiastical edifice in 1646, is a superb building, 337 feet long, and flanked by two towers 210 feet high. Between the towers, mounted upon a stylobate, is a beautiful portico, composed of light Doric columns 40 feet high, above which is a gallery and Ionic colonnade, with columns 80 feet in height, the whole surmounted by a balustrade. In front of the church is a beautiful fountain by Visconti. The seminary is a large plain building, with accommodations for above 200 ecclesiastical students.

The Chamber of the Legislative Body of the French empire, formerly the Chamber of Deputies, and originally part of the Palais-Bourbon, is remarkable for its splendid façade towards the river and the Place-de-la-Concorde. The whole extent of this side of the building is 236 feet, 186 feet of which form an advancing central mass faced by a Corinthian portico of 12 columns, supporting a pediment covered with bas-reliefs and mounted on a stylobate of 28 steps 100 feet wide, and flanked by pedestals and statues. Notwithstanding that it is only a single intercolumn in depth, this portico makes an exceedingly majestic appearance. The legislative chamber, which is behind the portico, is a semicircle lighted from above, and surrounded by an Ionic colonnade.

Along the line of quays, between the Chamber of Deputies and the Mint, are many noble structures, among which may be mentioned the Palace of the Legion of Honour; the Palais-d'Orsay, one of the finest edifices in the capital, now occupied by the Council of State and dependent offices; the Palais-de-l'Institut, which contains the Mazarine library (120,000 volumes and 4500 manuscripts), and the library of the Institute; and the Palais-des-Beaux-Arts, on the roof of the amphitheatre of which is Paul de la Roche's beautiful picture representing the different Schools of Painting. The Institute, the principal of the learned societies of France, occupies the building of the former College des-Quatre-Nations.

The Hôtel-des-Monnaies, or mint, on the Quai-Conti, near the south end of the Pont-Neuf, is a noble structure of palatial aspect. It has two fronts of nearly the same extent, 376 feet, one towards the Quai, the other in the Rue-Guénégaud. The former is in three divisions, the centre one of which has an Ionic order of six columns above the basement, crowned by an attic, against which are statues over the columns and panels between them. There are two series of windows in the height of the order, and 27 on a floor. The whole is marked by great nobleness and simplicity, and is pure in taste.

The Hôtel-de-Ville, the splendid residence of the prefect of the Seine, the chief of the municipality of Paris, was commenced under François I., and completed in 1606; but it has received since then many additions and alterations, and the whole building has been recently restored. Its plan is a rectangle, with 25 windows in its length on the east and west façades, and 19 windows on the north and south façades. Four square pavilions, three stories high, flank the four angles, and two intermediate pavilions rise in the middle of the longest sides, besides the graceful bell-tower that springs up above the principal entrance. Between the pavilions the building is only two lights high, crowned by a lofty flat-roofed attic, in front of which are niches and pedestals with statues of illustrious magistrates, and on the south façade with allegorical figures representing Justice, Commerce, &c. The apartments of the Hôtel-de-Ville are furnished and decorated with unexampled splendour.

The Halle-aux-Blés, or corn-market, is a rotunda whose external diameter is 225 feet, containing within a circular arcade of 25 arches, leaving a clear central space 127 feet in diameter, which was originally an open court, but was afterwards covered in by a dome of iron and copper, with a skylight in the centre, similar to the opening in the dome of the Pantheon at Rome. The Halle-aux-Vins, or wine-market, to the north of the Jardin-des-Plantes, consists of seven large piles of building separating streets named after the most celebrated French wines. The granaries contain about 450,000 casks. Nearly opposite the Halle-aux-Vins, on the right bank of the Seine, are the vast buildings of the Arsenal, which contain a library, and some memorials of Sully and Henri IV.; and the great Reserve Granary, facing the Boulevard-Bourdon, which always contains four months' consumption of flour and grain for the capital, and is 2160 feet long by 64 feet in breadth. Behind the Halle-aux-Vins, opposite the north-west angle of the Jardin-des-Plantes, is the Hôpital-de-la-Pitié, which makes up 600 beds; and immediately west of the hospital is the prison of Sainte-Pélagie.

The Bourse is an insulated building standing in the centre of a large square. It is in form a parallelogram, measuring 164 feet by 234 feet, and is entirely surrounded by a Corinthian peristyle of 64 columns, of which there are 14 at each end, besides which there are two others, namely, behind the second one from each angle of the west front, the portico being there two intercolumns in depth. The columns are 40 feet high, and raised upon a solid stylobate 10 feet high; the extreme height from the ground to the top of the attic, or podium above the entablature, is rather more than 68 feet. The interior contains the tribunal of commerce, several offices, and a large central hall for the Exchange, 108 feet by 59 feet (exclusive of the arcades or galleries by which it is surrounded on both floors), and lighted by a central skylight in the vaulted roof.

Nearly on the line between the Bourse and the Tuileries, off the east

side of the Rue-Richelieu, is the Palais Royal, originally built in 1629 by Cardinal Richelieu, on the sites of the hotels of Rambouillet and Mercœur. At his death the cardinal left it to Louis XIII.; and here Louis XIV. and his mother resided during the troubles of the Fronde. After his accession to the throne, Louis XIV. presented the palace to his brother, the Duke of Orléans, in which branch of the Bourbon family it continued till recently. The palace was augmented in 1763, and in 1786 the galleries that surround the garden were built, with the exception of the Galerie-d'Orléans, completed in 1829 to connect the pavilions that inclose the second court. The father of King Louis Philippe converted the pavilions into an immense bazaar, parcelling them out into little shops. The garden forms a parallelogram, 700 feet long by 300 feet wide; in the centre is a beautiful fountain, rising from a large basin, on each side of which is a grass-plot bordered with flower-beds, and adorned with fine bronze and marble statues. The restaurants and coffee-houses of the Palais-Royal are very numerously attended; and the promenades here, in the evening, when the whole place is brilliantly lighted, are particularly attractive. The southern portion of the palace, facing the great square, is now the residence of Prince Jerome Bonaparte. It was sacked by the mob in February 1848, when the valuable battle-pieces of Horace Vernet were destroyed. Opposite the Palais-Royal stood the Château-d'Eau, the scene of a desperate struggle in the revolution of 1848. It has been demolished since. Near the north end of the palace is the Théâtre-Français; and at the corner of the Rue-Fontaine-Molière is a bronze statue of Molière, placed in a niche nearly opposite the house in which he died. A little farther on, in the Rue-Richelieu, is the Imperial Library, one of the largest in the world, open to all comers from 10 o'clock a.m. till 3 o'clock p.m.

The Column of the Grand Army, in the Place-Vendôme, is 231 feet high, comprising the pedestal. The column is built of cut stone, coated with bronze bas-reliefs representing the chief exploits of the Grand Army from its leaving the camp of Boulogne to the peace concluded after the battle of Austerlitz. In its general design it is a copy of that of Trajan; the bronze reliefs were executed by thirty different artists, under the direction of Denon. The pedestal is likewise highly enriched; the diameter of the column is 12 feet 10 inches. In 1814 the bronze statue of Napoleon I., in Roman costume, was taken down, and afterwards recast to form the horse of the equestrian statue of Henri IV.; but a second bronze figure of Napoleon I., in a characteristic dress and attitude, was put up July 23th 1833: it is 13 feet high.

The triumphal arch de-l'Étoile, begun by Napoleon I. in 1806 and completed in 1836, is, without exception, the most gigantic work of its kind either in ancient or modern times; the great arch being 47 feet 10 inches wide, 96 feet 6 inches high, and 73 feet in depth. This structure is perfectly isolated, and forms a mass whose plan is 147 feet by 78 feet, and its height 162 feet, the effect of which extraordinary dimensions is greatly enhanced by its simplicity of form and its solidity, the outline being unbroken by columns and projecting entablatures, and there being only a single opening on each side, namely the large arch in the direction of east and west, and the smaller one running transversely through the plan from north to south; the height of the latter is 60 feet, and the breadth 274 feet. There are no columns or pilasters, and the architectural forms are exceedingly simple, but at the same time prodigiously rich: the entablature is 23 feet deep, and the frieze is entirely covered with figures in relief, besides which the mouldings of the cornice are carved, as are likewise those of the archivolts and impost of the arch. If it were remarkable for nothing else, this monument would be eminently so on account of the display of sculpture, there being four colossal groups of sculpture, one on each side of the arch in the east and west fronts, the height of which, including their pedestals, is upwards of 56 feet, and that of the figures themselves about 20 feet. Corresponding with these, and above the cornice forming the impost to the large arch, are as many large bas-reliefs. The attic also has a great deal of sculptured ornament. The sculptures generally represent the achievements of Napoleon I. and his generals. Within the upper part and attic there is, besides some other rooms, a spacious hall, extending from end to end of the building.

The Colonne-de-Juillet, erected on the Place-de-la-Bastille, in commemoration of the revolution of 1830, is somewhat loftier than the column in the Place-Vendôme; the bronze exterior of the shaft consists of 20 cylindrical bands or rings, not attached by cramps, but fitted into each other by grooves. The capital is cast in one mass of bronze. On the top is a lantern surrounded by a gallery with a bronze balustrade, and the whole is surmounted by a bronze statue, 17 feet high, of Liberty, holding a torch in the right hand and a broken chain in the other. The height of the entire structure is 164 feet, and the weight of metal employed is 163,264 lbs. Near the Column of July is the well-built square of Des-Vosges, or Place-Royale, which occupies the site of the ancient Palais-des-Tournelles. Farther east, in the Faubourg St-Antoine, is the Barrière-du-Trône, which is ornamented with two plain but lofty columns, conspicuous objects from many parts of Paris. It was on this spot that seated on his throne Louis XIV. received the homage of the city on his triumphal entry, August 26, 1660.

The principal churches of Paris have been already mentioned. Most

of them are still more remarkable for the grand architectural effects and rich decorations of their interiors than for their external appearance. Besides those already named, are the churches of Notre-Dame-de-Lorette, at the end of the Rue-Lafitte, finished in 1823; the church of St.-Eustache, one of the largest and handsomest ecclesiastical structures in Paris, and celebrated for its musical services; St.-Germain-des-Près; St.-Roch; the gothic church of St.-Merri in the Rue-St.-Martin; Notre-Dame-des-Victoires; St.-Nicolas-des-Champs, in the Rue-St.-Martin; St.-François-d'Assise; and the church of St.-Vincent-de-Paul, one of the handsomest structures in Paris, built a little north of the prison of St.-Lazare on a height formerly occupied by a royal lodge.

Among the more modern structures of Paris, the termini of the different railways deserve notice for their neatness and elegance. The principal are those of the Strasbourg railway in the Rue-de-Strasbourg in the Faubourg-St.-Martin; the Great Northern in the Place-Roubaix; the Rouen and Havre terminus in the Rue-d'Amsterdam; the terminus of the Chartres railway in the Boulevard Mont-Parnasse; the Orléans terminus in the Boulevard-de-l'Hôpital; and the Lyon terminus in the new Boulevard Mazas.

The improvements effected in Paris since the accession of the present emperor Napoleon III., not four years ago, are of a most important character; and if the impulse thus given to architectural amelioration is continued for a few years longer, Paris will be in every respect, not only with regard to public buildings but also to street architecture, unrivalled among the great capitals of Europe. Anyone who knew Paris even ten years ago must remember the mass of unsightly buildings which fronted the magnificent triumphal entrance to the Tuileries on the Place-du-Carrousel and disfigured the approaches to the Louvre. All these are now swept away, and the Tuileries and the Louvre are united into one vast building, forming the greatest palace in the world. This magnificent structure, just completed from designs of the architect Visconti, stands entirely alone, being surrounded on every side by open spaces and magnificent perspectives. To the west are the well-known and beautiful gardens of the Tuileries; on the south the quays; on the north is the Rue-de-Rivoli, the grandest street in the world, which passes through a new square formed between the Tuileries and the Palais-Royal; and on the east is another large square planted with shrubs and trees, and connecting the quays with the Rue-de-Rivoli. The area inclosed by the palace buildings forms a square unrivalled for extent and magnificence and large enough for the encampment of an army. The wing facing the river has been completely restored, and the opposite new wing, which forms a large part of the Rue-de-Rivoli, is magnificently built. The whole interior of the Louvre has been restored and most gorgeously decorated, and all its treasures have been re-arranged.

From the Place-de-la-Concorde, which has been re-embellished, the Rue-de-Rivoli extends on a perfect level and in a straight line to the Hôtel-de-Ville, a length of more than a mile and a half, with a width of 24 yards. The houses on each side are all built of white stone, six or seven stories high, with ornamental balconies and sculptured work, but with such variations and differences of design as obviate the monotony of uniformity. To clear the ground for the erection of this noble street a great number of old houses and narrow streets, not without many historical associations, have been swept away. The houses too about the Hôtel-de-Ville have been pulled down, and this celebrated seat of municipal government now stands in the midst of a large square, one side of which is formed by an immense stone palace, used as a barrack for troops. A wide street, running along the quays parallel to the Rue-de-Rivoli, forms another line of connection between the palace and the Hôtel-de-Ville and the barracks.

From the square of the Hôtel-de-Ville another magnificent street, a mile long, planted on each side with trees, and lined with houses six stories high all built of white stone, runs northward, crossing the boulevards from the quays to the handsome terminus of the Strasbourg railway. This street, which is not yet completed, forms a most magnificent entrance to Paris.

A railway is nearly finished completely encircling Paris, in order to connect all the metropolitan lines of railway together, and to enable companies to carry both passengers and goods from one end of France to the other across the metropolis without changing carriage. In France railways have all the same gauge.

In the Champs-Élysées, on the left of the Great Avenue leading from the Place-de-la-Concorde to the triumphal arch de l'Étoile, a building intended for industrial exhibitions, public ceremonies, and imperial festivals is rapidly approaching completion. This noble hall is 900 feet long by 500 feet wide. The exterior walls, built of stone, consist of two stories of massive arched windows, rising one above the other and ornamented with sculptures emblematic of the principal cities of France. Through these windows (which are painted) and the arched roof, which is constructed of iron and ground glass, the building is lighted. In the centre of each long side of the building are noble projections to break the uniformity of the façades; the projection on the northern side contains the principal entrance under a noble arch flanked by two lofty towers. This building forms part of the Palais-de-l'Industrie for the Universal Exhibition of 1855: several wings and galleries, extensions of the plan, are connected with it.

A very beautiful gothic church, of cathedral dimensions, surmounted

by two lofty towers and lighted through windows of stained glass, is built in the Faubourg St.-Germain near the Legislative Chamber. The building of the Alma Bridge has been already mentioned. Among other improvements we may enumerate the restoration and decoration of Notre-Dame, the Palais-de-Justice and its Sainte-Chapelle, the churches of St.-Eustache, St.-Etienne-du-Mont, and St.-Roch. The dome of the Invalides has been rebuilt to make it more worthy of the Tomb of Napoleon I., the most wonderful monument of Paris. The quays have been completely finished and put in order, and several of the oldest stone bridges rebuilt. The great central markets have been constructed on a grand scale. The Boulevard Mazas, connecting the bridge of Austerlitz with the Place-du-Trône, and passing the terminus of the Lyon railway, has been completed, and a new boulevard is being cut from the Madeleine to the Park of Monceaux. Finally a free library, containing 200,000 volumes, has been opened near the church of Sainte-Geneviève in a stone building of great architectural merit, in the Italian style. The interior of this institution is remarkable for its elegant and judicious arrangements.

The population of Paris in 1791 was estimated to be above 610,000. The first regular census was taken in (we believe) 1806, and the population of the commune of Paris in the years named was officially given as follows:—In 1806, 580,609; 1826, 890,431; 1836, 909,126; 1846, 945,721; 1851, 996,067. At the census of 1851 the population of the arrondissement of Paris (a division of the department of Seine) was 1,053,262. But the population of Paris as bounded by the great modern fortifications considerably exceeds this last number.

The total number of births in Paris during the year 1851 was 32,324 (16,349 boys, 15,975 girls): of this number 10,635 were born out of marriage. The total number of deaths for the year was 27,585 (13,698 males, 13,887 females): the number of bodies exposed at the Morgue in the year was 335 (296 men, 39 women); the number of deaths from smallpox amounted to 364.

The following items of the consumption of Paris are taken from the official return for the year 1851:—

Beef, mutton, veal	135,230,992 lbs.	Oil	2,035,626 gallons.
Pork	24,447,748 "	Vinegar	407,484 "
Salt pork, hams, &c.	2,714,918 "	Sea-Fish, value	6,562,861 francs.
Suet	6,324,199 "	Oysters	1,870,926 "
Salt	11,926,633 "	River-Fish	717,094 "
Cheese	3,071,457 "	Fowls and Game	12,618,432 "
Grapes	6,993,441 "	Butter	12,028,712 "
Grease for machinery	3,079,863 "	Eggs	5,532,890 "
Wine	23,588,288 gals.	Charcoal	8,284,122 bushels.
Spirits	1,286,208 "	Coal	9,969,649 "
Beer	2,430,868 "	Firewood	763,684 cubic metres.

The students of various classes form a considerable part of the population of Paris, the total number reaching nearly to 18,000. There is also a very numerous manufacturing population, which has been lately estimated at 450,000; for in the variety and extent of its productions of industry, Paris may vie with most cities of the world. The carpets of the manufactory of La Savonnerie and the tapestry of the Gobelins are well known. The two establishments are now united at the Gobelins. Cashemire, silk, and woollen shawls; light woollens, cotton goods, hosiery, gloves, hats, embroidery, lace, and other articles of fashionable attire; steam-machinery, jewellery, gold and silver plate, and trinkets; pens, clocks and watches, glass, and bronzes; musical, mathematical, and philosophical instruments; paper-hangings, household furniture, carriages, saddlery, leather, glue, cutlery, fire-arms, liqueurs, and confectionary are manufactured. Dyeing, printing, engraving, and lithography; the manufacture of salts, acids, oxides, and other chemicals; the refining of sugar, tallow-melting, the distillation of spirits, brewing, and the manufacture of starch, are carried on with activity. The special exports of Paris according to official returns were valued at 94 millions of francs in 1837. In 1847 the value was 168,572,187 francs; in 1848, a year of great depression, the value of the exports was 157 millions. In 1851 the exports had risen to 219½ millions, and in 1852 to 221½ millions of francs (8,860,000L.), or nearly one-seventh of the value of the total exports of France. It must be borne in mind however that many articles manufactured in other towns of France are sent to Paris to be finished, and are included in the exports of the capital. The great manufacturers of Lyon, Rouen, and the other chief manufacturing towns of the provinces, have their agencies and their depôts at Paris. The Seine furnishes the principal means of water-carriage. The Ourcq Canal, which opens a communication with the country to the north-eastward, terminates in the basin of La-Villette, just outside the wall of Paris, on the north-east side of the city; and the canals of St.-Martin and St.-Denis open a communication between the Ourcq Canal and the Seine. The canal of St.-Martin enters the Seine in the very heart of Paris, opposite the inland Louvier; its termination toward the Seine is formed by the basin of the Arsenal. The canal of St.-Denis opens into the Seine at the town of St.-Denis, a short distance north of Paris. Paris also has abundant facilities for transport by means of railroads, which connect the capital with Lyon, Troyes, Orléans, Nantes, Bordeaux, Bayonne, Strasbourg, St.-Quentin, Lille, Dunkirk, Calais, Boulogne, Rouen, Havre, and Dieppe, besides short lines to Corbeil, Versailles, Chartres, and Le-Mans. The western railway now open to Le-Mans is part of a great trunk line in course of construction to Brest, which is to be connected by branches with a

north-western line to Cherbourg. Along all these lines electro-telegraphic wires are laid.

A vast number of barges and other craft arrive in Paris, besides trains of fire-wood or timber floated down the main stream, or its affluents the Marne and the Oise. Wood is the principal fuel consumed, but the consumption of coal is gaining ground, and begins to tell slightly by its grimy smoke on the formerly transparent atmosphere of Paris. The principal articles conveyed by the river in boats are wine and brandy; grain, pulse, and flour; butter, fish, and fruit; groceries, spices, salt, and oil; hay and straw; bricks, tiles, and stone; cottons, linens, and other woven goods; iron and other metals; earthenware and glass; soap, tobacco and snuff, soda, drugs, paper, &c. For the supply of provisions there are numerous markets, covered or open. The corn-market (Halle-aux-Blés) is between the Louvre and the Post-Office. The Reserve Granary, near the Arsenal, has been already mentioned. The meat-market, near the Halle-aux-Blés, a large space fitted up with wooden stalls, is supplied with water by six fountains. The poultry-market is on the south bank of the Seine, opposite La-Cité. It is a covered market, about 200 feet long and 150 feet wide, divided into three parts by rows of pillars and iron rails. The fish-market, near the meat-market, is a covered building, supported by a great number of columns. The Marché-des-Innocents, for fruit, vegetables, and flowers, is an open square in the same neighbourhood, surrounded by small shops for the market-people, and adorned in the centre by a handsome fountain. The Marché-St.-Germain, not far from the Luxembourg Palace, is an open square of about 300 feet long by 240 or 250 feet wide, with a covered arcade or piazza all round, and having a fountain in the centre. The old linen-market (Halle-au-Vieux-Linge), in which old clothes and secondhand articles of every sort are sold, is built on part of the site of the Temple, the tower of which was the prison of Louis XVI. and his family. The Halle-aux-Vins has been already noticed. The Marché-aux-Fleurs, or famous flower-market, in the Île-de-la-Cité between the Pont-aux-Changes and the Pont-Notre-Dame, is simply the wide space along the quay, which is planted with four rows of trees and watered by four fountains. There are five abattoirs, or general slaughter-houses, in the outskirts of the city, three on the north side of the Seine (Ménilmontant or Popincourt, Montmartre, and du-Roule), and two on the south side, Villejuif, outside the boulevard de l'Hôpital, and Grenelle. They are of great extent, and under excellent regulation.

The principal cemeteries of Paris are those of Père-la-Chaise, Montmartre, and Mont-Parnasse. They are all outside the octroi wall. Père-la-Chaise on the eastern side of Paris, the largest of these cemeteries, contains about 100 acres. It is beautifully laid out, planted with cypress-trees, and contains a vast number of handsome monuments, amongst others one erected over the ashes of Heloise and Abelard. The chapel is a neat building, surmounted by a white marble cross. In the cemetery of Mont-Parnasse, which is outside the city a little west of the Observatory, are the graves of many persons executed for political offences. The Guillotine, when it is wanted, is erected inside the Barrière d'Arcueil, to the south of the Observatory.

Paris is the centre of the imperial government, of the executive and legislative powers of the state, the seat of the supreme court of appeal for the whole empire (Cour-de-Cassation), and of an archbishop, whose suffragans are the bishops of Chartres, Meaux, Orléans, Blois, and Versailles. It has a university (Collège-de-France), five colleges, namely, those of Louis-le-Grand, Henri IV., Bourbon, Charlemagne, and St.-Louis; a polytechnic school, special schools of the fine arts, mines, &c., normal school, and a vast number of educational establishments of a high order. The University-Academy of Paris grants degrees to all students educated in colleges affiliated to it within the limits of the departments of Seine, Cher, Eure-et-Loir, Loir-et-Cher, Loiret, Marne, Oise, Seine-et-Marne, and Seine-et-Oise. There are also several theological schools, the most famous of which is that of the Sorbonne. The church of the Sorbonne is a handsome building; in the chapel of the college is a fine monument erected over the grave of Cardinal Richelieu. Printing was first introduced into France at the college of the Sorbonne in 1483. Paris is the headquarters of the First Military Division, which comprises the departments of Seine, Seine-et-Oise, Oise, Seine-et-Marne, Aube, Yonne, Loiret, and Eure-et-Loir.

Each arrondissement has a separate municipality, over which a mayor presides. There is also a justice of the peace to each of the 12 arrondissements, and a commissary of police to each of the 48 quarters. The council of the department of Seine over which the prefect presides, forms a municipal council for Paris. The municipal police has charge of the safety of the public, and the sanitary regulations of the city are confided to it. This force is about to be modelled after the police of London. The regulations for protection against fire and for the extinguishing of fires are excellent. There is an organised body of firemen (sa-peurs-pompiers), who are distributed in barracks or stations. The supply of water is generally by public fountains, and not commonly by pipes furnishing a supply to every house.

In Roman times the city of Lutetia was supplied with water by an aqueduct from Arcueil, as before stated. In the 6th century the monks of St.-Laurent and St.-Martin brought the waters of St.-Gervais to Paris, and their fountains of St.-Lazare and Maubude still remain. When Philippe Auguste founded the Halles he supplied them with

fountains. Henri IV. constructed the new aqueduct of Arcueil; Louis XIV. devoted large sums to the hydraulic service of Paris, and many of the fountains still existing were erected in his reign. More recently the supply has been largely increased by the completion of the Oureq-Canal, the boring of the Artesian well of Grenelle (which is 1786 feet deep, 1685 feet below the level of the sea, and gives 176 gallons per minute); the erection of the Pompe-à-Feu on the left bank of the Seine in 1848; and lastly the works at Chaillot, where large reservoirs are formed, into which steam-engines pump about 300 gallons from the Seine at each stroke. The supply from all these sources would give to each person 32 gallons a day, but owing to the small diameter of the pipes and the low level of the principal sources, the quantity furnished is far short of this. To remedy these defects larger pipes are now being laid down all through Paris, and the underground conduits are being made to communicate with each other, so that the surpluse at one point may make up the deficiency (if any) at another. The volume of water derived from the present sources is clearly sufficient if it could only be brought to all parts of the town. But unfortunately about four-fifths of Paris at present receive only a surface supply; and a high service supply could be furnished to only about one-fifth of the city, and this at vast additional cost. It is proposed therefore to leave the present arrangements for all public needs, such as street watering and cleansing, fountains, fire-plugs, and general ground service, and to bring by means of an aqueduct a new supply of water from a high level (the waters of the Somme and the Soude have been named) for the high service supply of the city.

Like the water supply the drainage of Paris is in an unsatisfactory state, and seems on the way of being thoroughly executed. In old times the city was drained by open sewers. The first covered sewer was made in 1374. In the 16th century the palace of Tournelles had to be abandoned in consequence of the malaria arising from the open drains around it. In the time of Louis XIV. the uncovered drains were four times as long as those that were covered. Napoleon I. began the subterranean canalisation of the city; but in 1854 there were only 102 miles of sewerage completed to 276 miles of public ways. In the interval however all the open sewers have been covered in, and some other important improvements have been effected. These are the establishment of arterial sewers parallel to the Seine; a grand sewer encircling the city into which several tributaries open; the purification of the Bièvre; and the commencement of the great sewer under the Rue-de-Rivoli (13 feet high and 8 feet wide), which will extend from Chaillot to the Faubourg St.-Antoine, and communicate with the sewer of the enceinte; and an arterial sewer on the left bank of the Seine, which when finished, will extend from the Bièvre to below Gros-Caillois. But even with all these aids the surface drainage of Paris is very imperfect, though two drains have been constructed outside the barriers to carry off the superficial waters from the streets. To remedy all the defects of the system it is proposed, in connection with the improved water supply above noticed, to form grand lines of sewerage under the principal streets furnished with rails for the passage of waggons and carts; out of these secondary lines, also furnished with rails to the less important streets, with smaller conduits to encircle each group of houses, and to communicate with each house by means of pipes.

It must not be supposed however that the streets of Paris are now as they used to be in a dirty state. Thanks to the regulations made since the re-establishment of the empire, not only the principal streets but the smaller thoroughfares are kept remarkably clean. Street-sweepers are appointed to every district of the metropolis. Between 8 o'clock in the morning and 9 o'clock in the evening no one is allowed to throw anything out upon the pavements; after the last mentioned hour all that is thrown out is collected and carted away before morning.

Paris possesses about 100 Catholic churches and chapels. There are few ecclesiastical communities for men, but several for women, the principal of which is the seminary of the congregation of the Sisters of Charity in the Rue-du-Bac. This establishment is of vast size, and has between 2000 and 3000 inmates, who here prepare themselves for the active discharge of their important duties—tending the sick in the hospitals, and instructing the children of the poor. There are two Calvinist and two Episcopal churches, one Lutheran church, a synagogue, and a Methodist meeting-house.

Besides the free library before mentioned there are several large and important libraries open to the public:—The Imperial library in the Rue-Richelieu near the Palais-Royal, with above 1,500,000 volumes, 80,000 manuscripts, 1,600,000 engravings, 100,000 medals and coins, and 300,000 maps; the library of the arsenal, with 180,000 volumes and 5000 manuscripts; the Mazarine library (120,000 volumes and 4500 manuscripts); the City library; that of the museum of Natural History at the Jardin-des-Plantes, and others.

The charitable institutions are numerous. There are 17 hospitals, most of them of great extent and admirably regulated. The most important of the non-military hospitals is the Hôtel-Dieu, in the island of La-Cité; of the military hospitals, the Hôtel-des-Invalides. The patients in nearly all the hospitals of Paris are tended by the admirable Sisters of Charity. There are also 13 asylums, including houses for the blind and for deaf-mutes. Each arrondissement has an office (Bureau-de-Charité) for relieving the destitute at their own

habitations. Two hospitals have been lately established by decree of the Emperor for receiving the workmen maimed or disabled at the great works in course of construction in the capital. There are a variety of other institutions for affording relief, and vast sums are distributed every year through the medium of the clergy, and the Brotherhood of St. Vincent de Paul, a lay society, for visiting the poor at their own houses.

Paris contains numerous places of amusement. There are several theatres, the most remarkable of which are the Académie-impériale-de-Musique, or French Opera House; the Italian Opera; the Opera-Comique; the Théâtre-Français; the Odeon; the Théâtre-Lyrique; the Gymnase; Du-Vaudeville; Des-Varietes, &c. The principal equestrian spectacles are the Cirque-Napoléon in the Boulevard-du-Temple; the Cirque in the Champs-Élysées, a spacious polygonal edifice built of stone and surmounted by a bronze horse; and the Hippodrome outside the barrier, opposite the south front of the triumphal arch de l'Étoile. The last has seats for 10,000 spectators. Public balls are common in summer and winter; and the gardens of the Tuileries and of the Palais-Royal, the Bois-de-Boulogne, and the Boulevards are much frequented by promenaders.

Among the prisons of Paris, besides Sainte-Pélagie before named, St. Lazare in the Rue-Faubourg-St. Denis, which was formerly the house of the congregation for foreign missions, established by St. Vincent of Paul, whose remains originally deposited in the chapel of St. Lazare, were translated from Notre-Dame to the chapel of the Lazarists in the Rue-de-Sèvres after 1830. Other prisons are La-Force, near the Place-Royale; La-Roquette in the Faubourg-St. Antoine; and the Abbaye in the Rue-Sainte-Marguerite, on the left bank of the Seine.

(Dulaure; Malte-Brun; Balbi; *Dictionnaire Géographique Universel; Paris and its Historical Scenes; Dictionnaire de la France; Revue Municipale; Official Papers published in the Moniteur; Guide to Paris, &c.*)

PARKGATE. [CHESHIRE.]

PARKHURST. [WIGHT, ISLE OF.]

PARKSTONE. [DORSETSHIRE.]

PARMA, Duchy of, a sovereign state in Northern Italy, which extends from the Apennines to the Po, and forms part of the great basin of that river. It is bounded N. by Austrian Italy, from which it is divided by the Po; E. by the duchy of Modena; W. by the Sardinian territory; and S. partly by the Riviera of Genoa, and partly by Tuscany. The length of the duchy from east to west is about 50 miles, and its breadth is from 40 to 45 miles; the area is 2391 square miles, and the population in 1852 amounted to 502,841. The state of Parma consists of five provinces:—1. Parma, between the Enza and the Taro, population 148,898; 2. Borgo San Donnino, between the Taro and the Riglio, population 142,540; 3. Piacenza, between the Riglio and the Bardoneggia, population 133,973; 4. Val di Taro, on the Apennines, population 50,952; and 5. Lunigiana Parmesana, also on the Apennines about Pontremoli, the chief town, population 31,478. In consequence of changes that followed the death of the ex-empress Maria Louisa, Parma obtained the territories of Pontremoli and Lunigiana, which formerly belonged to Tuscany and Modena. *Guastalla*, which was formerly united to Parma, now belongs to MODENA.

The mountain region, which constitutes about one-third of the whole country, is rugged, poor in produce, and bleak in winter; the forests of chestnut-trees, which clothe the sides of the mountains, supply the inhabitants with their chief article of food. Thousands of these highlanders quit their homes every year, many to seek employment in other and often distant countries, whilst others migrate with their flocks to pass the winter in the low lands. The lower hills and plains, which extend between the Apennines and the Po, and along the southern bank of that river, are very fertile, well cultivated, and populous; the lands have the advantage of a regular system of artificial irrigation. The pasture-lands are remarkably rich. The principal products are—corn, pulse, fruit, wine, silk, wool, remarkably fine cattle, and poultry. Good cheese is made, but no Parmesan. [LODI.] The mineral wealth of the country consists of iron, copper, salt, stones for lithography, marble, and alabaster. The manufactures consist of paper, gunpowder, woollen stuffs, glass, and delft ware.

The Ligurian Apennines enter the state of Parma from the west; the central ridge runs in an eastern direction, separating the waters of the Taro, which run into the Po, from those of the Magra, which flow into the Mediterranean, and detaching various offsets to the north-east towards the Po. Between these offsets flow numerous streams, all of which are affluents of the Po; and though nearly dry in seasons of drought, become impetuous torrents during rains. Among these streams are the Tidone and the Trebbia, a larger stream, which joins the Po above Piacenza. On the banks of the Trebbia river Hannibal defeated the consul Sempronius; and here also Suwarrow defeated the French under Macdonald, after three days' desperate fighting, in June, 1799. East of the Trebbia flows the Nura, which enters the Po below Piacenza. Farther east is the Taro, the largest river of the state of Parma, which rises in the Ligurian Apennines, and after flowing through a deep and long valley called by its name, enters the plain of Parma near Castel Guelfo, and joins the Po after a winding course of about 60 miles. A road leads from the Val di Taro to Pontremoli and Sarzana in the valley of the Magra, passing over

the Apennines of La Cisa at an elevation of about 3000 feet. The other rivers of the duchy are the Parma, which flows through the capital, and the Enza, which forms the boundary between Parma and Modena.

The principal towns are:—PARMA. PIACENZA. *Borgo San Donnino*, a bustling town in a fertile plain, with 3000 inhabitants, a bishop's see, a gymnasium, and a clerical seminary. *Borgo Taro*, the chief town of the province of Val di Taro, in the highlands of the Apennines, with about 1000 inhabitants, two elementary schools, and an old castle. *Pontremoli*, on the southern slope of the Apennines, is divided into an upper and a lower town; the former is defended by massive fortifications and an old castle. The lower town is well built, and has many good houses: the cathedral is the principal building. The population numbers about 8500. Some silks and linen are manufactured.

After the fall of Napoleon in 1814, the Congress of Vienna decided that the duchy of Parma and Piacenza should be the apanage of his wife, Maria Louisa of Austria, during her lifetime; that after her death the Duke of Lucca should be restored to his paternal states of Parma, which had been incorporated with the French empire; and that Lucca should be annexed to the grand duchy of Tuscany. On the death of the ex-empress, Maria Louisa, in 1847, the territorial changes intended by the Congress of Vienna were made, and certain districts were exchanged with Modena for others on the left bank of the Enza, so as to leave that river the boundary between these two states. During the war between Sardinia and Austria, in 1848-9, the Sardinians twice occupied the duchy of Parma. In consequence of the death by assassination in the public street of the late Duke of Parma, Charles III., in 1852, the state is now governed by his widow, the Duchess of Parma, a sister of the Duke of Bordeaux.

The revenue of the duchy amounts to about 9,500,000 lire, or francs; the expenditure is about the same. The military force maintained numbers 8597 men and officers.

PARMA, the capital of the duchy of Parma, situated in a fine plain about twelve miles south of the Po, is rather more than four miles in circumference, and is surrounded by walls and ditches: it is a bishop's see, and has about 40,000 inhabitants. The streets are wide and straight. Parma has a lyceum, with chairs of theology, medicine, and philosophy; a secondary or grammar school; two colleges for boarders, besides a military college; a school for the arts, and several elementary schools. The museum of Parma contains 20,000 medals, and many inscriptions, bronzes, and other remains of antiquity, dug up at Veieia, an ancient town situated at the foot of the Apennines, not far from the Nura.

Most of the churches of Parma are adorned with paintings by Correggio. The most remarkable buildings are—the ducal palace, which contains a library of 90,000 volumes and a gallery of good paintings; the cathedral; the Baptistery, which is built of marble, and adorned with numerous statues and frescoes; the churches of St. John the Evangelist; L'Annunziata; and La Madonna della Steccata, which contains the tombs of the dukes of Parma. In the convent of St. Paul is an apartment exquisitely painted by Correggio, and the Palazzo del Giardino is adorned with frescoes by Agostino Carracci and Cignani. The great Farnese theatre, one of the largest in Italy, has not been used for many years, and is now in a dilapidated state. A new theatre, of more moderate dimensions, was finished in 1829. Several palaces belonging to the nobility also deserve notice.

Parma has a Monte di Pietà, founded in 1488 by Father Benardino da Feltre, a philanthropist who invented this kind of institution for the accommodation and relief of the labouring classes. Among the other beneficent institutions of Parma are—an hospital for incurable patients, a school of mechanical trades, a house for the poor, another for the insane, and a school for midwives, all founded by the duchess, Maria Louisa. Foreign consuls reside at Parma.

Parma was once a town of the Etruscans, and afterwards of the Boii; it was made a Roman colony at the same time as Mutina (Modena) B.C. 183. (Livy, xxxix. 55.) Of the ancient town nothing remains except two military columns, which are in the little square near the church of La Steccata; a sarcophagus; and a cippus, with an inscription, in which Parma is styled 'Colonia Augusta.' These two last monuments stand in front of the cathedral.

PARNAHYBA. [BRAZIL.]

PARNASSOS (Παρνασσός), the name of a mountain-chain in Phocia, which extends in a north-easterly direction from the country of the Locri Ozolæ to Mount Eta, and in a south-westerly direction through the middle of Phocia till it joins Mount Helicon on the borders of Bœotia. The name was usually restricted to the lofty mountain upon which Delphi was situated. It is called at the present day Liakura. Parnassus is the highest mountain in central Greece. Strabo says (viii. 379) that it could be seen from the Acrocorinthus in Corinth, and also states (viii. 409) that it was of the same height as Mount Helicon; but in the latter point he was mistaken, according to Colonel Leake, who informs us ('Travels in Northern Greece,' vol. ii. p. 527), that Liakura is some hundreds of feet higher than Paleorona, which is the highest point of Helicon. Parnassus was covered the greatest part of the year with snow, whence the epithet of 'snowy,' so generally applied to it by the poets. (Soph., 'Œd. Tyr.' 473; Eurip., 'Phœn.' 214.) The mountain is sometimes called 'the two-headed,' from two lofty rocks below which Delphi was situated. Between these two rocks the celebrated Castalian fount flows from the upper part of the

mountain, which is clear, and forms an excellent beverage. Above this spring, at the distance of 60 stadia from Delphi, was the Corycian cave, sacred to Pan and the Corycian nymphs. When the Persians were marching against Delphi, a great part of the inhabitants took refuge in this cavern. (Herod., viii. 37.) It is described by a modern traveller (Raikes, in Walpole's 'Collection,' &c., vol. i. p. 312), as 330 feet long and nearly 200 feet wide. Above this cave, and near the summit of Parnassus, at the distance of 80 stadia from Delphi, (Paus., x. 32, s. 6), was the town of Tithorea or Neon, the ruins of which are near the modern village of Velitza. For an account of the towns in the neighbourhood of the Parnassus, see PHOCIS.

PARNDON. [ESSEX.]

PAROPAMISUS. [AFGHANISTAN.]

PAROS, one of the larger Cyclades, is situated west of Naxos, from which it is separated by a channel six miles wide. Paros is estimated to be about one-half the size of Naxos; it is about 36 miles in circumference. The surface is hilly; it produces corn, abundance of fruit, and has flocks of sheep and herds of swine, and plenty of partridges and other game. The population, according to Thiersch ('État de la Grèce'), is about 4000. The head town of Paros, called Parichia, is on the site of the ancient town, in the inner recess of a bay on the north-west coast of the island. The principal harbour is on the north-east coast, and is the finest in the archipelago. The mountain Marpesus, now called Capresso, near the centre of the island, abounds with white marble, which was often used by the ancient sculptors. There are four or five villages on the island, besides the capital, and several Greek monasteries scattered about.

Paros is said to have been colonised by the Cretans. It attained a great degree of prosperity by its maritime trade, and the chief town was wealthy and well fortified. When Darius invaded Greece, the inhabitants of Paros submitted to the Persians, and furnished sailors for the Persian fleet; in consequence of which, after the battle of Marathon, Miltiades went with an Athenian squadron to attack the island, but he failed in the attempt, and received the wound of which he shortly after died. When the Franks took possession of Constantinople, Paros, like most of the Cyclades, became subject to the Venetians. It formed for a time part of the dukedom of Naxos, but afterwards became a separate principality of the Venetian family of Veniero, under which it remained till Barbarossa took it in the 16th century. In the latter part of the 18th century the Russians took possession of Paros, and made it for a time the station of their fleet. It now belongs to the kingdom of Greece. The Greek inscription called the 'Parian Chronicle,' was found in this island. West of Paros, and separated from it by a narrow channel, is the smaller island called Antiparos. [ANTIPAROS.]



Coin of Paros. British Museum. Actual size.

PARSONSTOWN, or BIRR, King's County, Ireland, a market-town and the seat of a Poor-Law Union, is situated on the right bank of the Little Brosna, in 53° 5' N. lat., 7° 54' W. long., distant by road 22 miles S.W. from Tullamore, and 78 miles W.S.W. from Dublin. The population in 1851 was 5540, besides 1611 inmates of the workhouse. Parsonstown Poor-Law Union comprises 39 electoral divisions, with an area of 220,438 acres, and a population in 1841 of 67,860; in 1851 of 49,651.

This town early became the chief seat of the O'Carrolls. The Danes repeatedly attacked it. In 1620 it was bestowed on Lawrence Parsons, the ancestor of the present proprietor, the Earl of Rosse. The town extends on both sides of the Birr, which here joins the Brosna. The modern part of the town contains many handsome houses. The church, erected in 1815, is of pointed architecture, with a tower 100 feet high. The Roman Catholic chapel is a spacious building in the same style, with a spire 124 feet high. There is a second Roman Catholic chapel, in which the service is performed in English. The Independents, Wesleyan Methodists, Baptists, and Quakers have chapels. There are two National schools, and others partially endowed; a public library, a reading-room, a savings bank, and loan fund. A court-house, a fever hospital, dispensary, bridewell, and Union workhouse are in the town. Linen is manufactured. There is a weekly market for corn. Fairs are held four times a year. Quarter and petty sessions are held. A low Doric pillar, standing in the square in the modern part of the town, and supporting a statue of William, duke of Cumberland, was erected in 1747 to commemorate the victory of Culloden. Birr Castle, which has been rebuilt and improved by the present Earl of Rosse, is close to the town, and, with its towers and embattled walls, forms a striking ornament. The grounds contain a laboratory for the preparation of specula, and his lordship's celebrated telescope is set up on the lawn in front of the castle.

PARTHENIUS, the ancient name of the Chatl, a river of Anatolia, sometimes also called Barta from a town at its mouth, which seems to

retain the traces of the ancient name of the river. The river rises in Mount Olgassy, and flows in a north-westerly direction into the Euxine, separating Bithynia from Paphlagonia. The country through which it flows is very fertile and beautiful. Ovid and Ammianus Marcellinus (xxii. 8) speak of the Parthenius as a rapid stream; and Xenophon ('Anab.' v. 6, s. 9) says that it is impassable. It is mentioned in the Iliad (ii. 854).

PARTHIA originally comprised a small and mountainous country (Strabo, xi. p. 514) south-east of the Caspian Sea, between Hyrcania and Aria; but the name was sometimes applied to the countries included in the later Parthian empire. It is difficult to define the boundaries of Parthia proper, as they differed at various times. In the time of Strabo (xi. 514) Parthia extended on the west as far as Rhagæ and the Tapuri to the Caspian passes, and included the districts of Komisede (Kumis) and Choarene (Khuar). Pliny (vi. 29) says that it was bounded E. by the Arii, S. by the Carmanii and Ariani, W. by the Pratites Medi, and N. by the Hyrcani.

The chief town of Parthia, and the only one in the country of any importance, was Hecatompylon, which, according to Strabo (xi. 514), was 1260 stadia from the Caspian gates. The site of it is doubtful. Some writers identify it with the modern Damghan.

The Parthians were apparently of Scythian origin. According to Justin (xli. 1) their name signified in the Scythian language 'banished,' or 'exiles.' The Parthians were subject to the Persian monarchy, and in (Herod., iii. 93) the army of Xerxes they marched together with the Chorasmii, Sogdi, Gandarii, and Dadice (Herod., vii. 67); and in that of the last Darius they were united with the Hyrcani and Tapuri under one commander (Arrian, iii. 8). Under Alexander, Parthia and Hyrcania together formed a satrapy (iii. 22).

On the death of Alexander the Parthians espoused the side of Eumenes, and afterwards became subject successively to Antigonos and the Seleucids, till about B.C. 256, when they threw off the authority of the Syrian kings and were formed into an independent kingdom under the rule of Arsaces I., from whom the succeeding kings received the title of Arsacids. His reign was the beginning of the great Parthian empire, which was gradually increased at the expense of the Syrian kingdom in the west and the Bactrian in the east; and at length extended from the Euphrates to the Indus, and from the Oxus to the Persian Gulf.

The Parthian empire lasted from B.C. 256 to A.D. 226. Under Arsaces I., Mithridates I., and Phraates II. the dominions of Parthia were extended as far as the Euphrates and the Indus; after the defeat of Antiochus Sidetes of Syria in B.C. 190, the Parthians were constantly engaged in wars with the nomad tribes of central Asia, who, after the destruction of the Greek kingdom in Bactria, attempted to obtain possession of the western parts of Asia. Tigranes, king of Armenia, also obtained some successes over Mithridates II., but after his conquest by the Romans the Parthians again acquired the ascendancy. The invasion of Crassus during the reign of Orodes terminated in the death of the Roman general and the destruction of his army, B.C. 53, and the Parthians obtained a great increase of power. In the war between Cæsar and Pompey they took the side of Pompey; and after the death of Cæsar they sided with Brutus and Cassius. In B.C. 37 Orodes was murdered by his son Phraates IV., and from this time the history of Parthia is a succession of civil wars, with occasional interventions by the Romans, until A.D. 217, when Artaxerxes, who had served with great reputation in the army of Artabanus, the last king of Parthia, took advantage of the weakened state of the monarchy to found a new dynasty. He represented himself as a descendant of the ancient kings of Persia, and called upon the Persians to recover their independence. This call was readily responded to; a large Persian army was collected; the Parthians were defeated in three great battles, and Artaxerxes succeeded to all the dominions of the Parthian kings, and became the founder of the new Persian empire, which is usually known by that of the Sassanids.

PARTICK. [LANARKSHIRE.]

PARTNEY. [LINCOLNSHIRE.]

PAS-DE-CALAIS, a department in the north of France, is bounded E. and N.E. by the department of Nord, N.W. and W. by the Strait of Dover and the English Channel, and S. by the department of Somme. It extends between 50° 2' and 51° N. lat., 1° 35' and 3° 10' E. long.; from north-west to south-east it is 86 miles long, and its mean breadth is 33 miles. The area is 2550½ square miles. The population in 1846 was 685,021; in 1851 it amounted to 692,994; which gives 271.70 inhabitants to the square mile, being 97.12 above the average per square mile for all France. The department is formed out of the greater part of the former province of Artois, and portions of Lower Picardie. In ancient times the territory of Pas-de-Calais was inhabited by the Ambiani, the Morini, and the Atrebatæ. The southern district between the Anthie and the Canche formed part of the territory of the Ambiani, whose capital was *Samarobriua*, now Amiens. The Morini dwelt along the sea coast; and the Atrebatæ inland to the south of the preceding. *Nemetacum*, now Arras, was the capital of the Atrebatæ. *Taruenna*, now Théroutanne, was the chief town of the Morini; and *Gesoriacum*, afterwards called *Bononia*, now Boulogne, also belonged to them. Cæsar's Itius Portus is Witand, or Wissant, east of Cape Grinez, and the Itium Promontorium is Cape Grinez itself, which is now surmounted by a lighthouse.

The department takes its name from *Passage*, or *Pas-de-Calais*, by which the French sometimes designate the Strait of Dover. The surface consists of two inclined plains, which slope respectively towards the east and west, and lie on either side of a ridge of hills that crosses the department from south-east to north-west, terminating in the latter direction in the high cliffs of Cape Grinez, between Calais and Boulogne. These cliffs, which extend for some miles on each side of the cape, are composed of chalk, and bear a close resemblance to those of Dover. Farther west the cliffs are composed of masses of slaty clay. In some parts the coast is low, and defended from the sea by a natural barrier of sandy downs. The coast-line, reckoning all its indentations, has a length of about 80 miles, but it presents no good natural harbours, the inlets being incumbered with sand or the debris of the cliffs. Calais and Boulogne are good artificial high-water-harbours formed by piers. Besides the ridge of hills above mentioned, which sends out spurs that form the watersheds between rivers flowing through the valleys on either slope, there are some isolated high lands south of Boulogne, and also between the Authie on the southern boundary and the Canche. The principal rivers on the eastern slope are—the Scarpe, the Sensée, and the Lys, feeders of the Escaut; and the Aa, which forms the north-eastern boundary, and falls into the sea at Gravelines; most of these rivers are navigable, or are made so by canalisation. From the western slope flow the Lianne and the Canche into the Channel at Boulogne and Etaples respectively, and the Authie, which flows for some way in the department of Somme, and then north-west into the Channel, forming the boundary between Pas-de-Calais and Somme. By means of its rivers and several canals that connect the principal towns on the eastern slope with those of the department of Nord, Pas-de-Calais has an inland navigation of 124 miles. It is traversed by the Great Northern of France railway which passes through Arras, and from which branches run to Boulogne from Amiens, and to St-Omer and Calais from Lille. Along all these lines electro-telegraphic wires are laid down, and from Calais submarine electro-telegraphic cables cross the strait to Dover. Common highway accommodation is afforded by 13 imperial and 15 departmental roads.

The soil is in general fertile; farms are large; a very great breadth of land is occupied with the growth of wheat, but other cereal grains, pulse, oleaginous seeds, and cider fruits are also grown. The low valleys, though generally very fertile and abounding with excellent pastures, are in many places marshy, and in a few places covered with peat bogs. Except in the arrondissement of Béthune, and in the flat districts contiguous to the department of Nord, the fields are mostly uninclosed, and the country, save near hamlets or farmhouses, is bare of trees. A great deal of land is laid out in meadows and orchards. Other crops besides those already named are barley, beet-root for making sugar, hemp, flax, and hops. The number of horses chiefly for draught, of horned-cattle, sheep, and swine is very great; poultry is very abundant, good, and cheap; and fish is very plentiful, great numbers of boats being actively engaged in herring, cod, mackerel, and oyster fishing. The climate resembles that of the south-east of England, but is if possible more inconstant, the changes from heat to cold being sometimes marked by great rapidity; the west and north-west winds, charged with sea spray, are sometimes very annoying on the coast.

Iron- and coal-mines are worked, but not to any very great extent. The ore and coal used in the iron-works are mined on the spot. Other mineral productions are marble, quartz, rock-crystal, limestones, and pipe- and potters'-clay.

The industrial products of the department are common woollen cloth, linen, hosiery of all kinds, velveteen, lace, soap, fishing-nets, beet-root sugar, cotton and flaxen yarn, oil, salt, gin, grain and potato spirits, furniture and cabinet work, glass, earthenware, &c. Besides the numerous establishments for the manufacture of these articles, there are also 1578 wind- and water-mills, several bleach-works, 70 beetroot sugar factories, paper-mills, marble-sawing works, tan- and fulling-mills, and tan-yards. The coasting trade in corn, eggs, butter, seeds, oil, flax, hides, &c. is active. Steam-boats ply regularly from London, Dover, and Folkestone, to Calais and Boulogne.

The forests of this department are small, and chiefly confined to the arrondissements of St-Omer and Montreuil. Consequently coal is generally used for fuel, and has to be imported from Belgium and the department of Nord; for the quantity of coal raised does little more than suffice for the iron-works.

The department is divided into 6 arrondissements, which with their subdivisions and population, are as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Arras	10	211	168,919
2. Béthune	8	142	135,943
3. St.-Omer	7	118	110,245
4. St.-Pol	6	193	81,800
5. Boulogne	6	100	117,615
6. Montreuil	6	139	78,472
Total	48	908	692,994

1. Of the first arrondissement and of the whole department, the chief town is ARRAS. *Bapaume*, situated near the source of the Sensée, 15 miles S. by E. from Arras, is a well-built fortified town, with 8210 inhabitants, who manufacture lawn, muslin, calico, thread, soap, and leather. The town has salt-refineries, and is supplied with excellent water from a fountain, which is fed by an artesian well. *Vitry*, on the Paris-Brussels railroad, 10 miles E. from Arras, on the Scarpe, is a village with 2308 inhabitants.

2. The second arrondissement takes its name from *Béthune*, a fortified town with a tribunal of first instance, a college, and 7158 inhabitants in the commune. The town, situated on a rock above the Brette, 18 miles N. by W. from Arras, is pretty well built, and possesses a large square, the centre of which is occupied by an old tower of odd construction. The town-hall, which stands on one side of this square, and the principal church, remarkable for the light elegance of its nave, are the only remarkable buildings. Béthune has a public library; manufactures of soap, oil, lawn, and woollen cloth; salt-refineries, beetroot-sugar factories, tan-yards, and a gin distillery. The trade of the town in its industrial products and in corn, wine, brandy, oleaginous seeds, cheese, pottery, &c., is much facilitated by the Lawe and Bassée canals, which here meet in a common basin. The first artesian wells were bored in Béthune and its neighbourhood.

3. The third arrondissement takes its name from its chief town St-Omer. [OMER, ST.] *Aire*, a tolerably well-built town with a college, and 9591 inhabitants, is situated 9 miles S. by E. from St-Omer, at the confluence of the Laquette with the Lys, and at the junction of the St-Omer and Bassée canals, by means of which it communicates with the Aa and the Deule. The town is surrounded with ramparts and deep ditches; it has barracks large enough to accommodate 6000 men; a town-house; several handsome fountains; and two fine churches. Hats, soap, oil, basket-work, grain spirits, glazed paving tiles, &c. are manufactured. *Ardes*, is a small fortified town with 2193 inhabitants, 17 miles by railway N.W. from St-Omer, and 7½ miles S. by E. from Calais. A regiment of cavalry lies in the town; the barracks, stables, and riding-house are the most noteworthy objects. *Le-Champ-du-Drap d'Or*, or the Field of the Cloth of Gold, the scene of the famous interviews between Henry VIII. and François I., lies between this town and Guines.

4. In the fourth arrondissement the chief town, *St.-Pol*, is situated 20 miles N.W. from Arras, at the intersection of seven high roads, and at the head of a vale watered by the Ternoise, a feeder of the Canche. This town was formerly the capital of the county of St.-Pol, and was fortified: of its defences, and of the castle of the counts of St.-Pol, there are still some remains. It is an irregularly-built place, and has a college and 3246 inhabitants in the commune.

5. Of the fifth arrondissement the chief town is BOULOGNE. The district which now forms the arrondissement of Boulogne comprises the former county of *Boulonnais*. The Boulonnais was governed from the 10th century by counts who were great vassals of the crown. The last count, Bertrand de la Tour d'Auvergne, was dispossessed by Philippe, duke of Burgogne, to whom the county was ceded by Charles VIII. Louis XI. took possession of it in 1477. The English held the northern part of it a long time; when the French regained this portion they called it Pays Reconquis. The other towns are:—CALAIS: *Guines*, which stands in a marshy country, 5 miles S. from Calais, and on the canal from St-Omer to Calais, has 4097 inhabitants, who trade in corn, linen, cattle, poultry, fire-wood, turf, and charcoal, and who manufacture tulle, pottery, leather, salt, &c.: *Marquise*, which is situated 8 miles N.E. from Boulogne, on the road to Calais, on the Slack, and has 2108 inhabitants: *St.-Pierre-les-Calais*, a large suburb of Calais, which is traversed by the railway to Lille, has 9000 inhabitants, engaged chiefly in the cotton manufactures, and in the manufacture of buttons, hats, beetroot-sugar, salt, and leather: and *Samer*, which is built on a hill 4 miles S.E. from Boulogne, on the high road to Montreuil, and has a population of 2195. Samer is famous for the remains of an abbey founded about the middle of the 7th century.

6. The sixth arrondissement is named from its chief town, *Montreuil-sur-Mer*, which is situated 25 miles by railway S. from Boulogne, on a high hill near the right bank, and about 4 miles from the mouth, of the Canche. It is tolerably well built with bricks, and strongly fortified. The town has a tribunal of first instance, a college, and 3720 inhabitants in the commune, who manufacture soap, salt, paper, beer, and leather. The tower of the citadel was the prison residence of Queen Bertha, the repudiated wife of Philippe I. Montreuil was ceded to the English by the treaty of Brétigny, but it soon shook off their yoke; in 1537 it was taken by Charles V.; the Spaniards took it a second time in 1544. The charter of the town dates from the year 1189. *Etaples*, a small sea-port town, is situated on the northern shore of the mouth of the Canche, which here forms a small bay, 18 miles by railway S. from Boulogne. Here a treaty of peace between Henry VII. and Charles VIII. was concluded in 1492. Etaples was formerly a place of much greater importance than now, when it numbers scarcely 2000 inhabitants, chiefly fishermen. *Fruges*, situated on a steep hill 18 miles E. from Montreuil, consists of several streets, which abut on a large square. It has 2952 inhabitants, who manufacture woollen cloth, hosiery, tobacco pipes, salt, and leather. *Hesdin*, one of the prettiest towns in the department, is beautifully situated in

the valley of the Canche, 15 miles S.E. from Montreuil, and has 3790 inhabitants. The town is well built with bricks; it is surrounded by ramparts and by ditches, which are always filled by the waters of the Canche. In the town-hall, a graceful structure, there is a small public library. The environs of this town are well cultivated and exceedingly pretty. Hesdin has manufactures of hosiery, oil, pottery, bricks, cotton-yarn, salt, and leather. The famous battle-field of Azincourt, or AGINCOURT, is near Hesdin, but in the arrondissement of St.-Pol.

The department forms the see of the Bishop of Arras, who is the sole suffragan of the Archbishop of Cambrai. It is included in the jurisdiction of the High Court and within the limits of the University-Academy of Douai; and belongs to the 3rd Military Division, of which Lille is head-quarters. It returns 5 members to the Legislative Body of the French empire.

(*Dictionnaire de la France; Annuaire pour l'An 1853; Official Papers.*)

PASAGES. [BASQUE PROVINCES.]

PASARGADÆ (sometimes written *Passargada*, and also, but only by Ptolemy and Solinus, *Pasargada*), an ancient town of Persia, which is said to have been built by Cyrus after his victory over Astyages the Mede, which he gained near this place. (Strabo, xv. 730; Curt., v. 6.) The kings of Persia, according to Plutarch ('Artax.'), were consecrated at Pasargadæ by the Magi; and here was the tomb of Cyrus, of which Strabo (xv. 730) and Arrian (vi. 80) have given a description, taken from the work of Aristobulus, who had visited the spot. The position of Pasargadæ has been a subject of much dispute. Many writers think that Pasargadæ and Persepolis are only different names for the same place, and that the latter word is the Greek translation of the former. There appears however little doubt that they are distinct places. But although we may have strong grounds for believing that Pasargadæ and Persepolis are different places, it is difficult to determine the site of the former. Lassen, who has examined the subject with great care and diligence ('Ersch. und Gruber's Encyclop.,' art. 'Pasargadæ'), thinks that we ought to look for Pasargadæ south-east of Persepolis, in the neighbourhood of Darabgherd, or Fasa.

PASO DEL NORTE. [MEXICO.]

PASSAGE. [CORK.]

PASSAMAQUODDY BAY. [NEW BRUNSWICK.]

PASSAU, the capital of the Bavarian circle of the Lower Danube, is situated at the point where the Danube receives the Ilz and the Inn, in 48° 36' N. lat., 13° 25' E. long., and has 10,820 inhabitants. It consists of the town itself, and of three suburbs. A handsome bridge, resting on seven piers of granite, crosses the Danube, which is 754 feet wide. On the right bank of the Inn, which is 800 feet wide, is the suburb called the Innstadt, connected with the town by a wooden bridge. On the other side of the Danube, and on the left bank of the Ilz, lies the Ilzstadt. The third suburb is called the Anger. In the angle between the right bank of the Ilz and the Danube there is a rock 400 feet high, upon which stands the fortress of Oberhaus, which is connected with the castle of Niederhaus, situated below. The other defences of the place consist chiefly of eight detached forts. The town of Passau itself is pretty well built: among the public buildings the most remarkable are—the palace, formerly the residence of the bishop; the lyceum; the cathedral; the church of St. Michael; a gymnasium; the ecclesiastical college; and the post-office, in which the treaty of Passau was signed in 1552. In the Domplatz, the handsomest square in the town, stands a colossal bronze statue of king Maximilian Joseph, erected in 1828. The charitable institutions of Passau possess a capital of 2,000,000 florins. There are a great tobacco and snuff manufactory, extensive breweries, tanneries, and paper-mills. Passau is the staple town of Bavaria for salt; there are great magazines, to which the salt is brought from the works at Hallein. Steamers ply on the Danube to Regensburg, Ratisbon, Linz, and Vienna. The bridge over the Rothfluss, near Passau, is considered a curiosity, being one arch of 200 feet span, the largest in Germany. Passau was formerly the capital of a bishopric, which was founded in the 7th century, but was secularised in 1803, and in 1809 wholly incorporated with Bavaria.

PASTO. [NEW GRANADA.]

PATAGONIA, a country in South America, comprehending the most southern portion of that continent, from the Cusu Leubu, or Rio Negro, to the Strait of Magalhaens, by which it is divided from TIERRA DEL FUEGO. It lies between 38° 50' and 53° 55' S. lat., 63° and 76° W. long. It is bounded E. by the Atlantic Ocean; N. by Buenos Ayres; N.W. by Chili; W. by the Pacific Ocean, and S. by the Strait of Magalhaens. The area is about 800,000 square miles; the population has been estimated at about 120,000.

Patagonia comprehends two very different regions—the mountain region and the plains. The mountain region occupies the countries extending along the shores of the Pacific and the western portion of the Strait of Magalhaens. The plains occupy the eastern part of the country, stretching out along the Atlantic and the eastern part of the Strait of Magalhaens.

The mountain region comprehends the southern portion of the ANDES. It is a remarkable and characteristic feature of the southern part of the mountain region of Patagonia that it is cut through by two long but comparatively narrow inlets, which extend to the plains east of the mountains, and there expand into large salt-water lakes.

The southern of these lakes, or inland seas, consists of two basins united by a narrow channel of moderate extent, and connected with the Strait of Magalhaens by a strait of larger dimensions, called Jerome Channel, which branches off from the Strait of Magalhaens near 53° 35' S. lat., 72° 30' W. long., and extends northward with a slight bend to the west to 53° 15', where it turns north-east, and gradually widens into Otway Water. It is upwards of thirty miles long, and generally two miles wide. Otway Water, the southern of these inland sea-basins, extends towards east-north-east for some fifty miles, and increases in width as it proceeds eastward, from hardly six miles to above twenty miles. Not far from the north-eastern extremity of Otway Water, a winding channel, about eight miles long, half a mile wide, and deep enough for the largest vessels, called Fitzroy Passage, runs north by west to another inland sea-basin, called Skyring Water, which is about eighty miles in length and from eight to fifteen miles wide. The northern inland sea is of comparatively small extent, but it sends out several branches, which advance to a considerable distance inland: it is described under ANCON SIN SALIDA. A deep and narrow inlet runs northward from the strait which unites this basin to the ocean, intersecting the country between the ocean and Last Hope Inlet for nearly thirty miles from the Ancon Sin Salida. It is called the Canal of the Mountains.

The more southern of the mountain districts, which is inclosed on three sides by the Strait of Magalhaens, and on the north by Otway Water, is called Brunswick Peninsula, and is connected with the main body of Patagonia only by the isthmus which extends from the eastern shores of Otway Water to the Strait of Magalhaens, opposite Elizabeth Island. This isthmus is from seven to ten miles wide, low, and partly occupied by lakes. Although the area of the peninsula probably exceeds 3000 square miles, it does not appear that a stream above the size of a mountain torrent finds its way to the strait itself. The whole drainage therefore must run off northward to Otway Water. South of the isthmus which divides Otway Water from the Strait of Magalhaens, a range called the Brecknock Hills rises to from 1000 to 1200 feet, and is only a few miles from the strait and parallel to it; but farther south it rises into mountains covered with perpetual snow. Where the mountains approach Cape Froward they sink under the line of perpetual congelation, but Mount Tarn is 2600 feet high, and the mountains at the back of the Cape are estimated at 2500 feet. The mountains continue close to the shore along Jerome Channel and round to where Otway Water opens to view; but the highest summit, Mount Cruz, near Port Gallant, is only 2290 feet high. The southern shores of this peninsula, though extremely rocky, are distinguished by luxuriant vegetation, and the trees attain a full growth, while farther west they are stunted. The climate, though colder than in Europe at an equal distance from the pole, is not subject to extreme cold. The greatest disadvantage is the moisture of the atmosphere and the frequent rain.

The tract of country, or rather peninsula, which is inclosed by Otway Water, Fitzroy Passage, Skyring Water, and the western portion of the Strait of Magalhaens, is called Ponsonby Land. The eastern part of it contains low wooded tracts of considerable extent along the shores of both waters, but the interior is occupied by hills, rising to about 1500 feet, with the exception of one summit, Mount Misery, which is near 72° W. long. and attains an elevation of about 3000 feet, but does not reach the snow-line. The western portion of Ponsonby Land is covered with rocky mountains. On Croker Peninsula and the adjacent district they do not appear to attain a great elevation. But on the shores of the Skyring Water, west of 72° 30' W. long., several of them rise above the snow-line and send down extensive glaciers on their slopes towards the sea. These high snow-capped mountains continue across the narrow isthmus which divides Skyring Water from Beaufort Bay, and attain their greatest elevation in Mount Burney, which is situated not far from the southern shores of the Ancon Sin Salida, and is 5800 feet high. Farther eastward the mountains decline in height, and are intersected by level tracts of some extent, until they disappear in the plains of eastern Patagonia, about 40 or 50 miles from the Pacific.

The Andes, that elevated chain which traverses South America in its whole length, begin on the south, on the very shores of the Ancon Sin Salida (52° 10' S. lat.). South of 47° S. lat. the higher peaks of the range are very lofty, but to the north of that parallel no peak of the Patagonian Andes rises above the line of perpetual snow. The country occupied by the Patagonian Andes is described under ANDES, vol. i. col. 348. From the Strait of Magalhaens to 41° 48' S. lat. the Andes constitute the very shores of the Pacific, and the watershed between the two oceans is so near the western coast, that the largest river which flows into the Pacific has its origin only 13 miles from the beach. This is the *Rio San Tadeo*, the mouth of which is a little south of the peninsula of Tres Montes (47° S. lat.). The shores along this extensive coast-line are rocky and high, with the exception of a few places of very moderate extent. But there is a difference between those which are north of the peninsula of Tres Montes and those which are south of it. The former run nearly in a straight line, both the projecting rocks and the recesses between them hardly anywhere exceeding one mile in extent. But south of the peninsula the inlets penetrate many miles into the mountain masses, and thus form huge promontories. The farther we advance to the south, the more the inlets

increase in depth, until we reach the Ancon Sin Salida and the Jerome Channel, which extend across the whole mountain region.

But the open sea of the Pacific does not wash this rocky coast. A series of high and rocky islands lie like a barrier in front of it, so that no part of the continent, except the peninsula of Tres Montes, is exposed to the ocean's swell. Some of these islands are of great extent; others are only separated from one another by narrow straits, which are not visible at some distance from the open ocean, and the islands accordingly appear to be a continuous high rocky shore. The most northern is the island of Chiloe [CHILI], between which and the continent is the Gulf of Ancud. Farther south is the Chonos Archipelago, which occupies the space between 44° and 46° S. lat., and consists of numerous islands, some of which are of considerable extent, and divided by narrow straits. Then follows the peninsula of Tres Montes, which is nearly isolated by a deep bay that enters the continent from the north, and extends about 30 miles southward. South of the peninsula is the Gulf of Peñas, which contains only scattered islands; but near 47° 30' S. lat. is the small group of the Guaianeco Islands, followed by Wellington Island or Islands, which extends from 47° 50' to 50° S. lat., and in some parts is 60 or 70 miles wide. The long strait which separates Wellington Island from the continent, and is called Mesier Channel, is on an average two miles wide towards each extremity; but in the middle and for a length of about forty miles it is hardly a mile wide, and in three particular places not more than 400 yards wide. A broad channel, called the Gulf of Trinidad, separates Wellington Island from the Archipelago of Madre de Dios; and this archipelago is separated from the continent and Hanover Island by Concepcion Strait. The strait south of Hanover Island, called Lord Nelson's Strait, separates it from the archipelago of Queen Adelaide, an assemblage of islands which run more than 80 miles north-west and south-east. MAGALHAENS STRAIT lies between this archipelago and South Desolation Island. These islands are, without exception, high and rugged, and have a rocky shore; but the mountains in none of them rise to the snow-line, except on South Desolation.

Although the difference in geographical position between the two extremes of this coast is 14 degrees, the difference in the temperature is much less than might be expected. On the island of Chiloe the mean temperature of the winter seems to be 40°, and that of the spring 50°, or something more. That of Port Famine, on the Strait of Magalhaens, is about 38° in winter and 50° in summer. It would therefore appear that the difference in the mean annual temperature between the two extremities of the mountain region of Patagonia does not exceed ten degrees of Fahrenheit, probably a smaller difference than in any other country of similar extent. This phenomenon is due to the great dampness of the atmosphere. As the prevailing winds blow from the west, they bring to the land the moisture which they collect in passing over the wide expanse of the Pacific; and this moisture being suddenly condensed when it comes in contact with the high mountains along the shores, descends in abundant and nearly continual rain. On the peninsula of Tres Montes only two or three weeks in November are without rain, and farther south there is hardly a day without either rain or snow and sleet, according to the seasons.

The constant dampness of the air, though not favourable to many European plants, especially to fruit-trees, maintains a vigorous vegetation. The forests, which cover the sides of the mountains for two-thirds of their height north of 45° S. lat., rival in luxuriance those of the tropical regions. Stately trees, with smooth and highly coloured barks, are covered with parasitical plants; large and elegant ferns are numerous, and arborescent grasses twine round the trees to the height of 80 or 40 feet. South of 45° S. lat. vegetation is less vigorous; but even at the most southern extremity, on the Strait of Magalhaens, the country and hills, from the height of 2000 feet above the sea to the very verge of high-water mark, are covered with trees, mostly evergreens, and some large enough to be used as timber, as the evergreen beech (*Fagus betuloides*), and two other species of beech. Capt. King saw large and woody-stemmed trees of *Fuchsia* and *Veronica*, in England considered as tender plants, in full flower within a very short distance of the base of a mountain covered two-thirds down with snow, and this with a temperature of 36°.

Where the mountains border on the eastern plains, a kind of deer, with short straight horns, is abundant. There are also pumas as far south as 53° S. lat., caviars, and nutrias; seals, otters, fur-seals, and sea-elephants. Fish is very plentiful, especially several smaller kinds, which live in the subaquatic forests formed by the gigantic seaweed (*Fucus giganteus* of Solander), which covers all the rocks near the open coast and in the numerous straits. Land birds are not numerous but water-fowl abound, among which is the black-necked swan (*Anser nigricollis*) and several kinds of geese and ducks. Shell-fish of several kinds occur in the recesses of the inlets, and they constitute the principal food of the inhabitants during a part of the year. On the Guaianeco Islands and the Chonos Archipelago the potato grows wild: they are small and quite tasteless.

The plains of Patagonia, which occupy the greater portion of the country, extend along the Atlantic Ocean. Though similar in aspect, these plains seem to differ in their natural capacities. Between 47° and 48° S. lat. the coast forms a wide promontory, projecting near

100 miles from the body of the mainland. On this promontory, at the back of Cape Blanco, are the high lands of Espinoza, which rise at least 4000 feet above the sea, and form an irregular range with several peaked summits. On this promontory and the contiguous coast, as far north as 45° S. lat. and southward to 49° S. lat., the rocks are porphyritic, but they seldom rise more than 300 or 400 feet above the sea-level, when they stretch westward in an undulating plain, which is covered with a light sandy soil, through which the rock protrudes in many places. This tract is dry and parched, and has no vegetation except a few tufts of grass and here and there a straggling bush of berberis, or of a dwarf woody shrub, which supplies good fire-wood.

South of 49° S. lat. to the northern shores of the Strait of Magalhaens, the cliffs are composed of soft marly clay, without any gravel or impression of organic remains. Between the high and low tide-mark, there is a smooth beach of green clay hardened by the action of the surf to the consistence of stone, which extends about a hundred yards into the sea, and is succeeded by a soft green mud, over which the water gradually deepens. The outer edge of the clay forms a ledge parallel to the coast, upon the whole length of which the sea breaks with violence. The cliffs rise rather abruptly to the height of 200 or 300 feet. They form the descent of an elevated plain, which extends several miles westward, and is then followed by an escarpment of from 100 to 150 feet elevation, which constitutes the slope of another and more elevated plain. Thus the country extends from east to west in wide plains, which rise one above the other like terraces. These plains are traversed by some broad and flat-bottomed depressions. The soil consists of well-rounded shingle mixed with a whitish earth. It is in most places without vegetation. Here and there are scattered tufts of brown wiry grass, and still more rarely some low thorny bushes. In the depressions the bushes are more abundant, and in some places they grow up to stunted trees. Fresh water is seldom found, but salinas, or salt-pools, are numerous. Marine shells are frequently scattered over the plains, but they abound most on the plains nearest to the sea.

The plains are traversed from west to east by the Santa Cruz River, which is supposed to rise in the Andes and traverse their base for a considerable distance from north to south: its mouth is near 50° S. lat. It was ascended by Captain Fitzroy to a distance of 140 miles from the sea in a straight line, and 245 miles by the course of the river. The river runs in a vast excavation below the level of the neighbouring plains. East of 70° W. long, this valley varies between one and five miles in width, and is bounded on both sides by steppe-like terraces. The valley is hardly more fertile than the plains which surround it, and no bushes grow in the upper part; even the wiry half-withered grass is scanty. West of 70° W. long, the valley contracts in some parts to a mile in width, and here the upper part of the adjacent plains is capped with a layer of lava from 120 to 320 feet thick. This part of the plain is 1400 feet above the valley, which is 400 feet above the sea. The lava seems to extend to the foot of the Andes, where the platform of the plains probably attains an elevation of 2000 or 3000 feet. The width of the lava seems to be about 100 miles. The layer of earth on which it rests does not differ from the materials of which the plains near the Atlantic are composed. Within the lava district, between 71° and 72° W. long, the valley is from 5 to 15 miles wide, and there is here a flat tract of apparently good land, exhibiting many swampy places covered with rich herbage; and higher up is a large plain, on which shrubs, small trees, and bushes are sparingly scattered; yet parts of this plain may be called fertile and woody by comparison with the tracts farther east. The Santa Cruz River is supposed to traverse in its upper course several lakes, among which is Viedma or Capar Lake, which lies between 48° and 49° S. lat., and is about 30 miles long and from 10 to 12 miles wide. At its mouth the Santa Cruz forms an estuary, in which the neap-tides rise 18 feet and the spring-tides from 38 to 42 feet. The extensive shoals which lie near the mouth of this river are ascribed to the meeting of the rapid stream with an extraordinary tide.

The country north of 45° S. lat. differs from the southern plains. The shores are fringed by rocky reefs, extending from two to three miles from high-water mark, which are dry at low tides, and in many places covered with seals. The beach is rather steep, and consists of shingle. Above it extends an undulating country, which at some distance rises into hills. Though the soil here also is gravelly and parched, and in most places exhibits a very scanty vegetation, the valleys and lower elevations are mostly covered with grass and shrubby plants. In several places there are tracts covered with good grass and stunted trees, especially at Camerones Bay and north of it. On the banks of the Chupat River and the western shores of New Bay (Bahia Nueva), there are extensive tracts covered with a fine dark soil, and producing abundance of fire-wood and excellent pasturage. Wild cattle abound, and are very numerous on the natural meadows which extend far inland on both sides of the Chupat River. The river Chupat is believed to rise in the Andes, but at the distance of 20 miles from its mouth it is only 100 yards wide and 6 feet deep at low-water, so that only vessels drawing 7 feet can enter its mouth at high-water. This river runs with a winding course through a wide and fertile valley, over which an immense quantity of drift timber is scattered, and large trees are found several hundred yards from its banks.

The climate of the plains differs greatly from that of the mountain region. Their sterility is partly to be ascribed to the nature of the soil, and partly to the want of rain. Westerly winds are prevalent during nine months of the year, and though they drench the western declivity of the Andes with rain, not a drop falls on the plains while they blow; and even during the three winter months (from June to August), little rain falls except on rare occasions, when it comes down heavily for three or four days in succession. Sea-winds sometimes bring small fine rain for a few hours, all through the year, but not enough for the support of vegetable productions. But it appears that rain is more abundant in the interior of the plains north of 45° S. lat. The Rio Negro covers the adjacent country with water to a great extent in autumn (May and June), when no snow on the Andes is dissolved. In summer the heat is scorching, but not sultry; and in winter, though the weather is sometimes very cold, especially during southerly winds, the air is always elastic and wholesome. Changes of wind are sudden, and cause rapid though not very great variations of temperature.

The plains differ from the mountain region both in vegetation and in animals. The natives have dogs and herds of horses, and there are wild cattle, as already mentioned, on the banks of the river Chupat. Guanacoos are very numerous, especially in the southern plains. Pumas are found everywhere, and wolves on the northern plains. There are several species of foxes, as well as caviars, armadillos, and tucu-tucu, a little animal like a rabbit. On the coast there are common seals, fur-seals, and sea-lions. Land-birds are not numerous, except emus, condors, and carrion-hawks. Teals, partridges, doves, snipes, and rails however are frequently met with, which pass southward or northward according to the season. The sea-birds consist of gulls, grebes, and periguina. On the coast fish are rather plentiful, the larger species resembling cod, ling, and salmon. Between Cape Blanco and Port Desire there are numerous salinas, or extensive hollows filled with salt, in which the solid mass is several feet thick, and consists of very white and good salt. Near Port San Julian there are salt lakes, in which the salt crystallises in great tubes.

Inhabitants.—The inhabitants of the mountain region are different from those of the plains. The natives of the plains are called Patagonians, or Horse-Indians, as they wander about in the interior on horseback, and do not live on the shores. The natives of the mountain region are called Canoe-Indians, because they live only on the sea-coast, and frequently remove from one inlet to another in canoes; they belong to the same race with the inhabitants of the western part of Tierra del Fuego.

The Patagonians were so called by Magalhaens when he saw them at Port San Julian in 1520. He described them as being of a gigantic stature, 7 feet in height, but the statement was disbelieved even in his own day, and Winter, who visited Patagonia a little later than Magalhaens, saw no natives of unusual stature. About the middle of the last century Captain Byron met with a number of Patagonians, of whom the men were not less than 6 feet, and some even exceeded 9 feet in height; the women were from 7½ feet to 8 feet. This account again was contradicted by Wallis and Bougainville. The fact however appears to be now established that though no men of the height said to have been seen by Magalhaens and Byron are to be met with at the present day, the Patagonians are really distinguished by their size. Captain Fitzroy observes that among 200 or 300 of these people scarcely half a dozen men are seen whose height is under 5 feet 9 or 10 inches, though none have recently been measured who much exceeded 6 feet; while the long mantle of skins which they wear adds so singularly to their apparent height, that it is difficult to believe, till they are measured, that they are not really much higher. Their head is rather broad, but not high, and except in a few instances, the forehead is small and low. Their hair, which hangs loosely, is black, coarse, and very dirty. Their brow is prominent, and the eyes rather small, black, and ever restless. Their faces are roundish, and the projection of the cheek-bones makes them look unusually wide. The nose is a little depressed, narrow between the eyes, but broad and fleshy between the nostrils, which are rather large. The mouth is large and coarsely formed, with thick lips. All the features are large except the eyes. They have little hair either on the face or the body, and they attempt to eradicate it. Their hands and feet are comparatively small. Their limbs are not so muscular as their height and apparent bulk would induce one to suppose; they are also rounder and smoother than those of white men. Their colour is a rich reddish-brown, between that of rusty-iron and clean-copper, rather darker than copper, yet not so dark as good old mahogany. The Patagonians wander about in the extensive plains south of the Rio Negro, and traverse that immense distance (800 miles) in a comparatively short time. Their principal subsistence is the flesh of mares, emus, caviars, and guanacoos, with two wild roots, one called tus, and the other chalis.

That tribe of Patagonians which principally visit the southern plains is called Te-huel-het, or Southern People. In the stony district between 45° and 49° S. lat. none of the tribes seem to make a long stay. North of 45° S. lat. there are said to be three other tribes: the Pe-huel-che, or Eastern People, who move about in the country along the coast; the Chulian Indians, who ramble over the districts adjacent to the Andes south of 42° S. lat.; and the Molu-che, or Warrior

Indians, who occupy the interior of the country south of the Rio Negro to about 42° S. lat.

The mountain region is inhabited by two tribes of the Fuegians; one occupying the country about Otway and Skyring Waters, and another which inhabits the western coast of Patagonia, between the Strait of Magalhaens and the promontory of Tres Montes. The Fuegians are rather short, varying in height from 4 feet 10 inches to 5 feet 6 inches, yet their bodies are as bulky as those of a man of 6 feet. Their limbs and joints are short in proportion to the trunk, which gives them a clumsy appearance. Passing so much time in low huts (wigwams), or cramped in small canoes, the shape and size of their legs are injured, and they move about in a stooping posture, with the knees much bent. Their colour is that of old mahogany, or rather between dark copper and bronze. The average height of the women is 4 feet and some inches. The most remarkable traits in their countenance are, an extremely small low forehead, a prominent brow, small black sunken eyes, wide cheek-bones, wide and open nostrils, a large mouth, and thick lips. The nose is always narrow between the eyes, and almost flat. Their hair is black, coarse, and lank. Their shoulders are square but high, and the chest and body very large. It is remarkable that, though living in a very cold climate, they have seldom any covering, for a scrap of hide, which is tied to the side or back of the body by a string round the waist, serves only as a pocket. The women have generally a seal skin wrapped about them and a diminutive apron. The tribes are dispersed among the islands in small families, on account of the scarcity of food. They live only on seals, birds, fish, and particularly shell-fish, and they are consequently always moving from one place to another. During the summer they prefer the coast, where they obtain a great quantity of eggs and young birds, besides seals, which come to shore to breed at that season. In winter they retire more to the interior waters in search of shell-fish, and the small but numerous and excellent fish which they catch among the sea-weed (*Fucus giganteus*).

(Fitzroy and King, *Surveying Voyages of the Adventure and Beagle*; Darwin, *Journal of Researches*; Parish, *Buenos Ayres and the Provinces of La Plata*.)

PATAY. [LOIRET.]

PATEAU. [SOOLOO ARCHIPELAGO.]

PATELEY BRIDGE, West Riding of Yorkshire, a market-town and the seat of a Poor-Law Union, in the parish of Ripon, is situated on the right bank of the river Nidd, in 54° 5' N. lat., 1° 45' W. long., distant 80 miles W.N.W. from York, and 224 miles N.N.W. from London. The population of the town of Pateley Bridge in 1851 was about 750. The living is a perpetual curacy in the archdeaconry of Richmond and diocese of Ripon. Pateley Bridge Poor-Law Union contains 14 parishes and townships, with an area of 74,276 acres, and a population in 1851 of 9324. In the neighbourhood of Pateley Bridge are several lead-mines, which afford some employment. The hat manufacture is carried on. There is a market weekly on Saturday. Cattle-fairs are held on October 10th, and on every alternate Saturday from that date till the third Saturday in May. Besides the church, there are three chapels for Dissenters, a mechanics institute, and a branch savings bank.

PATER, or PEMBROKE DOCK. [PEMBROKESHIRE.]

PATERNO. [CATANIA.]

PATERSON. [NEW JERSEY.]

PATHHEAD. [FIFESHIRE.]

PATMOS, a small island, one of the Sporades, near the southwestern coast of Asia Minor, and about 30 miles S. from Samos, now called Patino. Patmos is chiefly known as the place of exile of the apostle St. John, who here wrote his Revelations. The island is a rock about 15 miles in circumference, with only a few fertile spots; the coast is high, and forms many capes, with several good harbours. The only town is situated on a rocky eminence near the sea, with about 400 houses, which, with about 60 more at La Scala, or the 'landing-place,' are the only habitations in the island. In the highest part of the town is the monastery of St. John, built by Alexius Comnenus; a massive building flanked with towers. About half-way up the mountain, between La Scala and the town, is a natural grotto, the abode, according to the natives, of St. John, and they have built a small church over it. (Tournefort; Hilaire, *Voyage dans la Grèce*.)

PATNA. [ATREHIRE; HINDUSTAN.]

PATRÆ. [ACHÆA.]

PATRAS, the ancient *Patra*, a seaport town on the north coast of the Morea, capital of the nome of Achæa, is about 6 miles S.W. from the entrance of the Gulf of Lepanto. It stands partly on a plain and partly on a ridge about one mile long, of which the citadel crowns the summit, in 38° 14' 5" N. lat., 21° 44' E. long., on the site of the ancient acropolis. Mount Voidhia, one of the high summits of the Morea, rises above the ridge on which the town is built. The plain of Patras produces a great quantity of currants, which form the principal article of export. Previous to the Greek revolution, Patras was the most thriving town of the Morea, being the emporium of the trade of that peninsula, as well as of western Greece. It contained about 10,000 inhabitants, mostly Greeks, and had consuls of most European nations. The war of the Greek revolution greatly injured the town. The citadel, though repeatedly attacked, was never taken by the Greeks; it capitulated at last, in 1828, to the French auxiliary force. Since that

time Patras has somewhat recovered; and it is said to contain at present about 8000 inhabitants. The houses, many of which are surrounded by plantations of orange, fig, pomegranate, and other fruit-trees, are only one story high, on account of the frequency of earthquakes. Patras was one of the twelve cities of Achaëa, and is the only one that still exists as a town. (Leake, *Morea*.)

PATRINGTON, East Riding of Yorkshire, a market-town and the seat of a Poor-Law Union, in the parish of Patrington, is situated near the left bank of the estuary of the Humber, in 53° 40' N. lat., 0° 1' W. long., distant 14 miles E.S.E. from Hull, and 192 miles N. by E. from London. The population of the parish in 1851 was 1827. The living is a rectory in the archdeaconry of the East Riding and diocese of York. Patrington Poor-Law Union contains 27 parishes and townships, with an area of 88,872 acres, and a population in 1851 of 9407. The parish church is a beautiful cruciform structure, of the reign of Richard II.; it has a lofty spire, which is useful as a landmark to mariners. The Wesleyan and Primitive Methodists have places of worship, and there is a Free school. A creek which communicates with the Humber, brings vessels to Patrington Haven, a short distance from the town. The market is on Saturday, and there are fairs on March 28th, July 18th, and December 6th.

PATTI. [MESSINA, PROVINCE OF.]

PATUN. [HINDUSTAN.]

PATUXENT, RIVER. [MARYLAND.]

PATZCUARO. [MEXICO.]

PAU, the capital of the French department of Basses-Pyrénées, is situated on the right bank of the Gave-de-Pau, 468 miles S.W. from Paris, in 43° 17' 44" N. lat., 0° 22' 24" W. long., and has 15,171 inhabitants in the commune. The town is situated on a height, and is divided into two parts by a deep ravine crossed by a bridge; the principal part is on the south side of the ravine. There is a suburb, on the bank of the Gave-de-Pau, at the foot of the height on which the town stands. Pau is well laid out; the houses are well built, and coated with cement. The poorer houses in the suburbs are chiefly of pebbles laid in very hard mortar. The principal object of interest is the castle, the birthplace of Henri IV., on the west side of the town. This building is an irregular gothic structure, striking from its vastness and interesting from its historical associations. It is kept in repair by the government. The room in which Henri was born is still shown. The castle, which commands a beautiful and extensive prospect, and has a fine park attached to it, was for a part of the year 1848 the prison-residence of the Arab chief Abd-el-Kader. There are two handsome squares in Pau, called La-Comédie and La-Place Royale; the latter is planted with trees, and adorned with a fine pedestrian bronze statue of Henri IV. There is a good bridge over the Gave-de-Pau, leading from the lower town to the neighbouring town of Jurançon, celebrated for its wines. There are a court-house, a market-house, with a fountain in front of it, and several promenades. The town is the seat of a High Court, which has jurisdiction over the departments of Basses-Pyrénées, Hautes-Pyrénées, and Landes. It has tribunals of first instance and of commerce, a public library containing 18,000 volumes, and a college. The principal manufactures are carpets, linen, handkerchiefs, leather, and table-covers. Trade is carried on in hams, salted legs of geese, wines, chestnuts, cotton yarn, cotton goods, and coarse woollens. The English, who are pretty numerous at Pau, have a church and clergyman of their own, also an English banker and several English doctors. An English vice-consul resides in the town.

PAUILLAC. [GIRONDE.]

PAUL, ST. [ALPES, BASSES.]

PAULERSPURY. [NORTHAMPTONSHIRE.]

PAULIEN, ST. [LOIRE, HAUTE.]

PAULO, SAN. [BRAZIL.]

PAUMBEEN PASSAGE. [CEYLON; HINDUSTAN.]

PAUNTON. [LINCOLNSHIRE.]

PAVIA, a province in Austrian Italy, is bounded N. by the Milanese, E. by Lodi, W. by Sardinia, from which it is separated by the Ticino, and S. by Sardinia and Parma, being divided from both by the Po. It is one of the most fertile provinces in Lombardy, lying entirely in the fine plain of the Po. It produces corn, wine, fruit, hemp, and has good pasture land. The length from north-west to south-east is about 40 miles, the breadth about 10 miles. The area is 400 square miles, and the population in 1851 amounted to 171,622. The province is divided into eight districts, and 193 communes. Two navigable canals, the Naviglio-Grande and the Naviglio-di-Pavia cross the province, and supply water communication between Milan and the Lago-Maggiore, the Ticino and Po, and by the latter river with the Adriatic.

The capital is Pavia, a well-built walled city of about 28,000 inhabitants, situated on the left bank of the Ticino, a few miles above its junction with the Po, and 20 miles S. from Milan. A handsome covered bridge over the river connects Pavia with the suburbs of Borgo-Ticino, on the right bank. The cathedral, which is a modern structure, was rebuilt in the last century; it contains some good paintings. The oldest church in Pavia, and perhaps in Italy, is that of San-Michele, which it is asserted was built in the 6th century. Several old and curious baso-relievs adorn this church, as well as some frescoes of the age of Giotto. The vast church Del-Carmine,

which was built in the 14th century, contains some valuable paintings. That of Santa-Maria-Coronata was built by Bramante, and is also rich in paintings. The once handsome church of San-Pietro 'in Cielo d'Oro,' noticed by Dante ('Paradiso,' x.), was not long ago used as a military storehouse.

Pavia is chiefly known for its university, which was founded by Charlemagne and contains 13 colleges. It has faculties of law, medicine, and philosophy, attended by an aggregate of above 1000 students. Pavia has long been renowned for its medical and surgical instruction. A valuable library of 50,000 volumes, a museum of natural history, a cabinet of anatomy, and a botanical garden are annexed to the university. Three colleges, Caccia, Borromeo, and Ghislieri, the first two founded by the noble families of those names, and the third by Pope Pius V., support about 120 students gratuitously. The college Borromeo is a magnificent building. Pavia gives title to a bishop; it has a large hospital, a gymnasium, a theatre, a foundling hospital, and other benevolent institutions. The chief trade of the town is in silk, wine, rice, and Parmesan cheese.

Pavia occupies the site of the ancient *Ticinum*, which was a town of Cisalpine Gaul: little mention is made of it in Roman history. The Lombard kings resided in Pavia; their old castle still remains. Near Pavia Francis I. was defeated and taken prisoner by Charles V. in 1525. Five miles from Pavia, on the road to Milan, is the *Certosa*, a splendid Carthusian monastery, now suppressed. It was built by Gian Galeazzo Visconti, duke of Milan, whose monument is in the church: the church is rich in sculpture, marble, and fresco paintings.

PAWLENO-SELO. [NISCHNEI-NOVGOROD.]

PAX AUGUSTA. [BADAJOS.]

PAXO. [IONIAN ISLANDS.]

PAZ, LA, Bolivia, the seat of a bishopric, and the capital of the department of the same name, situated on the Rio Chuqueapo, at an elevation of 12,226 feet above the sea, near 16° 30' S. lat., 68° 10' W. long.; population about 20,000. It stands in a ravine probably more than 1000 feet below the table-land of the Lake of Titicaca [BOLIVIA], on some hills which are scattered over the ravine, on the northern side of which rises the elevated peak of Illimani. The streets of the town are very irregular, and some of them extremely steep. It contains many extensive dwelling-houses, built in the Spanish fashion; but the greater part of the houses are only mud-huts, and inhabited by Indians. La-Paz is the most commercial town in Bolivia, being the centre where European goods are brought from the coast of Peru, and exchanged for gold, bark, and other products of the interior.

PECKHAM. [SURREY.]

PEEBLES, the chief town of Peebles-shire, Scotland, a royal burgh and market-town, is situated in a valley on the left bank of the Tweed, in 55° 38' N. lat., 3° 6' W. long., 22 miles S. from Edinburgh by road. The population of the burgh in 1851 was 1982. The burgh is governed by two bailies and eleven councillors, one of whom is provost.

Peebles is a very ancient town. After the battle of Nevill-Cross (1346), in which David II. was taken prisoner by the English, the town of Peebles contributed so largely to his ransom that he, in 1367, created it a royal burgh. The old town having been burnt by the English in 1545, a new town was commenced, and surrounded by a wall, with gates, which were standing in 1707. St. Andrew's cathedral was formerly used as the parish church, but only a small portion of it is now standing. The river is crossed here by an excellent bridge of five arches. The houses and public buildings are substantial and well built. Besides the parish church there are a Free church, two chapels for United Presbyterians, an Episcopal and a Roman Catholic chapel, and a Grammar school. There are also in the town a town-hall and a jail, a scientific institute, and a savings bank. There is a weekly market. Eight fairs are held in the year.

PEEBLES-SHIRE, or TWEEDDALE, an inland county in the south of Scotland, bounded N. by Edinburghshire, E. by the counties of Selkirk and Edinburgh, S. by those of Selkirk and Dumfries, and W. by Lanarkshire, is situated between 55° 24' and 55° 50' N. lat., 2° 45' and 3° 33' W. long. Its greatest length from north to south is 30 miles, and the greatest width from east to west rather less than 22 miles. The area is 354 square miles, or 226,488 acres; the population in 1841 was 10,499; in 1851 it was 10,738.

Surface, Hydrography, and Communications.—The general elevation of Peebles-shire exceeds that of any other county in the south of Scotland. The most mountainous parts extend from the south-east to the south-western extremities of the county, including the sources of the Clyde, the Tweed, and the Annan. On the north-east a lofty ridge of mountains separates this county from Edinburghshire; and on the north-west it is separated from the same county by the Pentland Hills, among which the North Esk, the Leith Water, and the Lyne (a tributary of the Tweed), have their rise. The principal elevations are Culterfell, Cardon, and Dollariaw, the summit of each of which is more than 2400 feet above the sea-level; Hartfell (2635 feet) and Broadlaw (2741 feet). The hills and mountains in Tweedsmuir afford good pasturage for sheep and black cattle.

The Tweed rises just beyond the limits of the county, to the north of Erickstane, a hill in Dumfries-shire, near Moffat. After it reaches the town of Peebles, its course is nearly due east through the county,

which it quits a few miles below Innerleithen. The numerous rivulets which intersect the county are nearly all tributaries of the Tweed. The chief of these are—the Lyne, which itself has numerous small tributaries; the Peebles, or Eddlestone, which falls into the Tweed at the town of Peebles; the Leithen, in the east of the county; the Manor, and the Quair, which last falls into the Tweed, near the seat of the Earl of Traquair. All these streams contain salmon and trout. Eddlestone Loch is a small lake in the north-east part of the county, from which the South Esk takes its rise. It abounds with pike, perch, and eels, and is the resort of large flocks of wild fowl during summer.

The county is well intersected by roads, which are for the most part kept in good repair. The principal are those connecting Edinburgh and Moffat, and Lanark and Kelso. The former winds through the valley of the Tweed in a single line for about 15 miles, after which it separates into two branches, one passing through Broughton, the other through Eddlestone, which again meet upon the borders of Edinburghshire. The road from Lanark to Kelso is the means of communication with Glasgow, and crosses the county from north-west to east, passing through Peebles.

Geology, &c.—The prevailing rock is grauwacke, or as it is called here whinstone, of which there are some excellent quarries in the vicinity of Peebles, and from which the town has been chiefly built; but that which is found in other parts is, from its laminated structure, unsuitable for building; some of it serves as roofing-slata. White and red freestone are common in the north, and both coal and limestone have long been wrought at Carllops, in the parish of Linton.

Climate, Soil, and Agriculture.—The climate is keen, but less severe than that of Edinburgh. The mean annual temperature of Tweedsmuir, the most elevated parish in the county, was 45° in 1828; the mean height of the barometer at the town of Peebles, which is 535 feet above the sea-level, is 29.2 inches in summer, and 29 inches in winter; and the indications of a rain-gauge, kept at the same place, upon an average of seven years, give an annual fall of 26.75 inches. The fogs so often met with in the Lothians seldom extend into this county. In the lower parts of the county much attention has been paid to rotation of crops and the application of the new manures. Leases are generally granted for 19 years, but farms purely of the store kind are let for 14 years only. The arable farms vary in extent from 40 to 200 acres; the sheep farms from 600 to 4000 acres. Inclosures and planting are on the increase. Since the commencement of the present century the Cheviot breed of sheep has been introduced, and has increased rapidly. Other breeds have also been introduced from England with much advantage.

Divisions, Towns, &c.—PEEBLES is the county town. The county returns one member to the Imperial Parliament. The villages are few and not of much importance. Of these the following may be named; the populations are those of 1851:—*Drummelzier*, population of the parish 244, is situated on the right bank of the river Tweed, about 12 miles S.W. from Peebles. Of Drummelzier Castle, formerly the residence of the Tweedies of Drummelzier, some portions remain. *Eddlestone*, population of the parish 790, is on the coach-road between Edinburgh and Peebles. In the parish are traces of three ancient camps. In 1828 a stone coffin containing the ashes of human bones, also some brass weapons, were dug up from an ancient barrow. *Innerleithen*, population of the parish 1236, about 10 miles E. by S. from Peebles, is on the right bank of the Leithen Water, which falls into the Tweed near the village. Innerleithen is much frequented in summer on account of a medicinal spring. Besides the parish church there are places of worship for the Free Church and United Presbyterians. The Tweed is crossed by a wooden bridge which leads to Traquair House, the seat of the Earl of Traquair. The St. Ronan's Border Club holds an annual festival, at which games and gymnastic exercises are engaged in. *Linton*, or *West Linton*, population of the parish 1630, is situated on the left bank of the Lyne Water, about 18 miles N.N.W. from Peebles. Many of the inhabitants are weavers. Besides the parish church, there is a chapel for United Presbyterians. A sheep market is held on the last Tuesday of June; stock and hiring markets are held in April and September.

History, Antiquities, &c.—The only antiquities of the county are the ruins of castles or towers. One of these, the Castle of Need-path, on a rocky promontory in the Tweed near Peebles, now the property of the Duke of Buccleuch, made a stout resistance against the forces of Cromwell. Another, in the parish of Broughton, is called the Castle of Macbeth. The Earls of March were hereditary sheriffs of Tweeddale, which gives the title of Marquis to a branch of the house of Hay, Earls of Errol. In the churchyard of Drummelzier the famous Merlin, of the Hay family, is traditionally said to be buried.

Religious Worship and Education.—According to the Returns of the Census in 1851 there were then in Peebles-shire 31 places of worship, of which 13 belonged to the Established Church, 8 to the Free Church, 5 to the United Presbyterian Church, 2 to Episcopalians, and 1 to Independents. There were 28 day schools with 1526 scholars, 19 Sabbath schools with 879 scholars, and 3 evening schools for adults with 98 scholars.

PEEL. [MAN, ISLE OF.]

PEGLI. [GENOA.]

PEGU was a century ago a powerful empire in the peninsula with-

out the Ganges. The nation which established this empire is called Peguans by the Europeans, and Talam by the Birmans; but they call themselves Mosan. They inhabit the low country which extends on both sides of the river Irawaddy, from its mouth to the Galladyet Mountains (from 16° to 18° 30' N. lat.) and from the banks of the Saluen River to the mountains of Aracan. In 1757 the Birmese, under their emperor, Alompra, invaded the country, took the capital Pegu, which was razed to the ground, and annexed the whole as a province of their empire. [BIRMA.] In the war which broke out with the British in 1852 the province was wrested from them, and the towns of Pegu, Proma, and RANGOON were fortified. In 1854 an embassy was sent from Birma to the governor-general of India to treat for the restoration of Pegu, but the proposition was rejected.

PEGWELL BAY. [KENT.]

PEINE. [HILDESBREM.]

PEIPUS LAKE. [LIVONIA.]

PEKING, the capital of the Chinese empire, is situated near 40° N. lat., and between 116° and 117° E. long., in a level plain, which on the west of the town assumes an undulating surface, and at some distance from it rises into low hills. It is about 80 miles south from the nearest part of the Great Wall. The river Pei-ho, which falls into the Yellow Sea about 100 miles below Peking, runs at some distance on the west but is connected with the town by means of a canal, and serves as the medium of a large commerce. The city consists of two parts and of several suburbs. The most ancient part is the northern, called the town of the Tartars, or city of Nine Gates, a large portion of the centre of which is occupied by the palace and gardens of the emperor; the southern, or city of the Chinese, is the seat of commerce, of the larger part of the population, and is less strictly guarded than the other. The circumference of the united towns is estimated by Sir J. F. Davis ('Sketches of China') at 25 miles; the whole is surrounded by a wall 40 feet high, and surmounted by a parapet deeply crenated, but without regular embrasures; the merlons contain loopholes for archers. The thickness of the walls is about 20 feet at the base, and 12 across the terrepleine upon which the parapet is erected. The outside of the walls, though not perfectly perpendicular, is smooth, but the inside has a considerable bevel, the rows of bricks which form it being placed like steps, one above and behind the other, like the steps on the faces of the Great Pyramid of Egypt. In some parts there are slopes of earth, on which the cavalry can ascend the walls, on which several horsemen can ride abreast. The walls are flanked on the outside by square towers, at about 60 yards distance from each other, and projecting 40 or 50 feet from the curtain between them. Sixteen gates lead to the town. Over each gate is a watch-tower, nine stories high, and in each story are port-holes for cannon. The lowest story forms a large hall for the officers and soldiers on guard. Round the gate, on the outside, is a semicircular wall, inclosing a space about 360 feet long, which serves for a parade. In this semicircular wall there is a lateral gate, by which the troops can enter the parade without marching on the high road.

The roads leading to the city are paved with blocks of granite; the streets are not paved, but are constantly watered to keep down the dust. The principal streets vary from 140 to 200 feet in breadth, but they contain no large buildings; the houses are usually not higher than one story, and few have two stories. The streets are lined with a continuous series of shops, in which the goods are laid out with great order. The wooden columns in front of the shops are painted red, blue, and sometimes are gilt. In several places triumphal arches cross the streets. They are built of wood, and consist of three handsome gateways, of which the middle is the highest and largest, and over them are three roofs richly decorated. Public edifices and also the dwelling-houses of private persons occur only in the narrow streets and lanes. Where these lanes open into the wider streets there are generally gates, which are shut at night and opened only in case of need. The private dwellings do not embellish the town, as they are separated from it by walls or curtains, to prevent passengers from seeing the court into which the street-door opens. They are built of bricks, and have a roof of gray tiles.

Peking became the capital of China after the expulsion of the Mongols, and the accession of the dynasty of Ming. As the seat of government, it contains the great offices for the administration of the empire, which are situated, for the sake of convenience, near the southern gate of the imperial palace; the national college, and the imperial printing-office. The population has been very variously estimated, but it probably amounts to 2,000,000. Under the article CHINA a notice is given of the insurrection which broke out in 1851, and in 1854 had threatened the safety of Peking: in March 1855 the insurgents had not succeeded in capturing Peking, having turned their forces more against Canton, but they still retained possession of all the places previously taken by them, from which the imperialists had in vain endeavoured to expel them.

PELEW ISLANDS are a chain of small islands situated in the Pacific, between 8° and 9° N. lat., 130° and 136° E. long. They extend from south-south-west to north-north-east. The group is inclosed by a reef, which surrounds it in the form of a crescent almost entirely on the west and north, and even from the east it is difficult to approach the islands on account of the reefs. There is no reef on the south, but there are several shoals of coral-rocks. The group consists of about

twenty islands, the largest of which is that of Babeltoup, nearly sixty miles in circumference. There are no rivers in the islands, but the inhabitants are supplied with water from brooks and ponds. Cattle, goats, and hogs are abundant in the islands; wild fowl is numerous; fish are plentiful; turtles abound, as well as shell-fish, such as oysters, mussels, and others. The principal objects of cultivation are yams, bananas, and cocoa-nut trees, and most other vegetable productions of tropical growth. The inhabitants are of the Malay race. Their huts are made in a very simple way, but they show some ingenuity in the construction of their boats. Their cooking utensils are made of clay, and are burned in the same manner as our coarse pottery.

PELION, MOUNT. [THESSALY.]

PELLA. [MAEONIA.]

PELOPONNESUS, that is, 'the Island of Pelops,' the ancient name of the Morea, derived its name from Pelops, who is said by later Greek mythologists to have been of Phrygian origin. Thucydides (i. 9) simply observes that he came from Asia, and brought great wealth with him. He married Hippodameia, the daughter of Enomaus, king of Pisa in Elis, and succeeded to his kingdom. Agamemnon and Menelaus were descended from him.

The word Peloponnesus does not occur in Homer. The original name of the peninsula appears to have been Apia. In the time of Thucydides (i. 10) the Peloponnesus appears to have been divided into five parts, namely, Laconia, Messenia, Argolis, Achaia, and Arcadia; but in that case, as Pausanias has remarked (v. 1, § 1), Elis, which for many reasons ought to be made a separate division, must have been included in Achaia or Arcadia. Modern writers usually make six divisions—Achaia, Elis, Arcadia, Argolis, Laconia, and Messenia; to which Sicyonia, or Corinthia, is sometimes added.

The ancient history of the Peloponnesus forms parts of the history of GREECE. The physical geography of the country is given under MOREA, ACHAEA, ARCADIA, ARGOS, ELIS, LAONICIA, and MESSENIA.

PELTON. [DURHAM.]

PELUSIUM. [EGYPT.]

PELUSSIN. [LOIRE.]

PEMBREY. [CAERMARTHENSHIRE.]

PEMBRIDGE. [HEREFORDSHIRE.]

PEMBROKE, Pembrokeshire, South Wales, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, is situated on a navigable creek of Milford Haven, in 51° 40' N. lat., 40° 54' W. long., distant 264 miles W. by N. from London. The population of the borough in 1851 was 10,107. The borough is governed by 6 aldermen and 18 councillors, of whom one is mayor; and, in conjunction with Tenby, Wiston, and Milford, returns one member to the Imperial Parliament. The livings are in the archdeaconry and diocese of St. David's. Pembroke Poor-Law Union contains 29 parishes and townships, with an area of 69,804 acres, and a population in 1851 of 22,874.

Pembroke consists chiefly of one long irregularly-built street, gradually ascending westward to the castle, which stands on a bold rocky promontory about forty feet high. In the reign of Henry I. the fortress came into the possession of Gilbert Strongbow, earl of Pembroke. It sustained a protracted siege in 1648, when the Royalists under colonels Laugharne, Powell, and Poyer, held out against Cromwell till compelled by famine to surrender. The circular keep is 75 feet high, and 163 feet in circumference at the base; the walls are 14 feet thick. Under the keep is a spacious natural cavern called the Wogan. Henry VII. was born in Pembroke Castle. The important naval establishment Pater, or Pembroke dockyard, is described under PATER in the article PEMBROKESHIRE. In the town are—St. Michael's church, of Norman date; two other churches of the Establishment; chapels for Wesleyan and New Connexion Methodists, Independents, and Baptists; National schools; and a savings bank. The Free Grammar school has been closed for many years. Markets are held on Wednesday and Saturday, and fairs seven times in the year. A county court is held.

PEMBROKESHIRE, a maritime county, forming the extreme west of South Wales, is bounded E. by the counties of Caermarthen and Cardigan, on the other sides by the Irish and Bristol channels. It lies between 51° 36' and 52° 7' N. lat., 4° 30' and 5° 20' W. long. The length from Strumble Head on the north coast to St. Gowan's Head on the south, is 31 miles; the average width from east to west hardly exceeds 21 miles. The area is 628 square miles, or 401,691 acres. The population in 1841 was 88,044; in 1851 it was 94,140.

Surface, Coast, Rivers.—The surface is generally undulating. The county is surrounded on three sides by the sea, and intersected by the great estuary of Milford Haven; the course of the rivers is therefore short, and none of them is large. There is little timber except in sheltered situations. The Precelli Mountains, a range running from near Fishguard to the borders of Caermarthenshire, are about 10 miles in length; Cwm Cerwyn, the highest summit, is 1754 feet above the sea.

The river Teivy, which forms the northern boundary, runs into the sea between Cardigan Island and Cardigan Head; its mouth is impeded by a dangerous bar. Salmon abound in the Teivy. The fishermen ply their trade in light wicker boats or coracles, covered with skins or tarpaulin. Fishguard Bay, at the mouth of the Gwain, is about three miles across, with from 30 to 70 feet of water and good holding-ground

of sand and mud; it is open to the north-west. Off St. David's Head, 51° 54' N. lat., 5° 17' W. long., are seven rocky islets called the Bishop and his Clerks, and to the south-east of these Ramsey Isle. The coast here turns to the south, and shortly after forms St. Bride's Bay, about 8 miles broad and as many in depth; the projection of the mainland which forms the southern boundary of Bride's Bay, terminates southward in the peninsula of Dale, which shelters Milford Haven on the west. There are two lighthouses on St. Anne's Head at the north entrance of Milford Haven. This great estuary is about twenty miles in length; the mouth is about two miles wide, and it varies from that width to half a mile throughout. It contains numerous bays and creeks, completely land-locked, and forms one of the finest harbours in the world. Farther south are the Stack Rocks, high insulated cliffs which in spring and summer are the resort of innumerable sea-birds: a new tower has been recently erected on the Stack for the protection of Pembroke dockyard. On this part of the coast are the ancient chapel cell and holy well of St. Gowan, situated at the bottom of a terrific chasm in the rocks. The southern coast presents a wild and inhospitable appearance: the carboniferous limestone forms precipitous cliffs 150 feet high. Close to the Castle Hill at Tenby, on the west shore of Caermarthen Bay, is the small rocky island of St. Catherine's, on which are the ruins of a chapel. Ramsey island lies south of St. David's Head. It rises high out of the sea, is three miles long from north to south, about a mile broad, and terminates at each end in a precipitous hill. The island is the property of the Bishop of St. David's. Falcons and an immense number of sea-birds breed upon it; rabbits are plentiful. There is a solitary farm-house on the island. Caldy island, 2½ miles S. from Tenby, is above a mile long, and about half a mile broad, and the greater part of its surface is included in a well-cultivated farm. In the reign of Henry I., Robert de Tours founded a priory here, of which there are still some remains. Limestone is quarried; oysters, crabs, and lobsters abound round the island. Caldy lighthouse bears a stationary light, with two tiers of reflectors. St. Margaret's island, which has been separated from Caldy by the force of the sea, is perforated by vast caverns; it is reached over a ledge of rocks at low water of spring tides. Skomer island contains 700 acres. There is a farm-house upon it, and multitudes of rabbits. Skokham isle, separated from Skomer by Broad Sound, has an area of about 200 acres, and is used chiefly as a sheepwalk. Rabbits are numerous.

Pembrokeshire has no rivers of importance. The two rivers Cleddau, or Cleddy, are the principal: the eastern branch rises in the Precelli Mountains; the western, in the north-west part of the county, runs by Haverfordwest, whence it is navigable for small vessels, and, uniting with the East Cleddy about five miles below that town, falls into Milford Haven. The other rivers are—the Nevern, which empties itself into the Bay of Newport, the Gwain at Fishguard, and the Solva into St. Bride's Bay, where it forms a small port.

The principal common roads are—the coach-road from London to Pembroke; the road from Caermarthen to Haverfordwest, St. David's, Fishguard, and Newport to Cardigan; the road from Tenby to Pembroke, and from Tenby northward through Narberth. There is a railway from the coal-mines at Kingmoor to the sea at Saundersfoot. The South Wales railway runs from Caermarthen westward through this county to Haverfordwest.

Geology, Mineralogy, &c.—If a line be drawn through the centre of Pembrokeshire from east to west, we find the stratified rocks north of that line composed of slates, grit, and shales; to the south the older rocks are surmounted by the Silurian rocks, old red-sandstone, carboniferous limestone, and coal measures. The whole surface is greatly diversified by trap-rocks bursting forth in many places, and altering the structure of the sedimentary deposits. The carboniferous limestone dips below the millstone-grit, forming a girdle round it in the eastern district, but disappears in the west. The great coal-basin of South Wales runs across the county, gradually narrowing as it approaches St. Bride's Bay. The coal is anthracite; it is contained in beds of shale and sandstone, overlying millstone-grit and carboniferous limestone. The seams vary from three feet to a few inches in thickness. The southern part of the county presents a greater extent of carboniferous limestone to the view than is anywhere else laid open in Great Britain. There are numerous funnel-shaped cavities and fissures to which the sea has access. Of these the most remarkable is Bosherton Mere, near St. Gowan's Head. Another of these cavities, called the Devil's Punch Bowl, and situated in the same neighbourhood, presents a scene of the wildest confusion, the waves dashing and bellowing incessantly in the bottom and round the interior. Copper-ore has been found in small quantities in the neighbourhood of St. David's. Slate-quarries are opened in the Precelli Mountains and near St. David's. Coal is the only mineral besides slate which is worked in the county.

Climate, Soil, Agriculture.—The climate of the southern part of Pembrokeshire is mild but damp. The northern part of the county has a considerably lower temperature. On the southern part of the county the limestone and old red-sandstone formations afford soils of excellent quality; some districts near St. David's, and along the coast towards Fishguard, are well adapted for the growth of barley, but in the coal district and the slaty ridge of the Precelli Mountains the land is very inferior. The system of agriculture has been improved within the last few years. The breed of black cattle, called Castle-Martins,

are bought in droves for the supply of the London market. The horses are small but much esteemed. The farms vary in size from 30 acres to 800 and 1000 acres, the great proportion being from 100 to 200 acres. The chief crops are oats, barley, and potatoes. A good deal of butter is exported.

Divisions, Towns, &c.—Pembrokeshire is divided into seven hundreds, namely:—Narberth, south-east; Castle-Martin, south; Boos and Dew-island, west; Kemys and Kilgerran, north; and Dungleddy, central. Three members are returned to Parliament from Pembrokeshire: one for the county; one for Pembroke, Tenby, Milford, and Wiston; and one for Haverfordwest, St. David's, Fishguard, and Narberth. The county contains nine market-towns—HAVERFORDWEST, Fishguard, ST. DAVID'S, PEMBROKE, TENBY, MILFORD, NARBERTH, Newport, and Wiston. Those printed in small capitals are noticed under their respective titles; the others, with Pater, are given here.

Fishguard is a small sea-port, situated partly on a cliff near the mouth of the Gwain, 15 miles N. from Haverfordwest: population 1757 in 1851. The river is crossed by a bridge of five arches. Besides the parish church there are chapels for Independents, Baptists, and Calvinistic Methodists. The market is held on Thursday; fairs are held five times a year. A county court is held. Some flannel is manufactured. Hat-making and rope- and sail-making are carried on. Slate abounds in the neighbourhood. Numerous vessels are engaged in the fisheries and in the export of corn and butter. Fishguard is a parliamentary borough, contributory to the district of Haverfordwest.

Newport, a sea-port 7 miles E.N.E. from Fishguard, population of the parish 1716 in 1851, is situated at the mouth of the Nevern, which empties itself into the Bay of Newport. There are some remains of an ancient castle. Slates are quarried on the coast and shipped at Newport. There is good salmon-fishing in the Nevern. The market is on Friday: fairs are held on June 27th and October 16th.

Pater, or *Pembroke Dock*, is situated within a mile of Pembroke, in which borough it is included: population of the ecclesiastical district 6236 in 1851. The town is neatly built and lighted with gas. It has a large market-house. A considerable trade is carried on with Ireland and America. The royal dockyard was removed in 1814 from Milford to this place. The dockyard establishments cover 80 acres: they include an arsenal and 12 iron-roofed slips for ship-building; the whole is surrounded by a high wall and strongly fortified; large barracks, defended by bastions and a wide and deep ditch, have been recently completed. A new church was completed in 1848. There are a chapel of ease, chapels for Roman Catholics, Wesleyan Methodists, and Baptists, National and British schools, and a temperance hall. Markets are held on Tuesday and Friday.

Wiston, a contributory borough in the Pembroke district, is 10 miles N. by E. from Pembroke. It is a small place, with a population of 774; the chief buildings are the parish church and a ruined castle. A fair is held October 20th.

The following are some of the more important villages; the populations are those of 1851:—

Abercastle, a small place, situated on a creek 6 miles S.W. from Fishguard, has a well-sheltered harbour and some coasting trade. There are some large cromlechs and other primeval remains in this neighbourhood. *Broadhaven*, a pretty little watering-place on St. Bride's Bay, 6 miles W. by S. from Haverfordwest, is much frequented in summer. It is celebrated for the extent and hardness of its sands, and the purity of its water. *St. Dogmael's*, population of the parish 2689, a straggling fishing village on the left bank of the Teivy, is built round the remains of St. Dogmael's Priory, about two miles from Cardigan. The priory was founded by Martin de Tours; part of the north transept remains; the adjoining parish church was constructed with materials from this fine old building. Besides the church there are places of worship for Wesleyan Methodists (Welsh) and Baptists. *Kilgerran*, population of the parish 1266, a village consisting of a street half a mile in length, is situated on the left bank of the Teivy, about 4 miles S.E. from Cardigan. The chief occupation is salmon-fishing by means of coracles. Slates are extensively quarried. Large fairs for horses, cattle, &c., are held in August and November. Near the village is the majestic ruin of Kilgerran Castle, founded by Gilbert Strongbow in 1109. *Nevern*, 2 miles E. from Newport, on the right bank of the Nevern, population 1642, possesses a Norman church dedicated to St. Brynach. In the churchyard is an ancient decorated cross of great beauty. *Saundersfoot*, a thriving coal-port, is situated on Caermarthen Bay, 3 miles N. from Tenby. The harbour is protected by piers, and connected by tramways with extensive anthracite collieries. North of this place are Hean Castle, a modern residence, and Amroth Castle, a splendid modern mansion, on the site of an old feudal structure. *Solva*, or *Solfach*, is a small sea-port, 4 miles E. from St. David's. The Wesleyan Methodists, Independents, and Baptists have places of worship. There are a National school and a superior school called Solva Academy. A small market is held on Friday. *Stackpole*, is a pretty village, situated on the edge of Stackpole Park, 3 miles S. from Pembroke. In this park, one of the finest in Wales, stands the mansion of Earl Cawdor.

Pembrokeshire is in the diocese of St. David's and archdeaconry of Caermarthen. Assizes and quarter sessions are held at Haverfordwest; county courts at Fishguard, Haverfordwest, Narberth, and Pembroke.

History and Antiquities.—Giraldus Cambrensis informs us that Pembrokeshire was conquered in the reign of Henry I. by Arnulf de Montgomery, who built the first castle of Pembroke of stakes and turf. In the same reign a colony of Flemings settled in the peninsula west of Tenby, which is called the hundred of Castle-Martin, and in the neighbourhood of Haverfordwest; their descendants still retain much of their nationality, and the district is hence termed 'Little England beyond Wales.'

Pembrokeshire is rich in antiquities. Many primeval remains are found about St. David's Head, and in the west of the county generally; several Danish encampments may be seen near Linsey Head. The history of the see of St. David's, and a notice of the cathedral buildings, are given under DAVID'S, St. Pembroke Castle, the birthplace of Henry VII., is noticed under PEMBROKE. To the feudal structures already mentioned in this article we add the following:—Manorbear Castle, near Tenby, situated among hills overlooking a wild and broken coast terminated by St. Gowan's Head, was founded by a Norman knight named De Barri, ancestor of Giraldus de Barri, surnamed Cambrensis, who was born here in 1146. At Lamphey, near Pembroke, are the remains of an episcopal palace alienated to Henry VIII., and by him granted to Walter Devereux, afterwards Viscount Hereford. Carew Castle, on the road from Tenby to Pembroke, stands on a gentle elevation above a creek of Milford Haven. The state apartments, the chapel, and the great hall, 102 feet by 20 feet, are lighted through lofty mullioned windows, and are in good preservation; near the entrance is a room 80 feet by 30 feet. On the left of the road, in approaching the village of Carew, is a lofty ancient stone cross of remarkable beauty.

Statistics: Religious Worship and Education.—In the registration county (the population of which in 1851 was 84,472, being 9668 less than that of the county proper) there were 317 places of worship in 1851, of which 136 belonged to the Church of England, 62 to Methodists, 59 to Independents, and 50 to Baptists. The total number of sittings provided was 67,004. The number of day schools was 184, with 8079 scholars; of Sunday schools 179, with 14,846 scholars; and of evening schools for adults 2, with 31 scholars. A mechanics institute at Pembroke Dock had 276 members, with a library of 200 volumes; and a literary and scientific institute at Haverfordwest had 120 members, with a library of 40 volumes. In 1858 the county possessed 2 savings banks at Haverfordwest and Pembroke. The total amount owing to depositors on November 20th 1853 was 106,953*l.* 18*s.* 4*d.*

PENANG, PULO. [PRINCE OF WALES ISLAND.]

PENDENNIS. [FALMOUTH.]

PENDLEBURY. [LANCASHIRE.]

PENEUS. [THESSALY.]

PENISTONE, West Riding of Yorkshire, a market-town and the seat of a Poor-Law Union, in the parish of Penistone, is situated on the right bank of the river Don, in 53° 31' N. lat., 1° 38' W. long., distant 17 miles S.S.W. from Wakefield, 175 miles N.N.W. from London by road, and 176 miles by the Great Northern and Manchester, Sheffield and Lincolnshire railways. The population of the township of Penistone in 1851 was 802. The living is a vicarage in the archdeaconry of Craven and diocese of Ripon. Penistone Poor-Law Union contains 15 parishes and townships, with an area of 33,846 acres, and a population in 1851 of 13,214. Penistone church is a neat building, and there are places of worship for Wesleyan Methodists, Independents, and Quakers. The Grammar school, founded in 1604, is free for classics to all boys in the parish; it has an income from endowment of 100*l.* a year, and had 50 scholars in 1852. There is a Free school for girls. The market, which is chiefly for cattle, is held weekly on Thursday; there are five yearly fairs.

PENKRIDGE, Staffordshire, a village and the seat of a Poor-Law Union, in the parish of Penkridge, is situated on the right bank of the river Penk, in 52° 43' N. lat., 2° 6' W. long., distant 6 miles S. from Stafford, 131 miles N.W. from London by road, and 136 miles by the North-Western railway. The population of the township of Penkridge in 1851 was 2663. The living is a perpetual curacy in the archdeaconry of Stafford and diocese of Lichfield. Penkridge Poor-Law Union contains 21 parishes and townships, with an area of 68,369 acres, and a population in 1851 of 16,541. Penkridge chiefly consists of two streets leading down to the bridge over the Penk, before reaching which they unite: the lower part of the village is subject to frequent inundations. There are here the parish church, a chapel for Independents, and a National school. Three yearly fairs are held; one of them a large cattle-fair, and another a large horse-fair.

PENMAENMAWR. [CAERNARVONSHIRE.]

PENNAIR, RIVER. [HINDUSTAN.]

PENNSYLVANIA, one of the most populous and wealthy of the United States of North America, lies between 39° 43' and 42° N. lat., and 74° 40' and 80° 36' W. long. It is bounded E. by the state of New Jersey; N.E. and N. by that of New York; N.W. for 40 miles by Lake Erie; W. by the state of Ohio; S.W. by Virginia; S. by Maryland; and S.E. by Delaware. Its form is that of a parallelogram, with a length from east to west of 305 miles, and a width of 155 miles. The area is about 47,000 square miles. The population in 1850 was 2,311,786 (of whom 53,628 were free coloured persons), or 49.19 to the square mile. The inhabitants being all free, the federal representative population is the same as the entire population in 1850; this,

according to the present ratio of representation, entitles the state to send 25 representatives to Congress. To the Senate, like each of the other states, Pennsylvania sends 2 representatives.

Surface, Soil, Climate, Productions.—The Alleghany or Appalachian Mountains cover more than one-half of the surface of this state. The ridges of which the mountain system consists run in the general direction of the whole system, south-south-west and north-north-east; and along the southern boundary-line of the state their width hardly falls short of 100 miles. But north of 40° N. lat. the eastern ridges turn to the east-north-east, while the western ranges continue in a north-north-east course, and thus between 41° and 42° N. lat. the two outer ridges of the mountains are 200 miles apart. This mountain region occupies the middle and above half of the state, and to the south-east and north-west of it extend two hilly regions exhibiting different natural features.

1. *The South-Eastern Region* extends along the Delaware River as far north as 41° N. lat., and along the boundary of Maryland as far west as 78° W. long. Its north-western border is formed by the eastern ridge of the Blue Mountains. This region forms a portion of the Atlantic slope; the surface, while generally undulating or hilly, rising gradually from the south-east to the north-west, and near the foot of the Blue Mountains attaining an elevation of between 200 and 300 feet above the sea. About 15 miles from the Blue Mountains is the continuous ridge called the South Mountains, which rises to a considerable height near the southern boundary, but farther east exhibits frequent depressions. This ridge terminates on the banks of the Delaware at the mouth of the Lehigh River. Along the Delaware the soil is a sandy loam, not distinguished by fertility, but well cultivated on account of the ready market afforded by the navigable river and the city of Philadelphia. Farther inland the soil improves considerably in fertility. The climate of this region resembles that of England, except that the changes are more sudden and greater, and the summers hotter and the winters colder, than in England. The mean annual temperature varies between 54° and 50° according to the elevation of the country. Sudden changes of temperature, extending to 20 or 30 degrees, are not uncommon at any season. During the winter months there is a good deal of frost and snow. Rain is abundant all the year round. The mean annual fall is 38 inches. The greatest quantity falls in the summer months, from June to September. In this region are cultivated the grains of England, with maize and much buckwheat. Hemp, flax, tobacco, and esculent plants thrive very well. The orchards chiefly produce apples, peaches, and cherries; the other fruits are less cultivated. In some sheltered places there are extensive vineyards.

2. *The Mountain Region* south of 41° N. lat. consists of a succession of steep ridges and narrow valleys; but north of that line it extends in an elevated table-land, the greater portion of the surface being occupied by large tracts of level or hilly ground, while the mountain ridges are far distant from each other, and cover a comparatively small part of the surface.

Nearly in the middle of the mountain region runs the highest and widest of the ranges of the Alleghany Mountains. In the southern districts of Pennsylvania it forms the watershed between the rivers, which descend eastward to the Potomac and Susquehanna, and westward to the Ohio; but north of 41° N. lat., where it inclines to the north-east, the continuity is broken by the upper branches of the Susquehanna. The summit of this range is broad and nearly of equal elevation, being destitute of peaks. Its elevation above the sea, south of 41° N. lat., seems to vary between 2000 and 2600 feet, and it stands on a base from 800 to 1000 feet high and from 6 to 10 miles wide. East of this range there are five or six other ridges running parallel to each other. The most eastern, the Blue or Kittatinny Mountains, seems to be the highest, and in the Wind Gap, near Williamsburg, on the Delaware, attains the elevation of 1390 feet. The valleys inclosed by these several ridges rise in elevation as they approach the main Alleghany range; the most easterly being hardly more than 300 feet above the sea-level. Both the ridges and the valleys are comparatively narrow, occupying on an average only three miles in width. The declivities of the ridges are steep, and the valleys much depressed and deep. The mountain region west of the main range consists, south of 41° N. lat., of two broad valleys and two ranges, called the Laurel Hills and the Chestnut Ridge. The valleys are about 1000 feet above the sea-level, and the ranges rise some 700 or 800 feet above them. The soil of this region is in general poor and stony, though the valleys contain some alluvial tracts of great fertility, but of inconsiderable extent. The winters are very cold and of long duration; the snow covers the ground for several months. The springs are wet; and the summers, though hot, of comparatively short duration. Maize does not ripen in most parts, and is only planted to be consumed before it gets ripe; wheat is only cultivated in sheltered places. The most common grains are rye and oats. The vegetables generally raised are peas, parsnips, carrots, onions, shallots, potatoes, sweet potatoes, and cabbages. The uncultivated portion of this region, which comprehends the greater part, is chiefly covered with forests. On the higher parts of the ridges the mountains are covered with *Coniferæ*, as pitch, spruce, and white pines and cedars. In the valleys are oak and chestnut, and, where the soil is subject to inundations, sycamores. West of the Laurel Hills the forests are mainly composed of the broad-

leaved laurel, rhododendron, and *Magnolia acuminata*, mixed with chestnut-trees and some oaks.

The table-land of Pennsylvania, on the mountain region north of 41° N. lat., consists, as already observed, of wide broken plains with some ridges and some extensive swamps. The highest part of the table-land is contiguous to the boundary-line of New York, and rises to an elevation of about 1300 feet, with a few ridges which are a few hundred feet higher. Along the water-courses the table-land is depressed, sometimes above a hundred feet, and in these districts alone rye, oats, and some vegetables are cultivated. There are however extensive pastures on the higher parts. The climate is still more severe than it is between the ridges farther south, as the low ridges cannot shelter the plains against the prevailing north-west winds. The forests of the higher land are almost entirely composed of *Coniferæ*, but they do not contain many timber-trees, the stony soil being too poor for their growth. In the depressions and along the rivers are sugar-maple, black walnut, elm, and beach.

3. *The North-Western Region* constitutes the most eastern portion of the plain which slopes from the base of the Alleghany Mountains westward to the banks of the Mississippi. Near the foot of the mountains it is from 900 to 1000 feet above the sea, and where it approaches the boundary-line of Ohio it is still nearly 700 feet above it, in the valley of the Ohio, but much higher farther northward, where it preserves the elevation of from 900 to 1000 feet to the very boundary-line. The surface of this region is undulating, the ascents being gentle and the upper part of the eminences broad, with a rounded outline, except along the water-courses of the larger rivers, where the ascent is rather steep. The soil varies very much: in many places there are large tracts with a poor and stony soil; in others, especially along the rivers, there are fertile tracts. The climate does not materially differ from that of the south-eastern region, except that the winters are colder, and the quantity of rain which falls is not quite so great. In the southern districts cultivation has made considerable progress, and the country presents a pleasing variety of fields and forests. All the grains of the south-east region are raised in abundance, and the orchards produce great quantities of fruit, especially apples and cherries. The forests consist chiefly of oak and sugar-maple. The northern districts are almost entirely covered with forests, consisting of hemlock, spruce, and Weymouth pine, which attains a great size, intermixed with beech, birch, and sugar-maple.

Hydrography; Communications.—The most important river of Pennsylvania is the Delaware, which is navigable by large ships to Philadelphia, and by sloops to Trenton, 130 miles from its mouth. [DELAWARE.] The *Susquehanna* rises in two branches on the table-lands of Pennsylvania and New York, of which the eastern branch originates near 74° 40' W. long., and the western near 78° 40' W. long., and consequently more than 200 miles from each other. The eastern and principal branch has its source in Lake Otego, near the western declivity of the Tuscarora Mountains in New York, traverses the table-land of New York in a south-western and western direction, and after a course of about 140 miles enters Pennsylvania, and is soon afterwards joined by the Tioga River, which collects its waters on the table-land farther west, and flows about 80 miles. From the junction with the Tioga it flows about 130 miles south-east, and afterwards south-west, to its junction with the western branch. This western branch, which is exclusively a river of Pennsylvania, originates in the mountainous tract south of 41° N. lat., and after a northern and eastern course of about 140 miles, it turns southward about 25 miles and joins the eastern branch above Sunbury. After the union of the two branches, the Susquehanna runs southward for about 50 miles, traversing by narrow valleys five or six of the ridges, which here lie between the table-land and the south-eastern region. Before it reaches the lower country it receives on its right bank the largest of its affluents, the *Juniata*, which rises on the western declivity of the Alleghany Mountains, and runs in a circuitous course for about 160 miles, collecting in its way by far the greater part of the waters in the eastern part of the mountain region south of 41° N. lat. After having left the mountain region above Harrisburg, the Susquehanna is joined by the Swatara Creek, whose course hardly exceeds 50 miles, and by several other small streams. The course of the Susquehanna through the south-eastern region is about 170 miles; its entire course is somewhat under 450 miles. It is navigable by sloops for about 5 miles; but above that navigation is impracticable, owing to the rapidity of the current and the numerous rocky ledges which form numerous rapids. Its waters however have been rendered available by the construction of canals. Some of the affluents of the Susquehanna, as the Tioga, Juniata, and Swatara, are navigable for small boats, at least a considerable part of the year, when the rivers are full.

The western part of the state is drained by the two principal branches of the Ohio, the Alleghany and Monongahela rivers. [MISSISSIPPI RIVER, vol. iii. col. 821.] Both of these rivers are navigable for boats during several months of the year. The Ohio, also noticed under MISSISSIPPI RIVER, is formed by the junction of these two streams, and runs westward about 40 miles through Pennsylvania; it is joined from the north by the Big Beaver River, which is navigable for boats as far as the boundary-line between Pennsylvania and the Ohio.

Pennsylvania has a most extensive system of canals, by which the

great coal-fields of the state, and its commercial, manufacturing, and agricultural districts are provided with abundant facilities of internal water communication, and connected with Lake Erie on the one side, and Philadelphia, New York, and the Atlantic on the other. The main lines for the most part follow the great valleys of the interior. In all there are above 1100 miles of canal in the state.

The railways of Pennsylvania are of great extent and importance; and they are of a more costly character than those of any other state except New York. The longest lines are those carried quite across the state, from Philadelphia westward by Harrisburg to Pittsburg, and thence to Crestline in Ohio; and the unfinished series intended to run from Philadelphia north-westward by way of Sunbury to Lake Erie; while other main and junction lines of considerable length and importance connect all the leading towns of the state with each other, and with the towns on the lines of railway belonging to the neighbouring states. On the 1st of January 1855, there were in Pennsylvania 1992 miles of railway in operation, and 1400 miles in progress or projected. The number of railways was 69; but many of these are merely short mineral lines constructed for conveying the coal, &c., from the pits to the ordinary passenger lines.

Geology, Mineralogy, &c.—Igneous and metamorphic rocks occupy the south-eastern portion of the state. In the extreme south-east angle they are chiefly of granite, sienite, &c.; but north of these the prevalent rocks of this series are of gneiss, mica-schist, talcose slate, crystalline limestone, &c.; whilst veins of copper trap occur in several places. Bordering these on the west and north is a belt of Lower Silurian strata, which stretches across the state from Maryland to the Delaware above Trenton, and consists of thick beds of dark reddish-brown argillaceous sandstone, compact limestone, and over all slaty clays. West and north of this series and following its outline is a narrower belt of Upper Silurian strata, consisting chiefly of light gray limestones. Beyond these occur widely extended strata of Devonian rocks. These occupy the middle and north-eastern part of the state, attain a depth of some 14,000 feet, and consist of very fossiliferous sandstones, thick beds of marl and clay, and surmounting all strata of very deep red-sandstone, corresponding to the Old Red-Sandstone of Wales and Scotland. The whole of the western half of Pennsylvania belongs to the Carboniferous system—a portion of the great coal-field of the Alleghanias. The Lower Carboniferous strata are chiefly represented by red schist and siliceous conglomerate, and form a narrowish band west of the Devonian rocks, and between them and the Upper Carboniferous strata, or coal-measures, which occupy the entire remaining portion of the state, and recur in detached patches throughout the district assigned to the Devonian formation; it is indeed among these detached portions that the most productive coal-mines occur. The Upper Carboniferous strata consist chiefly of conglomerate as the base of the formation, and above carboniferous limestone, sandstone, and clay-slates, with veins of true coal, both bituminous and anthracite.

Rich as Pennsylvania is in minerals, by far the most important is coal. The anthracite coal is found in the greatest quantity between the Blue Ridge and the Susquehanna River, and chiefly in the Lehigh and Lackawanna valleys. The richest mines are near Mount Carbon or Pottsville, on the Schuylkill, and near Mauch Chunk on the Lehigh, where beds occur above 40 feet thick, and are worked in the open air, the overlying sandstone, 40 feet thick, having been removed bodily from the top of the hill. The quantity of coal extracted from the Schuylkill field in 1851 amounted to 2,178,584 tons. Other very productive beds of anthracite occur in the Wyoming valley and elsewhere. The bituminous coal-fields of Pennsylvania lie in the western parts of the state, where the coal is found in beds varying in thickness from an inch to six feet and upwards: and it is noteworthy that the coal becomes progressively bituminous as we advance westward in the state. The coal-lands of Pennsylvania are said to occupy above 15,000 square miles, or nearly one-third of the entire area of the state. The quantity of coal now annually obtained from the coal-mines or quarries of Pennsylvania averages nearly 8,000,000 tons, of which about 1,300,000 tons are bituminous.

Next in value to the coal is the iron-ore, which is abundant all over the state, but the more valuable kinds especially so in the bituminous coal districts of Pittsburg, where it has long been very extensively worked. Nearly half of the iron manufactured in the United States is said to be obtained from Pennsylvania. Copper-ore is worked in various places of good quality. Rich argentiferous lead-ore is also obtained. Some zinc is found. Salt-springs are common all over the region of the bituminous coal. Wherever the earth in this region has been penetrated to any considerable depth, salt water has been found, and there are salt-works on a large scale on the Conemaugh, an affluent of the Alleghany, and one or two other rivers. Saline and other medicinal springs in various places have of late been much resorted to by invalids during the summer season. Marble of beautiful variety and excellent texture, granite, and other excellent building stones are largely quarried. Slate and limestone abound in some places.

The climate, the principal agricultural productions, forest trees, &c., have been already noticed in describing the different sections of the state. The staple cereals are wheat, maize, and oats; but rye and buckwheat are also largely raised. Of other food crops potatoes are the principal. The culture of tobacco appears to be greatly on the

increase. Maple sugar is very extensively made. There are very large quantities of horses, cattle, and swine in the state, but their numbers decreased considerably between the censuses of 1840 and 1850. The waggon-horses of Pennsylvania are of extraordinary size and strength. The cattle are generally of a good breed. Sheep are kept in most parts, but the wool is not fine. The wild animals have much diminished. The elk has entirely disappeared, and the deer begins to be scarce. In the northern and less cultivated districts are still found the brown bear, the wolf, wild cat, &c.; also squirrels, rabbits, hares, and minxes. Among the birds, the wild turkey is the largest. Several kinds of fish are plentiful in the rivers, as salmon, trout, carp, shad, &c.

Manufactures, Commerce, &c.—Pennsylvania is one of the chief manufacturing states of the Union. Though the manufactures of cotton, woollen, and linen stuffs are less extensive than those of New York and Massachusetts, those of iron are by far the most extensive in the Union, amounting indeed in value to more than one-third of the whole. In almost every county there are iron-works, but the chief seats of the manufacture are Pittsburg in the north-west, Lancaster in the south-east, and Armstrong, Chester, Berks, Blair, Columbia, and Luzerne counties. Railway carriages and machinery, steam-engines for the navigation of the Ohio and Mississippi, sugar-mills and machinery, agricultural implements, tools, chain-cables, stoves, cutlery, &c., are made to a very great extent. Great quantities of common glass are made and sent to other states. The manufactures of paper are perhaps almost equal in value to those of glass. Leather-making is also a considerable branch of industry. The largest tan-yards are at Pittsburg, but they are numerous in the smaller towns in the north-west region. There are also manufactures of sail-cloth, ropes, hats, stockings, potash, tobacco, earthenware, china, candles, coaches, &c. The distilleries are on a large scale; but New York alone brews a larger quantity of ale.

Pennsylvania ranks fourth among the states of the Union in respect to foreign commerce. Philadelphia is the only sea-port in the state [PHILADELPHIA], and the only place through which foreign commerce is carried on. The exports during the year ending June 30, 1853, amounted to 6,527,996 dollars, of which 6,255,229 dollars were of domestic produce. The imports during the same period amounted to 18,834,410 dollars, of which 10,454,563 dollars were carried in American vessels and 8,379,847 dollars in foreign vessels. The entrances during 1850 were—352 American vessels of the aggregate burden of 100,009 tons, and 185 foreign vessels of the aggregate burden of 32,361 tons. The clearances during 1850 amounted to 479 vessels, of the aggregate burden of 111,618 tons. The total tonnage owned in the state in 1850 was 257,939 tons, of which by far the greater number were employed in the inland and coasting trade. During the year ending June 30, 1850, there were built in the state 191 vessels, of the aggregate burden of 31,539 tons; of these 56 were steamers, 102 sloops and canal boats, 28 schooners, 4 brigs, and only one a ship.

Divisions, Towns, &c.—Pennsylvania is divided into 63 counties, 21 in Eastern and 42 in Western Pennsylvania. Harrisburg is the political capital; but Philadelphia is the chief city and the commercial metropolis, and Pittsburg the principal seat of the iron manufactures of the state. PHILADELPHIA forms the subject of a separate article: some of the other more important towns are noticed below; the population is that of 1850:—

Harrisburg, the capital, occupies an elevated site on the left bank of the Susquehanna, in 40° 16' N. lat., 76° 50' W. long., 110 miles N. from Washington: population, 7834. The chief public buildings are the capital, or state house, a large and costly edifice of the Ionic order; the court-house, prison, several churches, schools, &c. Considerable manufactures are carried on. A handsome covered bridge nearly 3000 feet long crosses the Susquehanna here. Like almost every other town of any consequence in the state, Harrisburg has ample railway and canal facilities.

Pittsburg, the chief town of Western Pennsylvania, is a city and port of entry; it stands at the confluence of the Alleghany and Monongahela rivers, which uniting here form the Ohio: population, 46,601. The city is regularly laid out, well supplied with water, and lighted by gas; the wide streets are lined with well-built houses; and several handsome bridges cross both rivers. Among the principal buildings are the court-house, a large and costly Doric structure; a spacious Roman Catholic cathedral; about 80 churches, some of considerable architectural pretensions; the western university of Pennsylvania; several schools; a museum; market-houses; besides banks, hotels on a very sumptuous scale, railway stations, &c. The manufacturing establishments are very numerous, and of great magnitude; and Pittsburg boasts of being known as the Birmingham of America. The chief manufactures are of iron. There are very large rolling-mills, foundries of bar- and pig-iron, nails and other coarse goods, locks, latches, mills, tools, springs, gun-barrels, &c. The other leading manufacturing establishments are of glass, soda, potash, white-lead, &c.; with breweries, saw- and grist-mills, &c. A large wholesale and retail trade is also carried on. Great quantities of bituminous coal are obtained in the immediate vicinity of the city. Besides the commercial facilities afforded by the Ohio, which is navigable to Pittsburg by steamers of large size, the city is connected with Lake Erie and the Atlantic by canal and railway. *Alleghany City*, on the

opposite side of the Alleghany River, population 21,262, is really a suburb of Pittsburg, with which it is in almost every respect closely identified; and the same may be said of Birmingham (population 3732), and South Pittsburg (1883), on the opposite bank of the Monongahela. Alleghany City contains the western penitentiary of Pennsylvania; 30 churches; and has extensive manufactories of iron, hardware, cutlery, glass, cotton goods, &c.

Carbondale, on the left bank of Lackawanna Creek, 120 miles N.E. from Harrisburg, population 4945, is the centre of a busy coal-mining district, and contains some considerable iron-works. *Carlisle*, 22 miles W.S.W. from Harrisburg, population 4581, is a busy manufacturing town, and the seat of a United States barracks and cavalry school, and of Dickinson college. *Chambersburg*, on an affluent of the Potomac, 45 miles S.W. from Harrisburg, population 3335, is one of the busiest places in the centre of the southern part of the state, and contains some good buildings. *Columbia*, on the left bank of the Susquehanna, 25 miles S.E. from Harrisburg, population 4140, carries on an extensive river trade, and contains the county buildings, 13 churches, &c. The Susquehanna is here crossed by a bridge 5690 feet long. *Dannville*, at the confluence of the Mahoning Creek with the Susquehanna, population 3302, is also a place of considerable trade. *Easton*, at the junction of the Lehigh River with the Delaware, 95 miles E.N.E. from Harrisburg, population 7250, is one of the rising towns of Pennsylvania, being the centre of a great internal trade, and having been made the point of junction of several important lines of railway, and three canals. The town is regularly laid out with broad streets, and a spacious central square; and contains besides the county buildings, several churches and schools, Lafayette college, &c. Considerable manufactures are carried on, and there are extensive deposits of iron in the vicinity, but the principal trade at present perhaps is in flour, corn, meal, and whiskey. *Erie*, a port of entry on Presque Isle Bay, Lake Erie, 220 miles N.W. from Harrisburg: population, 5858. The harbour is a good and safe one, but the place has until the last few years made very slow progress owing to the thinness of the population of the surrounding country, and the want of good lines of communication. Since however it has been connected by the state railways with the leading towns of this and the neighbouring states and the Atlantic ports, it has rapidly advanced in trade and population, and has probably in 1855 nearly twice as many inhabitants as it possessed in 1850. *Germantown*; *Kensington* [PHILADELPHIA]. *Lancaster*, 35 miles S.E. from Harrisburg, population 12,369, is a well-built and flourishing town, the seat of extensive industrial establishments, and the centre of an important line of traffic between the interior and the sea-coast. It contains county court buildings, numerous churches and schools, Franklin college, banks, railway depôts, large hotels, printing offices, paper-mills, distilleries, cotton factories, iron-works, &c. *Mauch Chunk*, on the right bank of the Lehigh, 75 miles N.E. from Harrisburg, population 2567, is chiefly noteworthy as the capital of one of the principal anthracite mining districts. The village contains some good public buildings, banks, &c.; and some large iron-works. In the immediate vicinity is the celebrated Mauch Chunk coal mine, or quarry, which occupies the summit of a hill, and is reached by an inclined plane 700 feet long with a rise of 200 feet. *Moyamensing*. [PHILADELPHIA]. *Norristown*, on the left bank of the Schuylkill, 85 miles E.S.E. from Harrisburg, population 6024, possesses a great amount of water power, which is rendered available for several extensive factories. A handsome bridge spans the river, and a canal and railways afford ample facilities for the transit of goods, &c. *Northern Liberties*; *Oxford* [PHILADELPHIA]. *Phenixville*, on the left bank of the Schuylkill, 78 miles E.S.E. from Harrisburg, population 2670, is largely engaged in the manufacture of iron and iron-ware. *Pottsville*, on the right bank of the Schuylkill, 45 miles N.E. from Harrisburg, population 7515, is the capital of an important coal- and iron-mining district. There are extensive iron-works, machine and engine shops, breweries, &c.; and the place has abundant canal and railway facilities. *Reading*, on the left bank of the Schuylkill, 55 miles E. from Harrisburg, population 15,743, is a well-built town founded in 1748. Many of the public buildings are of a superior character, and there are very extensive iron-works, cotton factories, hat manufactories, potteries, breweries, grist and saw-mills, lumber yards, &c. *Southwark*; *Spring Garden* [PHILADELPHIA]. *Tamaqua*, on the Little Schuylkill, 58 miles N.E. from Harrisburg, population 3080, is another busy coal-mining village. *Washington*, on the Chartier Creek, 170 miles W. from Harrisburg, population 2682, is the seat of Washington College, and has considerable manufactures. *Westchester*, 70 miles E.S.E. from Harrisburg, population 3172, is a well-built town with several churches, schools, an atheneum, &c., and a place of considerable trade. *York*, on the Codorus Creek, 22 miles S. by E. from Harrisburg, population 6863, is regularly laid out, contains several handsome public buildings, and has extensive manufactures.

Government, History, &c.—The constitution of the State of Pennsylvania was framed in 1776 upon the base of that originally drawn up by William Penn. This was subsequently amended, and in 1838 entirely remodelled. The present amended constitution dates from 1850. By it the right of voting is vested in every free white citizen of the United States 21 years of age, who shall have resided in the state during one year. The legislature consists of a Senate of not less than one-fourth nor more than one-third the number of repre-

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sentatives (now of 33 members), who are elected for three years; and a House of Representatives of not less than 60 nor more than 100 (at present 100) members, who are elected annually. The governor is elected for three years. The judges are also elected by the people; the judges of the supreme court for 15 years, of the other courts for 10 and 5 years. The public funded debt of the state on December 1st 1854 was 39,750,000 dollars. The total revenue of the state for the year ending December 1st 1854 was 6,666,000 dollars; the expenditure was 5,425,000 dollars. The state militia in 1852 was composed of 13,328 men, of whom 212 were commissioned officers. Since 1844 the sum of 200,000 dollars has been annually appropriated by the state for the support of schools. The whole number of schools in the state in 1853 was 9703 with 286,105 male, and 238,535 female scholars. There are 9 colleges, and 14 theological, medical, and law schools in the state. A large part of the population of Pennsylvania, especially in the middle and western districts, are Germans; they retain the use of their language, and a considerable number of newspapers in German are printed and circulated in the state.

The first settlements on the shores of Chesapeake Bay were made by the Swedes in 1627. The Dutch took possession of the Swedish colony in 1658, but were obliged to cede it to the English in 1664. Several dispersed settlements had been formed along both sides of Chesapeake Bay. The country was granted by Charles II. in 1681 to William Penn, who considered it just to buy from the original possessors, the Indians, what had been granted by the king of England. In 1682 he founded the town of Philadelphia, and published a 'Frame of Government,' which was confirmed by an assembly of the people at Chester, in December, 1682. The humane principles on which the constitution and laws of Penn were based, attracted numerous colonists to this country from most parts of Europe, especially from Germany. They all settled however in the south-east region, whilst the Indians remained in undisturbed possession of the north-west region. The French, advancing from Canada, got possession of this back country, and in 1752 built Fort Duquesne, the name of which was changed to Pittsburg after it was taken by the British. In 1774 the delegates of the colonies assembled in Philadelphia, declared against the right of the English parliament to tax the colonies, which may be considered as the declaration of war; and it was at Philadelphia that, in 1776, the representatives of the 13 states adopted and promulgated the 'Declaration of Independence.' The seat of the federal government was at Philadelphia till 1800, when it was removed to Washington.

(*Statistical Gazetteer of the United States*; Lippincott, *New and Complete Gazetteer*; *Seventh Census of the United States*; Rogers, *Geological Survey of the State of Pennsylvania*; Maroou; Lyell; Ansted; *American Almanac*, 1855.)

PENNYCUIK. [EDINBURGSHIRE.]

PENOBSCOT, RIVER. [MAINE, U. S.]

PENRITH, Cumberland, a market-town and the seat of a Poor-Law Union, in the parish of Penrith, is situated in a fertile vale at the south extremity of Inglewood Forest, in 54° 40' N. lat., 2° 45' W. long., distant 17 miles S. by E. from Carlisle, 283 miles N.N.W. from London by road, and 282 miles by the North-Western and Lancaster and Carlisle railways. The town is under the management of a Local Board of Health. The population of the town of Penrith in 1851 was 6668. The living is a vicarage, with the curacy of Trinity annexed, in the archdeaconry and diocese of Carlisle. Penrith Poor-Law Union contains 39 parishes and townships, with an area of 181,236 acres, and a population in 1851 of 22,307.

Penrith is an ancient town, situated at the foot of a hill, and contains many well-built houses. The town is lighted with gas. The parish church is a spacious Grecian building, after the model of St. Andrew's, Holborn, London; it was rebuilt, except the tower, in 1720. In the churchyard is an ancient monument consisting of two pyramidal stones about 12 feet high. A new church in the style of the 13th century, consecrated in 1850, and chapels for Wesleyan Methodists, Independents, United Presbyterians, Quakers, and Roman Catholics are in the town. The Free Grammar school, founded in 1564 by Queen Elizabeth, had 21 scholars in 1852, of whom two were free scholars. There are also in Penrith, Free, National, British, Industrial, and Infant schools; a school supported by the Wesleyan Methodists; a mechanics institute and reading-room, and a savings bank. Tuesday is the market-day. Several cattle fairs are held in the course of the year. There is here a house of correction. A county court is held in the town. In olden times Penrith was several times pillaged, and twice burned by the Scots. The Beacon, which stands on a high mount about a mile from the town, commands a view of the country for more than 100 miles in circumference.

PENRYN, Cornwall, a market-town and municipal and parliamentary borough, in the parish of Gluvias, is situated in 50° 9' N. lat., 5° 6' W. long., distant 30 miles S.S.W. from Bodmin, and 266 miles W.S.W. from London. The population of the municipal borough of Penryn in 1851 was 3959; that of the parliamentary borough is included in the return for the united borough of Penryn and Falmouth. The borough is governed by 4 aldermen and 12 councillors, of whom one is mayor; and in conjunction with Falmouth returns two members to the Imperial Parliament. The living of Gluvias is a vicarage in the archdeaconry of Cornwall and diocese of Exeter.

Penryn was made a market-town in 1258, and was incorporated by

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James I. in 1619. The town is built on a low hill, which projects eastward into one of the inlets of Falmouth harbour, dividing the inlet into two navigable branches. At the point between these branches is the public quay, from which the main street of the town rises. A considerable trade is carried on between Penryn and the populous mining district of Redruth. Granite is exported to a considerable amount. There are in Penryn an Episcopal chapel, places of worship for Wesleyan Methodists and Independents, and National schools. The market is held on Saturday, and five annual fairs for cattle are held.

PENSA is an extensive government of Russia in Asia. It is bounded N. by Nischnei-Novgorod, E. by Simbirsk, S. by Saratoff, and S.W. and W. by Tamboff. It lies between 53° and 54° N. lat., 42° 20' and 45° 20' E. long. The population in 1846 was 1,087,200, of whom nearly all are Russians of the Greek Church. The surface of the country is slightly undulating, and its general character is a plain. It is watered by numerous rivers, but most of them are small and not navigable. The most important rivers are the Soura and the Mokcha. The Soura, which rises in Saratoff, enters Pensa to the south of the chief town, traverses the eastern part of the government and enters Simbirsk. The Mokcha rises in the government itself, waters the north-east part of it, and after running northward turns to the west, and enters the government of Tamboff. The government of Pensa contains six small lakes. The climate is temperate and very agreeable in summer, but the winter is rather cold; the sky is clear and the air very healthy.

The soil is extremely fertile, and the produce includes corn, hemp, flax, potatoes, and fruit. The forests are of vast extent. There are still wild-deer and a great quantity of game, but the fur-bearing animals have disappeared. The chief occupations of the inhabitants are grazing and agriculture. Bees are reared in considerable numbers. The fisheries are of little importance. The mineral kingdom furnishes a little iron, vitriol, sulphur, and millstones.

There are few extensive manufactures. But the country people manufacture coarse linen and woollen-cloth, and all kinds of articles for their own use. There is a manufactory of blankets and carpets at the village of Jela. The distilling of brandy is carried on to a very great extent. The trade is chiefly carried on by land, especially with Nischnei-Novgorod. Annual fairs are held at Pensa, Nischnei-Lomoff, and Saransk. The exports are corn, flour, brandy, soap, wax, honey, potashes, wool, sail-cloth, carpets, blankets, wooden-ware, &c.

With respect to public instruction Pensa is under the university of Kasan, but the schools are few in number. The only printing-office belongs to the crown. There are in the government about 600 churches, of which 11 are cathedrals, 5 monks' convents, and 1 nunnery. The Tartar mosques are to the number of 70, of which about 40 are of the first class.

Pensa, the capital of the government, is built on an eminence at the conflux of the Pensa and the Soura, in 53° 7' N. lat., 44° 50' E. long., 465 miles from Moscow. It was founded in 1666, and is a flourishing town, with manufactures of leather and soap. There is a brisk trade in corn. Pensa is a bishop's see, and has a gymnasium, a seminary, two convents, to each of which two churches are attached; seven other churches and a cathedral. The houses are of wood. The population is about 11,000. At Nischnei-Lomoff (7000 inhabitants) a great annual fair is held from the 1st to the 16th of July; the chief articles sold are leather, furs, wax, drugs, and colonial produce. Saransk, at the conflux of the Saranga and the Insara, has nearly 9000 inhabitants, 9 churches, 2 cathedrals, and a convent of monks. It is a very thriving little town.

PENSACOLA. [FLORIDA.]

PENSFORD, a village a few miles south of Bristol.

PENSHURST. [KENT.]

PENTIMA. [ABRUZZO.]

PENTLAND FRITH. [CAITHNESS; ORKNEY ISLANDS.]

PENTRE VOELAS. [DENBIGHSHIRE.]

PENZANCE, Cornwall, a market and sea-port town, a municipal borough, and the seat of a Poor-Law Union, in the parish of Madron, is situated on the north-western shore of Mount's Bay, in 50° 7' N. lat., 5° 31' W. long., distant 53 miles S.W. from Bodmin, and 281 miles W.S.W. from London. The population of the borough in 1851 was 9214. It is governed by 6 aldermen and 18 councillors, of whom one is mayor. The living of Penzance is a perpetual curacy in the archdeaconry of Cornwall and diocese of Exeter. Penzance Poor-Law Union contains 19 parishes and townships, with an area of 65,022 acres, and a population in 1851 of 53,370.

Penzance is the most westerly town in England. It received a charter for a market and a fair in 1332, and was incorporated by James I. in 1616. The town is situated on the north-western shore of Mount's Bay, and has much increased of late years; it is lighted with gas. There are in Penzance a parochial chapel, rebuilt in 1836; a proprietary chapel, erected in 1843, in the early English style; places of worship for Wesleyan and Association Methodists, Independents, Baptists, Roman Catholics, and Jews; a Grammar school, which had 18 scholars in 1851; National schools, and a savings bank. Quarter and petty sessions and a county court are held. The town hall, recently built, is surmounted with a handsome cupola; its eastern front consists of a pediment supported by four noble columns. Penzance possesses

a good public library, a Society of Natural History and Antiquities, and a Horticultural Society. This town is also the seat of the Royal Geological Society of Cornwall, whose museum contains an admirable collection of minerals. The climate of Penzance is very mild but somewhat moist, and is in some repute for invalids. A large proportion of the tin produced in Cornwall is shipped at Penzance. The markets are held on Thursday and Saturday; and fairs on May 23th, Thursday after Trinity Sunday, and Thursday before Advent. Some woollen-yarn and coarse woollen-cloth are manufactured. The fishery at Penzance employs about 2000 persons and about 300 sail of large fishing-boats. The number of vessels belonging to the port on December 31st 1853 was—90 of 8190 tons aggregate burden. During 1853 there entered the port 777 sailing-vessels of 51,659 tons, and 29 steam-vessels of 11,462 tons; and there cleared 297 sailing-vessels of 20,797 tons aggregate burden.

PEORIA. [ILLINOIS.]

PERCY. [MANCHE.]

PERDU, MONT. [PYRÉNÉES.]

PERE-EN-RETZ, ST. [LOIRE INFÉRIEURE.]

PEREKOP. [CRIMEA.]

PERGAMOS, or PERGAMUM, the most important town in Mysia, first mentioned in Xenophon's 'Anabasis' (vii. 3, s. 8), was situated north of the river Calcus, on a small stream named Silenus. It was strongly fortified by nature and art, and was chosen by Lysimachus, when ruler of the north-west part of Asia Minor, as the most secure place in his dominions for depositing his treasures. Philetærus, to whom he entrusted his treasures, declared his independence about B.C. 288, and remained master of the town and a small part of the surrounding country till his death B.C. 263. He was succeeded by his nephew Eumenes, who increased his dominions, and even gained a victory near Sardis, over Antiochus son of Seleucus. He reigned for 22 years, and was succeeded, B.C. 241, by his cousin Attalus I., who assumed the title of King. Attalus was a successful general, and his prudence as well as his valour greatly extended the limits of his kingdom. He died at the age of 72, after a reign of 44 years, and was succeeded, B.C. 197, by his son Eumenes, who, like Attalus, was a firm friend of the Romans, and in consequence of his services in their wars against Antiochus and the kings of Macedonia, received from them all the territory conquered from Antiochus on this side of Mount Taurus. Eumenes embellished the city with many public buildings, and founded a library, which became only second in importance to that of Alexandria. The library remained at Pergamos till Antonius made a present of it to Cleopatra.

The history of the kings of Pergamos is given in an Appendix to Clinton's 'Fasti Hellenici' (iii. 400-410).

Pergamos was a considerable town, and possessed many public buildings, of which the most celebrated was a temple of Æsculapius, which possessed the right of asylum. (Tac., 'Ann.', iii. 63; App., 'Mith.', c. 60.) Pergamos was one of the seven churches to which St. John wrote in the book of the Revelation (i. 11; ii. 12). It continued to be the capital of the Roman province of Asia. The modern town, which is called Bergma, is still a place of considerable importance. Mr. Fellows, who visited it in 1838, says ('Excursion in Asia Minor,' p. 34), that "it is as busy and thriving as heavy taxation will allow, and has seven or eight khans." It contains many extensive ruins. Mr. Fellows informs us (p. 34) that the walls of the Turkish houses are full of the relics of marbles, with ornaments of the richest Grecian art.



Coin of Pergamos. British Museum. Actual size.

PERGE. [PAMPHYLIA.]

PERIAPATAM. [COORG.]

PERIERS. [MANCHE.]

PÉRIGORD, a former province of France, included in the military government of Guienne, was bounded N. by Poitou and Llimousin, E. by Quercy, S. by Agenais, and W. by the Bordelais, Saintonge, and Angoumois. It is now included in the department of DORDOGNE; the capital was Périgueux.

PÉRIGUEUX. [DORDOGNE.]

PERM, an extensive government of Russia, is situated partly in Europe and partly in Asia, between 56° 30' and 61° 30' N. lat., 53° 20' and 64° 10' E. long. It is bounded N. by Wologda and Tobolsk, E. by Tobolsk, S. by Orenburg, and W. by Viatka. The area is about 128,500 square miles, or more than double the area of England and Wales. The population in 1846 was 1,637,700.

This government is mountainous, and is divided by the Ural Mountains, which traverse it from north to south, into two unequal parts, the smaller of which is in Asia. The loftiest summit of the Ural

chain, the Pavdinskoi-Kamen, is upwards of 6000 feet above the level of the sea, but the chain rises so gradually that travellers approaching it on the road from Perm to Ekaterinburg find themselves at the summit without perceiving that they were making an ascent. The mountainous parts are covered with forests, in some of which there are immense marshes. The southern parts of the government, on the European side, are fertile and well cultivated, but the other portions are more suitable to pasture than tillage. The course of the rivers is determined by the Ural chain. The principal river on the west side is the Kama, among the numerous affluents of which is the Tchousovaia, which flows from some lakes at the foot of the chain, and joins the Kama above the town of Perm. On the other side of the mountains, the Soqva, the Toura, and the Sceth flow eastward to join the Tobol. There are above 600 lakes, most of them east of the mountains. There are also sulphureous and other mineral springs. The climate is unequal, being very rigorous in the mountains and in the eastern part, but milder towards the south-west. It is however generally healthy. The government does not produce corn sufficient for the consumption of the inhabitants. Rye, barley, oats, potatoes, and flax are grown. The forests, of which a very large proportion belongs to the crown, consist of the pine, the larch, the birch, and the lime-tree; in the south-eastern part the oak, the ash, the birch, and the elm are found, and in the districts of Tcherdynne and Werkhoutourie, the cedar. Game and fur-bearing animals abound. The government of Perm owes its riches to its minerals, and the working of the mines employs the greater part of the inhabitants. They produce iron, copper, platinum, a little lead, gold, silver, salt, marble, jasper, agates, amethysts, loadstone, and some diamonds. The richest gold-mines are those of Beresoff. The mines of the Ural Mountains yield annually about 300 poods (one pood=36 lbs.) of gold, 200,000 poods of copper, and 5,500,000 poods of iron. The greater part of these products belongs to the government of Perm, which also produces about seven million poods of salt annually.

Of domestic animals there are horses, horned cattle, sheep, swine, and goats. The Baschkirs breed a great quantity of bees: formerly they had camels, but the race appears to be extinct. The Woguls, in the north, have a few reindeer.

Three-fourths of the inhabitants are Russians. The remainder are Permians, descended from the ancient inhabitants of the country between the Ural Mountains and the White Sea, and various Tartar races. Most of the inhabitants profess Christianity; there are a few Tartars and Baschkirs of both sexes, who are Mohammedans; and some Tchermisises and Woguls, who are still Pagans.

There are some manufactures of cloth, leather, soap, candles, &c. Trade is very brisk, partly in consequence of the facility for water-carriage on the Kama and its tributaries, and partly owing to the 39 annual fairs, 18 of which are held in the towns, the most considerable being that of Irbit. With respect to education, Perm is under the university of Kasan, but education is confined to a very small portion of the inhabitants.

Perm, the capital of the government, is a modern town, having been built in obedience to a ukase of Catharine II., issued in 1780. It is situated in 58° N. lat., 56° 30' E. long., at the conflux of the Iagouschika and the Kama. The streets are broad and regular, the houses almost all of wood, and the town is surrounded by a boulevard planted with trees. The population is about 10,000. Perm is a bishop's see. Ekaterinburg, with 11,000 inhabitants, is a place of much greater importance. [EKATERINBURG.] *Kumgar*, at the junction of the Iron and the Sylwa, a fortified town with 6000 inhabitants, has manufactures of leather and soap. Within a mile of the town, on the banks of the Sylwa, there are caverns in the rock, which appear to have been formerly inhabited by many thousand families. *Solismansk*, at the conflux of the Ufolka and the Kama, has 5000 inhabitants, five churches, and two convents. There are here extensive saltworks. Owing to the road to Siberia passing through this town, it has a considerable trade. There is a botanic garden, in which the principal plants of Russia and Siberia are cultivated. *Nischnei-Newiansk* has 12,000 inhabitants, who have considerable manufactures of lacquered or japanned ware. *Irbit*, or *Irbizk*, on the Neïwa, near its confluence with the Irbit, has 3500 inhabitants, and is celebrated for its annual fair, which is frequented by Bokharian, Persian, Armenian, Greek, &c., merchants. Irbit is a neat, regularly built, and rapidly improving town. [See RUSSIA, in SUPPLEMENT.]

(Schmidtlin, *La Russie et la Pologne*; Hörschelmann, *Handbuch*; Erman, *Reise nach Sibirien*; *Russian Official Journals*.)

PERNAMBUCO, a sea-port in Brazil, situated in 8° 8' S. lat., 34° 51' W. long. It is the collective name of two towns, Recife and Ollinda, nearly 3 miles distant from one another. It gives title to a bishop, and is the capital of the province of the same name. The Cidade do Recife consists of three different parts, united to each other by bridges, called Bairro do Recife, Bairro de São Antonio, and Bairro de Boa Vista. The Bairro do Recife is built on the south-eastern extremity of a low and sandy peninsula formed by the mouths of two small rivers, the Capibaribe on the south, and the Ibiribe on the north; being contiguous to the harbour, it is the seat of the commerce. The harbour is formed by a Recife, or chain of reefs, which runs parallel to the shore and about 20 yards from it, and resembles a large flat wall, elevated about 6 feet above low-water mark. This reef

is interrupted by a narrow break which forms the entrance to the port, north of the northern extremity of Recife, and inside the reef, vessels are completely sheltered by a shoal. The town is indifferently built, and the streets are narrow, but generally paved. The Rua das Cruzes, which is the only wide street, contains many substantial houses. The treasury and the governor's palace are situated in San Antonio. As the tide enters the river some distance above the places where the three towns are built, the water is not fit for drinking, but an aqueduct has been constructed, by which water is brought from the Rio Prata, a distance of about 5 miles. Recife has a college, an episcopal palace, and an hospital.

Ollinda is beautifully situated upon a cluster of eminences which are connected with the mountains farther west. It is rather well built, contains many convents, a cathedral, an episcopal palace, a botanical garden of trees and exotic plants, mostly brought from Asia; and a college. The population of Pernambuco as a whole probably amounts to 50,000. The exports of Pernambuco consist chiefly of cotton, sugar, rum, horns, hides, and dyewoods. The imports are cod, mostly from England, flour, wine, English cotton manufactures, and silks from France and China. The trade of the town has been increasing for several years.

The town of Pernambuco was taken by the Dutch in 1630, and remained in their possession to 1654. The Dutch did more for its public works in that short period than has been done ever since.

PERNAU. [LIVONIA.]

PERONNE. [SOMME.]

PERPIGNAN, capital formerly of Roussillon, now of the department of Pyrénées-Orientales, in the south of France, is situated at the junction of the Rasse with the Tet, 5 miles W. from the Mediterranean, 525 miles S. from Paris, in 42° 41' 55" N. lat., 2° 54' 18" E. long., 1194 feet above the level of the sea, and had 19,123 inhabitants in the commune at the census of 1851. Whilst Roussillon was in the hands of the kings of Aragon, Perpignan became in 1349 the seat of a university founded by king Pedro. In 1474 the town was taken, after a most vigorous resistance, by Louis XI. of France. Having been restored to Spain, it was again taken in 1642 by Louis XIII., and was included in the cession of Roussillon to the French. The town is built partly on the slope of a hill, and partly in the plain at its foot, on the right bank of the Tet, over which there are two bridges. A strong citadel commands the town on the south side. The defences of the town, consisting of ramparts flanked with bastions and protected by terraces from the besiegers' fire, of advanced redoubts, covered ways, &c., were all thoroughly repaired in 1823, and Perpignan is now one of the strongest places in France. There are barracks for 5000 men built by Louis XIV., and occupying one side of the parade. Perpignan is divided into the old and new towns. The streets, with few exceptions, are narrow and dark, and the houses ill built. The most remarkable buildings are—the cathedral, the churches of St-Jean-le-Vieux and La-Real, the town-house, the mint, the former churches of the Cordeliers, Carmelites, and Dominicans, the Carmelite convent, now the arsenal, &c. The town gives title to a bishop. It has tribunals of first instance and of commerce, a custom-house, a college, a clerical school, two hospitals, a theatre, a botanic garden, and a public library of 13,000 volumes kept in a part of the old university buildings. The manufactures are—broadcloth and woollen stuffs, playing cards, leather, brandy, soap, and corks. The chief articles of commerce are—red and liquor wines, brandy, oil, silk, wool, iron, and cork. Half-way between Perpignan and the sea is the hamlet of *Castell-Roussillon*, which stands on the left bank of the Tet, and occupies part of the site of the ancient *Ruscino*.

PERRANZABULOE. [CORNWALL.]

PERREUX. [LOIRE.]

PERROS-GUIREC. [CÔTES-DU-NORD.]

PERSEPOLIS is mentioned by Greek writers after the time of Alexander as the capital of Persia. The name however does not occur in Herodotus, Ctesias, Xenophon, or Nehemiah, who were well acquainted with the other principal cities of the Persian empire, and make frequent mention of Susa, Babylon, and Ecbatana. Their silence may be accounted for by the fact that Persepolis was not a place of residence for the Persian kings, though, from the account of Arrian and other writers, it was from the most ancient times regarded as the capital of the empire. The kings of Persia appear to have been buried here or at Pasargads. There was at Persepolis a magnificent palace, which at the time of Alexander was full of immense treasures, which had accumulated there from the time of Cyrus. (Diod. Sic., xvii. 71; Strabo, xv. p. 729.) The palace of the Persian kings and a part of the city were burnt by Alexander (Arrian, iii. 18; Curt., v. 7; Strabo, xv. p. 729; Diod. Sic., xvii. 70); but it still continued to be a place of considerable importance after his time. (Diod. Sic., xix. 22.) We read of an attempt by Antiochus Epiphanes to plunder it, which did not succeed. (2 Mac., ix. 1, 2.) Persepolis was situated in an extensive plain, near the union of the Araxes (*Bendmir*) and Cyrus (*Kur*). The situation appears to have been very healthy and favourable to longevity. The ruins of Persepolis, which are usually called by the inhabitants *Tehil-Minar*, that is, 'The Forty Pillars,' are described at great length in Sir R. K. Porter's 'Travels.'

PERSHORE, Worcestershire, a market-town, and the seat of a Poor-Law Union, is situated on the right bank of the river Avon, in 52° 7'

N. lat., 2° 4' W. long., distant 10 miles S.E. from Worcester, and 102 miles W.N.W. from London. The population of the town of Pershore in 1851 was 2717. The livings are in the archdeaconry and diocese of Worcester. Pershore Poor-Law Union contains 39 parishes and townships, with an area of 52,269 acres, and a population in 1851 of 13,553.

The town of Pershore is well built and well paved, and is lighted with gas. There are two churches—St. Andrew's, a small ancient structure; and the church of Holy Cross, which is a noble remnant of an abbey church. The lofty square tower and transept of Holy Cross are Norman; the chancel, which is now used as the church, is early English. The Baptists, Wesleyan Methodists, and Mormons have places of worship. There are National and Infant schools, and a mechanics institute. A county court is held. Tuesday is the market-day. The principal fair, at which many horses are sold, is held on the 26th of June.

PERSIA, or PERSIS, called in the Old Testament Paras, and by the Arabic and Persian writers Fars, or Farsistan, is used in two significations: first, it is applied to the country originally inhabited by the Persians; and, secondly, to the various countries in Asia included in the Persian empire founded by Cyrus, which extended from the Mediterranean to the Indus, and from the Black Sea and the Caspian to the Persian Gulf and the Indian Ocean.

Persis proper was bounded N. and N.W. by Media, from which it was separated by the mountain range known to the ancients under the name of Paracothras; S. by the Persian Gulf; E. by Carmania; and W. by Susiana, from which it was separated by rugged and inaccessible mountains. The country included within these limits is, according to Chardin's estimate, as large as France. The southern part of it near the sea-coast is a sandy plain, almost uninhabitable on account of the heat and the pestilential winds which blow from the desert of Carmania; but at some distance from the coast the ground rises, and the interior of the country towards the north is intersected by numerous mountain ranges. The soil upon these mountains is very dry and barren, and though there are some fertile valleys among them, they are generally fit only for the residence of nomadic shepherds. This part of Persia was the original seat of the conquerors of Asia, where they were inured to hardship and privation. In the inner part of the country however there are many well-watered and fertile plains, in the largest of which Persepolis is situated.

The Persians were divided into several tribes, of which the principal were the Pasargadae, Maraphii, and Maspai, and of these the Pasargadae were the noblest, to the chief clan of which, called the Achamenides, the royal family of Persia belonged. In addition to these tribes, Herodotus mentions the Panthialaei, Derousiaei, and Germanii, as agricultural tribes; and the Dai, Mardi, Dropici, and Sagartii, as nomadic tribes.

Herodotus says (vii. 61) that the Persians were originally called Artai, which word probably contains the same root as Arii, the original name of the Medes (Herod. vii. 62); and Arya ('excellent, honourable'), the word by which the followers of the Brahmanic religion are designated in Sanscrit. The same root occurs in Aria and Ariana, from the latter of which the modern Persian name Iran seems to be derived. [ARIANA.]

The only places of importance in Persis were PERSEPOLIS and PASARGADE, of which an account is given in separate articles. (Strabo, Ptolemy, Pliny, Herodotus.)

PERSIA, called IRAN by the natives, lies between 25° and 40° N. lat., 44° and 70° E. long., constituting an elevated table-land, surrounded by mountain ranges, which mark the edges of the table-land, and separate it either from the sea, or from the low countries which inclose it on the east, north, and west. On the south the table-land, or rather the ranges which inclose it, come close to the Persian Gulf and the Indian Sea. On the east of the table-land are the extensive plains which are watered by the river Sind, or Indus; and on the north the still more extensive plain which surrounds the Lake of Aral, and extends to the eastern shores of the Caspian Sea. These desert plains are known to the natives by the name of Turan. A narrow and very low tract of land separates Iran from the Caspian Sea; a more elevated and rather undulating plain divides it from the high range of Caucasus. Along the mountain chains which form its western border are the great plains drained by the Tigris and Euphrates. Thus the table-land of Iran is surrounded on all sides by lower countries, but it is connected with the mountain ranges of Eastern Asia and Asia Minor by two chains. The chain which unites it with the Himalaya and Kuen-Luen mountains, in Eastern Asia, lies between 33° and 37° N. lat., 68° and 74° E. long., and is known by the name of Hindu-Koosh. At the most north-western extremity of Iran is Mount Ararat. From this high pinnacle a mountain chain runs westward, and unites the table-land with the mountains of Asia Minor. This chain forms the Armenian Mountains.

The surface of the table-land of Iran, with the mountain ranges inclosing it, according to a very rough estimate, may occupy an area of between 1,000,000 and 1,200,000 square miles, or about one-twelfth of the surface of Asia. The table-land is generally level, interspersed with low and rocky ridges of comparatively small extent, which are like islands or oases in the sandy sea which surrounds them. The level tracts, which occupy an immense space, and lie contiguous to one another, are either covered with loose sand or sand impregnated

with salt, but both these kinds of sand are nearly destitute of vegetation. Along the interior base of the mountain ranges which extend along the edges of the table-land there are large tracts, the soil of which is generally fertile wherever there are means of irrigating the fields. However even in these tracts there are numerous ridges of rocks, which render cultivation always difficult, and frequently impossible.

This extensive country is at present divided into three independent states. The western half of it constitutes the present kingdom of Persia, or Iran; and the eastern is divided between Afghanistan and Beloochistan. Of the two last-mentioned countries an account is found under their respective heads.

The modern kingdom of Persia extends between 25° and 40° N. lat., and from 44° to 62° 30' E. long., and borders on the east on Afghanistan and Beloochistan. The plains along the northern boundary are inhabited by several tribes of nomadic Turkomans as far west as the shores of the Caspian Sea, which constitutes the boundary-line on the north as far as 49° E. long., and washes it as far north as 38° 40' N. lat., where the line begins which separates Persia from Russia. This line commences on the shores of the Caspian Sea, at the mouth of the Astarah River, and runs along its course to its junction with the Kala Kushi: it then follows the course of this river to its source in the Massila Mountains. This range (which extends to the west of north) constitutes, as far as 39° N. lat., the boundary-line, which, farther north, passes to the Bala-Rud River, and thence to the Aras River. The last-mentioned river separates Persia from Russia as far as the base of Mount Ararat, which is situated at the junction of the three empires of Russia, Turkey, and Persia. The western boundary-line of Persia passes over the mountains of Kurdistan, which inclose the table-land of Iran on the west. North of 35° N. lat. the greater part of these mountain ranges are subject to Turkey, the boundary-line between Turkey and Persia passing between the lakes of Van and Urmia, or Urumiyeh; but south of that parallel the whole of the mountain system is now included within the territories of Persia, which south of 33° N. lat. extend to the banks of the Tigris and Shat-el-Arab. According to a rough estimate the surface of Persia is 500,000 square miles, or considerably more than double the area of France. It includes the western half of the table-land of Iran, and also the low narrow tract which separates the table-land from the Caspian Sea, as well as a small portion of the low plain which lies to the west of the table-land on the banks of the Tigris. The population is variously estimated at from 8,000,000 to 15,000,000.

Surface and Soil.—The mountain range at the north-east corner of Persia is called the Mountains of Khorasan, which is a continuation of the Western Hindu-Koosh, the ancient Paropamisus, otherwise called the Ghor Mountains in the north of Afghanistan. The range is in some places 200 miles wide, and has peaks from 4000 to 5000 feet above the sea-level; it is crossed by numerous minor ridges; the valleys of which are drained by many rivers. Where the mountain ranges approach the Caspian Sea and turn to the west, between 55° and 56° E. long., they probably occupy less than 60 miles in width, and have few high summits; but westward of this point commences the portion called the Elburz Mountains, which have many lofty summits, of which Mount Demavend (a once active volcano) is 14,600 feet high; and several of the peaks are covered with snow during the greater part of the year. The tract of country which extends along the southern side of the Elburz Mountains, and between it and the desert in the interior of Iran, may vary between 20 and 30 miles in width. It is for the most part stony and sterile; but in the valleys watered by the rivers Shah-Rud and Sefid-Rud it is fertile. The Elburz Mountains do not descend with a steep declivity towards the north, but are skirted by a hilly tract varying from 20 to 30 miles in width, furrowed by many valleys, in which there is much fine timber, and which are cultivated to a considerable extent. The *Shah-Rud* is composed of two principal head streams, which flow through fertile longitudinal valleys between the mountains, and unite a little west of 50° E. long., whence the united stream runs west-north-west to the plain of Tarom, where near Menjil it meets the Sefid-Rud coming from the north-west. The *Sefid-Rud* carries down the waters that flow from the high undulating and in parts mountainous country to the east of the basin of Lake Urmia, and also a part of the drainage of the belt of highlands that skirt the Shahu or Zagros Mountains in Persian Kurdistan. From the Sehend Mountains to the south of the plain of Tabriz the watershed between the Lake of Urumiyeh and the Sefid-Rud runs south-south-east, the more southern part, between 36° and 37° N. lat., being called the Kibleh Mountains, which throw off several ranges of hills eastward and north-eastward. The highest of these secondary ranges are the Kafilan-Koh, which separates the Miana River from the Kizil-Uzen, the largest of the feeders of the Sefid-Rud. The *Kizil-Uzen* (the Turkish name for the Sefid-Rud, both meaning 'white river') rises on the eastern declivity of the Zagros, near the Naukhan Pass, and runs in a very winding and impetuous course towards the north-east to near 36° 20' N. lat., 48° E. long., where it sweeps round to the north-west near Mount Demirli, and then north, along the eastern base of the Kafilan-Koh. In this part of its course the Kizil-Uzen runs between deep precipitous banks, and, after receiving the Zenjan River (which flows north-west from the plain of Sultaniyeh), on its right bank it unites with the Miana River near the

town of Miana, about 37° 25' N. lat., 47° 40' E. long. The united stream, here called the Sefid-Rud, immediately sweeps round to the north-east, and then to the south-east, in which direction it flows for about 100 miles through the plain of Tarom, the upper part of which is very narrow, the high mountains, seamed by ravines and narrow valleys, reaching down on both sides nearly to the banks of the river, but wider at the lower extremity. The territory on the left bank of the river, along the southern declivity of the Massula Mountains, is also called the Pushti-Kuh. The plain of Tarom (which is only about 500 feet high above the Caspian) produces excellent cotton and abundance of fruits. At its eastern extremity the Sefid-Rud receives the Shah-Rud, and the river then flows through the Rudbar Pass, between the Elburz and the Massula Mountains, into the plain of Ghilan, and enters the Caspian Sea a little east of 50° E. long. and about 30 miles E. from the town of Resht. The Massula Mountains, which run north-north-west from the Rudbar Pass and nearly parallel to the Caspian, are from 6000 to 7000 feet high above the sea, and about 2000 feet above the table-land. To the west of it, along the right bank of the Sefid-Rud, at a distance of from 6 to 30 miles, is another higher range, one of the passes in which, called Ak-Geduk, is about 8000 feet above the level of the sea. This high range bounds the table-land of Media in the north. It is covered with snow for many months in the year.

The narrow tract of level ground which surrounds the southern extremity of the Caspian Sea, and goes under the name of the Plain of Ghilan and Mazandaran, extends from the mouth of the river Gourgan, which falls into the most south-eastern angle of the sea, to the mouth of the river Astarah. This tract considerably exceeds 300 miles in length; the width varies from 5 to 30 miles; the level is very little above that of the Caspian Sea. In climate and productions this region bears an extraordinary resemblance to intertropical countries. The swampy tracts along the shores of the Caspian Sea are overgrown with saline plants and canes. In the interior are extensive forests, mulberry plantations, rice-fields, vineyards, orchards, orange-ries, and sugar and cotton plantations.

The western portion of the plain of Ghilan separates the Caspian Sea from the table-land of Azerbijan, which constitutes the most northern portion of the great table-land of Iran, and lies between 36° and 40° N. lat., 44° and 49° E. long. The general elevation of this table-land is 4500 feet above the sea-level. The table-land is bounded on the west by the numerous ranges of the Kurdistan Mountains, and by the Massula Mountains on the east; it is also diversified with numerous cross ranges, one of which runs nearly eastward from the Sehend Mountains to the north of the great bend of the Sefid-Rud below Miana, along the edge of the basins of Lake Urumiyeh, the Sefid-Rud, and the Aras. To the north of this range the Aji flows westward from Mount Sevilan, a lofty summit 12,000 feet high, to the lake, crossing the plain of Tabris a little to the north of that city. Mount Sevilan, which is the culminating point of a more northerly range, is also the source of the Derahi, or Kara-Su, which flows past Ardebil and thence northward to join the Araxes.

The surface of the table-land is in parts hilly, but generally the hills do not rise into mountains; between 36° 30' and 37° 30' N. lat., several high ranges occur, as the mountains of Kibleh and the Kafilan-Koh, before mentioned, which perhaps rise to 2000 feet above their base. The levels between these ranges are not in general extensive enough to be called plains, though in some parts they are several miles wide. But farther north there are several extensive plains, among which that surrounding the Lake of Urumiyeh is by far the largest. Though in several places traversed by narrow and low ranges of hills, which terminate at a small distance from the shores of the lake, the plain extends in general from 20 to 30 miles from it, and at Tabris even 50 miles. From the hills and mountains which inclose the basin of the lake great numbers of perennial streams descend, and are much used for irrigation. The rice-fields are extensive, and produce rich crops. The meadows are also large, and horses, buffaloes, cows, and sheep are abundant on the pasture-grounds. Orchards, which are large and very numerous in this plain, yield abundance of peaches, nectarines, apricots, plums of all sorts, cherries, pears, apples, and grapes. There are also plantations of poplar and chinarr, but the mountains and hills are generally devoid of wood. In the other plains, which are much less in extent, and have not the advantage of abundant water, the cultivation is limited, and they are chiefly used as pasture-grounds by the nomadic tribes. The climate of this table-land is cold in winter, but very temperate in summer. During several of the winter months it is covered with snow, and the cold is sometimes very intense, except on the plain around Lake Urumiyeh. The royal family of Persia abandon the town of Teheran in summer, and retire to Sultaniyeh, in the southern districts of the table-land.

The mountains of Kurdistan occupy a broad belt of country along the western edge of the table-land of Iran. Mount Ararat may be considered as standing at the northern extremity of the mountains of Kurdistan. [ARARAT.] From its southern base mountains branch off to the south and south-west, which inclose the Lake of Van; and the mountain region then extends southward, with a width varying from 70 to 180 miles, till its termination in the mountains of Farsistan, about 30° N. lat. The northern portion of this extensive mountain region is nominally subject to the Turkish emperor; but the nomadic

tribes which inhabit it are nearly independent under their hereditary chiefs. The mountain system consists of several parallel ridges, between which are many narrow deep valleys, and a few plains fitted for pasturage. The declivities are wooded with oak, which, near the base of the mountains, grows to a large tree, but higher up is stunted.

The ridges, frequently four, five, or even six in number, run in the direction of the whole range, and are frequently united by transverse ridges. But there are also some valleys in the southern part of the system which run across the ranges, as is evident from the courses of the rivers; for nearly all those rivers which join the Tigris south of 30° N. lat., and traverse this mountain region, do not rise within the range, but to the east of it, on the plains of the table-land of Iran, such as the Great Zab, the Diyalah, and the Kerkhah. Several summits and ridges attain a great elevation, being for nine or ten months covered with snow; two summits of the Kurdistan Mountains rise above the snow-line: one on the most western ridge called Kebir-Koh, near 33° 15' N. lat., and the other in the ridge, called Koh-Mungasht, near 31° 25' N. lat.

That part of the great plain traversed by the Euphrates and Tigris, which belongs to Persia, lies between the mountains of Kurdistan, and the banks of the Tigris and Shat-el-Arab. It is about 100 miles long, and, on the average, 30 miles wide. The lower portion of it, which lies along the great river, and comprehends nearly one-half of the country, is swampy and uninhabited. About fifteen miles from the banks of the river, the country is considerably higher, but as the soil is composed partly of sand and partly of a hard clay, it cannot be cultivated, except along the banks of the rivers, and even there cultivation is very limited. The greater part of the country is a waste, which does not yield pasture, except for camels. This more elevated tract is called Chad, or Kaaban.

The country which lies east of the Kurdistan Mountains, and between them and the Kuweer, or Salt Desert, belongs to the table-land of Iran. Its general elevation above the sea in the southern districts exceeds 4000 feet, and rises in some parts to 6000 feet; but north of Ispahan it sinks down to 2500 feet, and in some places even lower. It is a plain traversed by numerous ridges of rocky hills, which generally run from west to east, and sink gradually into the desert farther east. Few of these hills are more than 1000 feet above their base, and generally not half so much. The valleys are open and wide, in some parts exceeding ten or fifteen miles in width; they are also very long. Here too, as in most places on the table-land of Iran, cultivation is limited for want of water. As the eastern ridge of the Kurdistan Mountains does not rise high enough to be covered with snow for many months, the rivers which descend from them are scarcely provided with water during a great part of the year; and the little that they furnish is absorbed in irrigation. The valleys are consequently, for the most part, uncultivated, except in the vicinity of the villages.

The mountain region of Farsistan and Kerman occupies the whole of Persia south of 30° N. lat., from the mouth of the river Tab to Cape Jask (from 50° to 58° E. long.), a distance of nearly 500 miles in length, and nearly 200 miles in average width. On the south it is washed by the Persian Gulf, and on the north it borders on the desert of Kerman. Along the shores of the gulf is a low and sandy tract, varying in width from 20 to 30 miles, the soil of which is impregnated with salt, and produces little else than dates. This district, which has a very warm climate, is called Dushtistan or Gurmair, that is, 'warm region.' At the back of this low tract the country rises in steep and bare rocks to the height of mountains, and constitutes an elevated region which extends more than 100 miles inland, where it stretches out in a plain traversed by low rocky ridges running east and west. About 50 miles from the sea, the lowest part of the mountainous tract is about 2500 feet above the sea-level, but where it approaches the plain it attains the height of 4000 feet. This mountainous region is called Sirhud (the cold country), in opposition to Gurmair. In its northern districts, where it is connected with the mountains of Kurdistan, the rocky ridges, which traverse the surface longitudinally from west to east, rise to 7000 or 8000 feet, and in these parts they are partially wooded. But south of 29° N. lat. they do not appear to attain so great an elevation, rising probably only from 1000 to 2000 feet above their base, which in many places cannot attain a great elevation above the sea, as the valleys inclosed by the ridges produce the date. The ridges, though generally of inconsiderable width, are numerous, and the valleys are narrow, except towards the north, where they are from 15 to 20 miles across. The mountains are barren and destitute of vegetation, but the valleys are rich in fruits, and even grain, where they can be irrigated. The plain which extends along the northern side of the mountain region, and which is from 60 to 100 miles in width, has a soil strongly impregnated with salt, and contains several smaller salt lakes, besides the great salt lake of Bakhtegan. It would form a portion of the Great Desert, if it were not divided from it by a series of oases, which stretch east and west through it, between 29° and 30° N. lat., and which are inclosed on the north and south by two low ridges of rocky hills. This narrow fertile tract, called the Nurmanshir, produces some grain, but it is particularly rich in several kinds of fruit, which attain great perfection.

The central desert of Persia, included between these several mountain ranges, extends from 40 to 350 miles in width from north to

south; and in length it extends through 9 degrees of longitude. The nature of this desert varies in different places. In some the surface is dry, and even produces a few of those plants which require a salt soil; in others we find a crackling crust of earth, covered only with a saline efflorescence. A considerable portion is marshy, and in certain spots sand predominates. In several parts of it rocks rise abruptly, though in general only to a moderate elevation. These rocks, usually short ridges, inclose small oases or fertile spots where water and herbage are found, and which are inhabited. The largest of these oases form a series across the desert between Herat and Ispahan, extending from the former westward to Tubbus, from Tubbus southward to Yazd, and thence westward to Ispahan. The towns of Tubbus and Yazd are situated in the most extensive of these oases. The smaller oases transversed by the road between these towns are 20 to 30 miles apart.

Rivers and Lakes.—The table-land of Iran, as well as the mountain regions which surround it on the north and south, is very sparingly watered. The southern mountain ranges are too bare and also too low to attract sufficient moisture to form perennial streams, except in a few places. The northern mountains give rise to a much greater number of watercourses; but as soon as they enter the plain, and sometimes before, the small volume of water which they bring down during the greater part of the year is absorbed in irrigation, and only a few of these streams reach the desert, where they are lost in the dry and thirsty soil. Only those parts of Persia which are included in the plains of Ghilan and Mazanderan, in the table-land of Azerbaijan, and in the mountains of Kurdistan, are well watered. The rivers of Ghilan and Mazanderan have a short course, but they are usually navigable for some miles from their mouth, where the woods on their banks do not form an impediment. The most considerable river in the table-land of Azerbaijan is the Sefid-Rud, or White River, the ancient Amardus before mentioned. The whole course of the Sefid-Rud may be about 350 miles. On the table-land the bed is generally many hundred feet, and sometimes a thousand feet, below the adjacent country. Thus it cannot be used for irrigation, and though the banks are less elevated in the plain above the pass of Rudbar, still the waters can nowhere be used to fertilise the country. In Ghilan the current is not rapid, but the river is not navigated, there being no place of any importance on its banks, which are very low and swampy. Two rivers, each running about 100 miles, fall into the lake of Urumiyeh: the Aji, already noticed, and the Jaghātu, or Jeghetu. This last mentioned river is formed by two head-streams, one of which flows north from the Naukhan Pass in the Zagros Mountains, and the other the Saruk, which rises in the angle between the Kibleh and the Kaflian mountains, and receives numerous feeders from the barren undulating downs that surround the Takhti-Soleiman, the site of the ancient Ecbatana. The Saruk flows near, not on, the boundary of Azerbaijan and Persian Kurdistan. Its course is generally south-west, in a narrow rocky valley between high banks, broken at intervals by huge ravines which intersect the country in all directions. From the point of confluence, which is a few miles west of the great ravine of Karafen, celebrated for its caves, the scenes of ancient Mithraic worship, the Jaghātu continues among the mountains for about twenty miles to Kiz-Kopri; the valley then expands, and at length opens out into the great plain of Mirjandab, on the south-east of Lake Urumiyeh. This plain is traversed a little farther west by the Tatau, which flows northward from the great western mountains through the districts of Sardasht and the Mikri Kurda, and enters the lake near its south-eastern point. In the plains about the lake the rivers named are extensively used to irrigate the valleys through which they flow, and also the plain itself. The rivers which drain the mountains of Kurdistan and its numerous valleys are not navigable within the mountains, as their course is frequently broken by rapids and cataracts; and where they enter the plain they are not navigated, the adjacent country being nearly uninhabited. Three of these rivers run between 200 and 400 miles: the Diyálah, which joins the Tigris below Baghdad; the Kerkhab, which falls into the Shat-el-Arab a few miles below Kornah; and the Karun, which passes Shuster, and after receiving the Dizful River (ancient Coprates) near Ahwaz, flows into the Shat-el-Arab by means of an artificial canal called Haffar, and also by a direct mouth into the sea. The Karun is the ancient Euleus. Below its junction with the Coprates, it was also called *Pasitigris*. The Karun is a deep river, easily navigable. Lieutenant Selby ascended it a few years ago in a steamer to Shuster. The Kerkhab is the ancient Choaspes: at the point of its nearest approach to the Dizful River are the ruins of the ancient city of Susa. These rivers are more fully noticed in the article on the *Pasallic* of BAGHDAD, where also the course of the Jerahi is traced.

As a great part of the soil of Persia is impregnated with salt, the few lakes which occur are salt also, except in Ghilan and Mazanderan, where there are several small lakes of fresh-water. The most considerable of the lakes of Persia is that of Urumiyeh, or Shabee (called *Spanta* by Strabo), which is about 90 miles long and from 20 to 30 miles wide. The greatest depth of the water is 4 fathoms, and the average depth about 2 fathoms; but the shores shelve so gradually that this depth is rarely attained within two miles of the land. The water is much saltier than that of the ocean. It contains no fish, but the smaller classes of zoophytes are found in considerable quantity.

The lake receives a great number of rivers, but it has no outlet. The mountain region of Farsistan contains the salt lake of BAKHREGAN.

Climate.—The climate of the low plain of Ghilan and Mazanderan, which forms part of the great depression occupied by the Caspian, sheltered by the Masaula and the Elburz mountains from the cold winds of the table-land, has a temperature resembling that of the tropics, with a dry and rainy season. During the latter a great part of the plain is inundated. The climate of Gurmair is distinguished by its great heat and dryness, and is therefore the country most suitable to the growth of date-trees, which only bear eatable fruit where these two circumstances concur. In the interior of the table-land the climate is very hot in summer but cold in winter. In winter a good deal of snow falls. The quantity of snow which falls on and near the mountain regions is much greater than that which falls in the centre of the table-land. Winter lasts on the table-land near Teheran till April, during which month cold north winds prevail. The transition from cold to heat about the end of April is very rapid.

Productions.—Agriculture is well understood and carefully attended to, as is evident from the means of irrigation employed, and especially from the subterraneous aqueducts. But extensive tracts, which were formerly under cultivation, are now a desert, or serve only as pasture-ground, owing to the predatory incursions of the neighbouring wandering tribes. In other tracts which are cultivable grain is not raised, but they are kept in their natural state as pasture-ground for the Iliyats, or wandering tribes who live within the boundaries of the empire.

Rice, wheat, and barley are the most usual crops, but there are also millet, maize, tel, or sesamum, dal (a species of vetch), and several kinds of beans and peas; cotton, indigo, sugar, tobacco, and madder are raised in many places, but especially in Mazanderan. The fruit-trees are managed with great care and skill, and fruit furnishes a considerable article of internal trade. These fruits comprise dates, apricots, peaches, nectarines, plums, apples, pears, quinces, figs, pomegranates, mulberries, currants, cherries, almonds, walnuts, and pistachio-nuts. The vine plantations are very extensive, though wine is made only in a few places by Christians. Melons are distinguished by their size and flavour. Common culinary vegetables are grown abundantly. One of the most remarkable vegetable productions of Persia is the plant from which assafetida is obtained. Opium poppies and saffron are extensively cultivated.

The domestic animals are camels, horses, asses, mules, black cattle, buffaloes, sheep, and goats. The Persian horses are noted for their beauty, strength, and speed. Asses are numerous, and some of them of superior size and description. Mules are used for the transport of goods more than any other animals; they are very strong, and usually carry about 3 cwt. The black cattle of the plain of Mazanderan are distinguished by size and beauty; they have the Indian hump. Sheep are very numerous in all the parts possessed by the nomadic tribes: they are principally of the fat-tailed kind.

Among the wild animals lions, leopards, cheetahs, tiger-cats, lynxes, bears, hyenas, wolves, jackals, foxes, antelopes, and several sorts of deer are found. The wild ass is found in many of the rocky recesses of the country, but particularly in the deserts of Khorasan and the extensive valleys of Farsistan and Irak Ajemi. Wild boars, porcupines, and hares are common. Among the most remarkable wild animals are the mountain sheep, and the mountain goat. Among birds, which are not numerous, except in a few places, are pheasants, bustards, partridges, desert-partridges, herons, wild ducks, and pelicans. Blackbirds, thrushes, and nightingales are frequently heard in the underwoods of Ghilan and Mazanderan, and in the thickets of roses which embellish every garden. Fish abounds only in the Persian Gulf and the Caspian Sea. Sturgeons and sterlets in great numbers ascend the small rivers which fall into the Caspian Sea, though not in such shoals as in the Volga. As the Persians themselves are not fond of fish, they have permitted the Russian fishermen to establish themselves near the mouths of these rivers, where they prepare caviar and isinglass, but the body of the fish is thrown away. Locusts frequently lay waste extensive tracts of country. Bees are common in many places, and much honey is collected. The silkworm furnishes the principal article of commerce in the plains of Ghilan and Mazanderan, but it is also reared in the country round the Lake Urumiyeh, and in several other places.

Iron, lead, copper, antimony, rock-salt, alum, bitumen, and naphtha are mentioned among the mineral productions of Persia.

Inhabitants.—The population of Persia consists of a great number of nations, who speak different languages; but all of them belong to the Caucasian race. It is said that one-fourth of the population consists of nomadic tribes. That portion of the population which has fixed abodes consists chiefly of Persians, Parsees, Armenians, Arabs. The Persians, who are distinguished for the politeness of their manners, constitute the bulk of the population, and are merchants, agriculturists, and manufacturers. The number of the Parsees is small; and they appear to be numerous only in the oases of Yazd. Their language differs considerably from that of the Persians; they adhere to the religion of Zoroaster, as it is contained in the Zend Avesta, and adore fire as the symbol of the divinity. They occupy themselves mostly with agriculture and the raising of fruits. The Armenians live in all the great towns, where they are merchants: they also cultivate the

ground, and are particularly numerous in the western districts of the table-land of Azerbaijan, where they exclusively occupy whole villages. Arabians form the bulk of the population in Dushtistan or Gurmair, where they gain their livelihood as fishermen, seamen, planters of date-trees, and merchants. In the western part of the country about Lake Urumiyeh and the valleys of the Zagros there are some Nestorian Christians, and also some Catholics.

The wandering tribes of Persia are comprehended under the general term *Iliyats*, and are found in every part of Persia; but many of them have become inhabitants of cities and villages. A considerable number of them live all the year round in tents, in the winter keeping to the plains, and in summer seeking the pasture of the mountains. As is the case with all nomads, their wealth consists in cattle. They breed camels and horses for sale, and their sheep yield milk, which is made into liquid butter, and sold throughout the country. In the summer they ascend to high mountains, where they find abundant pasture, and in the winter they keep to tracts which enjoy a warmer climate. They pay a tax to government, which is collected by their own chiefs; and are obliged to furnish a certain number of soldiers to serve on foot and on horseback, for which service however the individuals are paid. Some of these tribes have the almost exclusive possession of large tracts of country. The most numerous of the nomads of Persia are the Lurs, who inhabit that portion of the mountains of Kurdistan which lies south of 34° N. lat., and comprehends the province of Luristan, together with the mountainous part of Khuzistan. A small number of the Lurs and Bakhtiarijs have adopted a settled life, and their country contains towns and villages inhabited by persons who do not belong to these tribes. The language of the Lurs differs slightly from that of the Kurds. The mountains and plains to the west and south of Lake Urumiyeh are in possession chiefly of Kurdish clans, among whom many have adopted a settled or rather a half agricultural half nomadic life. The Kurds are also in possession of a large tract of the mountain region of Khorasan, on the northern border of the table-land of Iran. The character and habits of these people resemble the Kurds of Turkey and Armenia. [KURDISTAN; ARMENIA.]

To the south-east of the Kurds of Khorasan, between the towns of Mushed and Herat, there is a tribe of Arabs, which was transported to this country from Nejd by Shah Ismael, for the same purpose as the Kurds, namely, for the protection of the frontier. These Arabs retain their pastoral habits, and are almost all dwellers in the field. They are of the Sunni sect, and partly preserve their language, though they have changed their national costume.

Besides these tribes, which almost exclusively occupy large tracts of country, there are others mostly of Turkoman origin, which are dispersed over other parts, but constitute only a small portion of the population. Among them are the Lak, or Lek, who are dispersed throughout the country, but their principal seats are about Casvin, and in the provinces of Fars and Mazanderan; the Kajar, to which the present sovereign family belongs; the Afshars (from which tribe the famous Nadir Shah sprung), dispersed through Irak-Ajemi and Khorasan; the Shekagi and the Shah-seven, whose principal seats are in Azerbaijan. The two last mentioned tribes live mostly in tents: the others mostly live in towns. The Lek are by some said to be Kurds.

Political Divisions, Provinces, and Towns.—The provinces of Persia are twelve in number. Seven lie along the western boundary-line: Azerbaijan, Kurdistan, Luristan, and Khuzistan, along the border of the Turkish empire; and Farsistan, Laristan, and Kerman, along the shores of the Persian Gulf. The interior of Persia is occupied by the two large provinces of Irak-Ajemi and Khorasan; and along the shores of the Caspian Sea extend the provinces of Ghilan, Mazanderan, and Astrabad.

1. Azerbaijan, the ancient Atropaténé, is separated from Armenia by the Araxes on the north, by the Kizil-Uzen from the Irak-Ajemi; on the south and west it borders on Kurdistan and Turkey. The large salt lake of Urumiyeh is in this province. The differences of temperature are considerable; but the climate is healthy.

The most flourishing part of Azerbaijan is that along the northern and western border of the Lake of Urumiyeh, from Tabriz to the confines of Armenia. *Selmas* is now a town of about 2000 inhabitants, most of whom are Nestorian Christians. *DILMAN*. *Khoi* is described as one of the finest and best-built towns of Persia; its walls are in good repair, the streets are regular, shaded with avenues of trees, and the ceilings of many of the houses are tastefully painted. The town of *Urumiyeh* is situated on the south-west side of the lake to which it gives its name: its population is 12,000. *Maragha*, a town of about 15,000 inhabitants, is situated in a low valley; it is celebrated in Oriental geography for the observatory of the celebrated astronomer Nasir-Eddin, the ruins of which still exist.

The principal town of Azerbaijan is *Tabriz*, situated in 46° 8' N. lat., 38° 4' E. long. The number of its inhabitants, which was at one time much greater, is at present about 30,000. Its situation, near the confines of the Persian and Turkish dominions, sufficiently accounts for its present desolated condition, as the town has been subject to frequent conquests and devastations. It has, moreover, repeatedly and most severely suffered from earthquakes. *Tabriz*, *Khoi*, and several other towns in Azerbaijan were greatly injured by earthquakes in September 1854. *Miana* is situated in a long and winding valley

on the western side of the Kaslian-Koh. It was nearly ruined by the Russians in their last invasion of Persia, and is now a poor village. The ruins called *Kalah-Zohak*, are situated on a precipitous rock near the river Karangoo. *Ardibil* is situated at the eastern descent of the Sevelian Mountains. Towards the north of the town there is a fertile plain with excellent pastures.

2. Kurdistan comprehends the mountain region of the Kurdistan range, about the sources of the rivers Kizil-Uzen, Diyala, and Kerkhah; it is separated from the Paahalic of Baghdad by the eastern range of the Kurdistan mountains, called the Shahu Mountains, and farther south chiefly by the course of the river Shirwan, a branch of the Diyala. It is mainly separated from Luristan by the river Kerkhah. It is divided into two parts, Ardelan in the north-east, and Kermanshah in the south-west. The first part, comprehending the country surrounding the upper branches of the Sefid-Rud, which is about one-third of the province, consists of a succession of well-wooded mountains and narrow valleys, and has excellent pasture-grounds. It contains *Schmah*, the residence of a Kurdish chief, who lives in a palace built on a hill in the middle of the town: population, from 4000 to 5000 families, among which 200 are Jews, and a small number of Chaldean Catholics. Kermanshah also is principally mountainous, but there are fine wide open valleys along the rivers Shirwan and Kerkhah, and pretty extensive plains near the outer edges of the mountain region; both the valleys and plains are generally well cultivated. *Kermanshah*, the capital, a flourishing town, is situated in the southern extremity of a fine plain, through the centre of which runs the Kara-Su, an affluent of the Kerkhah. It contains about 12,000 houses, and has many public buildings. It carries on a considerable commerce, being on the great caravan-road which passes across the mountains from Baghdad to Hamadan, Ispahan, and Teheran. This road seems always to have been a great thoroughfare, and ruins of great antiquity occur along it. About six miles from Kermanshah, on the face of the mountains which inclose the plain on the north, are excavations and sculptures of great extent, called *Takt-i-Bostan*. Where this range of mountains terminates on the east, on the banks of the river Kerkhah, are the sculptures of *Basittoo*. About 30 miles farther east, also near the road, there are extensive ruins, among which those of a temple of Artemis are the best preserved. They occur near a village called *Kengawar*, which is about 30 miles W.S.W. from Hamadan. [EGBATANA.] South of Hamadan is Mount Elwend.

3. Luristan, which lies between the Kerkhah and the Dizful, an affluent of the Karun, is entirely occupied by mountains and narrow valleys, except some plains of moderate extent near the outer ridges of the mountain region. These plains alone are under cultivation, the remainder serving as pasture-grounds to the different tribes of Lurs who inhabit it. There is no town in this province except *Khorram-abad*, which stands in a fertile and tolerably extensive plain, 90 miles S. from Hamadan, on a feeder of the Kerkhah. It contains about 1000 houses, and is built on the south-western face of a steep rock, on which a strong fortress and palace are erected.

4. Khuzistan comprehends the southern part of the mountains of Kurdistan and that part of the plain of the Tigris which belongs to Persia. It is therefore naturally divided into two portions. The plain, which is in possession of some Arab tribes, contains good pasturage in the northern and western districts, and here the wandering Beduins pitch their tents. But the southern and eastern portion of it is a sandy desert, occasionally intersected by extensive morasses, and cultivated only in some places on the banks of the rivers, where rice, some wheat and barley, and dates are raised. In this part of the plain is the town of *Dorak*, or more properly *Felahi*, on the banks of two branches of the river *Jerahi*. It is a large place, the walls of which are two miles in circumference; but notwithstanding this, the houses are few, as the majority of the people live in the suburbs under the shade of the date-trees. This town is celebrated for its manufacture of Arabian cloaks, which are exported to all parts of Persia and Arabia.

The mountainous part of the country contains several plains and valleys of great extent, which are fertile, but only partially cultivated, among which the valley of *Ram Hormuz*, which is 40 miles long and from 6 to 8 miles wide, is distinguished by its soil and picturesque beauty. Between the higher ranges of the mountains and the level plain runs a hilly tract several miles wide, which contains a large portion of cultivable land, though at present only the borders of the rivers are under cultivation. This is however the most fertile portion of the province. The high mountain-ranges in the eastern districts of the province are in possession of Lurish tribes, which have almost entirely settled in villages, and cultivate the ground. Tobacco is extensively grown and exported. The present capital of the province is *Dizful*, on the river of the same name, a considerable place, with 20,000 inhabitants, and a fine bridge over the river. About 10 miles S.W. from this town are immense heaps of ruins, on both sides of the river *Kerkhah*, which mark the site of *Susa*. [SUSA.]

The second town of the province, and formerly the capital, is *Sawster*, which stands not far from the high mountain-ranges on the river *Karun*. The houses are good, being principally built of stone, but the streets are narrow and dirty. There is a considerable manufacture of woollen stuffs. The population amounts to 10,000. The town is supplied with water by extensive hydraulic works. The mountains east

of Shuster are traversed by roads leading to Irak Ajemi and Farsistan; and though they are now little frequented, the extensive ruins which exist in the valleys and plains along these lines of road show that large towns were once situated on them.

5. Farsistan, or Fars, the ancient Persia, comprehends nearly one-half of the Dushtistan, a low, hot, sandy strip which extends along the shores of the Persian Gulf, the northern portion of the mountain-region of Farsistan and Kerman, and the hilly plain which extends north-eastward to the lake of Bakhtegan and the Great Desert. The mountain-ranges, which in this part separate the table-land of Iran from the Persian Gulf, are hardly more than 30 or 40 miles wide, but exceedingly steep towards the sea. They consist of three or four rocky ridges, which can only be crossed by narrow roads over rugged mountain-passes. The most frequented road leads from the harbour of Bushire to the towns of Kazerun and Shiraz. The less mountainous portion of the table-land, which lies farther south, contains several salt lakes. Though there are many well-cultivated districts in this province, a great portion of it is nearly desert, especially towards the north. The southern part of the coast, east of Ras Berdistan, is occupied by Arabs, who acknowledge the authority of the Imam of Muscat; and in the northern districts there are some tribes of Kurds. In that part of the coast which is subject to the Imam are the town and harbour of *Congoon*, near Cape Berdistan. The town is stated to have 6000 inhabitants, and some trade is carried on with Bassora, Muscat, and the different towns on the Persian and Arabian coasts. Near it is an excellent roadstead, where a frigate may lie at anchor in safety. The principal commercial place is Bushire, or Aboushehr. [ABOUSHEHR.] The principal towns in the interior, from west to east, are Behaban, Kazerun, Shiraz, Firoze-Abad, and Darabgherd. *Behaban*, near the boundary-line of Khuzistan, is situated on a very mountainous tract, but in an extensive and highly-cultivated plain: it is about three miles in circumference, and contains nearly 10,000 inhabitants. *Kazerun*, in a valley 30 miles long and 7 or 8 miles wide, was once a considerable place, but has been depopulated by civil wars. It contains several thousand inhabitants, and has cotton manufactures. *Shiraz*, the capital of the province, and for some time the residence of the kings of Persia, stands in a fertile plain, surrounded by extensive gardens. It is six miles in circumference, but a great part of the area is covered with ruins. The houses are generally small, and the streets narrow and filthy. None of the edifices are remarkable for antiquity or beauty, except the great Bazar, or Bazar-i-Wukell, which is a magnificent arcade nearly half a mile long and 40 feet wide. It affords accommodation to several hundred shopkeepers. This town carries on a considerable trade with Yezd, Isphahan, and Bushire. Through Bushire it receives goods brought from India and Europe, which it exports to Yezd and Isphahan, receiving in return the manufactures of those two cities. The population is variously stated at 40,000 and 60,000. This place contains several manufactures of cotton, glass, iron, swords, and gunpowder. The wine, made by the Armenians who are settled in this town, is thought to be equal to any in Asia. Shiraz is also famous for its roses and the rose-oil which is obtained from them. Near the city are the tombs of the Persian poets Sadi and Hafiz. *Firoze-Abad*, a town situated in a fertile plain, contains about 4000 or 5000 inhabitants. Darabgherd is noticed in a separate article. [DARABGHERD.] North of Darabgherd is the pass of Urmijan, which leads to Robat in Kerman, and runs for two miles between perpendicular mountains.

In no part of Persia is the number of ruins so great as in Farsistan. The most remarkable are those of Persepolis [PERSEPOLIS], which are situated north-east of Shiraz, at a small place called Istekhar or Istakhr. The ruins of the ancient town of *Shapur* are situated north-west of Kazerun, where they cover an area six miles in circumference, amidst rocks and precipices, many of which are decorated with sculptures similar to those near Persepolis. A statue from 15 to 20 feet high, now mutilated, is found in an immense cavern at Shapur. At *Mourghab*, 49 miles N.N.E. from Istakhr, are other extensive ruins, resembling those of Persepolis, among which a building, called by the natives *Musjed-i-Madre Solyman*, is remarkable. It is considered by some persons to be the tomb of Cyrus the Great. [PASARGAD.] Near the great ruins of Persepolis are the *Nakah-i-Roostan* and the *Nakah-i-Rejib*, both of which are considered to be tombs of kings of the Sassanian dynasty. Very extensive ruins occur in the neighbourhood of Firoze-Abad. They occupy a large space in the plain, about 17 miles in length and half that distance in width. Other ruins of some extent occur in the neighbourhood of Darabgherd, and in several other places.

6. Laristan occupies the country between Cape Berdistan and the island of Kiahm, and consists of the Dushtistan and a hilly country. The low coast is in possession of the Arabs, who are subject to the Imam of Muscat. The hilly country, which is about 100 miles in width, is sterile along the low plain, but seems to contain a great number of fine valleys, which produce dates and other fruits, and also grain. There are several small harbours on the Persian Gulf. The capital, *Lar*, is at the foot of a range of hills, in an extensive plain, which is covered with palm-trees. It contains about 12,000 inhabitants, and is celebrated for the manufacture of swords, muskets, and cotton-cloth. The bazar is the noblest structure of that kind in Persia. It is built in the same manner as that of Shiraz but on a

much grander scale, the arches being more lofty, the breadth and length greater, and the work in every way superior. The houses are commodious. The only water used is from large cisterns, in which it is collected during the wet season. *Tarun*, E.N.E. of Lar, is as large and populous as Lar, but meanly built. It carries on a considerable commerce with Muscat, Gombroon, and Shiraz.

7. Kerman occupies the south-eastern part of Persia, extending along the Persian Gulf from Cape Jask to a place opposite the island of Kiahm, and thence northward to the borders of the desert, of which the adjacent southern part is considered as included in this province, and called the Desert of Kerman. The desert is sandy and impregnated with salt, and here and there intersected by short rocky ridges. The remainder of the province, which extends more than 200 miles from south to north, but less from west to east, is nearly unknown, except the tract along the shores of the gulf, and another tract in the interior, between 29° and 30° N. lat. That part of the coast east of 57° E. long, which lies along the narrow entrance of the gulf, is extremely mountainous, and the rocks come close up to the sea, where they form lofty cliffs. The short valleys in these mountains are well watered, afford pasturage all the year round, and contain fine plantations of date and other fruit-trees. Between *Sareek* and *Mináb*, or *Mináv*, the mountains retire from the shores, and form a plain which is very fertile, and termed by the natives the *Paradise of Persia*. It abounds in every kind of fruit. The mountains then run northward, retiring more than 50 miles from the sea, and then returning to it to the north of *Bunder Abas*, or *Gombroon*. The plain thus formed rather resembles the sandy tract called *Gurmais* than the country surrounding *Mináb*, being sterile and producing nothing except dates. That portion of the *Gurmais* which is within Kerman is subject to the Imam of Muscat, who however pays a certain annual sum to the king of Persia. That portion of the interior of Kerman which has been visited by European travellers comprehends the *Nurmanahir*, a district about 90 miles in length, and from 20 to 30 miles wide, in which are several small towns surrounded by large orchards and extensive cultivated grounds, and comparatively small sterile tracts. Two mountain ranges inclose this district on the south and north. The southern range is of considerable elevation, and covered with snow during the greater part of the year. Between the *Nurmanahir* and the town of Kerman is a desert, with a few oases of moderate extent; and about the town itself there is a large tract of very fertile country. West of the town, to the very boundary of Farsistan, there are numerous rocky ridges, with difficult passes, and several large villages, with a good deal of cultivation round them. The town of *Kerman*, which was destroyed in the civil wars of Persia in 1794, still contains a population of 20,000, of whom a small portion are *Guebres*: there are also Armenians, Jews, and Hindoos. The trade is still considerable, and it is celebrated for its manufacture of shawls, matchlocks, and carpets, which are chiefly exported to Khorasan and the northern provinces; and in return for which are received drugs, skins (from *Bokhara*), furs, silk, steel, and copper. These articles, as well as pistachio-nuts, carpets, rose-buds, and bullion, are sent to India, whence spices, cotton-manufactures, broadcloth, china and glass wares, hardware, indigo, tin, lead, and iron are received. The bazaar, which is extensive and well built, is abundantly supplied with articles of every description; and there are nine large caravanserais within the walls, and a number of inferior ones both within and without. In the country between Kerman and the harbour of Gombroon there is said to be a large place called *Sultanabad*. The Persians in December 1854 attacked Gombroon, which has been for several years in the possession of the Imam of Muscat. After shelling the town for two days and nights, they defeated the Arabs under the command of the Imam's son; but as far as we have yet learned they did not then succeed in taking the place. *Gombroon* is noticed separately. [GOMBROON.]

Opposite the town of Gombroon, and about 9 miles from it, is the island of *Kiahm*, the largest in the Persian Gulf. It is 60 miles long, but the widest part does not exceed 12 miles. It is separated from the mainland by a narrow channel, which is very intricate, but navigable for the largest ships. The inhabitants live by fishing and agriculture; and the island produces dates, wheat, and vegetables, with a few grapes, mangoes, and water-melons. There are two towns: *Kiahm*, at the southern extremity, with 2000 inhabitants; and *Laft*, on the northern side. At *Bassadore*, at the western extremity of the island, the East India Company formerly had an establishment. Not far from *Kiahm* is *Hormuz*. [ORMUZ.]

8. Khorasan, or Khorassan, extends over a large part of the Great Desert, and over nearly the whole of the mountainous region which lies north of it. In that portion of the desert which lies between *Herat* and *Yezd*, numerous oases occur; most of them are small, but some are of considerable extent, and contain large towns. Among these towns are *Gunahabad*, with 30,000 inhabitants; *Bushrewgab*, with 20,000 inhabitants; and *Tubbus*, with a still larger population. The wide valleys which lie between the desert and the declivities to the low sandy plains of Turan must possess a considerable degree of fertility, as there are several large towns here, and the villages are numerous and populous, in spite of the frequent incursions of the Turkomans and Kurds. *Herat*, which is the subject of a separate article, is generally considered to be the capital of Khorasan, although for many years it has been subject to an Afghan chief, who hardly acknowledges even a nominal allegiance to the Shah. [HERAT.] The

shortest road from Herat to Teheran runs along the northern border of the Great Desert, and on it there are two places of importance—Toorbut (20,000 inhabitants) and Toorshih; but this road is not much used. The most frequented road runs from Herat in a north-west direction to Mushed, and thence westward through Nishapoor and Sebsewar to Shahrood and Bostan. *Mushed*, or *Mashed*, occupies a larger space than Herat, but many of the houses are uninhabited and in ruins. The population amounts to 45,000, which however is often doubled by the number of pilgrims who visit the shrine of Imam Reza. A very wide avenue leads from the eastern to the western walls of the town, and is only interrupted by the sahn, or shrine, of Imam Reza. In the middle of it is a canal, and on both sides well-furnished shops. The mausoleum is a magnificent building of great extent, and kept in good condition. A silver gate, the gift of Shah Nadir, opens into the chief apartment, which rises into a noble dome and branches out into the form of a cross. Neither Jew nor Christian is permitted to enter this building. The city has many mosques, and 16 medresses, or colleges. There are also manufactures of steel wares, sword-blades, silks, velvets, polished turquoises and jewellery, and cups, plates, dishes, &c., made of talc. The town of *Nishapoor*, which was once a very large place, now contains only 8000 inhabitants. The famous turquoise-mines are about 40 miles from the town towards the north-west. *Sebsewar*, or *Subsewar*, contains about 4000 inhabitants; *Sharood*, 5000 inhabitants; and *Bostan*, 4000 inhabitants. In the neighbourhood of these towns cotton is grown to a great amount.

The wide and fertile valley which runs from Mushed north-west is in the possession of the Kurds, and contains some places of note. The largest is the town of *Kaboochan*, which contains from 15,000 to 20,000 inhabitants, and is the seat of the most powerful of the five chiefs of the Kurda. It has some commerce in wool, woollen-stuffs, tallow, butter, and sheep-skins. Some distance east of the town is the celebrated fortress of *Kelat-Nadiree* (the fortress of Nadir), which, according to the information obtained by Fraser from the natives, is in a valley from 50 to 60 miles long by 12 or 15 miles in breadth, surrounded by mountains so steep that a little assistance from art has rendered them quite impassable, the rocks being scarping into the form of a gigantic wall. A small river runs through this valley, and the only points of access occur where the stream leaves it, and even these are fortified by towers and walls, which are considered impregnable. The valley is well cultivated, and contains 2000 families in 20 or 30 villages.

9. Irak-Ajemi, the largest of the provinces of Persia, comprehends a considerable portion of the Great Desert and the countries which inclose its north-western extremity on the west and north, and which in their different parts display a great variety of natural features. South of Ispahan (32° 30' N. lat.) the mountains of Kurdistan terminate abruptly towards the table-land of Iran, and the country which lies between them and the desert, a space of more than 100 miles, consists of long and wide valleys running west and east, and terminating in the desert. Little water is found in them, except after the melting of the snow, and only a small part of them is cultivated, though the soil seems rather fertile. North of Ispahan, as far as 36° N. lat., the Kurdistan Mountains do not terminate abruptly; but between them and the plain there is a mountainous district, containing wide, fertile, and well-watered valleys. East of this district extends a plain about 40 or 50 miles wide, traversed by several broad and low ridges, and terminating on the border of the desert. It contains only a few cultivated tracts. That portion of Irak-Ajemi which lies north of 35° N. lat. belongs to the table-land of Azerbaijan. Its surface stretches out in a plain consisting of gradual ascents and descents, and furrowed by deep valleys in which the rivers flow. Though nearly the whole of this province is destitute of trees, it has excellent pasturage and many well-cultivated tracts. The surface is considerably higher than the plain farther east, and therefore the climate is not so hot in summer. The range of the Elburs Mountains, with its well-watered and fertile valleys, and its high summits, is included in Irak-Ajemi, as well as the hilly country which skirts its southern base, and which is generally well cultivated, being irrigated by the rivers that descend from the southern declivity of the Elburs Mountains.

That part of the desert which is included in Irak-Ajemi contains an oasis of considerable extent, in which the town of *Yezd* is situated. The oasis has a sandy soil, and is nearly inclosed by mountains. But though it is sparingly watered, it produces much silk and fruit. The wheat that is raised is only sufficient for forty days' consumption, and large quantities of grain are imported from Ispahan. On the north, east, and south, the Great Desert spreads out to a great extent; but on the west, a series of small oases connect that of *Yezd* with the more fertile districts east of Ispahan. The town of *Yezd* is very large, containing about 8000 houses and 50,000 inhabitants, among which 3000 or 4000 families are *Guebres*, or fire-worshippers. *Yezd* is remarkable as a commercial and manufacturing town. Its commercial importance arises from the caravan routes, which here cross one another. Two of these routes come from Herat and Mushed; two from the west, from Ispahan and Shiraz; and one from the south, from Kerman. Thus this town is the entrepôt of the commerce between India, Turkistan, and the western countries of Asia. A great variety of silk-stuffs are manufactured. Raw silk is imported

from Ghilan. Cotton is also manufactured to some extent, as well as carpets and felts; and much sugar-candy is made and exported. The summers are very hot, but the winters are cold. A good deal of snow falls, but it does not lie long on the ground.

Ispahan, or, more correctly, *Isfahan*, is still perhaps the most populous town in Persia. When it was the residence of Shah Abbas the Great its population was stated to be between 600,000 and 1,000,000. At present it is said to amount to between 100,000 and 200,000. It stands on the banks of the *Zeinde-Rud*, which during the heats of summer has little water, but in the spring months is equal to the Seine at Paris in winter. The mud walls are 24 miles in circuit. The streets are crooked, narrow and dirty, and unpaved, like those of most Persian towns. Ispahan contains a great number of magnificent palaces, large private buildings, spacious caravanserais, and handsome bazaars, most of which however are in a state of decay. On the southern side three nobly-constructed bridges cross the river; and near them, within the town, is a number of shady avenues of trees, which render that part of the city a very paradise, and lead to the great bazaar of Shah Abbas. This extensive building is vaulted above to exclude the heat, but it admits air and light: it is now nearly abandoned. In a still worse condition is the *Maidan-Shat*, or Great Square, which is 700 yards long and 200 yards wide, and inclosed by a double range of arched recesses. The other bazaars are still partly crowded, but most of the numerous caravanserais have been converted to other and meaner purposes. The most sumptuous of the palaces is the *Chehel-Sittoon*, with its hall of columns inlaid with mirrors so as to resemble pillars of glass. This building is situated in the centre of a garden, divided, according to the Persian fashion, into compartments by walks and canals bordered with poplars and stately chinars. There are also many other palaces, each with its own garden. Many of the mosques and medresses are in ruins; but a few of them are still in good preservation, especially the medress built by the mother of Shah Abbas, the gates of which are covered with wrought silver. Near the town is the suburb of *Julfa*, which is inhabited by Armenians, and contains a population of 12,500. The commerce of Ispahan is very great. The manufactures are various and numerous; in that of gold brocade it has attained unrivalled excellence.

The plain which extends from Ispahan to Teheran contains the towns of *Kashan* and *Koom*. *Kashan* is one of the most flourishing towns in Persia; it owes its prosperity to its manufactures of silk and cotton stuffs, brocades, carpets, and especially copper wares. It is as large as *Shiraz*, but better peopled. *Koom*, which lies farther north, a large place, but almost entirely in ruins, was formerly celebrated for its manufactures of silk. At present it is only noted as a place of pilgrimage. Among the shrines of this sacred place, that of *Fatima*, the sister of *Ali Reza*, the eighth Imam, is the most celebrated. Her tomb is in the centre of a lofty mosque, adorned with mosaic work in coloured tiles, and fitted up with rich carpets. The dome is covered with gilt tiles. In the mountainous country west of these towns are *Khonsar* and *Hamadan*. *Khonsar* is built in a long narrow valley, between steep and barren mountains, and is six miles in length, though not more than a quarter of a mile in width. It consists of isolated houses, surrounded by extensive orchards, and contains 2500 families. *Hamadan* is on or near the site of the ancient town of *Ecbatana*. [ECBATANA.] South of *Hamadan* is the snow-capped *Mount Elwund*, a lofty peak in the eastern range of mountains, which is connected with the *Zagros* by the *Hills of Sungur*. North of *Hamadan*, on the table-land of Azerbaijan, lies the town of *Zenjan*, a populous and thriving place, which derives its importance from being situated where the roads from *Hamadan* and *Teheran* to *Tabriz* meet. West of this town, near the boundary-line of the province of Azerbaijan, and rather within the last-mentioned country, are extensive ruins, called *Takht-i-Soleiman*, of the ancient *ECBATANA* of *Atropatene*. South-east of *Zenjan*, and at no great distance from it, is *Sultaniyeh*, a town quite in ruins, in which the reigning royal family has built a palace, to which they retire when the heat in *Teheran* becomes oppressive. On the road from *Zenjan* to *Teheran* is *Kasvin*, or *CASBIN*.

Teheran, or *Tehran*, the present capital of Persia and seat of government, is situated on a plain about eight miles from the base of the *Elburs* range, in a country without trees, and only covered with verdure during the spring. The town is about four miles in circumference, surrounded by a strong and high mud wall flanked by numerous towers and a dry ditch. The streets are narrow and crooked; the houses are built of sun-dried bricks, and are mean, with the exception of a few palaces. The only building of consequence is the citadel, which contains the palace of the sovereign and his officers. The population during the residence of the court is about 100,000; but when the king goes to *Sultaniyeh*, it is diminished by one-third of that number. In the neighbourhood are several royal country-houses, and the ruins of *Rai*, the Rhags of the ancients, and once the capital of the Parthian empire. About 70 miles E. from *Teheran*, on one of the mountains of the *Elburs* range, is the fortress of *Firuz-Koh*, which is of great importance, as it commands the most accessible of the mountain-passes which lead over the range to the plain of *Mazanderan*.

10. *Ghilan* comprehends the western portion of the low plain which surrounds the southern shores of the *Caspian Sea*. It is the lowest part of the plain, and more subject to inundations and continual rains than *Mazanderan*, which lies farther east. During the greater part of

the year it is properly a swamp, covered partly with forest-trees and partly with plantations of mulberries and rice-fields. There are no villages in this country, the peasants residing either in single dwellings or in small communities seldom exceeding eight houses. In some places there are bazaars, which, as well as the small clusters of huts, are situated in the midst of the forests or plantations of mulberry-trees. *Resht*, the capital of Ghilan, one of the most commercial places in Persia, is situated in the midst of a forest at some distance west of the mouth of the Sefid-Rud. The population is variously stated between 50,000 and 80,000. The houses are of a superior construction, and the streets generally well paved. Its commercial connections extend to Mushed and Herat, Teheran and Ispahan, and also to Badku, or Baku, and Astrakhan. There are several extensive manufactories of silk stuffs. The commerce with Astrakhan is carried on by means of the port of Enzillee, which is about 18 miles from Resht, and separated from it by a lagoon. Lahijan is a neat well-built town, on an island formed by the bifurcation of the river Sefid-Rud. It has a considerable commerce in silk with Resht and Ispahan. The population amounts to 15,000. The most northern portion of Ghilan is called Talish.

11. Mazanderan comprehends the largest and widest portion of the low plain along the shores of the Caspian Sea. Though the country along the sea is very low and marshy, it rises somewhat at a short distance from the shore, owing to which circumstance the inundations produced by the heavy rains are less extensive and of much shorter duration, especially as the rains themselves are less frequent and less heavy, than in Ghilan. The climate is accordingly much more healthy, and several plants are extensively raised which do not succeed in Ghilan, especially the sugar-cane and cotton; but it does not produce so much silk as that province. It is however very well cultivated, and populous. The most western town is *AMOL*. Farther east is *BALFRUSH*. *Saree*, the capital of the province, is a very ancient town. The walls, which are of mud, and strengthened with square brick towers, are about two miles in circuit. The streets are unpaved, and often impassable in bad weather. The town contains a population of 30,000 or 40,000, and has some commerce with Astrakhan by means of its harbour *Farah-Abad*, situated at the mouth of the river *Tejen*, which runs east of the town. At *Farah-Abad* the Russians have established a very extensive fishery, as great numbers of sturgeons enter the river: they send caviar and isinglass to Astrakhan. At this place are the ruins of a large palace built by *Shah Abbas the Great*.

A great artificial road was constructed by *Shah Abbas the Great*, through the provinces of Ghilan and Mazanderan. It begins at *Kiakar*, the western extremity of Ghilan, traverses the low plains, and ascends the declivity of the table-land of Iran by the pass which leads to *Bostan* in *Khorasan*, whence it is carried within a short distance of *Mushed*. In most parts it is still used, though it has been damaged in some places by torrents and inundations. It appears to have been 15 or 16 feet wide, and to have been constructed by filling a deep trench with gravel and stones, over which a regular causeway was very firmly built.

12. *Astrabad*, which comprehends the eastern portion of the low plain that skirts the Caspian, and comprises also the hilly country to the south, is the subject of a separate article. [ASTRABAD.]

Manufactures and Commerce.—The manufactures of Persia have been already named. In the manufacture of some articles the Persians are distinguished, as in several kinds of silk stuffs, especially brocades, and sword-blades, leather, carpets, felt of camel-hair, and jewellery. British cottons and silks obtain a ready sale owing to their cheapness. Persian goods are all woven by hand. The manufactures are chiefly in the large towns. The internal commerce of Persia is very considerable. It is entirely carried on by caravans. Great quantities of goods are brought by different caravan routes from India across Afghanistan, and distributed over the country. *Arthur Conolly* enumerates the articles conveyed to and from India by the northern caravan routes through *Mushed*, and indicates the countries from which they are brought; as from *Ispahan* and *Yezd*, fine velvet, silks, cotton-stuffs, felt, shoes, sugar, and sugar-candy; from *Cashan*, gold and silver, kimeob, cotton-socks, ink-stands, lamps of bronze, pots, and other utensils of copper; from *Shiraz*, dates, tobacco, lemons, lacquered-ware, ornaments made of ivory, and mats; from *Kerman*, shawls, sugar-candy, opium, henna, and indigo; from *Sind* and *Hind*, sugar, sugar-candy, spices, musk, amber, corals, precious stones, leather, kimeob, Indian and British muslins, and indigo; from *Cashmere* and *Bokhara*, shawls, saffron, paper; from *China* and *Russia*, by the way of *Bokhara*, lamb-skins (more than 120,000), stuffs made of camel-hair, tea, and Russian manufactures, as shagreen, broadcloth, satin, nankeen, china, glass, utensils of iron, copper, brass, cutlery, looking-glasses, needles, &c. Since the navigation on the Caspian Sea has increased, Russian goods are brought from *Resht* and *Balfrush*. From *Herat* are brought to *Mushed*, carpets, assafetida, lead, saffron, pistachio-nuts, mastic, manna, gummi, ispiruck (a yellow dye), and caraway-seeds. A well-frequented caravan-track leads from *Tabriz* through *Van* and *Erzurum* to *Trebizond*, and large quantities of textile goods are imported by the route from Europe. A branch of this route leads to *Tiflis* in Russian Georgia.

The foreign commerce of Persia however is less important than the internal trade. The principal foreign trade is with India through the port of *Bushire*, with *Russia* through *Balfrush*, and the ports on the Caspian (this trade is now carried on by steamers), with *Baghdad*,

Turkey, and *Bokhara* by caravans. The total exports are supposed to amount in value to no more than a million and a half sterling.

Government.—Persia is an absolute monarchy; the word of the king is law, and the life and property of the subject are in his hands. He delegates his power to the governors of provinces, reserving to himself the power of life and death, with which he entrusts only the governors of the royal blood, and such persons as are sent to govern distant provinces or such as are in a state of rebellion. The governors of the provinces are called *sardars*, and those of smaller districts *kulombega*. The tribes of the *Ilyats* however are not subject to these governors, but are under their own hereditary chiefs. The administration of the law is exercised by courts, of which there are two kinds, the *sherrah* courts and the *urf* courts. The former decide matters according to the *Koran*; the second, according to the customary laws of Persia. The supreme judge in the *sherrah* courts is the *Sheik-al-Islam*, who decides matters in the last instance. In every town there is a judge, and in the larger ones also a *cauzee*, who is aided by a council of *mollahs*. The *urf* is administered by the king himself, and his governors and delegates. The courts are held in public, and the monarch sits for a certain time each day in his hall of audience, to hear appeals, to receive petitions, and to decide such cases as come before him.

The army of Persia consists of about 40,000 men regularly disciplined, of which only about 20,000 are organised on European principles. But the king can in a few weeks collect an army of 100,000 men, the greatest part of which number is supplied by the tribes of the *Ilyats*, and consists of irregular cavalry.

(*Kinneir*; *Ouseley*; *Morier*; *Fraser*; *Conolly*, 'Journey to the North of India'; *Burnes*, 'Travels into Bokhara'; *Rich*, 'Narrative'; *Ritter*; 'London Geographical Journal,' vols. iii., vi., viii., ix., x., xiv.)

History.—At the earliest period of which any trace is preserved, Persia appears to have formed a province of the great Assyrian empire, on the disruption of which it fell under the power of the *Medes*, about B.C. 709. *Astyages*, king of the *Medes*, was dethroned B.C. 560 by *Cyrus*, who, according to *Herodotus*, was his grandson by his daughter *Mandane*, and who not only established the ascendancy of the Persians over the *Medes*, but by his victory over *Croesus*, king of *Lydia*, and by his conquest B.C. 538 of *Babylon* and its dependencies, extended his empire to the *Hellespont* and the *Syrian Sea*. This great prince perished (529) in an expedition against the *Scythians*, probably beyond the *Oxus*; and was succeeded by his son *Cambyses* (529-21), who subdued *Egypt*. On his death the kingdom was usurped by a *Magian*, who personated *Smerdis*, the brother of the deceased monarch: but this impostor was destroyed by the nobles, who raised to the throne one of their own body, *Darius Hystaspes* (*Gushtasp*). In his reign (521-485) the empire was divided into satrapies, and regular taxes introduced: *Babylon* revolted, and its walls were destroyed: and though a Persian expedition, under the command of *Darius* himself, against *Scythia* was a failure, the acknowledgement by *Macedonia* and *Thrace* of Persian supremacy extended the empire into Europe. The revolt of the *Asiatic Ionians* (501) and the aid given them by *Athens*, was the origin of the long wars of Greece and Persia. The defeat at *Marathon* (490) of a Persian force sent against *Athens*, showed the determination and military skill of the Greeks to be formidable. The famous expedition of *Xerxes*, the son and successor of *Darius* (485-64), conducted in person against Greece, *Herodotus* states to have consisted of above five millions of men, including an army of 1,700,000 infantry and 80,000 cavalry, and a fleet of 1200 ships. But this stupendous host, though it ravaged *Attica* and burnt *Athens*, sustained a signal naval defeat at *Salamis*; and the following year (479), after *Xerxes* had returned to Asia, the land and sea forces were discomfited in the two battles, fought on the same day, of *Platæa* in *Æscotia*, and *Mycale* on the coast of *Asia Minor*. The Persians were now driven from Europe; and *Xerxes*, who became more voluptuous and cruel after this disaster, was murdered by the captain of his guards (B.C. 464).

During the long reign of his son *Artaxerxes Longimanus* (probably the *Ahasuerus* of Scripture), the power of the empire greatly declined; *Egypt* was in continual revolt, and the *Asiatic Greek* cities were recognised as independent by the peace (449) which ended the Grecian war. The short reigns of *Xerxes II.* and *Sogdianus* occupy only a year (425): and the rule of *Darius II.*, surnamed *Nothus* (424-405), presents only revolts at home, and intrigues with Greece, where an alliance was formed with *Sparta* against *Athens* (411). *Egypt* threw off the yoke altogether in 414, and remained independent for 65 years. *Artaxerxes II.*, surnamed *Mnemon*, succeeded (405-359); and his younger brother *Cyrus*, attempting to dethrone him by the aid of an army of Greek mercenaries, was defeated and killed (401) at the battle of *Cunaxa*, in the plains of *Babylonia*, an engagement which was followed by the memorable *Retreat of the Ten Thousand*. In a war with *Sparta*, which commenced in 400, the integrity of the empire was threatened by the successes of *Ageilaus*, who, in three campaigns (398-94), advanced far into Asia: but by fomenting a coalition in the heart of Greece against *Sparta*, *Artaxerxes* was enabled in 387 to conclude the advantageous peace of *Antalcidas*, by which Persia recovered the *Ionian* cities and *Cyprus*, though the latter was not reduced till after 10 years' war. The accession of his son *Ochus*, or *Artaxerxes III.*, was followed by revolts in *Asia Minor*, *Syria*, and other provinces: but the former was betrayed by its leader *Orontes*,

and Syria was reduced (351) by Ochus in person, who destroyed Sidon, and advancing into Egypt, expelled the King Nectanebus, and reunited that country to the Persian empire (350). Ochus was poisoned by a eunuch named Bagoas, in B.C. 338. Bagoas now placed Arses, the only surviving son of Darius, on the throne, but murdered him two years afterwards, when the male line of the royal family being extinct, he invested Darius III, Codomannus (a great-grandson of Darius Nothus), with the vacant dignity. This prince commenced his reign (336-30) by ridding himself of the traitor Bagoas: but the invasion of his dominions by Alexander the Great, in 334, left him little opportunity for the exercise of sovereignty. By three great battles (Granicus, 334; Issus, 333; and Arbela, 331) the Persian empire was utterly overthrown; and the unfortunate Darius, flying from the arms of Alexander, was murdered (330) by his own servants, while the whole extent of his dominions from the Hellespont to the Indus fell under the sway of the Macedonian conqueror.

On the death of Alexander (323) and the dismemberment of his vast territories by his generals, Persia fell to the lot of the founder of the Syrian dynasty of the Seleucids, Seleucus Nicator (312-280), and remained in subjection during his reign and that of his son Antiochus Soter (280-61). But in the reign of Antiochus Theos (261-48), a germ of independence reappeared in the foundation of the Parthian kingdom in the country of Hyrcania (Mazanderan) by Arsaces, the first of the house of the Arsacids, of which 30 monarchs reigned in succession, each bearing the title of Arsaces, in addition to his individual name. One of these princes, Mithridates, or Pacorus I. (174-138), extended the Parthian power to the Euphrates and the Indus, and in 138 took prisoner Demetrius II. of Syria, who had invaded his territories. The sway of Orodes I. (54-37), who had dethroned and put to death his brother Mithridates III., was distinguished by the first war with Rome, and the defeat and slaughter of Crassus with his legions on the plain of Carrhæ (53). On invading Syria and Asia Minor however, the Parthians were repulsed by Ventidius (38); but this defeat was avenged by Phraates IV. (B.C. 37, to A.D. 4) on Mark Antony, who only escaped from Parthia (B.C. 36) with the loss of the greater part of his army. Some years later however Phraates opened diplomatic relations with Rome, and even sent his sons to be educated at the court of Augustus. The death of Phraates was followed by anarchy and dissension, and by wars with the Romans, at the close of one of which (A.D. 65), Tiridates, brother of Vologeses I., king of Parthia, accepted the Armenian kingdom as a fief of the Roman empire. Ctesiphon, the capital of the Parthian empire, was taken and sacked by the emperor Septimius Severus in 198; and these contests, though they occasioned no loss of territory, greatly weakened the declining monarchy. Artaxerxes, or Artashir, surnamed Babegan, a native of Fars, or Persia proper, overthrew the Parthian monarchy, and established the dynasty of the Sassanids.

The reign of Artaxerxes, or Artashir Babegan, after he attained undivided power (226-42), was occupied, excepting a short war with the Romans, in regulating his new dominions, and re-establishing in all its ancient splendour the Magian faith. His son Shahpoor, or Sapor I. (242-73), conquered Armenia, and by his victory, in 260, over the emperor Valerian (who was taken prisoner, with his army, and died in captivity), taught the Romans to respect and fear the arms of Persia. Syria, Cilicia, and Cappadocia were laid waste with ruthless severity; Antioch was taken and plundered, but the latter part of his reign was less fortunate: Odenathus, prince of Palmyra, and his celebrated wife Zenobia, defied his arms, and Aurelian re-established the Roman frontier in the East.

War with the Romans however continued, and Narses (294-301), vindicated for a time the renown of the Persian arms by a signal victory (296) over Galerius; but in the next campaign the Persian forces were surprised and destroyed by the Romans, and by the peace concluded in 297, Narses ceded Armenia and five provinces east of the Tigris. During the reign of Shahpoor or Sapor the Great the long war (327-63) was contested with the whole force of the two empires, and with varied success. In the battle of Singara (248) Shahpoor triumphed over the emperor Constantius; and the invasion of Persia by his successor Julian, which threatened the dismemberment of the kingdom, was frustrated by the death of that prince and the cowardice of his successor, who purchased a safe retreat by the peace of Dura (363), which restored Armenia and all the cessions made by Narses. The wisdom of Shahpoor in government was equal to his valour in war; and the kingdom continued in peace and prosperity throughout the reigns of the three next monarchs. The reign of Isdigertes (Yezdegerd) in 401-21 was disturbed by religious dissensions; the Magi murmured at the toleration and favour shown by the king to the Christians, and his friendship for the Greek emperor Arcadius; but the persecution of the Christians with which his son Bahram V. commenced his reign, led to a short and indecisive war with the Romans. The subsequent sway of this prince was glorious and popular; after repulsing with great loss an invasion of the Turks of Trans-Oxiana, he extended his realm to the frontiers of India; and his extraordinary personal prowess has preserved his memory to the present day in Persia as a favourite hero of romance. He perished accidentally in hunting. After a century of mingled prosperity, wars, and dissensions, the illustrious Khorsu Nusherwan (531-79), raised the Sassanian empire to its highest pinnacle of grandeur and prosperity.

He carried his arms to the Mediterranean, the Euxine, the Sutilj, and the Jaxartes. Trans-Oxiana, the Punjab, and great part of Arabia obeyed his mandates. Persia was divided into four great vicerealties, and the excellence of the internal administration, in which the king was aided by his celebrated minister Buzurg-Mihir, has earned for him the proud appellation of 'Just.' His son Hormuz (579-90), after losing all the conquests of his father, forfeited his throne and life in a popular revolt. Khorsu-Perwiz, son of Hormuz (590-628), attacked the Roman empire (602), and in 16 years restored the Persian empire to the limits under Xerxes, by the conquest of Syria, Asia Minor, and Egypt: but these successes were transient, and Khorsu, after having been in turn driven from his palaces by the victories of Heraclius, was murdered by his own son Shiruyeh, or Siroea. A period of confusion followed till the accession of Yezdegerd III., in the same year (632) in which Persia was attacked by the Arabs, then commencing the career of Mohammedan conquest. The fate of the kingdom, weakened by internal dissensions, was decided by the battles of Cadesia (636) and of Nehavend (641), the last of which, though the king survived in the condition of a fugitive 10 years longer, subverted at once the Sassanian power and the independence of the country.

The Persians imbibed the religion and literature of the Arabs; but the country for two centuries was only a province in the empire of the Kalifs. With the decay of the power of the kalifs the spirit of independence revived, and the re-establishment of the kingdom may be dated from the foundation of the Soffarian dynasty by Yakub Ibn Laïs, who about 868 threw off his allegiance to the kalif, and fixed at Shiraz the capital of a dominion including nearly all Persia. This dynasty lasted from 868 to 900; and was succeeded by the Tartar Samanides dynasty (900 to 936); and a native dynasty (936 to 1028). The Seljookian Turks, among whom were the distinguished kings Togrul-Beg and Alp-Arslan, ruled Persia from 1028 till 1194, when the Kharismians held the reins of power for a short time. The famous mogul Gengis Khan established a new dynasty, which ruled Persia till 1331, in which year the Tartars under Tamerlane conquered the country, and established a rule which lasted, with few interruptions, till 1502.

Ismael Shah, the founder of the Sefi, Soffee, or Soffavean dynasty, was remotely descended from the Kalif Ali, the cousin and son-in-law of Mohammed. He was a Turkoman, but he belonged to a different religious sect from the Turks usually so called, and hence partly the national hostility which has subsisted between the Sheah and Sooni, or Persian and Turkish Mohammedans. This dynasty lasted from 1502 till 1786; it included the distinguished name of Abbas the Great, under whom the Persian empire regained much of its former extent and splendour.

After totally expelling the Usbeks from Khorassan, in the first part of his reign, he turned his arms against the Turks, over whom he gained repeated victories from 1603 to 1618, in which year a peace was concluded, restoring to Persia all her former possessions. In order to promote manufactures, he invited Armenian artificers to settle at Julfa, and formed an alliance with the English, by whose aid he expelled the Portuguese from Ormuz; he removed the capital from Kazwin to Ispahan, and greatly improved the internal communications of the kingdom.

The Sefi dynasty was put an end to by Nadir Shah in 1736. This extraordinary man raised Persia, for a short time, to a higher degree of power than she had possessed since the rule of the Sassanian kings. He conquered Candahar and Afghanistan; and in invading India, in 1739, took Delhi, and carried off a booty estimated at 32,000,000*l.*, reducing the next year the Usbeks of Khiva and Bokhara, long the enemies of Persia. A second war with the Porte (1743-6) terminated favourably to Persia; but the barbarities and avarice of Nadir exasperated his subjects, and he was murdered in his tent, 1747. His death was the signal for a scene of anarchy and confusion; the Uzbek states threw off the yoke, and Afghanistan became an independent and powerful kingdom under Ahmed Dooranee, while the crown of Persia was contested by various competitors, and the kingdom torn by civil war, till a chief named Kereem Khan, of the Zend family, succeeded, in 1759, in possessing himself of supreme power, which he held till his death, in 1779, under the title of Wakeel, or administrator; he refused the insignia of royalty. But fresh troubles broke out at his death—six chiefs, between 1779 and 1789, ascended or claimed the throne, while Russia took Georgia under her protection in 1783. The candidates for royalty were at length reduced to Lutf Ali Khan Zend and Aga-Mohammed Khan Kajar; the former, a brave but cruel prince, bore the title of king from 1789 to 1795, when he was taken and put to death by his rival, who thus became sole monarch, and the founder of the Kajar or reigning dynasty. He fixed his capital at Teheran. His first act was to attack the revolted Georgians, whom he overthrew in the field, and subjected their capital Teflis to ruthless pillage and massacre; but his severity provoked his own attendants to assassinate him, and he was succeeded by his nephew, Shah Futah Ali (1797-1834). This reign was marked by two disastrous wars with Russia, the first of which (1804-13) ended in the cession of most of the Caspian provinces by the peace of Goolistan; the second (1826-8), in the cession of Erivan and the country to the Araxes, by the treaty of Turkmanchal. He however reconquered Khorassan from the Afghans and Usbeks, and broke the power of the chiefs of tribes by appointing his own numerous sons to nearly all the governments.

He was succeeded by Shah Mohammed, grandson of Futtah Ali by his son Abbas Mirza, who had been declared crown-prince, but died before his father. His reign was distinguished by an unsuccessful expedition in 1838 against Herat, the ruler of which however made his submission to the Shah in 1843.

PERSIAN GULF, a large closed sea, forming a kind of inlet of the Indian Ocean. The entrance from the Indian Ocean is by the Strait of Ormuz, which in the narrowest point, between Ras Koli (or Cape Koli), in Persia, and Ras Mussendom, in Arabia, is about 38 miles wide. The gulf extends between 24° and 30° N. lat., 48° and 58° 30' E. long. Its general form is that of a curve, the convex side of which is turned to the south-east. The greatest length in a straight line is about 550 miles; but measured along the curved line of the gulf, it is 600 miles. In width it varies between 40 and 200 miles. The area is about 70,000 square miles. The islands which are dispersed over this gulf are estimated at about 1400 square miles.

The navigation of this sea is dangerous and tedious, owing to the numerous shoals and reefs. These shoals and reefs are much more numerous on the southern or Arabian coast, which can hardly be approached in any part by large vessels without the greatest care, and it was accordingly for a long time the refuge of pirates. The most daring of these pirates were the Jawasimi, who were only compelled to keep the peace by two expeditions sent against them by the English from Bombay, in 1809 and in 1819. The navigation along the northern coast is comparatively free from danger. The places which are most resorted to by the shipping are the anchorage between the island of Ormuz and the town of Gombroon, the small bays of Mogoo and Bender Chetwar, the roadsteads of Busheer, and, north of that town, the bay of Jenabe and Ras Dilem.

The prevailing wind during the whole year blows from the north-west. It is only during the months of November, December, and January that southerly winds may certainly be expected, especially in the Strait of Ormuz, where gales from the south-west and south-south-west are sometimes experienced. The southerly winds blowing in winter are frequently accompanied with heavy rains, but the rains diminish towards the north, so that at Bassora, on the Shat-el-Arab, very little rain falls. These winds rarely last more than three or four days, and do not extend to the north-western part of the Gulf.

Before the entrance of the gulf, between Cape Jaak and Muscat, the currents are variable and uncertain, and usually subject to the wind (from the north-west); they set to the leeward. A current is frequently met with along the coast of Persia, which sets westward for several days together. Vessels therefore which sail to the west, keep close to the Persian shores, where, besides these currents, they are favoured by the land-breezes, which are not regular, but occur from time to time.

The most remarkable of the numerous islands which are dispersed along the shores of the gulf are—Ormuz [ORAMUS], Kishm, Kaés, Busheab, Bahrein [BAHREIN], and Karcj. *Kishm* is the largest island in the gulf, being 54 miles long and in the broadest part 20 miles wide. The greater part of the island is sterile, and in some places incrustated with a saline efflorescence, but there are also extensive tracts of fertile ground. The population exceeds 5000. *Kishm*, the capital, at the eastern extremity of the island, is a place greatly resorted to by native vessels. It has a bazaar well supplied with fruits and provisions. The population is 2000. *Laft*, on the northern coast, on the channel which divides the island from the continent, was once the resort of pirates, but is now nearly abandoned. Rice is cultivated, and date-trees are numerous. The island of *Kaés* or *Kenn* is small, but is well cultivated, and produces wheat and tobacco. It has a small town, and a harbour for native vessels. The island of *Busheab* contains about 40 square miles. It has a small town, and a harbour at the western end on the north side, where there is a good anchorage for vessels of large burden. The island of *Karcj*, or *Kharack*, contains about 26 square miles, and is surrounded by reefs except at its north-eastern extremity. It is elevated, and visible at a considerable distance. The date-groves are extensive, and there is abundance of good water. Vessels sailing to Bassora obtain pilots here, who conduct them through the dangerous shoals at the mouth of the Shat-el-Arab.

Fish abound along the shores of the gulf, and fish and dates constitute the principal articles of food of the population. Nearly the whole population of the Arabian shores of this sea get their means of subsistence by the pearl-fishery. The most extensive pearl-fisheries are those on the several banks not far from the island of Bahrein. About 1500 boats are employed in this fishery, and each contains ten persons, five divers and five 'syebors,' or pullers-up.

The shores of the gulf are low except near the Strait of Ormuz, where the mountains on both sides of Ras Mussendom rise to a considerable elevation, and come close up to the sea. This high coast extends within the gulf about 70 miles, and then the mountains on the Arabian shore recede to a great distance, leaving a wide plain which extends to the very mouth of the Shat-el-Arab. This plain is sandy, and produces only in a few places dates and a little corn. On all parts of the northern or Persian shore mountains are visible from the sea. In some places they retire to a distance of 80 miles from the coast, and at others they approach it within 3 miles. These mountains in general do not much exceed 3000 feet above the sea. The low plain which lies between the shores of the gulf and the mountains

is arid and sandy, and in many places swampy, but exceedingly hot. It produces very little grain, but dates in abundance, and is called by the natives Dushtistan, or Gurmair. Only one river of importance enters the Persian Gulf, namely, the Shat-el-Arab, which is formed by the confluence of the Tigris and Euphrates, and falls into the most northern recess of the sea by six or seven channels, of which however only the most western, called Cassia Boni, or Basra River, is navigable for vessels of considerable burden. The plain which here borders on the Persian Gulf extends northward on the banks of the rivers to the mountain ranges which surround the Black Sea on the south. The largest river next to the Shat-el-Arab is the Tab, which falls into the gulf not far from the most eastern mouth of that river.

It is remarkable that the shores of this gulf, in their whole extent, are inhabited by one nation, the Arabs. The Arabs are in possession of the whole country to the south of the gulf, which is also called Arabia; but on the northern shore they occupy only the Dushtistan, or low plain; the mountains at the back of it, as well as the table-land of Iran, which lies behind these mountains, being in possession of the Persians. The Imam of Muscat possesses authority over nearly the whole extent of the Dushtistan, at least as far west as Ras Berdistan; as an acknowledgment of superiority however the Imam pays to the king of Persia an annual rent. The earliest navigation of this gulf which is on record is the voyage of Nearchus.

(Kinneir, *Geographical Memoir of the Persian Empire*; Berghaus, *Geo. Hydrographisches Memoir vom Persischen Golf*; Wilson, *Memorandum respecting the Pearl Fisheries in the Persian Gulf*, in the *Lond. Geogr. Journal*, vol. iii.; Whitelock, *Descriptive Sketch of the Islands and Coast situated at the Entrance of the Persian Gulf*, in the *Lond. Geogr. Journal*, vol. viii.)

PERTE-DU-RHÔNE. [Aix.]

PERTH, the chief town of Perthshire, Scotland, and a royal and parliamentary burgh, is situated on the right bank of the Tay, 41 miles N. by W. from Edinburgh, in 56° 24' N. lat., 3° 25' W. long. The population of the municipal burgh in 1851 was 14,681; that of the parliamentary burgh was 23,835. The town is governed by a provost and 25 councillors, 4 of whom are bailies; and returns one member to the Imperial Parliament. Perth was a burgh in 1106, and down to the death of James I. (1437) was regarded as the capital of Scotland. It was the seat of a considerable trade, which the burghesses carried on in their own vessels with the Hanse towns, and many Flemings and Germans settled here. In the wars of Edward I., and in the contest between Bruce and Baliol, Perth several times changed hands. In 1437 James I. was assassinated in the Dominican monastery at Perth. After this event Edinburgh became the seat of government, though Perth continued to be nominally the capital till 1482.

In August 1600 Perth was the scene of the Gowrie conspiracy. In 1644 it was taken by Montrose, after his victory at Tippermuir. In 1651 it capitulated to Cromwell, after the defeat of the Royalists at Burntisland. Perth was occupied by Viscount Dundee in 1689, immediately before the battle of Killiecrankie. The Highlanders in 1715 and 1745 occupied the town.

The town is connected by a handsome bridge of 9 arches, 880 feet long, over the Tay, with Bridge-End of Kinnoull, which is included in the modern parliamentary burgh. The bridge of the Dundee and Perth railway crosses the river a little lower down. The streets are generally straight, convenient, lighted with gas, and paved. North and south of the town are two large public greens, called respectively the North Inch and the South Inch. The North Inch contains the race-course; the South Inch is surrounded by trees and villas. The principal public building is the church of St. John. The square tower is ancient; it has been surmounted at a later period with a pyramidal spire of wood. The body of the church is now divided into three places of worship, appropriated to three distinct parishes. There are three other churches of modern erection, in one of which the service is conducted in the Gaelic language. The Free Church has five chapels, including a Gaelic chapel; the United Presbyterians have three chapels; the Independents two chapels; and the Original Seceders one chapel. The choir, transepts, and other portions of a cathedral for the Scottish Episcopal Church have been recently erected. A handsome building containing the county-hall, courts of justice, and other apartments for county business, of Grecian architecture, faces the Tay; behind it is the city and county jail. The other public buildings are those of the academy, a neat theatre, a lunatic asylum, a range of barracks, and Marshall's monument (a building erected to commemorate the services of a late lord provost), containing the public library and the museum of the Perthshire Antiquarian Society. The general penitentiary at Perth is one of the largest buildings of the kind in Scotland. The manufactures of the town consist principally of coloured cottons, especially for umbrellas. There are flax-spinning mills, bleach-fields, dye-works, breweries, distilleries, iron-foundries, tanneries, rope-walks, and ship-building yards. The salmon-fishery in the Tay is valuable. The chief imports are—coal, lime, salt, and manure; timber, flax, bark, smalt, madder, &c. The exports are chiefly potatoes, sent to London; and corn, timber, and slates. The number of vessels registered as belonging to the port of Perth on December 31st 1853 was—54 sailing-vessels of 4573 tons burden, and 3 steam-vessels of 135 tons burden. During 1853 there entered 319 sailing-vessels of 21,689 tons, and cleared 302 sailing-vessels of 19,092 tons aggregate burden. Perth

Academy is an endowed institution, comprehending mathematical, scientific, and grammar schools, with classes for modern languages, English, writing, and drawing. The income (from the burgh funds) is 300*l.* a year. The number of scholars is about 550. There are six other endowed schools, a public library, an infirmary, a dispensary, and a savings bank.

PERTH. [CANADA; VAN DIEMEN'S LAND; WESTERN AUSTRALIA.]
PERTH AMBOY. [NEW JERSEY.]

PERTSHIRE, a central county in Scotland, bounded N. by the counties of Inverness and Aberdeen; E. by Forfarshire; S.E. by Fifeshire, the Frith of Tay, and Kinross-shire; S. by Clackmannan and Stirling shires; S.W. by Stirling and Dumfries shires; W. by Argyleshire; and N.W. by Inverness-shire. The form of the county is compact; but a small detached portion of it lies on the northern shore of the Frith of Forth, between the shires of Fife and Clackmannan, and another small detached part is surrounded by Stirlingshire; while a small detached portion of Forfarshire is included in the boundaries of Perthshire. It extends from east to west 70 miles, from north to south 66 miles; and its area is 2835 square miles, or 1,814,063 acres, of which about 50 square miles are covered with water. The county lies between 56° 2' and 56° 57' N. lat., 3° 2' and 4° 50' W. long. The population of the county in 1841 was 137,457; in 1851 it was 138,660. For parliamentary purposes part of the county is annexed to Clackmannan and Kinross. Perthshire returns one member to the Imperial Parliament.

Surface, Hydrography, and Communications.—The whole of the county, except in the immediate vicinity of Perth, is hilly, if not mountainous. The Ochill Hills traverse the south-eastern part between the Forth and the Tay. The Grampians form the northern and north-western boundary of the county, separating it from Aberdeen and Inverness-shires. Scarsoch (3390 feet), and Bruoch-Carruvan are in this part of the range. The western half of the county is overspread by the mountains of the Western Highlands, among which are Ben Venu, Ben Ledi (2863 feet), Ben Vorlich (3300 feet), Ben More (3900 feet), Ben Lawers (3948 feet), and Schihallien or Schihallion (3513 feet). Cairn Gower in the Ben y Gloe Mountains in Athol Forest, south of the Grampians, has an elevation of 3690 feet. The Sidlaw Hills are on the east side of the county near Forfarshire; Dunsinane Hill is 1084 feet above the level of the sea. Upon its oval and conical summit Macbeth is said to have erected his castle. Birnam Hill, near Dunkeld, is 1800 feet high.

These mountainous districts are intersected by long winding narrow vales, or 'glens,' through which the streams flow, or by 'straths,' or wider valleys. Strathallen, in the south, separates the Ochills from the Western Highlands; Strathearn extends across the centre of the county from west to east; Strath Tay, and lower down Strathmore (which extends through Forfarshire), form the valley of the Tay; and Strath Airdle is in the north-east of the county. In the north are Glen Shee and Glen Beg, Glen Fernal, Glen Tilt [ΑΤΗΟΛ], Glen Bruar, and Glen Erockkie. In the west are Glen Lyon, Glen Lochy, Glen Dochart, Glen Falloch, and Glen Artney.

This county is almost entirely comprehended in the basin of the Tay. A small portion on the south-west side is drained by the streams which flow into Loch Lomond; the district of Menteith in the south is included in the basin of the Forth.

The Tay rises in a small loch on the border of Argyleshire, and flows east and east-by-north 20 miles, through Loch Dochart into Loch Tay. In this part of its course it is known as the Dochart. Just before it enters Loch Tay it is joined by the Lochie, which rises a little to the north of Loch Dochart, and has a circuitous course of about 16 miles. Loch Tay is a long narrow lake embosomed in mountains, having Ben Lawers near its north-western shore; its length from south-west to north-east is about 14 miles; its average breadth is about one mile. The banks of the lake are steep and shelving, and the depth of water is supposed to be in some parts not less than 600 feet. It is fed by several mountain streams, and abounds with fish; its surface is at times agitated in a violent and uncommon manner. From the north-eastern or lower end of Loch Tay, the river Tay issues, and flows through Strath Tay. It receives several tributaries, and has a very winding course, extending in all to about 105 miles. Just above Perth, the Tay receives the Almond, and several miles below it the Earn, both on the right bank. The Tay is computed to send to the sea a greater volume of water than any other river of Great Britain. It is navigable to Perth for vessels of 100 tons. [DUNDEE.] There is a bar at the mouth, and the navigation is rather difficult, partly from the sand-banks in its channel, and partly from the strength of the tides.

The Tummel issues from the north-eastern end of Loch Lydoch, a large sheet of water on the border of Argyleshire, and flows eastward about six miles into Loch Rannoch, passing in its way through one or two smaller lochs. Loch Rannoch is a long narrow sheet of water, extending nine miles from west to east, and rarely if ever exceeding a mile in breadth. It abounds with trout of the largest size. Two streams, one flowing into the Tummel, between Lochs Lydoch and Rannoch, and the other into Loch Rannoch itself, serve to convey to the Tummel the superfluous waters of Loch Erich, another long narrow sheet of water, extending in length 14 miles from north to south by one mile in breadth, partly in Inverness-shire and partly in Perthshire. From the

eastern extremity of Loch Rannoch, the Tummel flows eastward 10 miles into Loch Tummel, and thence 12 miles farther east and south into the Tay. Its whole course is nearly 40 miles. Between Loch Tummel and the Tay it receives on its left bank the Garry, which has a course of about 30 miles, flows through Loch Garry, a narrow lake 3 miles long, and receives on its left bank the streams which water Glen Bruar and Glen Tilt, and on its right bank the Feachorie, which waters Glen Erockkie.

The Braan or Brand, 20 miles long, waters Strath Braan, and serves as an outlet to Lochs Freuchie, Kennard, Skiach, and some others, all small. The Isla, one of the most important feeders of the Tay, belongs chiefly to Forfarshire; only about 14 miles of its course are upon or within the border of Perthshire. Of its tributaries, the Shee or Erich, belonging to Perthshire, is nearly 30 miles long, and waters Glen Shee; it receives the Airdle, 20 miles long, which rises at the foot of Cairn Gower, in the Ben y Gloe Mountains, and waters Strath Airdle. The Almond rises not far from the south-east shore of Loch Tay, and flows about 24 miles east into the Tay.

The district of Menteith in the south belongs to the basin of the Forth, and is watered by the Teith, which rises just within Argyleshire, and flows 4 or 5 miles into Loch Katrine, a winding and picturesque sheet of water, 8 miles long from west-north-west to east-south-east, which has become celebrated as the scene of the 'Lady of the Lake.' From the south-east corner of Loch Katrine the Teith flows 9 miles through the Troaschs, and at the foot of Ben Venu it passes through the small lochs Achray and Venacher to Callander, where it is joined by a stream from Loch Voil and Loch Lubnaig, which lie north and north-east of Loch Katrine, and are each about 5 miles long. From Callander the Teith flows south-east 12 miles into the Forth above Stirling; its whole length is about 34 miles. The Allan, a small feeder of the Forth, waters Strathallen on the north-western and western side of the Ochills; the Devon, another small feeder, waters the valley on the south-eastern side of the same hills; and the Forth flows just within the southern boundary of the county. [FORTH; ARD, LOCH.] The Falloch is near the south-western border of the county. [DUMBARTONSHIRE.] There are several falls in the rivers of Perthshire. Those of the Bruar and the Tummel are very picturesque; as are also the falls and rapids of the Devon, called the De'il's Mill, the Rumbling Bridge, and the Cauldron Linn.

The road from Edinburgh by Queensferry and Dunfermline to Perth enters the county a few miles S. from Perth. Roads from Dundee, St. Andrews, and from Glasgow, by Stirling, converge at Perth. From Perth there is a road by Forfar, Brechin, and Stonehaven to Aberdeen; another road follows the valley of the Tay by Dunkeld, and afterwards the valleys of the Tummel and the Garry, through the Pass of Killiecrankie, to Fort Augustus, Inverness, and the Northern Highlands; while a third follows the valley of the Tay and the Dochart into Argyleshire. Three roads lead from Stirling into the Western Highlands through Menteith; one through Aberfoyle to the banks of Loch Lomond; another to Glengyle at the head of Loch Cateran; and another, branching from this, joins the road through the valley of the Tay into Argyleshire.

The town of Perth communicates with the south by the Scottish Central railway, which joins the Caledonian railway, and thence by the Lancaster and Carlisle and Midland lines to London. The portion between Perth and Dunblane, 28 miles, belongs to this county. By the Scottish Midland Junction railway and the Dundee and Perth line, both of which run through a portion of the south-eastern corner of the county, Perth has easy communication northward with Aberdeen and the intermediate towns, and eastward with Dundee and the other towns on the sea-coast.

Geology, &c.—The north-western and northern parts of the county belong to the great primitive district of the north of Scotland. Granite is found underlying the peat of the extensive waste of Rannoch Moor in the west portion of the county; but the predominant rock in this district is mica-slate, skirted by clay-slate and chlorite-slate, both of which pass insensibly into mica-slate. Schihallien, Ben Lawers, the hills round Loch Tay, and many of the mountains in the Grampian range, are composed of mica-slate, intermixed with hornblende-slate and quartz-rock, and in some parts with a small portion of crystalline limestone. Chlorite-slate, clay-slate, and others of similar character are found in the south-western part of the county. East of Loch Lubnaig, true mica-slate occurs and occupies the whole district, as far as Perth. A highly-elevated range of breccia may be traced in various places, separating the primitive district from the secondary district in the south-east of the county. The district to the south and east of the breccia is occupied by beds of sandstone. Basaltic rocks may be traced in a north-east direction. The Ochill Hills in the south-east consist chiefly of porphyry and amygdaloid; and the Hill of Kinnoul, near Perth, is an amygdaloid containing numerous nodules of agate and carnelian. Some portions of the county near the south-east are comprehended in the coal-field of Fifeshire.

Soil, Climate, Agriculture, &c.—Owing to its mountainous character a large portion of this county is ill adapted for cultivation. There are some extensive tracts of moor, bog, and moss. A large space is occupied either by natural woodlands or by plantations. The larch is generally planted in dry soils, and the spruce where there is moisture.

The most valuable tract of cultivated land in the county is the

'Carse of Gowrie,' the district watered by the Isla and its tributaries the Erich and the Airdle, and extending into Forfarshire. It is a low alluvial district, the finest, in an agricultural point of view, of any in Scotland. The lower part of Strathearn, or the vale of Earn, another low alluvial tract, is scarcely inferior to it. The vale of the Tay, above Perth, and the vales of the Forth and Teith, contain extensive tracts of low alluvium or of gravelly sandy loam. The size of the farms varies from 50 to 500 acres; and in the lower districts they are universally held on lease, commonly for 15 or 19 years; some of the small Highland occupiers are yearly tenants. The Carse of Gowrie, Strathearn, and the valleys of the Teith and the Forth yield good wheat and beans; but in the midland districts oats and barley are the principal grain crops. Turnip cultivation has been carried to a considerable extent. The chief article of agricultural produce is the potato, of which great quantities are yearly sent to London by railway. Considerable quantities of apples, pears, and other fruit are raised in the valleys and low grounds, particularly in the Carse of Gowrie.

There is no breed of cattle peculiar to the county. Ayrshire cows for the dairy have been introduced of late years into the lowlands. The West Highland breed is that commonly fed on the Highland pastures. The number of sheep has been vastly augmented, chiefly by the laying out of sheepwalks in the Highland tracts. The usual breeds are the black-faced Tweeddale and Cheviot. There are some Leicester and Southdowns.

Divisions, Towns, &c.—This county was formerly divided into the districts of Gowrie, Perth, Stormont, Strathearn, Menteith, Breadalbane, Balquhither, and Rannoch, each of which was in the jurisdiction of a distinct sheriff or steward. These divisions are now obsolete, though the names are still popularly applied to the districts. To these may be added the Highland district of ATHOL. The number of parishes in the county is 75, which form several presbyteries.

PERTH and CULROSS are royal burghs; AUCHTERARDER, and Dunblane were formerly royal burghs; Abernethy, ALYTH, CRIEFF, CUPAR ANGUS, and Dunkeld are burghs of barony. Those printed in small capitals are described under their respective titles. Of the others, as well as of the more important villages, we subjoin brief notices; the populations are those of 1851.

Abernethy, at the junction of the Earn with the Tay, is 7 miles S.E. from Perth: population of the burgh of barony 972. It was anciently the capital of the Picts, and the seat of a bishopric. Abernethy is chiefly remarkable for the possession of a round tower, which is built of hewn stone, and is 74 feet high, and 48 feet in circumference at the base, but diminishes towards the top. It serves as a belfry and clock tower to the church, which stands near, and is a modern building.

Dunblane, population 1816, anciently a seat of the Culdees, and subsequently a cathedral city, is situated about 6 miles N. from Stirling, on the left bank of the Allan. The town consists of a street of old-fashioned houses and a few lanes. The former cathedral, the choir of which (80 feet by 30 feet) is now used as the parish church, is a large gothic building, seated on an eminence. Every part, except the choir, is dilapidated. The nave is 130 feet by 53 feet. The choir was repaired, and the windows were renewed, in 1819 by the Earl of Kinnoull. The Free Church, United Presbyterians, Independents, and Episcopalians have places of worship. A modern steeple, 128 feet high, has been erected adjacent to the church. There is a public library, the foundation of which was a bequest of books by Leighton, archbishop of Glasgow, who held for a time the see of Dunblane.

Dunkeld, population of the town 1104, a burgh of barony and market-town, or city, as it is often termed, is situated on the left bank of the Tay, 15 miles N. from Perth, in a deep hollow under the brow of lofty wooded hills. The town attracts many visitors by the beauty of its situation and its convenience as the entrance upon the Highlands. There was an ancient monastery of Culdees here, and in 1127 it was made the seat of a bishopric. The cathedral, which was partly of Norman, partly of later architecture, is in ruins, except the choir, which serves as the parish church. The tower is 24 feet square at its base, and is 96 feet high. Episcopalians, Independents, and Free Church Presbyterians have chapels. The Macintosh library was founded by the Rev. Donald Macintosh, the last of the nonjuring clergy of the old Episcopal Church of Scotland. The Royal Grammar school of Dunkeld, founded by James VI. in 1567, has an average attendance of about 80 scholars. There is a girls school, founded in 1788 by Jane, Duchess of Athol. The market is held on Saturday: five fairs are held in the course of the year. A fine bridge of seven arches crosses the Tay; it was erected in 1809 by the Duke of Athol.

Auchtergaven, population of the parish 3232, chiefly employed in the cotton-works at Stanley. Quarries of freestone are in the vicinity. There is a small salmon-fishery. *Callander*, population of the parish 1716, on the Teith, at the junction of the stream from Loch Lubnaig, contains substantial freestone houses roofed with slate. The village is resorted to by tourists. *Comrie*, population of the parish 2463, situated on the north bank of the Earn, in the midst of picturesque scenery, is noteworthy for the shocks of earthquakes with which it has been visited of late years. *Downe*, population of the village 1459, on the banks of the Teith, 8 miles N. from Stirling, is remarkable for a handsome gothic church and tower, of modern erection; a fine old bridge over the Teith; and the ruins of Doune Castle, an ancient fortress of great strength and extent. There are extensive cotton-

works at Deanston, close to the village. *Barn, Bridge of*, a salubrious village in Dunbarney parish, frequented by invalids. The parish also contains the village of *Pitcaithly*, the mineral wells of which are much frequented. *Erris*, population of the parish 2796, is beautifully situated near the Frith of Tay. The church is a modern cruciform building in the Norman style, with a lofty square tower and pinnacles. Quarries are worked, and salmon and smelt fisheries carried on; but the linen-manufacture is the chief branch of industry. *Killis*, population of the parish 1608, stands at the junction of the river Dochart with the Lochy. Near the village are two islands in the stream, on one of which is the tomb of the Macnaba. Fingal's grave is pointed out in a field to the north of this village. *Killiecrankie*, in the parish of Moulin, is a pass on the great north road from Edinburgh by Perth to Inverness. Several handsome villas have been erected along both sides of the pass. At the northern end was fought the battle in which Grahame of Claverhouse, Viscount Dundee, lost his life, 17th July, 1689. The pass is famous for its picturesque scenery. *Kincairdine*, population 2697, is a burgh of barony and a thriving little port on the Forth, with a good quay and harbour. There are sail-lofts and rope-walks. Besides the chapel of ease, there are chapels for Free and United Presbyterians. *Longforgan*, population of the town 463, is a long straggling place, 18 miles from Perth on the road to Dundee. The chief occupation is the weaving of sheeting, sacking, and linens. Near the town are the ruins of an ancient Cistercian chapel, and the noble baronial seat of Castle Huntly. *Methven*, population of the parish 2454, a manufacturing village, 6 miles W. from Perth, has a commodious parish church, several schools, and a library. *Muthill*, population of the parish 2972, is a clean village, beautifully situated in Strathearn. There are at Muthill a parish church, an Episcopal chapel, a Free church, several schools, a library, and reading-rooms. *Soone*, population 1439, near the left bank of the Tay, about a mile north from Perth, is memorable for its palace, the ancient residence of the Scottish kings and the place of their coronation. It had also an abbey of the regular canons of St. Augustine. A modern house, the seat of the Earl of Mansfield, occupies the site of the palace. The village of Soone is neat and regularly built. *Stanley*, population of the town 1769, situated on the river Tay, about 8 miles N. from Perth, possesses extensive cotton-spinning mills.

History, Antiquities, &c.—Little that is certain can be advanced as to the early inhabitants of Perthshire. A Roman road crosses the eastern side of the county from the neighbourhood of Stirling to Orrea, near Perth, at or near which it probably divided into two branches, one directed towards the coast, the other crossing the Grampians (the Grampius Mons of the Roman historians and geographers) towards the shore of the Moray Frith. There were several Roman stations in Perthshire. Alaua was probably at Kier, just within the county, near Stirling. Lindum was at Ardoch, in Strathallan. Victoria was probably Dealgin Ross, in Strathearn, where are some remains of Roman works. Ad Hiernam may be fixed at Strageth, on the Earn, or Hierna, where are the remains of a Roman post. The Ad Tavum of Richard was probably in the neighbourhood of Perth. There are the remains of a Roman camp at Invergowrie. At Insuthill, on the Tay, above the junction of the Isla, are some remarkable Roman works. The remains of a Roman camp are at Fortingal, in Glen Lyon. The prætorium is still complete. There are the piers of a bridge over the Tay, close to the junction of the Almond, where the situation of Orrea may be fixed. This county was the scene of hostility in the sixth and seventh campaigns of Agricola (A.D. 83, 84). The attack made by the Caledonians on the camp of the ninth legion, in the sixth campaign, was probably at Dealgin Ross.

There are some remains of a large stone circle and of several ancient circular forts in the Highland parish of Fortingal. Remains of circles, cairns, standing-stones, and similar vestiges of the early inhabitants, are found in the parishes of Kirk-Michael, Blair Athol, Cargill, and other parts of the county.

At the downfall of the Roman empire, Perthshire was occupied by the Picts, who had Abernethy for their capital: it afterwards came into the hands of the Scots. In the latter part of the 10th century, the Danes arrived at the mouth of the Esk with a large fleet, and landing, marched to the Tay. They were entirely routed by the Scottish king, Kenneth III., at Luncarty, near Perth, probably in 990. Dunsinane Hill, in Collice parish, between Perth and Cupar Angus, was the stronghold of Macbeth, where he was defeated by the English allies of his competitor Malcolm (1054). The importance of Perth, and its rank as capital of the kingdom, made this shire the scene of many contests, some of which are mentioned under PERTH.

The chief ecclesiastical antiquities of the county are the remains of Dunblane and Dunkeld cathedrals. Among other ecclesiastical remains may be mentioned Inchaffray, in the parish of Fowlis, an ancient abbey now in ruins, founded in 1200 by an Earl of Strathearn and his countess. Remains of ancient castles are at Moulin, Doune, Kincairdine, Kinclaven, and Drummond castle near Muthill.

Statistics. Religious Worship and Education.—According to the Returns of the Census in 1851, it appears that there were then in the county 258 places of worship, of which 89 belonged to the Established Church, 71 to the Free Church, 41 to the United Presbyterian church, 15 to Episcopalians, 12 to Baptists, 11 to Independents, and 6 to Roman Catholics. The number of day schools was 307, of

which 221 were public schools, and 86 were private schools; the total number of scholars was 21,148. Of Sabbath schools there were 280, with 18,294 scholars, of which 76 schools were connected with the Free Church, 74 with the Established Church, and 37 with the United Presbyterian Church. Of evening schools for adults there were 19, with 464 scholars. There were 10 literary and scientific institutes, with 698 members, and about 9000 volumes in the libraries belonging to them.

Savings Bank.—In 1853 the county possessed one savings bank at Perth: the amount owing to depositors on the 20th of November 1853 was 184,759*l.* 17*s.* 1*d.*

PERU (Republic of), South America, is situated between 3° 30' and 21° 28' S. lat., 68° 20' and 81° 20' W. long. It is bounded S. and S.E. by the republic of Bolivia, E. by the empire of Brazil, N. by the republic of Ecuador, and W. by the Pacific Ocean. Its length from south to north, along the meridian of 70°, is about 1150 miles, but its width varies greatly. South of 17° S. lat., it hardly exceeds 30 miles, whilst near 10° S. lat. it is more than 650 miles wide. Its area is about 580,000 square miles; the population is about 1,375,000.

Coast-line, Surface, &c.—The coast-line is about 1500 miles in length. In an extent of 1200 miles this coast forms only three straight lines, which meet at obtuse angles, and are not interrupted by any large bays. The most southern line runs south and north, the central line runs nearly south-east and north-west, and the northern line runs north-north-west. The most northern and most projecting portion of the coast is broken by bays and headlands.

The southern coast-line, which runs south and north, extends from the mouth of the river Loa (21° 28' S. lat.), to the harbour of Arica (18° 28' S. lat.), a distance of 210 miles. The whole of this line consists of rocky cliffs, rarely low, and occasionally several hundred feet high. In a few spots a sandy beach lies between the cliffs and the sea. The projecting points seldom extend a mile from the mainland, and in no case more than two miles. The only harbour is that of Iquique, which is formed by a low island, the largest that occurs along this coast. Between it and the town is good anchorage in 11 fathoms. The harbour of Arica, which lies at the northern extremity of this coast-line, is also formed by a low island, on the northern side of which there is good anchorage. A mole runs out into the sea, which enables boats to lie quietly while loading or discharging.

From Arica (18° 28' S. lat.) to Point Carreta (14° 10'), a distance of more than 460 miles, the coast lies east-south-east and west-north-west. Where the cliffs come close to the sea, they rise from 50 to 300 feet above it, and the waves in some places break with great violence along the shore. The first harbour which occurs, after leaving Arica, is that of Islay, or Ilay, the port of Arequipa. Cove Mollendo formerly served for that purpose, but it has so changed that at present it only admits boats or very small coasting-vessels. Port Islay, formed by a few straggling islands which lie off Point Islay, affords good anchorage in 10 or 12 fathoms for about twenty sail. It is one of the most frequented ports on the Peruvian coast; but the landing is extremely difficult. Point Lomas, the port of Acari, lies farther west, and is an open roadstead, but has good anchorage in from 5 to 15 fathoms. Some distance farther west there are two good harbours, San Juan and San Nicolas. Farther west is the Bay of Independencia, which lies between Cape Quemada and Cape Carreta, is protected towards the sea by two islands (Santa Rosa and Santa Vieja), extends 15 miles from south-east to north-west, and is about 3½ miles broad. There is anchorage in all parts of this spacious bay, the bottom being quite regular in about 20 fathoms, but the country along here is sterile, and very thinly inhabited.

The coast from Cape Carreta (14° 10' S. lat.) to the roadstead of Lambayeque (6° 46' S. lat.), a distance of about 520 miles, runs north-north-west, and exhibits a much greater portion of low sandy beach than is found farther south. A high ground invariably appears at the back of the low shore. Towards the south-eastern extremity are some islands, and between 7° and 10° S. lat. some inlets, which are larger than commonly occur on this part of the coast, and good anchorage is found in them. The most southern of these harbours is the Bay of Pisico, which is between the mainland and a row of islands extending along the coast. The most southern of these islands, that of Gallan, is 2½ miles long, 1 mile wide, and of considerable elevation. North of it are the low rocky Ballista Islands, and north of them the Chinchas Islands. [CHINCHAS.] The sea about these islands is deep, and the Bay of Pisico may be entered safely by all the passages thus formed. Within the bay there is good anchorage in 12 fathoms. The Bay of Callao is between the coast and the island of San Lorenzo, which is 4½ miles long from south-east to north-west, and a mile wide; its highest part is 1050 feet above the sea-level. The bay, which is extensive and commodious, has good anchorage. Salinas Bay, on the north of Salinas Head, which extends 5 miles into the sea from south to north, is of large dimensions, and affords good anchorage. The Bay of Sapé, to the north of Cape Thomas, and the port of Guarmey, north of Point Legarto, are small, but afford good anchorage. Between 9° and 10° S. lat. there are four comparatively good harbours—Casma, Samanco, or Huambacho, Ferrol, and Santa. There is no harbour farther north. Opposite the towns of Truxillo and Lambayeque there are only open roadsteads with bad anchorage.

North of the roadstead of Lambayeque, and between it and the

Bay of Guayaquil, a huge promontory runs out into the sea. At its base, between Lambayeque and Point Malpelo (8° 30' S. lat.) it is 220 miles wide, and its coast-line exceeds 300 miles. Between Point Ahuja and Cape Blanco, the most projecting part of this promontory, the shores are rocky and steep, and rise to a considerable elevation; but near the roadstead of Lambayeque, and on the Gulf of Guayaquil, they are sandy and partially covered with brushwood. In this part there are two indentations, which form two tolerably deep but open bays. The southern is the Bay of Sechura, which is 6 miles deep, and at its entrance, between Cape Pisura and the Little Lobos Island of Payta, 12 miles wide. It is open to the swell of the sea, and is only navigated by the Indians in balsas. The Bay of Payta, which is farther north, is of smaller dimensions, but it is the best harbour on the coast of Peru, and is more visited by foreign vessels than any other harbour except Callao.

As the heavy surf occasioned by the swell of the Pacific renders landing with boats always dangerous, and often impracticable, 'balsas' are used along this coast, which carry two or three persons, and run through the surf and on the beach with ease and safety. These balsas, in Chili and the southern coast of Peru, are cane rafts supported by two inflated seal-skins made air-tight. Along the northern coast of Peru they are rafts formed of logs of the cabbage-palm secured together by lashings, with a platform raised about two feet, on which the goods are placed; and at Lambayeque, where the surf is very heavy, they consist of bundles of reeds fastened together and turned up at the bow.

As Peru comprehends the whole of the mountain masses of the Andes which lie between 15° and 5° S. lat., together with the countries on both declivities of the chain, it is naturally divided into three different regions. The country between the chain and the Pacific is called *Los Valles*, and that included between the higher ranges of the Andes, *Montañas*. The region east of the Andes may be conveniently called the *Eastern Plains*.

The country between the steep ascent of the Andes and the Pacific varies in width from 10 to 60 miles, and may be considered as the western base of the mountains. Its elevation above the level of the sea where it lies contiguous to the range, is on an average between 8000 and 10,000 feet. From this elevation it slopes towards the sea with a very irregular surface, which is furrowed by a number of deep depressions which are called *Los Valles*, or the *Vales*, and run from the Andes to the sea with a rapid slope. They are traversed by rivers, many of which are dry during nine months in the year, and only a few preserve a perennial stream. As it never rains in the lower portion of this region, vegetation and agriculture do not extend beyond the reach of irrigation. The narrow strips along the rivers are cultivated in proportion to the supply of water. Though the upper course of the rivers is extremely rapid, few of them enter the sea, but are either lost in shallow lagoons or filter through the sand which is invariably found near their mouth. The uplands which separate the valleys from one another are covered with a fine loose and yellow sand; and along them occur chains of sandy hillocks called *Medanos*, some of which are firm, but more loose and shifting. These uplands are complete deserts; neither beasts, birds, nor reptiles are ever seen on them, and they do not produce a single blade of vegetation. No stranger can travel from one vale to another without a guide, the sand being so loose that it is raised by the wind in clouds or columns from 50 to 100 feet in height, and thus all traces of a path are obliterated. On account of the great heat which is experienced in these uplands in the day-time, and the clouds of sand which the wind then raises, they are usually traversed by night, and the guides regulate their course by the stars, or the light breeze which always blows from the south. In the south the vales are very narrow, and occur at greater intervals, but farther north they are much wider and more numerous; and in the most northern district they are more extensive, and contain considerable portions of cultivated ground, but are at great distances apart. Between Lambayeque and Sechura the desert is 90 miles across.

Along the whole coast of Peru, south of Cape Blanco, a drop of rain scarcely ever falls. But for nearly five months, from June to November, the sky is covered with a kind of mist or fog, called the *garua*, which precipitates into a fine dew, which, though not heavy enough to penetrate the thinnest clothing, changes dust into mud, and fertilises the ground. In the morning it is so thick and close to the ground that objects at a moderate distance cannot be seen. About 10 or 11 o'clock the fog rises into the atmosphere, but does not break into clouds. While the *garua* covers the lower parts of the country, and produces their winter, the higher declivities of the Andes enjoy fine weather and have their summer. But in the month of January the rains on the mountains commence, and they last about three months. The rains occur however earlier in the year in the northern than in the southern districts: and hence it happens that the rivers in the northern parts of Peru are full at the end of January or the beginning of February, while in the southern parts this does not take place before the end of March.

The climate is not so hot as might be supposed. In summer the weather is delightfully fine, and the heat is moderated by the sea and land breezes. The sea-breeze generally commences about 10 o'clock; gradually increases till 1 or 2 o'clock in the afternoon; a steady breeze then prevails until sun-set, when it begins to die away; and soon after

the sun is down there is a calm. About 8 or 9 o'clock in the evening light winds come off the land, and continue until sun-rise, when it again becomes calm, until the sea-breeze sets in. The cold current which runs along this coast from south to north, and the temperature of which is on an average 8 degrees lower than the mean annual temperature of the adjacent coast, no doubt contributes to moderate the summer-heat. During the prevalence of the garua however the air is raw and damp. The mean annual temperature, according to Humboldt, is 72°, the maximum 82°, and the minimum 55°. In the day-time it varies between 72° and 77°, and in the night between 60° and 63°.

The prevailing winds along the coast blow from the south, varying between south-south-east and south-west. In the south they are seldom more than a fresh breeze, but farther north they are stronger and blow with greater rapidity; and near Cape Blanco they sometimes blow with great force. In winter light northerly winds are occasionally experienced. At some distance from the shores the prevailing winds blow from south and south-east, and with greatest strength in winter: no thunder-storms occur; lightning indeed is seen from a distance, but thunder is never heard. Earthquakes are very frequent, and sometimes destroy the towns and villages.

In the Valles, the soil is sandy; but becomes fertile when manured with guano, which is abundant on the rocky islands and cliffs (CHINCAS), and the use of which appears to have been well known here before the Spanish conquest. All the grains and fruits of southern Europe succeed, but many of the intertropical products do not. Maize is generally cultivated, and constitutes the principal food of the Indians and lower classes. Rice is extensively grown in some of the wider northern vales, and is exported. Wheat succeeds only in the more elevated part of the valleys, where barley also is grown. Potatoes and sweet potatoes are generally cultivated, also mandioc, yams, and bananas to a smaller extent. The sugar-cane plantations are numerous and extensive, and sugar is exported to all the American countries bordering on the Pacific. Vines grow in every valley, and good wine is made in several places, as at Pisco, Nasca, and Yca. The olive and the tomato are grown in the southern districts; the Aji, or Spanish pepper, is grown extensively all along the coast. There are few natural meadows; the want of them is supplied by the cultivation of lucern, which has spread over all the valleys.

The *Mountain Region*, or *Montaña*, runs parallel to the Pacific, and from 20 to 50 miles from the shores. It comprehends the central portion of the Andes, namely, the northern part of the Bolivian Andes and the whole of the Peruvian Andes. The Andes here consist of two very lofty chains, which with the country lying between them, known as the table-land of Cuzco, the valley of the Rio Jauja, the table-land of Pasco, and the valley of the Marañon, are described under ANDES, vol. i. col. 352-355.

The *Table-land of Cuzco* extends from the mountains of Vilcanota, its southern boundary, to about 12° 30' S. lat., or more than 150 miles from south to north, and about 100 miles from east to west. Its surface is very uneven, being traversed by several ridges of broad-backed hills rising with a tolerably steep ascent, and running from the south, where they are connected with the mountains of Vilcanota, towards the north-north-west, parallel to the great chains of the Andes, which inclose this region. The valleys between these ridges are usually several miles wide, but their surface is diversified by low eminences. The whole region declines towards the north. The town of Cuzco (13° 31' S. lat.) is 11,380 feet above the sea-level. In the most elevated districts south and west of Cuzco the only cultivated grain is the quinoa (*Chenopodium quinoa*). In the lower parts of the valleys north of 13° S. lat. the agricultural products consist of maize, sweet potatoes, yucas, and plantains. The sugar-cane succeeds very well, and is cultivated in some parts, but not extensively. The mountains which inclose these valleys are covered with thick forests, but trees are scarce in the more elevated districts, and in some of them are entirely wanting. Throughout this region a good deal of rain falls all the year round. In the valley of Paucartambo rain falls 300 days in the year.

The *Vale of the Rio Jauja* extends from the table-land of Pasco on the north, about 100 miles southward, between both ranges of the Andes, and in the widest part may be about 80 miles across. Its descent from the table-land is very rapid. At its southern extremity, near 12° 30' S. lat., it is probably less than 8000 feet above the sea-level. This valley is the most populous district of Peru, and contains several comparatively large towns. The northern districts produce abundance of wheat, maize, and the fruits of Europe; in the southern, yucas, plantains, and mandioc are cultivated, and the sugar-cane and tobacco are grown to a considerable extent: but here, as in every other part of Peru, agriculture is carried on in the rudest possible manner.

The *Table-land of Pasco* from south-west to north-east is about 60 miles wide, and in these parts it is inclosed by ranges which rise from 500 to 1000 feet above it. There is here an ascent from the Pacific near the high summit called La Viuda, about 11° 10' S. lat., 76° 30' W. long.; and a descent north of the Cerro Pasco, near 10° 30' S. lat., 75° 40' W. long. The mountain masses are broken towards the north-west and south-east by numerous river-courses, and do not constitute a determinate boundary, but sink imperceptibly lower. This is the highest of the table-lands inclosed within the Andes, the level parts being 14,000 feet above the sea-level, which renders the climate so cold

that this district would have remained uninhabited but for the rich mines of Pasco, which have attracted a numerous population. The mean annual temperature probably does not exceed 40° Fahr. Even in the midst of summer, from May to November, the nights are cold; and at sun-rise all the country is covered with hoar-frost, at which time the thermometer indicates 32°. During the morning the sky, which is serene in the night-time, is covered with fogs accompanied by a strong wind. This is followed by a fall of snow mixed with hail. In the afternoon storms are frequently experienced, accompanied by frightful thunder and hail, which sometimes cause great loss of property and life. In the winter, from November to March, the weather is much worse, as the snow-storms then last for weeks together. The table-land is an uncultivated plain divided into a considerable number of smaller plains by ridges of low hills rising a few hundred feet above their base. The surface of the level parts consists partly of bare rocks or sand. The sand is partly covered with peat, or by swamps intersected with grassy tracts, which serve as pasture-ground for the llamas, which are kept in considerable numbers for the purpose of carrying the ore from the mines to the smelting-places. A great number of lakes are dispersed over the plain. They are very deep, and are the sources of some of the largest tributaries of the Amazonas. In the northern part of the plain is the Lake of Llaurococha, the source of the Marañon. In the southern district is the Lake of Chinchaycocha, which is about 35 miles long, 7 miles wide, and 13,087 feet above the level of the sea. From it issues the principal branch of the Jauja, one of the greatest affluents of the Rio Ucoyal. Near the eastern edge of the table-land is the Lake of Quilnacocha, whence the Rio Huallaga, an affluent of the Amazonas, issues.

The *Vale of the Rio Marañon* extends from 10° to 5° S. lat. The southern part is merely a wide ravine, but about 8° S. lat., it gradually enlarges to a valley several miles wide, and more than 200 miles long. The southern part of this valley is probably not much more than 3000 feet above the sea-level and it lowers very gradually; at its northern extremity, at the Ponga of Rentama, it is only 1250 feet above the sea. This valley is by far the hottest portion of the mountain region, and the vegetation in the lower parts does not differ from that of other tropical countries. Wheat is only grown on the declivities of some adjacent mountains. Maize, mandioc, plantains, and yucas are most extensively grown for the consumption of the inhabitants, and the sugar-cane and tobacco for exportation.

On the west side of the Peruvian Andes, the region of the tropical productions does not ascend more than 2000 feet above the sea, but in the valleys of the mountain region it rises to between 4000 and 5000 feet, probably owing to the abundant rains which fall on the latter. The cultivated grains of this region are rice and maize, and the other products are plantains, bananas, mandioc, yams, amotes, and the sugar-cane. The principal fruits are grapes, anonas, pine-apples, papaws (carica), and cherimoyera. Above this region is that of the European cerealia, which towards the Pacific reaches to 10,000 feet, and in the valleys to upwards of 12,000 feet. The grains cultivated in this region are wheat, barley, and maize; potatoes and different kinds of pulse are also cultivated. The fruit-trees are those of Europe, among which the peach succeeds best. Above this region only quinoa and barley are cultivated; the latter for fodder. Potatoes succeed at a height exceeding 13,000 feet. There are no forest-trees on the western declivity of the Andes below 8000 or 9000 feet, but in the interior of the mountain region they increase in size and number in proportion as the country declines in height, and the lowest districts are covered with nearly impenetrable forests of lofty trees.

Several roads lead from the coast of the Pacific to the interior of the mountain region. [ANDES.] Six of these roads occur south of 15° 20' S. lat. The most southern is the Pass of Las Gualillas (17° 50' S. lat.), which is 14,830 feet high; the most northern mountain pass occurs near 5° S. lat., and leads over the Paramo of Guamani, where it attains the elevation of 10,950 feet above the sea-level. The lowest and most frequented of the southern passes is that of the Altos de los Huecos; it runs at the foot of the volcano of Arequipa, and where it passes the Andes (16° 21' S. lat.) it is only 13,573 feet high.

Of the eastern declivity of the Andes, the portion best known is the vale of the Rio Huallaga. This extensive valley lies east of the vale of the Marañon, being separated from it by the Eastern Andes. It extends from 10° 30' to 7° 30' S. lat., about 350 miles in length. The most southern part, as far north as 9° 30' S. lat., is narrow. In this part the descent is rapid. Huanuco is about 9000 feet above the sea-level, but at 9° 30' S. lat. the valley is probably not more than 4000 feet high. At this place it begins to widen, the Eastern Andes receding to the distance of 15 or 20 miles from the river. About 7° S. lat. a branch of the mountains comes close up to the river, and high hills approach also on the east close to its banks, forming near 6° 30' S. lat. the Pongo of Huallaga, at which the valley terminates on the north. The country north of the Pongo is level, and belongs to the alluvial plain of the Amazonas. The eastern boundary of the vale is formed by a range of lofty hills. The soil of the wider portion of the vale is chiefly alluvial, and as it combines great fertility with abundance of moisture and a great degree of heat, it is capable of maintaining a numerous population. There are at least 100 very rainy days in the year; rain falls at all seasons, but the most rainy season

is in October and November. During the rainy season the heat is frequently oppressive. The declivities of the mountains which inclose the vale are covered with thick forests of tall trees, which is also the case with the greatest part of the vale itself. Wheat and barley are grown in the southern and more elevated districts, whence they are sent to the table-land of Pasco. In the lower part maize, plantains, and bananas are cultivated. There are also plantations of sugar-cane, coffee, cacao, and coca, a herb much used by the Indian population, who chew it with a small quantity of lime. Fruit is here produced in greater perfection than in any other part of Peru, and there are several sorts of vegetables.

The Eastern Plains.—The country to the east of the range of hills which form the eastern boundary of the vale of the Huallaga, and extending from their base to the banks of the Rio Ucayali, is known under the name of the *Pampa del Sacramento*. But though the term 'pampa' is applied in South America to level plains destitute of trees, this country is covered with woods. The surface also is not a level, except along the banks of the Rio Ucayali. At some distance from this river the country is diversified by numerous eminences. This region extends from the banks of the Amazonas to the Rio Pachitea, more than 800 miles from north to south, with a breadth varying between 40 and 100 miles. North of 7° S. lat. it is a dead level, and forms part of the alluvial plain of the Amazonas. No European settlements have been established in this part of Peru. It does not suffer from oppressive heat, while in fertility and products it appears to be little inferior to the vale of Huallaga. It is still in possession of the native tribes, of whom a small number have embraced Christianity.

The country extending from the eastern banks of the Rio Ucayali to the Rio Yavari, which separates Peru from Brazil, is almost entirely unknown. In its general features it appears to resemble the Pampa del Sacramento. Some hills of considerable elevation rise on the plain between 74° and 75° W. long.; and north of 7° S. lat. they are called the Sencis Hills.

The Pampa del Sacramento extends southward to the banks of the Rio Pachitea. The country which extends south of this river, from the eastern chain of the Andes to the Rio Ucayali, is more broken; and the heights rise near the Andes into lofty mountains, but towards the Ucayali sink into hills. The country along the banks of the Ucayali is rather flat, and covered with forests.

Hydrography.—The rivers which descend from the western declivity of the Western Andes and fall into the Pacific are about 60 in number. They have a short course, and flow with great rapidity; are shallow, and have very little water during the greater part of the year; many of them indeed are quite dry for several months. They cannot consequently be navigated even by the smallest canoes, but the water is used to irrigate the adjacent flat tracts.

All the large rivers of Peru originate within the mountain region, and all the waters which collect in it are united in three large rivers, the Marañon, the Huallaga, and the Ucayali. These three rivers may be considered as the principal branches of the Rio Amazonas. The Marañon is noticed under AMAZONAS, of which river it is commonly regarded as the principal branch. It issues from the Lake of Llauricocha on the table-land of Pasco, and runs north-north-west about 150 miles in a narrow valley, and with great rapidity; it then flows in a wide valley with a much gentler current for more than 250 miles to the Pongo de Rentema, and is navigated by balsas and canoes. From the confluence of the Turumbusa the Marañon becomes the boundary line between Peru and Ecuador. From the Pongo de Rentema the river turns to the north-east, and then to the east; and after a course of 150 miles more it descends into the plains by the Pongo de Manseriche, a rapid about 7 miles in length. At the foot of the Pongo de Manseriche is the town of Borja (in Ecuador), from which place the river is navigable for vessels drawing not more than 7 feet. After its union with the Huallaga and Ucayali its depth is so much increased that it is navigable for the largest vessels.

The *Huallaga*, which joins the Marañon near 5° S. lat., 76° W. long., rises in the Lake of Quilucococha, which is also on the table-land of Pasco, south-east of the Lake of Llauricocha. It runs nearly 600 miles. The southern half of its course is north-north-west, and the northern half north-north-east. The upper part of its course is full of rapids, which may however be descended. These rapids cease at Juan del Rio, south of 9° S. lat.; and the river thence affords an easy navigation as far north as 8° S. lat., where several rapids again occur. North of 6° 40' S. lat. occur the last rapids, which render the river nearly unnavigable for about 30 miles. North of 6° 20' S. lat. the Huallaga flows through a level marshy plain to its junction with the Marañon, and is navigable for vessels of considerable size.

The *Ucayali* brings to the Amazonas the drainage of the mountain region situated between 11° and 15° S. lat. This large river is formed by the junction of the rivers Urubamba and Tambo, which takes place near 9° S. lat. The Urubamba is formed by the union of the rivers Paucartamba and Quilabamba, which drain the eastern portion of the table-land of Cuzco, and running north, meet near 11° 30' S. lat. The Rio Tambo is formed by the confluence of the rivers Apurimac and Mantaro. The Apurimac, which drains the western portion of the table-land of Cuzco, unites with the Mantaro, which drains the valley of the Jauja, and in its upper part is called Rio Jauja. Not

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far below the place where the Urubamba and Tambo by their union have formed the Ucayali, is a great rapid or cataract called *Vuelta del Diablo*. From this place downward the river runs above 500 miles, first north-north-west and afterwards north-north-east, and no impediment to its navigation by large vessels occurs in this part of its course. Among its chief tributaries is the Rio Pachitea, which rises on the eastern declivity of the mountains which inclose the upper vale of the Huallaga, near 10° S. lat., and runs first east and then north, falling into the Ucayali near 8° 30' S. lat. Nearly the whole of its course appears to be free from impediments to navigation; but its banks are inhabited by native tribes who are in a state of continual enmity with the whites.

Productions.—The trees and plants which are objects of cultivation have been already enumerated. The vast forests of the mountain region and the eastern country supply several articles for commerce and for domestic use, such as vanilla, sarsaparilla, copaiba, caoutchouc, and several kinds of resins and gum; also various barks and woods, used as dyes, such as Brazil-wood, log-wood, mahogany-bark, and arnotto; and the medicinal or Peruvian bark (*Cinchona*). The indigo plant grows spontaneously. There are various kinds of lofty trees, useful as timber or for cabinet-work, as mahogany and cedar.

Domestic animals are far from being abundant in Los Valles, on account of the want of pasture. There is a good supply of horses, and still better of mules, which are used for the transport of merchandise. On the elevated table-land of Pasco, and in other mining districts, llamas are kept for that purpose. A llama carries about 130 lbs., or half the load of a mule. Alpacas are bred for their wool. Cattle are abundant in the mountain region, where the declivities supply extensive pasture-grounds; and in the colder places sheep abound. The wool of the sheep, llama, and alpaca now forms an important article of export.

Nearly all the wild animals peculiar to South America are found in Peru, as the jaguar, the puma, the ounce, the tapir, the spectacled bear, several species of monkeys, sloths, armadillos, wild boars, ant-eaters, guanacos, and vicuñas. Von Tschudi found twenty-six species of *Mammalia* in the coast region. The condor inhabits the most elevated parts of the Andes. Falcons, hawks, and owls abound. Parrots, parroquets, and macaws are numerous in the woods on the mountains. Whales and seals abound along the coast. Fish are plentiful in the large rivers of the eastern region, where they constitute the principal food of the inhabitants, together with the manatee and turtles. The manatee occurs only in the Ucayali and the lower part of the Huallaga. The oil extracted from the eggs of the turtle is an article of export under the name of manteca. Alligators are numerous in these rivers, and they are often thirty feet long.

Peru is noted for its wealth in silver and gold. The number of mines which have been worked is above a thousand; many of them are exhausted or abandoned, but many of them are still worked; and some, as those of Pasco, are very rich. Of late years mining in Peru has received a great impetus from the introduction of foreign capital, and the annual produce of the mines has been largely increased. There are quicksilver-mines near Huancavelica. Copper, iron, lead, and brimstone are found in several places. Saltpetre is found in the country adjacent to the Pacific, south of Arequipa, and great quantities of it are exported by English vessels. Salt is collected on the coast north of Callao, at Point Salinas, and in Secura Bay, where there are salinas, or salt-ponds. Of late years a very important source of revenue has been the guano, which is obtained in vast quantities on the islands and rocky headlands of the coast. Of 235,111 tons of guano imported into England in 1854, no less than 221,747 tons came from Peru.

Inhabitants.—The population is composed of creoles, or descendants of Europeans, Peruvian Indians, negroes, and a mixed race. The greater part of the eastern region is in possession of independent tribes, and only those natives who inhabit the vale of the Huallaga have been converted and subjected to the government of the whites. The number of creoles is estimated at about 200,000, and that of the Peruvian Indians at more than 800,000; the remainder are a mixed race, the offspring of Europeans and Indian women, with about 40,000 free negroes and slaves.

The Peruvian Indians inhabit the Valles and the Montaña, to the exclusion of all other native tribes. They speak the Quichua language, which is generally called the language of the Incas, and which is used by all the natives of South America, from Quito near the equator, to Tucuman in La Plata, 27° S. lat. That the Peruvian Indians had attained a considerable degree of civilisation at the time of the arrival of the Spaniards is proved by the numerous ruins of extensive buildings; the remains of the great artificial road which leads through the Montaña from Quito to Cuzco, and thence southward over the valley of the Desaguadero; and more particularly by the fact that they irrigated the low tracts in the vales by making cuts to convey the water from the small rivers over the fields, and by the judicious manner in which the water was distributed. They have since acquired iron implements and domestic animals to assist them in their agricultural labour, but they have not been benefited in any other respect. These Indians apply themselves particularly to agriculture, and there are numerous villages, and even small towns, the whole population of which now consists of Peruvians. They also work in the mines, manufacture different kinds of woollen and cotton cloth, and show

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much expertness in making articles in gold and silver, and in various other kinds of handicraft. They are also fishermen, and sail with their balsas along the coast from one small port to another to exchange their different productions.

The native tribes which inhabit the vale of the Huallaga River have been converted, and are nearly equal in civilisation to the Peruvians. The Shanamachos live on the eastern banks of the Huallaga, and on the western banks are the Cholones, Sharras, and Ibitas. They all seem to belong to one nation, as they speak one language called the Ibita, though most of them understand the Quichua. They cultivate the grains and roots which have been mentioned as the principal productions of this valley.

The independent native tribes inhabit the low and level country east of the mountain region. South of 12° S. lat., on the east of the Andes, are the Chunchos, a numerous and savage race, and the Tuyoneris. The Antes inhabit the country where the Paucartamba and Quilabamba unite, between 12° and 11° S. lat. North of 11° S. lat., and as far north as 9° S. lat., are four tribes—the Tampas, Palutuniques, Chuntaguirus, and Pirós. The country on both sides of the Pachitea River, as far north as 8° S. lat., is in possession of the numerous and warlike tribe of the Cashibos. North of them, between the Huallaga and Ucayali, are the Conibos, Setebos, and Shipobos; and still farther north two small tribes, the Maparis and Puinaus. Between the Ucayali and Yavari are the Amajuacas (between 9° and 8° S. lat.), the Remos (between 8° and 7° S. lat.), the Sencis and Capanaguas (7° and 6° S. lat.), and the numerous tribe of the Mayorunas, who occupy the country to the very banks of the Amazonas. The tribes inhabiting both banks of the Ucayali speak one language, the Pano, or dialects which differ very little from one another. The Conibos, Setebos, and Shipobos have been partially converted to Christianity; but the missionaries have made no impression on the other tribes, and no attempt at conversion has been made among some of them. Since Peru has obtained its independence the missions have been much neglected, and many of the converted Indians have returned to the woods, and are again lost to civilisation; but on the whole the Indians have made considerable progress during the last thirty years. The converted and several of the unconverted tribes are agriculturists. They use a few articles of European manufacture, as hatchets, knives, scissors, needles, buttons, and some glittering baubles, which they procure at Nauta on the Amazonas, or at Sarayacu on the Ucayali. The Chuntaguirus, who are the most remote from all the settlements of the whites, ascend the Ucayali and Urubamba to the confluence of the Paucartamba and Quilabamba, where they procure by barter such articles as they want, giving in exchange parrots and other birds, monkeys, cotton robes white and painted, feather ornaments, wax, balsams, &c.

Manufactures.—The Peruvian Indians consume a very small quantity of European manufactured articles. Their dress is composed of cotton or woollen stuffs made at home, or in several of the small towns in the vale of the Marañon and Jauja. These home-made stuffs also serve as the dress of the mixed race. Only the creoles dress in European stuffs. There are some manufactures of cordovan leather, and some tanneries and soap-houses. The iron utensils, such as hatchets, scissors, &c., made in Caxamarca, are highly valued. In the large towns many persons are occupied in making vessels, utensils, and ornaments of gold and silver.

Commerce.—The country is too mountainous to admit the making of carriage-roads in the interior. Mules are generally used by travellers and for the transport of merchandises. In the more elevated parts of the country llamas are employed for the latter purpose. The foreign commerce is considerable, especially that with the other countries of America bordering on the Pacific, and also with Europe. The most important article of export is the produce of the mines, especially silver. Sugar, which is sent to Mexico, New Granada, Ecuador, and Chili, and saltpetre, the quantity of which sent to different countries of Europe is very great, perhaps rank next in importance; but of late guano has been an article of very great traffic. Cotton, tobacco, maize, rice, salt, and spirits, are minor articles. Wheat, flour, wine, and fruits are imported from Chili, with which country there is an active commerce. Manufactured goods are received from Europe and from the United States of North America, and from Canton silk goods and nankeens. We have no particulars of the total value of the exports and imports of Peru. The value of the imports from England in 1853 was 1,246,730*l.*; that of the exports from Peru to England in the same year was 1,491,759*l.* The principal articles exported to England were—bark, cochineal, copper-ore, guano, nitre, and wool: of the latter there were 1,789,919 lbs. of sheeps' wool and 2,008,572 lbs. of alpaca and llama wool. Cotton and woollen goods, hardware, cutlery, iron, &c., are the principal articles which Peru imports from England.

Divisions, Towns, &c.—Peru is divided into eleven departments, Amazonas, Libertad, Anchas, Junin, Lima, Huanavelica, Ayauccho, Cuzco, Arequipa, Moquegua, and Puno, which are subdivided into 65 provinces. The capital of the republic is LIMA. The following are among the other more important towns: the population is a mere estimate:—*Acaes*, which is built in a fertile plain several miles from the sea, near the southern boundary of the department of Lima, is a considerable place, though little visited by travellers. The port, called Point Lomas, has good anchorage and tolerable landing.

AREQUIPA; ARICA; CALLAO. *Caxamarca* stands on the eastern declivity of the Western Andes, in a rich silver-mining district, 75 miles N.E. from Truxillo: population, 7000. It is nearly 9000 feet above the sea-level; contains some handsome churches, and the ruins of a palace of the Incas. Cotton and woollen-cloth are manufactured to a considerable extent, and also many articles of silver and iron; the artificers of Caxamarca being accounted the best workers in those metals in Peru. In the neighbourhood there are hot springs, called the Baths of the Incas. *Chachapoyas*, near the western declivity of the Eastern Andes, on the road which leads to the vale of the Rio Huallaga, 70 miles E.N.E. from Caxamarca, population 3000, is a place of much trade. A great deal of tobacco is raised in the neighbourhood. *Chuquito*, near the Lake Titicaca, has above 4000 inhabitants. **CUZCO.** *Huaccho*, a port and 'city' on the coast, 80 miles N. by W. from Lima, contains about 5000 inhabitants, chiefly Indians, who cultivate the rich farms in the vicinity, or work in the salinas: the women plait coarse straw-hats, mats, &c., which they carry to Lima for sale. *Huanuco*, the capital of the department of Ayauccho, population 20,000, is a large place, founded by Francisco Pizarro, in an elevated situation, on the road leading from Lima to Cuzco, and has a considerable trade. It has a fine cathedral, a university, and a seminary for clergymen. The rich creole families that live in this town have large sugar-plantations in the valley of the river Mantaro. The suburbs, which are inhabited by Indians, are large, and the houses better than in other Indian towns. *Huanaco*, in the upper vale of the Rio Huallaga, N.E. of Pasco, population 6000, owes its prosperity to the circumstance of its agricultural produce finding a ready sale at Pasco. In the neighbourhood there are ruins of considerable extent. *Huacavelica*, the capital of the department of the same name, population 6000, is built in a ravine between mountains whose summits rise to the height of 13,000 feet, and which contain several rich mines of gold, silver, and quicksilver. Nothing is cultivated in the neighbourhood. *Huari*, in the upper vale of the Marañon, is a mining town of 5000 inhabitants. *Islay*. [AREQUIPA.] *Lambayeque*, population 4000, is situated on the coast, 130 miles N.W. from Truxillo, in a district which produces abundance of rice, and has a considerable commerce, though the roadstead is bad. *Moyobamba*, near the eastern declivity of the Eastern Andes, has 4000 inhabitants, who make coarse cotton-cloth. *Pasco*, or *Cerro Pasco*, is built on the table-land of Pasco, 10° 48' S. lat., 76° 23' W. long., 13,673 feet above the sea-level. Pasco is the most elevated town in America, if not in the world, which is permanently inhabited. This town, whose population fluctuates, according to the produce of the mines, between 12,000 and 18,000, is irregularly built on very uneven ground. The site on which it stands abounds in silver-ore, and the mouths of the mines are frequently within small houses in the streets of the city. Only those mines are worked which contain rich ores. The houses are low, and some have small glazed windows; but the suburbs are merely a collection of mud huts. As the surrounding country is destitute of trees, it is fortunate that coal abounds in the neighbourhood. All kinds of provisions have to be brought from a distance; but the markets of Pasco are well supplied not only with the necessaries of life, but with many of the most costly luxuries. *Payta*, near the northern extremity of the coast of Peru, population 6000, is a commercial town with an excellent harbour. The town is built on the slope and at the foot of a hill. It is the port of the fine vale of the Rio Piura, which contains 75,000 inhabitants, and is a place of much business, being the port of communication with Europe by way of Panamá. It exports large quantities of cotton and grain. *Pisco*, built on a plain, about a mile from the shores of the Bay of Pisco, population 3000, has a considerable commerce, and exports sugar, wine, and a kind of spirit called Pisco, or Italia. South of Pisco are the towns of *Yca* and *Nasoa*, in which much wine is made and exported to other parts of Peru. These two towns are closely connected with Pisco in the wine trade. *Piura*, or *San Miguel de Piura*, the first town founded by the Spaniards in Peru, stands on the left bank of the Rio Piura, about 20 miles from Payta, population 8000, has considerable manufactures of soap and leather, and an extensive transit trade. It is the largest town in Northern Peru. *Puno*, on the western shore of the lake of Titicaca, in the valley of the Desaguadero, is the capital of the department of Puno: population, 8000. In the vicinity are numerous silver-mines, which were formerly remarkably productive. *Tacna*, in the valley of the Arica, about 30 miles from Arica, population 6000, is the depôt of European merchandises for the consumption of the department of Puno and the greater part of the republic of Bolivia. *Tarma*, in the vale of the Rio Jauja, has 5000 inhabitants, who manufacture considerable quantities of cotton and woollen stuffs. *Truxillo*, founded by Francisco Pizarro, and named after his birth-place, is situated in the middle of the extensive valley of Chimú, about 2 miles from the sea, 8° 7' S. lat., 79° 4' W. long.: population about 6000. The harbour, Huanacho, is an open roadstead. The streets of Truxillo are wide and regular, and it has a fine cathedral and a handsome town-hall. The principal articles of export are bullion, sugar, and rice. The valley of Chimú contains the ruins of a large Indian town.

History.—When the Spaniards first visited Peru, they found the country under a well-regulated government, and inhabited by a nation which had made great progress in the arts of civilisation. The people were decently dressed, and lodged in comfortable houses. Their fields

were well cultivated, and artificial cuts had been made to conduct the water of the small rivers to a considerable distance for the purposes of irrigation. They had extensive manufactures of earthenware and woollen and cotton cloth, and also tools made of copper. Even now the elegant forms of their utensils, made out of the hardest rock without the use of iron tools, excite admiration. The extensive ruins of palaces and buildings scattered over the country, and the remains of the great road which led from Quito to Cuzco, and thence southward over the table-land of the valley of the Desaguadero, show that the nation was far advanced in civilisation. This civilisation appears to have grown up in the nation itself, and not to have been derived from communication with other civilised people. The navigation of the Peruvians was limited to coasting from one small harbour to another in balsas. The difference in political institutions and in the usages of society between the Peruvians and Mexicans precludes the supposition of either of these two nations having received their civilisation from the other. Besides this, they were divided by savage tribes, which were sunk in the deepest barbarism. The Spaniards were surprised to find this state of things in Peru. When they had got possession of the country, they inquired into its history, and learned the following traditions:—

About three centuries before the arrival of the Spaniards, Manco Capac and Mama Ocollo appeared on the table-land of the Desaguadero. These two personages, male and female, of majestic stature, appeared clothed in garments, and declared that they were children of the sun, and sent by their parent to reclaim the human race from its misery. The savage tribes submitted to the instruction of these beings of a divine origin, who taught them the first arts of civilisation, agriculture, and the manufacture of clothing. Manco Capac organised a regular government, and formed his subjects into four different ranks or classes, which had some slight resemblance to the castes of the Hindoos. He also established many useful customs and laws, and founded the town of Cuzco, which soon became the capital of an extensive empire, called the empire of the Incas (or lords) of Peru. He and his successors, being considered as the offspring of the divinity, exercised absolute and uncontrolled authority. His successors gradually extended their authority over the whole of the mountain region between the equator and 25° S. lat. When the Spaniards first entered Peru, the 12th monarch from the founder of the state, named Huayna Capac was said to be seated on the throne. He had violated the ancient usage of the Incas, which forbade a monarch to marry a woman not a descendant of Manco Capac and Mama Ocollo. His wife was a daughter of the vanquished king of Quito, and the son whom she had borne him, named Atahualpa, was appointed his successor in that kingdom. The rest of his dominions he left to Huascar, his eldest son by a princess of the Inca race. This led to a civil war between the two princes, and when the contest was at its height, a Spanish force entered the country under Francisco Pizarro in 1531.

Pizarro had sailed in 1526 from Panamá to a country lying farther south, which, according to the information collected from the natives, abounded in precious metals. He sailed along the coast as far south as Cape Parina or Cape Aguja. Landing at Tumbes in the Bay of Guayaquil, the most northern point of the present republic of Peru, he was struck with the advanced state of civilisation of the inhabitants, and still more with the abundance of gold and silver vessels and utensils. From this time he resolved on the conquest of the country. In 1531 he returned with a small force which he had procured from Spain, marched along the coast, and in 1532 built the town of St. Michael de Piura, the oldest Spanish settlement in Peru. The distracted state of the country, caused by the civil war, enabled the Spaniards to take possession of it without a battle; and though the Peruvians afterwards tried to renew the contest, they were easily defeated and compelled to submit to a foreign yoke. Pizarro built the towns of Piura, Truxillo, Lima, Arequipa, and Huamanga: Cuzco was founded by Manco Capac.

The disorders which immediately followed the conquest nearly caused the loss of the country, a circumstance which determined the court of Spain to make Peru the chief seat of the Spanish dominions in South America. Lima was chosen for the capital, and it soon rose to such opulence that it was called the City of the Kings. The authority of Spain took deeper root in Peru than in any other of her South American Colonies. In 1780 the Peruvians took up arms against the Spaniards, under Tupac Amaro, an Inca, but failing to capture the town of La Paz after a long siege, they again submitted. When all the Spanish colonies began to rise against the mother country, after the year 1810, Peru remained quiet, and though some of the neighbouring provinces had already expelled the Spanish armies, and others were attempting to do the same, the Spaniards remained in undisturbed possession of Peru until 1820, when General San Martin, after having expelled the Spaniards from Chili, entered Peru at the head of a victorious army, and soon obtained possession of Lima. The independence of Peru was declared on the 28th of July, 1821, and San Martin was proclaimed protector of Peru. The Spanish viceroy Canterac, who had remained in possession of the Montaña, gradually recovered the Valles. San Martin, having lost his popularity, resigned his authority into the hands of the legislature on the 19th of August, 1822. On the 1st of September, Bolivar, the Columbian general, entered Lima, and continued the war with Canterac, but at first with doubtful

success. In February, 1824, Bolivar was made dictator; and in December of the same year the Spanish army, under Canterac, was entirely defeated by Sucre, on the plains of Ayacucho, by which battle the authority of Spain in Peru and South America was annihilated. In February, 1825, Bolivar had resigned the dictatorship, but he had previously contrived to separate the southern provinces from the northern, and to convert the former into a new republic, which adopted the name of Bolivia. Several different forms of government were tried within the six years following the declaration of independence. The constitution adopted by Bolivar in 1826 excited great discontent, and as Bolivar was soon afterwards obliged to go to Columbia, where an insurrection had broken out and a civil war was on the point of commencing, a complete revolution took place in Peru, in January, 1827. The Bolivian constitution, or government, was abolished, and a new federal constitution, avowedly founded on that of the United States of North America, was framed and adopted, and may be considered as still in force. The national congress, or supreme legislature, consists of two bodies, a senate and a house of representatives. The president, in whose hands the executive power is placed, is chosen for four years, and he cannot be re-elected. The departments have their own legislatures, and administer their own affairs, but the laws passed by these legislatures must be approved by the National Congress. The highest officers of the central government in the departments are the prefects and subprefects. These persons, as well as the judges, are elected by the congress from three candidates, who are proposed by the provincial governments. The Roman Catholic religion alone can be publicly exercised. But though this is still the nominal constitution, Peru has been ever since its adoption almost continually distracted by parties struggling for power, and by civil wars and revolutions produced by these continual struggles, while the government has really been in the hands of the chief of the successful party. The most recent intelligence received from Peru (March, 1855) confirms the announcement of the successful termination of a revolution which had been in progress for about a year, and by which the late president, or dictator, General Echinique, has been driven from power. During the latter portion of the late president's supremacy, the financial reputation of Peru had fallen into the lowest depth of discredit, but it has been announced that the new government will at once endeavour to regain the confidence of the national creditors. The public debt consists of an internal debt of a very large but unnamed sum, and a foreign debt which was stated in 1854 to amount to about 4,000,000*l.* The total revenue in 1850 was 2,139,000*l.*; the expenditure was set down at 1,857,000*l.* By the constitution no persons born in Peru, or brought into the country subsequent to the publication of the Charter of Independence, can be slaves, but this article of the charter has been frequently evaded, and its evasion has been formally sanctioned by the National Congress. The number of slaves in Peru has been estimated at about 30,000. General Castellan, the present ruler of Peru, in January, 1855, issued a decree by which all slaves are to be liberated, except such as took up arms in the cause of Echinique; at the same time he pledges the government to indemnify their owners within five years.

(Ulloa, *Voyage to South America*; Humboldt, *Personal Narrative*, &c.; *Memoirs of General Miller*; Meyen, *Reise um die Welt*; Pöppig, *Reise in Chile, Peru, &c.*; Smyth and Lowe, *Narrative of a Journey from Lima to Para*; *Narrative of the Surveying Voyages of the Adventure and Beagle*; Darwin, *Journal of Researches*; Stevenson, *Residence in Peru*; Von Tschudi, *Peru*; and *Untersuchungen über die Fauna Peruanica*; *Admiralty Sailing Directions for South America*; Weddell, *Voyage dans le Nord de la Bolivie*, &c.; Seeman, *Narrative of the Voyage of H.M.S. Herald*; Pentland and Miller in the *London Geographical Journal*.)

PERUGIA, a delegation or province in the Papal States, is bounded N. by the Apennines, W. by Tuscany, S. by the provinces of Spoleto and Viterbo, and E. by those of Macerata and Spoleto. Its length from the Apennines, which border the valley of the Tiber above Città di Castello, down to the confluence of the Paglia with the Tiber, is about 60 miles, and its breadth varies from 20 to 35 miles. The area is 1447 square miles. The population in 1852 amounted to 222,926. The province of Perugia is entirely in the basin of the Tiber. The Lake of Perugia (*Trasimenus*) lies near the borders of Tuscany; its circumference is about 30 miles, the greatest width is about eight miles; the depth is not more than 30 feet. It contains three small islands. The lake is inclosed by hills on the north, east, and south, but the western shore is more open, merging into the wide plain of Cortona. This lake is fed by no permanent river, but by numerous springs which rise from the bottom of the bed; it has no natural outlet, and in seasons of rain, when numerous streams run into it from the neighbouring hills, it used to overflow the banks, and sometimes the waters have entered the plain of Cortona, and mixing with those of the Chiana, have flowed into the Arno. In order to prevent the mischief occasioned by these floods, a tunnel was cut in the 15th century by Braccia da Montone, lord of Perugia, through a hill on the south-east bank opposite the southern island of Polrese. The water on issuing out of the tunnel flows into a canal, sets in motion several mills, and after a course of about two miles enters the river Caina, an affluent of the Nestore, which is a feeder of the Tiber. The mouth of the emissary is above the ordinary or summer level.

water flows into it only in the winter or after heavy rains. The emissary was repaired by order of Pope Clement VIII. in 1602-3.

The site of the battle between Hannibal and the Romans is supposed to be near Passignano on the north-east side of the lake, where the hills recede some way from the shore. The province of Perugia is chiefly hilly, being crossed by offsets from the Apennine chain, which stretch southward in a direction parallel to the course of the Tiber. South of the town of Perugia are some extensive plains, one of which lies eastward towards Foligno, and another along the right bank of the Tiber, towards Città della Pieve. The principal affluents of the Tiber in the province of Perugia are the Chiascio, the Nestore, the Naja, and the Paglia which receives the Chiana, the outlet of the Lake of Chiusi in Tuscany. [CHIANA, VAL DL.]

The province of Perugia is the most fertile of the provinces south of the Apennines. The principal productions are corn, wine, oil, silk, and grass, on which large herds of fine horned cattle are fed: nearly one-half of the consumption of butcher's meat by the city of Rome is supplied by cattle from Perugia. The Lake of Perugia abounds with fish, which forms a considerable article of export; and the shores are frequented by numerous aquatic birds. The climate is healthy, except in a few low spots on the banks of the lake and in the valley of the Chiana near Città della Pieve.

The principal towns of the province are—PERUGIA; ASSISI; NOCERA. *Foligno*, a pleasant well-built town on the Topino, on or near the site of the ancient Fulginium, is said to have risen to importance only about the 11th century, after the destruction of the neighbouring town of Forum Flaminii. It has a handsome cathedral, several other fine churches; manufactures of woollens and silks, extensive paper-mills, and 7300 inhabitants. *Todi*, the ancient *Tudertum*, a city first of the Umbri, next of the Etruscans, and afterwards a Roman colony, stands on a hill above the Tiber. It has a cathedral, and another handsome church built after the design of Bramante, with several remains of Etruscan and Roman antiquities, among which are the town walls and the ruins of a temple of Mars. The population is about 3000. *Città di Castello*, a well-built town, with 5000 inhabitants, in the valley of the Upper Tiber, near the borders of Tuscany, contains several fine churches (in which are some good paintings), and a palace of the former baronial family of Vitelli. *Città della Pieve*, a small town situated on an eminence above the Chiana, has about 2000 inhabitants. *Gualdo*, a walled town of 5000 inhabitants, near the site of the ancient Tadinum, is situated at the foot of the Apennines. Its neighbourhood was the scene of the defeat of the Goths under Totila by the Romans under Narses. *Spello*, a few miles north of Foligno, is on the site of the ancient Hispellum, of which there are still considerable remains of its walls, a Roman gate called *Porta Veneris*, a triumphal arch in honour of the emperor Macrinus, and an amphitheatre in the plain below the town. Spello has several churches, with good paintings, a college, and about 2400 inhabitants.

PERUGIA, the chief town of the province of Perugia, in the States of the Church, is built on a high hill which forms two summits, on the left bank of the Tiber, 82 miles N. from Rome, and has about 19,000 inhabitants, including the suburbs. It is surrounded by walls in the form of a polygon. The streets are wide, and the squares are lined by massive old buildings. It has also numerous churches with lofty domes, fine gates, and retains all the appearance of an important though now somewhat decayed city. Perugia is a bishop's see, and it has a long-established university, which is attended by between 300 and 400 students. In connection with the university are a library of 30,000 volumes with some valuable manuscripts, a botanical garden, a collection of minerals, and a cabinet of antiquities, rich in Etruscan inscriptions, bronzes, vases, and medals. The Academy of the Fine Arts has a collection of pictures by natives of Perugia and its territory; there are also several private galleries of paintings. Perugia has a school of music, two theatres, a dramatic academy, assembly-rooms, and a literary club. The circumference of the walls is above six miles, but much of the area within is not built upon. The citadel, from which there is a splendid view, was built by Pope Paul III. Perugia has manufactories of silks, woollens, and soap; brandy distilleries; and a considerable trade in the products of its fertile territory—corn, oil, wool, wine, and cattle. Large cattle-fairs are held in August and November.

Among the many churches of Perugia, said to be above a hundred, the most remarkable are—the *Duomo*, or cathedral, which is built in the gothic style and decorated with good paintings. A celebrated painting by Perugino, representing the Marriage of the Virgin, which adorned this church, was taken away, with many other master-pieces, at the first invasion of Bonaparte. The church of San Francesco formerly contained the Descent from the Cross, by Raffaele, now in the Borghese Gallery. The vast Benedictine convent of San Pietro is decorated with several paintings by Vasari. The church of San Domenico has a fine coloured-glass window in the choir; it contains also the finely-sculptured tomb of Pope Benedict XI., who died at Perugia in 1304. The town-house (Palazzo dei Priori), a vast gothic building, and the residence of the delegate and of the municipal authorities, contains the archives of Perugia. The old exchange is adorned with beautiful frescoes by Perugino. The square before the cathedral contains a fine fountain, with sculptures by Giovanni da Pisa. In the square Del Papa is the bronze statue of Julius III. seated in a chair,

cast by Vincenzo Danti of Perugia. The Place Grimana has a handsome gate, said to be of Etruscan construction, but called the Arch of Augustus. The church of San Angelo is built on the site and with the materials of an ancient temple. About a mile from the walls of the town there is an ancient Etruscan sepulchral structure, with an arched vault and an Etruscan inscription. Many objects of remote antiquity have been discovered in the immediate vicinity of the city, which are deposited in the Archaeological Museum.

Perusia was one of the principal cities of ancient Etruria, but it seems to have been built before the Etruscan dominion by a colony of Umbri from Saraina. (Servius, x. 201.) It acted a principal part in the wars of the Etruscans against Rome; its troops were defeated by the consul L. Fabius Maximus, and then Perusia, together with Arretium, sued for peace and paid tribute to Rome, B.C. 294. (Livy, x. 31, 37.) In the second Punic war Perusia was one of the allied towns that sent timber and provisions to Scipio to fit out his armament against Africa. During the second triumvirate, the consul Lucius Antonius shut himself up in the town of Perusia, where he sustained a long siege, and at last, through famine, was obliged to surrender to Octavianus, who gave up the town to plunder. Perusia was on that occasion nearly destroyed by fire. It was afterwards rebuilt under the name of Perusia Augusta. At the fall of the Western empire it was devastated by the Goths under Totila. It afterwards ruled itself for a time as a free municipality, had its factions of Guelphs and Ghibelines, its own tyrants, and at last submitted voluntarily to the rule of Braccio da Montone, one of the best chieftains of the middle ages. Pope Paul III. united it to the Papal State.

PÉRUEWELZ. [HAINAULT.]

PESARO-E-URBINO, a legation or province of the States of the Church, is bounded E. by the province of Ancona, N. by the Adriatic, W. by the province of Forli and Tuscany, and S. by the province of Perugia. The area is 1353 square miles: the population in 1850 was 241,612. The central ridge of the Apennines, which divides the province of Pesaro-e-Urbino from Tuscany, projects eastward towards the Adriatic in the neighbourhood of Urbino, and sends off several offsets, which run to the sea-coast, forming the natural boundary between Northern and Southern Italy. The mountain on which San Marino stands forms part of one of these offsets. [SAN MARINO.] Several streams run in a north-east direction from the Apennines to the sea. The Conca runs between the provinces of Forli and Pesaro, and enters the sea near La Cattolica. The Foglia (ancient Pisaurus) rises in the Apennines of Carpegna, on the Tuscan border, and enters the sea at the town of Pesaro. Farther south is the Metauro, the largest river in the province, which rises on the east side of the Apennines that bound the valley of the upper Tiber. It runs first due east, then north-east past Fossombrone, and enters the sea near Fano, after a course of 60 miles. The principal feeder of the Metauro is the Cantiano, which comes from the mountains of Gubbio, and joins it on the right bank between Fossombrone and Furlò. According to a tradition among the country-people, the spot at which Hasdrubal was defeated and killed is a plain above the confluence of the Cantiano. A tower on a hill, on the right bank of the Metauro, is called the Sepulchre of Hasdrubal. The Flaminian road from Fano crosses the Metauro above Fossombrone, and follows the course of the Cantiano, ascending the Apennines above the source of the latter river, and afterwards descending by Gualdo to Nocera. The Césano rises in the mountains of Avellana, passes Périgola, and enters the sea north-west of Sinigaglia. The Misa enters the sea at Sinigaglia.

The surface of the province is hilly; some parts of it are very fertile, but the mountains are generally barren. The lower hills are planted with vines and olive- and mulberry-trees. Good pasture is also abundant. Coal is found near Pesaro.

Towns.—URBINO. *Pesaro*, the ancient *Pisaurum*, a well-built town and a bishop's see, built upon a rocky and wooded hill above the mouth of the Foglia, has several fine churches with some good paintings; several palaces, one of which is the residence of the legate; a public library of 15,000 volumes, with a museum and a cabinet of models. Pesaro has a small harbour, several manufactories of silks, pottery and glass, and leather, and about 17,000 inhabitants. It is surrounded by a bastioned wall. In the 16th century it was the residence of the dukes della Rovere, great patrons of literature and the arts. The surrounding territory, which produces excellent figs, is covered with pleasant country-houses. Pesaro has a civil and criminal court, a commercial tribunal, a college, and a clerical seminary. It is the birthplace of Rossini. *Fano*, the ancient *Fanum Fortunæ*, is a sea-port town at the mouth of the Metauro, with about 10,000 inhabitants. It has a triumphal arch dedicated to Augustus, several churches with paintings by Guido and Guercino, a handsome theatre, some silk manufactories, and a public library. The town is surrounded by walls. The harbour is nearly useless, from the accumulation of sand; only vessels of very light draught enter it. *Sinigaglia*, the ancient *Sema Gallica*, is a bustling town with a small harbour, several churches and convents, and about 8000 inhabitants. It is chiefly remarkable on account of its great fair, which is held in the month of July, and is frequented by trades-people from all parts of Italy, and also from other countries, for the sale and purchase of colonial produce, and of British, French, and German manufactures. All articles enter the fair free, but pay duty on passing the gates into

the country. The fair of Sinigaglia has been held since 1200, and was made free by Pope Paul II. in 1464. *Fossombrone*, situated on a hill about a mile and a half from the ruins of *Forum Sempronii*, which are lower down the banks of the Metauro, is a bishop's see, has several churches and convents, a bridge over the Metauro, and about 6500 inhabitants. The silk manufactured by steam machinery at Fossombrone is considered the best in Italy. The town is also famous for its woollen manufactures. The Flaminian Way from Fano to Foligno through Fossombrone traverses an extremely beautiful country on the left bank of the Metauro. Crossing the Metauro, it then runs up the left bank of the Cantiano, traversing the scene of the great battle in which Hasdrubal was slain, B.C. 207. At the Pass of Furlo the road is carried for above half a mile on shelves and through a tunnel, out in the rocky precipices that overhang the Cantiano. *Gubbio*, the ancient *Iguvium*, a city of the Umbri, is situated on the southern slope of the Apennines, near the source of the Chiascio, an affluent of the Tiber. It has several churches and other buildings worthy of notice, and about 5000 inhabitants. Old Iguvium was in a lower situation than the present town; the amphitheatre is still in tolerable preservation. There is also an ancient tomb, with other remains of antiquity. Traces of the temple of Jupiter Apenninus, an old deity of the Umbri, are visible a few miles from Gubbio. In this neighbourhood also were found, about the middle of the 15th century, the seven bronze tablets written partly in Etruscan and partly in Latin characters, and known by the name of the Eugubine Tables, which are now in the museum of Gubbio. *Cagli*, the ancient *Callia*, a Roman colony, on the Flaminian road, has about 10,000 inhabitants, some remains of antiquity, and an important trade in leather and dressed skins. *Urbania*, a modern town, which derives its name from Pope Urban VIII., is situated on the banks of the Metauro; has a collegiate church, a manufactory of majolica, or delft ware, and about 4400 inhabitants. *Pérgola*, on the Césano, has 5600 inhabitants, and extensive carpet-factories.

PESCARA. [ABRUZZO.]

PESCIA. [FIRENZE.]

PESCINA. [ABRUZZO.]

PESCO COSTANZO. [ABRUZZO.]

PESHAWUR, formerly a frontier town of Afghanistan, is now included in the government of the Panjab, and occupied permanently by a body of British troops. The town is situated in a spacious and well-watered plain, in 34° N. lat., 71° 38' W. long., 12 miles E. from the Khyber Pass, and 40 miles W. from Attock. The town, which is about 5 miles in circumference, is defended by a fort, and contains a population of about 50,000. The streets are narrow, but are paved; the houses are generally constructed of brick. The public buildings include the mosques and a large caravanserai.

PESQUEIRA. [BEIRA.]

PESTH, the most populous city in Hungary, is situated in 47° 30' N. lat., 19° 4' E. long., on the left or east bank of the Danube, about 20 miles from the spot where the course of the river, till then nearly from west to east, makes a sudden bend to the south. On the other side of the Danube, which is here about 1500 feet broad, is the city of Ofen. [BUDA.] The two cities are connected by a bridge of boats, and by a fine suspension bridge, erected by Mr. Tierney Clark, an English engineer, and opened in January 1849. The city of Pesth is about 7 miles in circumference. It consists of five principal parts—1, the old town, which, though antiquated and irregularly built, contains some fine buildings; 2, the Leopoldstadt, or new town; 3, the Theresienstadt; 4, the Josephstadt; and 5, the Franzstadt—so named after the sovereigns in whose reigns they were built. Leopoldstadt is now joined to the old town, the walls which formerly surrounded the latter having been levelled to make room for new buildings. Leopoldstadt is built on a very regular plan. The other three parts or suburbs are separated from these two by a very broad street. The population of the city, including the garrison, is about 75,000, of whom about five-sixths are Roman Catholics. Among the 12 Roman Catholic churches, that of the university is distinguished by its fine steeple and excellent fresco paintings. The Greek church is one of the finest buildings in the city, but the Calvinist churches are very plain edifices. Of the other public buildings, the following deserve notice: the great barracks built by Charles VI.; the hospital of invalids, which serves as barracks for a regiment of artillery; the theatre, a very handsome edifice, capable of containing 3000 spectators; the national museum, and the university. The university was founded in 1635 at Tyrnau. In 1777 it was transferred by Maria Theresa to Ofen, and in 1784 by Joseph II. to Pesth. There are 45 professors and about 700 students. The university has a library of 60,000 volumes, a cabinet of natural history, and an anatomical and pathological collection. Connected with it are the botanic garden, the veterinary school, the university hospital, and the observatory at Ofen. [BUDA.] The national museum, which is independent of the university, was founded by Count Szecsenyi, who gave to it his fine library and a valuable collection of Hungarian coins and medals. The collection of coins and medals contains above 60,000 specimens, of which the Greek, Roman, and other antique silver medals amount to above 12,000. The gymnasium of the Piarists has 800 scholars; and the city normal school (likewise in the convent of the Piarists), above 400. The Magyar Academy is an institution of recent establishment.

The manufactures of Pesth are of silk, cotton, leather, jewellery, and musical instruments; that of tobacco is a government monopoly. Pesth has, next to Vienna, the greatest trade of any city on the Danube. It has four fairs, each of which lasts a fortnight. The principal articles sold are manufactures and colonial produce, and the natural products of the country, such as cattle, wine, wool, tobacco, and raw hides, honey, wax, &c. The environs of Pesth are not picturesque, the city being situated on a sandy plain, but there are some fine promenades, such as the Grove, a mile and a half from the city; the gardens of Baron Orczy; and the Palatine, or Margaret Island, in the Danube, which is laid out in walks and gardens with great taste. Pesth is connected by railway with Vienna.

Pesth has been frequently laid waste by war, and was for nearly 160 years in the possession of the Turks, who were not finally expelled till 1686. Civil war followed, and at the beginning of the 18th century Pesth was one of the most inconsiderable towns in the kingdom. Its improvement may be dated from the reign of Maria Theresa, and it has since been progressive and rapid. The winter of 1838 was disastrous to Pesth, above 1200 houses being destroyed by the overflowing of the Danube, but in rebuilding the houses considerable improvement was effected in the appearance of the town. The Hungarian insurrection of 1848 affected very materially the condition of Pesth and of its sister town, Buda. The principal incidents of the struggle, so far as the Hungarian capital is concerned, are noticed in the article BUDA.

PETERBOROUGH, Northamptonshire, a city, parliamentary borough, and the seat of a Poor-Law Union, is situated on the left bank of the river Nen, in 52° 35' N. lat., 15' W. long., distant 40 miles N.E. from Northampton, 81 miles N. by W. from London by road, and 76 miles by the Great Northern railway. The population of the parliamentary borough in 1851 was 8672. The borough returns two members to the Imperial Parliament. The living is a vicarage in the archdeaconry of Northampton and diocese of Peterborough. Peterborough Poor-Law Union contains 40 parishes and townships, with an area of 100,514 acres, and a population in 1851 of 28,957.

At this place a Benedictine abbey was founded by Peada, son of Penda, king of the Mercians, soon after the revival of Christianity among the Saxons. About 870 the abbey was destroyed by the Danes; it was restored in the reign of Edgar, about which time the name of Burgh, otherwise Gilden-burgh, from the wealth and splendour of the abbey, or Peter-burgh, from the saint to whom it was dedicated, was applied to the town. On two occasions the greater part of the village and the abbey were destroyed by fire. The monastic buildings were gradually restored and augmented; and at the dissolution of the religious houses under Henry VIII., Peterborough was one of the most magnificent abbeys then existing. Having been selected as the seat of one of the new bishoprics erected by Henry, the buildings were preserved entire. In the civil war of Charles I. great devastations were committed. The cathedral itself was much injured, and many of the other conventual buildings were utterly demolished and the materials sold.

The city is regularly laid out and well-paved and lighted. The corn exchange, a neat building in the Italian style, erected in 1848, contains a spacious market-room, lighted by a handsome lantern roof. The jail and house of correction for the liberty of Peterborough is in the Norman style. Besides the cathedral, there is a large parish church, a handsome stone building. There are also chapels for Wesleyan Methodists, Independents, Baptists, and Primitive Methodists. The Cathedral Grammar or Chapter school has an endowment of 100*l.* per annum for the education of 20 boys, who receive an annual payment of 5*l.* each, and are entitled to compete for three scholarships at St. John's College, Cambridge. The number of scholars in 1854 was 33. There are also another Endowed school, National and Infant schools, and a mechanics institute, with a library, a dispensary and infirmary, rebuilt in 1845, and a savings bank. There are workhouses for 52 poor persons.

The cathedral of Peterborough is a regular cruciform structure of Norman and early English character, remarkable for the solidity and massiveness of its construction. Its erection was commenced in 1117 by John de Sais, or Sees, a Norman, then abbot. It is probable that the choir was the part first erected. It has a semicircular eastern end: the aisles have subsequently been carried out square by an addition of perpendicular character. The building was carried on by degrees under successive abbots. The central tower is low, and forms a lantern. The fine western front of the cathedral is an addition to the nave; it consists of a lofty portico of three compartments, that in the centre being the narrowest; each compartment has an arch equal in height to the nave, supported by triangular piers faced with clustered shafts, and is surmounted by a lofty and richly ornamented pediment and a cross. At each extremity of the western front is a lofty turret, flanked at the angles by clustered shafts and pinnacles, and crowned with spires. The inner roof of the nave and of the great transepts is painted wood; the choir has a wooden groined roof of very inferior workmanship and appearance. The dimensions of the church are as follows:—Total length 476 feet 5 inches, breadth of the nave and aisles 78 feet, height of the ceiling of the church 73 feet, breadth of the church at the great transepts 203 feet, breadth of the transepts 69 feet, height of lantern 135 feet; length of the western front 156 feet, height of the turrets at the

extremities of the west front 156 feet, height of the central tower from the ground 150 feet. At the west end is a large court, the entry to which from the town is by a gateway of Norman architecture, with some later additions. On the south side of the court is a range of the ancient monastic buildings. On the greater part of the other sides the cathedral is surrounded by the ancient cemetery of the citizens. The entrance gate to this cemetery from the western court is by a gate of late perpendicular architecture, remarkably rich in ornament. The bishop's secretary's office, and registry for wills and diocesan documents, lately erected in the minster precincts, harmonises in style with the cathedral buildings.

The trade carried on at Peterborough is chiefly in corn, coal, timber, lime, bricks, and stone. There is a very extensive steam flour-mill. The Nen is navigable for boats. Markets are held on Wednesday and Saturday; and fairs are held on July 10th and October 2nd.

There is no corporation at Peterborough. The dean and chapter exercise a certain jurisdiction; their steward holds a court for trying all actions, personal or mixed, arising within the city. Peterborough has sent members to parliament from 1 Edward VI. (1647).

The bishopric of Peterborough comprehends the counties of Leicester, Northampton, and Rutland, and is divided into the arch-deaconries of Northampton and Leicester. It consists of 524 benefices, and includes the dean, 2 archdeacons, 4 canons, 14 honorary canons, 8 minor canons, and a chancellor. The income of the bishop is fixed at 4500*l*.

PETERBOROUGH. [CANADA.]

PETERHEAD, Aberdeenshire, Scotland, a parliamentary burgh and sea-port, in the parish of Peterhead, is situated in 57° 30' N. lat., 1° 46' W. long., about 32 miles N.N.E. from Aberdeen, on a peninsula running south-eastward into the North Sea. The two harbours, the New North Harbour and the South Harbour, are near the south-eastern extremity of the peninsula, in opposite sides of which they are formed; both harbours are furnished with quays and protected by piers. The population in 1851 was 7298. The town is governed by a provost and 11 councillors. It unites with Banff, Cullen, Elgin, Inverury, and Kintore in the return of one member to the Imperial Parliament. The streets of the town are generally paved with dressed granite and lighted with gas. The houses are built of granite, which is quarried near the town. The principal public building is the town-hall. The market-cross is a granite pillar of the Tuscan order. The parish church has a granite spire 118 feet high. There are chapels for Episcopalians, the Free Church, United Presbyterians, and Independents, a parochial school, the 'town school,' a reading society, with a large library; a scientific association, and a news-room. The chief exports are grain, meal, butter, pork, herrings, cod-fish, and eggs; the imports are lime, wool, timber, salt, flour, and general merchandise. The number of vessels registered as belonging to the port of Peterhead on December 31st 1853 was 48, of 9731 tons. During the year 1853 there entered the port 665 sailing-vessels, of 88,321 tons, and 24 steam-vessels, of 3888 tons burden; and there cleared 664 sailing-vessels, of 40,778 tons, and 24 steam-vessels, of 3888 tons burden. The herring fishery is usually productive. There is a salmon fishery in the river Ugie. The market is on Friday; two half-yearly fairs are held.

A few miles south from Peterhead, on the sea-coast, are situated the Bullers of Buchan, a nearly round basin, about 30 yards wide, formed in a hollow rock which projects into the sea. The waves enter the basin under a natural arch. It is open at the top, round which there is a narrow path about 30 yards from the water; when the sea is high in a storm the scene is exceedingly grand.

PETERSBURG, ST., a government of European Russia, extends from 57° 56' to 60° 35' N. lat., 21° 5' to 38° 52' E. long. It is formed of the ancient province of Ingermanland, or Ingria, a part of Carelia, and some circles formerly belonging to Novgorod. It is bounded N. by the Gulf of Finland, Finland, and Lake Ladoga; E. by Novgorod; S. by Pakow; and W. by Lake Peipus and Esthonia.

The country is for the most part level, and in the north-east part it is low, and full of swamps and morasses. In the south it is rather more elevated. The government contains many forests and some good arable land. More than half of the surface is covered by morasses, forests, and lakes. The principal lakes are the Ladoga, Peipus, and Pakow. The chief rivers are the Neva, the Luga, the Narova, and the Wolohow. The Neva issues from Lake Ladoga, near the fortress of Schlusselburg, from which point to its mouth the whole course, including the windings of the river, is 40 miles to the Bay of Cronstadt, which may be considered as the mouth of the river. The banks are rather elevated; the breadth varies from 600 to 1200 feet, and the water is remarkably pure, light, and limpid. Within the city of St. Petersburg it divides into several branches. The climate is cold, damp, and not favourable to agriculture. The summer is short, but in general fine and often very hot: thunder-storms are neither frequent nor violent. The area of the government is about 20,520 square miles. It is divided into nine circles. The population in 1846 was 648,700, exclusive of the capital. The crops raised are insufficient to supply the great population of the capital. There are in the vicinity of St. Petersburg fine gardens and parks; kitchen-gardens, which produce vegetables in abundance, and numerous hot-houses which supply the capital with pines, melons, pine-apples, asparagus, &c. Timber is the chief

source of wealth; the forests, though much injured by waste and bad management, being still of immense extent. The country-people rear great numbers of geese, ducks, and turkeys for the markets of St. Petersburg. Fish are tolerably abundant. The mineral kingdom affords granite, limestone, marl, brick-earth, potters'-clay, &c. The villagers manufacture wooden wares of various kinds. Trade and manufactures are almost wholly confined to the capital: there are however considerable manufactories of cloth, camlet, and blankets, as well as several glass-houses at *Jamburg* (2000 inhabitants), on the Luga, and of printed calico at *Schlusselburg*, on an island where the Neva issues from Lake Ladoga. *Narva*, the capital town of the circle of Narva, is situated in 59° 24' N. lat., 28° 12' E. long., and has a population of 5500, most of whom are of German descent. It stands chiefly on the left bank of the river Narowa, which comes from Lake Peipus and falls into the Gulf of Finland about 10 miles below the town. It is surrounded with a rampart, and in the suburb of Ivan-gorod, on the other side of the river, there are the remains of a large fortress. Narva is divided into the old and new town, which are separated by a rampart and by the river. The houses are well built of brick, and stuccoed white. There are 7 stone and 2 wooden Greek churches, and 2 stone Lutheran churches, an exchange, and a good German school. The port has a considerable export trade in balsa, planks, flax, hemp, corn, and furs. The fishery in the Baltic is very productive, and the lampreys and smoked salmon of Narva are celebrated. The barks which come down the Narowa from Lake Peipus are unloaded about a mile from the town, at the island of Kragholm, where there is a fall in the river about 12 feet perpendicular. Narva was built in the year 1213 by King Waldemar. On the 30th Nov., 1700, King Charles XII., with 8200 Swedes, totally defeated 60,000 Russians under Peter the Great and the Duke of Croy, and stormed their intrenched camp near the town. In 1704 however Peter the Great took it by storm, and it has ever since remained in the possession of Russia. *Gatschina*, situated on a beautiful lake formed by the Ischora, has 7000 inhabitants, a military orphan-house, a foundling hospital, and a palace, formerly a favourite residence of the late empress, the consort of Alexander I. *Tzarskocelo*, or the Emperor's Village, about 15 miles S. from St. Petersburg, has sprung up around the palace of that name, which was erected by the empress Elizabeth, and restored after a fire by Alexander I. [CRONSTADT; PETERSBURG, ST.]

PETERSBURG, ST., the capital of the Russian empire, is situated in 59° 58' N. lat., 30° 20' E. long., at the eastern extremity of the Gulf of Finland, and at the mouth of the river Neva, and had 478,487 inhabitants in 1848. St. Petersburg has at first sight a striking appearance: the breadth and cleanliness of the streets, the elegance of the buildings, the noble canals which traverse the city, and the regularity of the edifices on their banks, make altogether a most impressive spectacle. All is grand, extensive, large, and open; the streets seem to consist entirely of palaces; the edifices are lofty and elegant. The public structures, quays, piers, and ramparts, are composed of masses of solid granite. In 1703 Peter the Great chose this spot, then just taken from the Swedes, for the site of a fortified sea-port. In some respects the position was unfavourable as the site of a capital. It was a low marshy island, in summer covered with mud, and in winter a frozen pool. The adjacent country was covered with marshes and impenetrable forests, the haunts of bears and wolves. But it was important to have a strong position like this as a check upon the Swedes: besides, this was the only place through which an intercourse could be established with civilised Europe, an object which Peter had much at heart. When Peter the Great died in 1725 the city contained 75,000 inhabitants; in 1762, when Catherine II. ascended the throne, the population was 110,000; it is now about 500,000, of whom nearly two-thirds are males.

The Neva, on the banks and islands of which the city is built, runs first towards the north, and then turning to the west, sends out towards the north an arm called the Nevka, which again divides into two branches called the Great and the Little Nevka. The main river, after throwing out the Nevka, divides into two branches—the Little Neva, which runs north-west; and the Great Neva, which runs south-west. Thus the Gulf of Cronstadt receives the Neva by four great arms, which form several islands. On the island to which the name of St. Petersburg was first given Peter laid the foundations of a fortress. In the spring of 1703 he collected a number of Russian, Tartar, Cossack, Calmuck, Finnish, and other peasants, and workmen were sent for from all parts of the empire. At this period, in consequence of the state of war, soldiers were encamped on both sides of the Neva. The great difficulty was to find subsistence for so many persons. The surrounding country was desolated by a long war, and provisions were very scarce and dear. The workmen, exposed to cold and damp, perished from fatigue and want, and the foundation of St. Petersburg cost the lives of 100,000 men.

The city, in its present state, is of a circular form, but rather irregular. The circuit is nearly twenty miles, but the smaller portion of the area is covered with buildings. Fires frequently occur, in consequence of many houses being built of wood; but wooden houses are not allowed to be built now, except in the suburbs. The most considerable and the handsomest portion is the southern, on the left bank of the Neva, including the four Admiralty quarters; between this and

the northern or right bank of the Great Neva lie, from south to north, 1, Wassily-Ostrov; 2, St. Peter's Island, the Island of Petrovsky, and the Apothecaries' Island; 3, Kammenoi-Ostrov, Krestovskiy, and Yelagin, a group of islands covered with gardens, groves, avenues of trees, and country-houses, which in summer are the resort of the rich. The city is divided into 12 districts, and these again into quarters. Few cities have such long and broad streets as St. Petersburg. They are from 60 to 120 feet broad; and the Nevsky Perspective is 14,350 feet long, the Great Perspective 10,220 feet, and eight others 6000 feet. The stone pavement is in general bad, and requires to be laid down afresh every year; a pavement of hexagonal blocks of wood, covered with tar, has been found to be more durable and cheaper, and is used in many of the principal streets, which have broad flag-pavements for the foot-passengers. There are no wells, but the water of the Neva is held in high estimation by the inhabitants. A bridge of granite has been recently constructed across the Neva. There are two bridges of boats over the Neva, and three over its arms; one of them, near the citadel, is 2730 feet long. These bridges are removed whenever danger is apprehended from the ice, both at the beginning of the winter and in the spring. There are about 130 bridges over the canals, many of which are of granite; several of cast-iron, two of which are handsome suspension bridges; and many of wood. The Great or Southern Neva is here from 900 to 1200 feet wide, and its south or left bank, to the extent of 10,000 feet, exclusive of the Admiralty, which divides it into two parts, is furnished with a quay of granite; a work which for utility and magnificence will remain a lasting monument of the reign of Catherine II. The part of the quay to the east of the Admiralty is called the Imperial Quay, or the Quay of the Court; that on the west was, till the present war broke out, denominated the English Quay, being lined with a row of splendid mansions originally built or occupied by English merchants. The Quay of Wassily-Ostrov, on the opposite bank, which was completed in 1834, is still finer, but not so extensive. It is adorned with two colossal sphinxes brought from Egypt, which are placed in front of the Academy of Arts. Among other buildings here are the Custom House, the Academy of Sciences, and the Hotel-des-Mines. There are 140 Russian-Greek churches, 40 of other Christian communities, 2 Greek convents, a synagogue, and a mosque. Divine service is performed in 15 languages. Of the Greek churches the most remarkable are—1, the Isaac's church, a magnificent edifice built of marble; 2, the beautiful cathedral of the Mother of God of Casan; 3, the church of St. Nicholas; 4, the church of Alexander Nevsky, in the convent of the same name, containing the body of the saint in a silver sarcophagus; 5, the church of St. Peter and St. Paul, in the citadel, which contains the tombs of the imperial family. The number of magnificent palaces and public buildings is so great that we can do little more than barely enumerate the most remarkable:—1. The Imperial Winter Palace has been described as the most conspicuous by all travellers; it was entirely destroyed by fire in 1837, but was rebuilt in all its magnificence in the space of twelve months. Two of the apartments deserve especial notice—the Salle Blanche, or White Hall, a beautiful ball-room, the decorations of which are in pure white relieved with gilding; and St. George's Hall, which is fitted up with great magnificence, and is used for the reception of ambassadors and on other state occasions. By the great exertion of the imperial guard, the fire was prevented from extending to the Hermitage, built by Catherine, which contains a costly library, a valuable collection of paintings, and other treasures. The Hermitage communicates with the Winter Palace by covered galleries. 2. The Marble Palace, an elegant but gloomy-looking building. 3. The Taurida Palace, with its fine gardens; so called in honour of the conquest of the Crimea, the ancient Taurida. This palace was presented to Prince Potemkin by Catherine II., but subsequently became the property of the crown by purchase. 4. The Anitchkov Palace, the residence of the late emperor Nicholas while he was grand-duke. 5. The Old Michailov Palace, where the emperor Paul resided and died. 6. The New Michailov Palace was built between the years 1819 and 1825, and is one of the finest palaces in Europe. The number of what are called crown-buildings is very great. Among them are—1, the Admiralty, surrounded on three sides by the dockyards; 2, the splendid building belonging to the general staff; 3, in the very extensive Isaacs Square, the Senate House, the General Synod, the Palace of the War Department, the large and handsome riding-school of the guard; 4, the Alexander Theatre, in the Nevsky Perspective; 5, the fine palace of the Imperial Assignat Bank; 6, the New Arsenal; 7, the Gostinnoi-Dvor, or Merchants' Inn, a great bazaar, two stories high; 8, the Academy of the Fine Arts, &c. The Field of Mars, adorned with a statue of Suwaroff, is extensive enough to admit 40,000 or 50,000 men to be reviewed in it. The Field of Mars is bounded on two sides by the imperial gardens, on the third by the Winter Palace, and on the fourth by a row of massive buildings. The most recent of the public monuments is the Alexander Column, about 150 feet in height, erected in honour of Alexander I. There are also a celebrated equestrian statue of Peter the Great, and a granite obelisk, 82 feet high, in honour of Romanzov.

The Russian sovereigns have done much to promote science and learning; academies and schools have been founded and liberally endowed by them, and learned men invited from foreign countries. Among these establishments are—the university, founded in 1819; the academy of sciences, founded by Peter I., on the plan of Leibnitz;

the academy of fine arts; the pedagogical institution for training teachers in the higher departments of learning; the ecclesiastical seminary in the convent of St. Alexander Nevsky; the medico-chirurgical academy; four gymnasia; the Oriental institution; numerous institutions for the army and navy; the mining academy; the female schools of St. Catherine; the Smolnoi convent; and the founding hospitals. The collections of all kinds are very rich. In the splendid collection of minerals of the Mining Academy there is a lump of native gold weighing 80 lbs., and a lump of platinum of 10 lbs. The Imperial public library consists of above 400,000 volumes; that of the Academy of Sciences of 100,000 volumes; and almost every establishment has its own library. Hospitals and charitable institutions of all descriptions are numerous and well supported.

The ground on which St. Petersburg stands is low and swampy, and the surrounding country is a morass and forest, except where it has been ameliorated by industry and art. It is liable to be inundated by the Neva. In general the ice in the Neva does not break up before the 22nd of March, nor later than the 27th of April; the earliest time of the river's freezing is the 20th of October, and the latest the 1st of December. The few bright days are generally during the greatest heat or the severest cold. The spring is very short; a sudden transition brings summer at once, which all classes hasten to enjoy, in the adjacent villas, in hospitality and social amusements. In summer the nights are bright and generally warm. During the night, parties, frequently attended by music, promenade the streets in every direction; and the simple melody of the popular ballads floats on the air from the boats that glide on the canals and the smooth surface of the Neva. In autumn St. Petersburg is one of the most disagreeable spots on the face of the earth. In winter the cold, when it once sets in, is equal and constant, and it strengthens and braces the body. Travelling in sledges over the hard snow is convenient and agreeable, and the people defend themselves very efficiently against the cold. All commercial intercourse with foreign countries being suspended during the winter, the citizens indulge their national fondness for luxury and amusements. The great masked ball (as it is called) on New Year's Day brings together persons of all classes in the Winter Palace; tickets are very easily obtained, and above 30,000 are usually issued. Nobody however is masked, nor is there any dancing. The river being frozen over for several months, the populace are amused with swings, roundabouts, and the like; and by the ice-hills, which are inclined plains of considerable height, covered with blocks of ice. The ascent is by a flight of steps at the back. A low sledge with one person in it glides down the plane with such rapidity that it is carried by the impetus to the next ice-hill, when the driver takes his sledge on his back, ascends the steps, and descends on the other side. There are likewise great popular amusements during Lent in Isaac's-square. The bath establishments are much frequented.

In summer those persons who have the means go into the country. There are numerous country-houses in the islands, and on the road to Peterhof, Strelna, and Oranienbaum. Peterhof, on the Bay of Cronstadt, the road to which is a noble causeway bordered by fine gardens and country-seats, has a large garden and fine waterworks. A grand fête is generally celebrated here on the 13th of July in honour of the birthday of the empress Alexandra, when the gardens are splendidly illuminated and enlivened with bands of music, and sometimes as many as 250,000 persons are assembled. Oranienbaum, on the Gulf of Finland, is still more beautifully situated than Peterhof. Zarskoje-Selo is a very magnificent imperial country-seat, with an immense park and noble gardens. A large portion of this palace was burnt down in 1820. At a short distance is the Pulkowaberg, a fine observatory, erected by the emperor Nicholas. Pavlovsk, near the town of the same name, is an imperial country-seat, with a fine park laid out in the English style by Brown. At Gatschina, Tschesma, and Strelna, there are likewise country-seats belonging to the imperial family. [CRONSTADT.] In 1854 batteries and strong defensive works were erected on both sides of the Neva, in anticipation of an attack by the Anglo-French fleet upon Cronstadt and the capital.

St. Petersburg is not only the capital but the greatest manufacturing city of the empire. There are numerous manufactories of silk, cotton, woollen, leather, glass, gold and silver articles, watches, surgical instruments, paper, snuff and tobacco, sugar, &c. Some manufacturing establishments the government has considered it advisable to carry on upon its own account; such are the great manufactory of tapestry, a large manufactory of aqua-fortis, with an assay-office and a mint; a plate-glass manufactory, which produces mirrors 14 feet high and 7 feet wide; a porcelain manufactory; a great manufactory of cotton and linen, in which steam-engines are employed, at Alexandrovsk, near the city; a cannon-foundry, and powder-mills.

The commerce of St. Petersburg is very considerable. Ships of large burden cannot come up to St. Petersburg in consequence of a bar across the mouth of the Neva, which has not more than nine feet of water upon it. The gross imports into St. Petersburg in 1849 were valued at 71,546,996 silver rubles, or about 11,300,000 sterling; the exports amounted to 38,340,747 silver rubles, or about 6,000,000 sterling. The chief items in the exports were hemp, flax, tow, linseed, tallow, hides, various hempen and flaxen manufactures, timber, leather, bones, potash, bristles, iron, copper, furs, &c. The imports are chiefly colonial produce; tissues of cotton, flax, silk, and wool; dyestuffs, wine, spirits, &c. The harbour is at Cronstadt. [CRONSTADT.] When large

ships are built, the hull is usually constructed at St. Petersburg, and then towed down the river by steamers to be fitted up at Cronstadt. In the transit they are placed on large rafts called camels. A canal connects the river system of the Neva with that of the Volga, thus affording an unbroken water communication between the Baltic and the Caspian seas, a distance of upwards of 1400 miles. St. Petersburg is connected by railway with Moscow, a distance of 400 miles.

(Milner, *The Baltic, its Gates, Shores, and Cities*, London, 1854; Kohl; *Plan of St. Petersburg*, published by the Society for the Diffusion of Useful Knowledge.)

PETERSFIELD, Hampshire, a market-town, parliamentary borough, and the seat of a Poor-Law Union, in the parish of Petersfield, is situated in 51° 1' N. lat., 0° 56' W. long., distant 18 miles E. by S. from Winchester, and 54 miles S.W. from London. The population of the parliamentary borough in 1851 was 5550. A mayor is chosen annually, but his only function is that of returning-officer at parliamentary elections. The borough returns one member to the Imperial Parliament. The living is a curacy, annexed to the rectory of Buriton, in the archdeaconry and diocese of Winchester. Petersfield Poor-Law Union contains 13 parishes and townships, with an area of 40,112 acres, and a population in 1851 of 7814.

Petersfield is a clean country town, well supplied with water, lighted with gas, and paved. Besides the parochial chapel, a building chiefly of the 12th century, with fine Norman arches, there are a chapel for Independents, Churcher's college or school, National, British, and Infant schools, a library and reading-room, and a savings bank. Near the chapel is an equestrian statue of William III. A county court is held. The market is on alternate Wednesdays. Fairs for cattle and sheep are held on July 10th and December 11th.

PETERWARDEIN, or **PETERVARA**, the principal and frontier fortress of Austrian Slavonia, is situated in 45° 15' N. lat., 19° 55' E. long., in the neighbourhood of some mountains and fruitful hills, on the right bank of the Danube. On a rock isolated on three sides stands the upper fortress and the hornwork; at the northern foot of the rock lies the lower fortress, which includes what is properly the town, and is partly on a gentle slope. It is a place of extraordinary strength both by nature and art. The lower fortress has very broad and deep moats, which may be filled with water from the Danube. One principal street, and two others parallel to it, with a pretty extensive parade, form the whole town. The principal buildings are the arsenal, the residence of the commandant, and the Catholic church. The population of the town not including the garrison is stated at 3860. The fortress is capable of containing a garrison of 10,000 men. Peterwardein is connected, by a bridge of boats over the Danube (here 700 feet wide, and from 50 to 60 feet deep), with the Hungarian town of Neusatz, on the opposite bank. [HUNGARY.]

PETHERTON. [SOMERSETSHIRE.]

PETROCA. [ACONCAGUA.]

PETRA, which lay nearly half way between the Dead Sea and the head of the Ælantic Gulf, was one of the most important towns in the north of Arabia, and the capital of the Nabathæi. It is in all probability the Sela of the Old Testament, which signifies, like the Greek word, a 'rock.' This town, which originally belonged to the Edomites, was taken by Amaziah, king of Judah, who changed its name into that of Joktheel (2 Kings, xiv. 7; compare Joseph., 'Antiq.' ix. 9, § 1); but it seems in later times to have belonged to the Moabites. (Isaiah xvi. 1.)

Petra is described by Strabo (xvi. p. 779) and Pliny ('Hist. Nat.' vi. 32) as situated on level ground about two miles in circumference, and surrounded by precipitous mountains, the principal one of which has been identified with Mount Hor of the Old Testament. The town itself was well watered, but the surrounding country, and especially the part towards Judæa, was a complete desert. It was 600 Roman miles from Gaza, and three or four days' journey from Jericho. In the time of Augustus, Petra was a large and important town, and its greatness appears to have been principally owing to its situation, which caused it to be a great halting-place for caravans. It maintained its independence against the attempts of the Greek kings of Syria (Diod. Sic. xix. 95-97), and was governed by a native prince in the time of Strabo. It was taken by Trajan (Dion Cass., lxxviii. 14); and it appears from coins that Hadrian called it after his own name.

The ruins of Petra still exist in the Wady Musa, two days' journey from the Dead Sea, and the same distance north-east of Akaba. Captains Irby and Mangles visited Petra in 1818, and gave a minute description of the ruins, and from them and from M. Laborde, who published an account in 1836, we take the following notice:—The principal entrance to the town was through a narrow valley formed by the passage of a small rivulet through the rocks, which in some places only leaves room for the passage of two horsemen abreast. This narrow valley extends for nearly two miles; and on each side of it there are numerous tombs cut out of the rocks, which, as you approach the city, become more frequent on both sides, till at length nothing is seen but a continued street of tombs. Nearly at the termination of this valley there are the ruins of a magnificent temple, entirely cut out of the rock, "the minutest embellishments of which, wherever the hand of man has not purposely effaced them, are so perfect that it may be doubted whether any work of the ancients, excepting perhaps some on the banks of the Nile, have come down to our time

so little injured by the lapse of age. There is in fact scarcely a building of forty years' standing in England so well preserved in the greater part of its architectural decorations."

After passing this temple, the valley conducts to the theatre, "and here the ruins of the city burst on the view in their full grandeur, shut in on their opposite sides by barren craggy precipices, from which numerous ravines and valleys, like those we had passed, branch out in all directions. The sides of the mountains, covered with an endless variety of excavated tombs and private dwellings, presented altogether the most singular scene we have ever beheld, and we must despair of giving the reader an idea of the singular effect of rocks tinted with the most extraordinary hues, whose summits present to us nature in her most savage and romantic form, while their bases are worked on in all the symmetry and regularity of art, with colonnade and pediments, and ranges of corridors adhering to the perpendicular surface."

PETROPAWLOVSKI. [AWATSKA BAY.]

PETROZAVODSK. [OLONETZ.]

PETTIGOE. [DONEGAL; FERMANAGH.]

PETWORTH, Sussex, a market-town, and the seat of a Poor-Law Union, in the parish of Petworth, is situated in 50° 59' N. lat., 0° 36' W. long., distant 14 miles N.N.E. from Chichester and 49 miles S.S.W. from London. The population of the town in 1851 was 2427. The living is a rectory in the archdeaconry and diocese of Chichester. Petworth Poor-Law Union contains 5 parishes, with an area of 39,329 acres, and a population in 1851 of 9629.

The town is clean and neat, and well lighted with gas. The church is a cruciform structure, chiefly in the perpendicular style. Some years back the building was repaired and altered, and a new spire added. The Independents and Calvinistic Methodists have small chapels. There are two Endowed schools, almshouses for 14 aged persons, founded in 1624; for 22 poor females, founded in 1746; and for 4 poor men. A savings bank and a literary institute are in the town. A county court is held here. The market-place and courthouse in the centre of the town is a neat building, erected at the cost of the late Earl of Egremont, the great benefactor of Petworth. The market is on Saturday; fairs are held on May 1st, September 4th, and November 20th.

The mansion of the Percys, who formerly possessed the manor, abuts upon the churchyard. In 1309 Henry de Percy had a licence and embattled his house at Petworth; the house was new-fronted by the Duke of Somerset, and greatly altered by the late Earl of Egremont. The galleries contain numerous portraits by Vandyke, and many other fine works, with choice specimens of ancient and modern sculpture, and the rooms are adorned with a singularly extensive and valuable series of carvings by Grinling Gibbons. The park, 12 miles in circumference, is remarkably picturesque and well wooded.

PEVENSEY. [SUSSEX.]

PEVERAGNO. [COMI.]

PEWSEY, Wiltshire, a village, and the seat of a Poor-Law Union, in the parish of Pewsey, is situated in 51° 20' N. lat., 1° 46' W. long., distant 12 miles E. by S. from Devizes, and 80 miles W. by S. from London. The population of the parish of Pewsey in 1851 was 1921. The living is a rectory in the archdeaconry of Wilts and diocese of Salisbury. Pewsey Poor-Law Union contains 23 parishes and townships, with an area of 65,650 acres, and a population in 1851 of 12,503.

PEYREHORADE. [LANDES.]

PEYRIAC-MINERVOIS. [AUDE.]

PEYRUIS. [ALPES, BASSES.]

PEZENAS. [HÉRAULT.]

PFORZHEIM, a town in the Baden circle of Middle Rhine, is situated in 48° 55' N. lat., 8° 48' E. long., at the entrance of the Black Forest, and on the navigable river Enz, near its junction with the Nagold and Wurm. It is surrounded with a wall and moat, and consists of the town and three suburbs. There are four churches and an ancient palace, the church of which contains a handsome monument to the late duke Charles Frederick. Among the public institutions are a convent for noble ladies, an hospital, an infirmary, an orphan-house, and an asylum for the deaf and dumb. The population of the town and suburbs is above 6500. The manufacture of trinkets employs above 1000 workmen. Watches, superfine cloth and kersey-mere, leather, hardware, and iron-wire are manufactured. There are also iron- and copper-foundries, dye-works, and extensive bleaching-grounds. Pforzheim has a very great trade in timber from the neighbouring forests of Hagenschies, which is floated down the Neckar and the Rhine to Holland. The trade in corn, oil, wine, and cattle is considerable.

PHAROS. [ALEXANDRIA.]

PHARSALIA. [THESSALY.]

PHASIS, the principal river of ancient Colchis, now called *Faz*, and sometimes *Rioni*, rises in the Caucasus nearly midway between the Kasbek and Elbruz, and flows in a westerly direction into the Black Sea. The river is composed of three principal head-streams, the Rioni proper (ancient Rion), or upper Phasis, the Quirilla, Kvirtla, or Ziroula, which joins the Rioni on the left bank below Kutais, and the Kakhenis-Kali, probably the ancient Glauous, which comes from the southern slope of the Elbruz and joins the Rioni several miles lower down on the right bank. The principal places on the Phasis

are Kutais on its upper course, and Poti, ancient Phasis at its mouth. Phasis was navigable in ancient times for large ships for 38 miles from the coast, and for smaller vessels as far as the fort of Sarapana (*Sarapan*), on the boundaries of Colchis and Iberia, from which place goods were conveyed by waggons in four days to the river Cyrus. (Strabo, xv. 498: Plin. 'Hist. Nat.,' vi. 4.) The Phasis was sometimes considered as the boundary between Asia and Europe (Herod., iv. 45), and was regarded in the time of Augustus as the northern boundary of the Roman dominions in that part of Asia. (Strabo, vi. 288.) From the junction of the Rion and Quirilla the river is navigable for boats at all seasons, has no obstructions, and is from 20 to 30 feet deep, with a current of about 2½ miles an hour. It flows through a level country, which is lower than the banks of the river. There is a bar at the mouth of the Phasis, with only 6 feet water, the only circumstance that prevents the river being entered by the largest vessels.

In ancient times there were 120 bridges over the Phasis (Strabo, xv. 500; Plin., 'Hist. Nat.,' vi. 4), and many towns upon it, of which the most important were *Æa*, the old capital of the *Æetes*, which is celebrated in the legends of the Argonautic expedition, and Phasis (*Poti*), situated at its mouth. The valley of the Phasis was in ancient times, as now, famous for great numbers of pheasants, which were first it is said (Mart. 'Ep.,' xiii.) brought into Greece by the Argonauts, and named Phasiani, from this river.

PHILADELPHIA. [LYDIA.]

PHILADELPHIA, a city and port of entry, and formerly the capital of the State of Pennsylvania, United States of North America, is situated between the Delaware and Schuylkill rivers, in 39° 57' N. lat. 75° 10' W. long., 136 miles N.E. from Washington. With the exception of New York, Philadelphia is the largest city in the United States. The population, which was only 69,403 in 1800, was 340,045 in 1850.

Philadelphia is about 120 miles from the Atlantic, following the course of the Delaware, and about 55 miles from it in a straight line. It lies immediately above the junction of the Schuylkill with the Delaware, and occupies the space, about 2 miles in width, between the two rivers, and a considerable space on the opposite side of the Schuylkill; it is about 5 miles in length, but the city proper is only 2 miles long and 1 mile wide. The streets which run north and south, parallel with the rivers, are called First-street, Second-street, and so on, except Broad-street and Schuylkill-street. These streets are crossed at right angles by others which run from east to west, and which are almost all named after trees, as Chestnut-street, Walnut-street, &c. The squares thus formed are subdivided by smaller streets and alleys. Most of the principal streets have rows of locust and other trees, which afford a pleasant shade in the summer. The houses are generally of brick, but many of them have the outer steps and also the window-sills of white marble. The city is lighted with gas and well paved. There are a few squares, which are very prettily laid out and planted.

Of the public buildings of Philadelphia, the old State House, now known as Independence Hall, is one of the most interesting, though one of the plainest. The Declaration of Independence was read from the steps in front of the building, on the 4th of July, 1776. The United States court, and the city and county courts are now held in it. The United States mint is a very large and handsome edifice of brick faced with marble, with an Ionic portico of six pillars, each 3 feet in diameter. The Custom-house, formerly the United States bank, is a large and splendid building, constructed entirely of white marble on the model of the Parthenon at Athens: the portico, at each end, consists of eight fluted Doric columns, 27 feet high and 4½ feet in diameter. The Merchants Exchange, in the basement of which are the post-office and various mercantile offices, is a spacious and handsome marble edifice with a semicircular portico; it is 114 feet long, 95 feet wide, and three stories high. Several of the banking-houses are among the leading architectural features of the city. The Bank of Pennsylvania, which is 125 feet long by 51 feet wide, is designed after the Temple of the Muses at Athens, with a portico of six Ionic columns at each end, and is constructed entirely, even to the dome and roof, of white marble. The Philadelphia Bank, and Girard Bank are also built of white marble, with commanding Corinthian porticos. One or two of the most recent banks are Italian palatial edifices.

The number of churches in the city and its suburbs is upwards of 170, including places of worship belonging to all the leading sects; but the only one which is remarkable in an architectural point of view is the recently-erected Roman Catholic cathedral, which is said to be a very magnificent pile. The other leading ecclesiastical buildings are the episcopal churches of St. Andrew's, in the Ionic, and St. Stephen's and St. Mark's in the Gothic style; St. Peter's Roman Catholic church; the First and Seventh Presbyterian churches; and the Baptist church in Sansom-street. Education is carefully provided for; the city and county of Philadelphia being constituted a school district, under duly qualified controllers and directors, whose duty it is to see that the system of uniform grades of free instruction—consisting of a high school, a normal school, grammar schools, secondary, and primary schools—is efficiently carried out. There were in 1853 in the district 286 schools, with 80 male and 760 female teachers, and 25,836 male and 24,249 female scholars. The buildings of the University of Phila-

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delphia are very spacious. The University has departments of law and medicine, as well as of arts. Philadelphia is generally regarded as the medical metropolis of the Union. Besides the University Medical School, which had 450 students at the last report, there are in the city—the Jefferson Medical College, with 514 students; that of Pennsylvania College, with 150 students; and the Philadelphia College of Medicine, with 75 students; besides several medical schools which do not grant degrees. The College of Physicians publishes its transactions quarterly. There are also theological and law schools. The literary and scientific institutions are numerous and important. The oldest scientific institution in the United States is the American Philosophical Society, founded in 1743, which reckons among its members distinguished literary men in all parts of the world, and the proceedings of which have a very high reputation. The library contains upwards of 20,000 volumes and an extensive collection of medals, maps, engravings, &c. The Philadelphia Library, commenced by Franklin in 1781, has a marble statue of Franklin placed over the front door. The library contains 60,000 volumes. The Historical Society of Pennsylvania has also a high reputation. The Academy of Natural Sciences possesses a library consisting of upwards of 18,000 volumes, and the finest collection of botanical, geological, and ornithological specimens in the Union. The Philadelphia Athenæum, established in 1814, has a library of about 12,000 volumes. The building is a very elegant Italian one. There are besides, the Franklin Institute, Mercantile, Apprentices, German Society, Friends, Law Association, and Philadelphia Hospital libraries. The Pennsylvania Academy of Fine Arts has fine galleries of paintings and statues by the best masters: an annual exhibition of the works of living artists is held here in May. There are also an Art Union, a Graphic Association, and an Artists' Fund Society. The Philadelphia Museum is a vast structure 238 feet long and 70 feet wide, and contains a very extensive collection of objects of interest; but it belongs rather to the places of amusement than of instruction. There are three theatres, and a musical hall capable of accommodating 2000 persons, in the city.

Philadelphia has a large number of benevolent asylums. One of the most remarkable is Girard College, an asylum for the gratuitous instruction and support of destitute orphans, founded by Stephen Girard, a Frenchman, who from an humble origin became a banker in Philadelphia, and left nearly the whole of his large property towards beautifying Philadelphia and New Orleans and establishing this college. He bequeathed two millions of dollars for the foundation of the college, nearly the whole of which has been spent in constructing the buildings and improving the grounds, which are about 40 acres in extent. The central building is in form of a Corinthian temple, 218 feet long, 160 feet wide, and 90 feet high. It has a colonnade of eleven columns on each side, and a portico at each end of eight columns, each 6 feet in diameter and 55 feet in height. The entire structure, including the roof, is of fine white marble. Besides this central building there are four others, each 125 feet long, 52 feet wide, and three stories high, faced with marble. In 1852 there were 305 orphans in the college. There are four other orphan asylums in the city—the Orphan Society of Philadelphia, St. John's (Roman Catholic) Male Orphan Asylum, St. Joseph's Female Orphan Asylum, and the Coloured Orphan's Asylum. The Pennsylvania Hospital was instituted in 1751, and has since relieved a vast number of patients. The buildings occupy an entire square, in the middle of which is a bronzed leaden statue of William Penn. A branch of this hospital for lunatics has been removed to a more open site at West Philadelphia, where the capacious buildings stand within inclosed grounds of above 40 acres. The Friends' Asylum, for the insane, is situated near Frankford. The House of Refuge, a school for the reformation of character, occupies a plot of ground 400 feet long by 230 feet broad, inclosed by a stone wall 20 feet high. The main building is 92 feet long by 30 feet deep. It receives all destitute males under 21 and all females under 19 years of age. During 1852 there were admitted 164 boys and 60 girls in the white, and 36 boys and 44 girls in the coloured department. The other hospitals are—the City Hospital, founded by the state in 1818; the State Deaf and Dumb Asylum, in a granite building 96½ feet long by 63 feet deep; the Institute for the Blind; Wills' Hospital for Diseases of the Eye, an excellent institution, founded by a gentleman named Wills; the City Almshouse and Infirmary; Christ Church Hospital, for indigent females; and St. Joseph's Hospital; besides four dispensaries, several widows' asylums, asylums or retreats for children, three Magdalene asylums, and various other charitable institutions. There are also numerous religious societies.

The sanitary condition of the city is regulated by a Board of Health of 18 members. The public markets are on a very extensive scale, well supplied with all kinds of provisions, and generally admired for their cleanliness.

The works for supplying Philadelphia with water are situated at Fair Mount, near the city, on the left bank of the Schuylkill. A dam 1248 feet long, thrown in a sloping direction across the Schuylkill keeps back the water, which is raised by eight powerful pumps lifting 1,250,000 gallons in 24 hours, into four vast reservoirs, the summit of a hill 100 feet above the level of the river and above the highest part of the city. The water is conveyed to the city in pipes. About a mile higher up the Schuylkill are of works on a smaller scale, for the supply of Spring Garden.

Northern Liberties. The fire-engine establishment consists of 70 companies, 35 being engine companies, 33 hose companies, which supply the fire-engines with water, and 2 hook and ladder companies. The firemen are all volunteers. The institution is kept up with an enthusiastic public spirit, and fires are extinguished with a promptitude which greatly surprises strangers. There is an association for the relief of disabled firemen.

The river Delaware, in front of the city, is about a mile wide, but the width is contracted by an island, which extends nearly the whole length of the city, and somewhat impedes the navigation. Both the Delaware and the Schuylkill are frozen over during the winter months, which renders Philadelphia, as a harbour, inferior to New York. A portion of the navy of the United States is stationed at the southern extremity of the city, and ships of the largest size are built. The Delaware is navigable for steam-boats and small vessels as high as Trenton. The Schuylkill Navigation Canal, and the Chesapeake and Delaware Canal greatly facilitate the commerce of the city; while eight lines of railway which terminate at Philadelphia afford rapid communication with every important place in the Union.

In respect to foreign commerce Philadelphia now ranks third among the cities of the United States: and it is the only city in Pennsylvania in which foreign commerce is carried on. [PENNSYLVANIA.] The exports to foreign countries in 1853 amounted to 6,527,996 dollars, the imports to 18,834,410 dollars. The exports chiefly consist of wheat, maize, flour, meat, wool, and manufactured iron. The shipping belonging to the Philadelphia district in 1851 amounted to 222,428 tons. The arrivals of ships from foreign countries in 1851 were 576; the clearances in 1850 were 479, of which 309 vessels of the aggregate burden of 81,276 tons were American, and 170 vessels of 30,342 tons burden were foreign. The coasting and internal trade is much greater than the foreign commerce. In 1851 the number of vessels arriving coastwise was 26,484. The home trade is chiefly in grain, flour, coals, cotton, and tobacco; but the coal trade is now the most important branch. In 1851, 8126 vessels engaged in this trade arrived at Port Richmond, the terminus of the Reading railway.

The manufactures of Philadelphia are very considerable. The capital invested in manufactures in 1850 was returned at 33,787,911 dollars; the number of hands employed was 59,099, of whom 15,803 were females. The principal establishments are warping-mills, sugar refineries, machine shops, rope-walks, marble-works, two shot-towers, and manufactories of cutlery, nails, leather, hardware, gold and silver goods, musical instruments, furniture, carriages, &c. There were in 1852 in Philadelphia 13 banks with capitals amounting in the aggregate to 10,650,000 dollars; 4 savings banks; 19 fire and marine, and 9 life insurance companies. In 1850 there were 64 periodicals published in Philadelphia, of which 11 were daily, and 38 weekly newspapers.

The federal government has very extensive naval and military establishments at Philadelphia. The United States arsenal near Frankford is an immense establishment for the manufacture and storing of military material: it includes one of the largest powder magazines in America. The United States arsenal at Moyamensing consists of four large warehouses forming a hollow square three stories high, and serving as a dépôt for military clothing, camp equipage, &c. The United States navy yard on the Delaware, Southwark district, covers an area of 12 acres, and includes large stacks of warehouses, workshops, moulding lofts, officers' residences, ship houses, and dry docks capable of raising the largest steam vessels and ships of the line, with hydraulic cylinders, railways, and other connected works. Connected with this is the United States naval asylum, which consists of three buildings, the principal one being of marble, three stories high, with a frontage 380 feet long, and affords accommodation for 140 pensioners; its grounds cover an area of 25 acres and are beautifully laid out.

The city of Philadelphia proper (like the city of London) forms but a portion of what is known by that name, always understood when the town is spoken of, and included in the official statement of the population. The city proper contains but 121,376 inhabitants, or little more than one-third of that given above; it has however its own municipal government consisting of mayor, select, and common council, &c. The other districts—Kensington, the Northern Liberties, Richmond, and Spring Garden on the north; Moyamensing, Passyunk, and Southwark on the south; with West Philadelphia, Oxford, Germantown, &c. on the west and north-west, are governed by boards of commissioners.

Philadelphia was founded by William Penn in 1682. On the 5th of September, 1774, the members of the first Congress assembled at Philadelphia, where they adopted the 'Declaration of Rights,' and subsequently the 'Declaration of Independence,' which was proclaimed at Philadelphia in April, 1776. The British forces obtained possession of the city on the 26th of September, 1777, and occupied it till the 18th of the following June. The city was the seat of the federal government till the year 1800, and the capital of Pennsylvania till 1799.

PHILBERT, ST. [LOIRE-INFÉRIEURE.]

PHILIP ISLAND. [NORFOLK ISLAND.]

PHILIPPEVILLE. [ALGÉRIE; NAMUR.]

PHILIPPI. [THESSALY.]

PHILIPPINES, THE, constitute the most northern group of the

islands that compose the extensive archipelago known under the name of the Indian Archipelago; and they lie between 5° and 20' N. lat., 119° and 127° E. long. The Strait of Balingtang, or Great Passage, separates them from the Batanes and Bashee Islands, which lie farther north. On the east extends the Pacific, and on the south the Celebes Sea, with the Sooloo Islands, only divided from Magindanao by the Strait of Basilan, which is frequently navigated by vessels sailing to China. The Mindoro Sea and the Chinese Sea wash the western shores of this group.

The Philippines consist of ten larger and a multitude of smaller islands. The larger islands have altogether an area of more than 120,000 square miles, according to the estimate of Berghaus, in which the surface of Magindanao is estimated at 36,140 square miles. The smaller islands comprehend, according to the same authority, 6230 square miles; several of the larger islands are to some extent subject to the Spaniards, who have also settlements on the northern and south-western coast of Magindanao. The total territory however in possession of the Spaniards amounts to only 53,271 square miles, including their settlements in Magindanao, upon which there was a total population in 1849 of 2,679,500 persons, under the government of the captain-general of the Philippines, while the entire population of the group is estimated at 5,000,000. The greater proportion of the population (about 3,500,000) are of the Malayan race, about 1,000,000 it is estimated of the Papuan negro race, and the remainder are Chinese, half-castes, and Europeans.

1. Luzon, which is by far the largest of these islands, has, according to Berghaus, an area of 57,405 square miles. The form of the island, which is extremely irregular, may be compared to a bent arm. Its length measured along the bend is more than 550 miles. The width varies between 10 and 136 miles. Where the bend occurs, which is near 14° N. lat., a deep bay enters the land from the north, and divides the island into two peninsulas. The isthmus which connects the two peninsulas is only from 10 to 12 miles wide, and nearly 50 miles long. The rocky coast of the island is indented by a great number of larger and smaller bays, among which the most extensive on the larger peninsula are the Bahia de Manila and the Golfo de Lingayen, both on the western side; and on the smaller peninsula the Bahia de San Miguel and the Seno de Albay on the northern coast, and the Seno de Ragay on the southern.

The island is extremely mountainous; the principal ranges are the Montes Caravallos, which extend from Cape Engaño in 18° N. lat., to Cape St. Ilfonso in 15° 5' N. lat., the more southern part being known as the Sierra Madre, and other ranges occupy other portions of the island. In the northern peninsula there are two extensive plains, one on the western side of the Caravallos range, called Llana del Dijun, watered through its whole length by the river Tajo, which runs from south to north, and falls into the sea west of Cape Engaño, at a town called Apari. The other lying at the south-western base of the Sierra Madre, and the western base of the Caravallos, is a level plain of great extent and fertility, called the Plain of Pampanga, extending from the innermost recess of the Gulf of Lingayen (16° N. lat.), on the north, to the Bahia de Manila (14° 45' N. lat.), on the south. It is about 90 miles in length, with an average width of about 30 miles, so that it covers a surface of 2700 square miles. The whole plain is very little elevated above the sea-level, full of lakes, and traversed by rivers, whose course is nearly imperceptible except in the rainy season. In the northern districts there is a large lake, the Laguna de Canarim, on the most elevated part of the plain; two rivers issue from it, one towards the north, which falls into the Gulf of Lingayen, and the other towards the south, which enters the Bahia de Manila. These rivers, of which the first is called Rio Grande, and the second Rio de Pampanga, are of great importance, as the produce of this rich and well cultivated tract, which is mostly covered with plantations of sugar, can be brought by water to Manila during the rainy months.

The Bahia de Manila is one of the finest basins in the world. It is nearly of a circular form, and measures from 20 to 25 miles in every direction. It is nearly free from shoals, and contains excellent anchorage. The tides in this bay are very irregular during the north-east monsoon, when the low tides run through the Boca Chica or northern entrance, with rather a strong current for 18 hours, whilst the high tides last only six. The rise is about three feet at full and change. A hilly country begins west of the bay and a mile or two from the shores, and extends eastward to the Laguna de Bahia. This lake is about 20 miles long, and on an average 10 miles wide, but it is divided into two nearly equal parts by a projecting tongue of land and an island situated opposite its termination. The surface of the water is about 36 or 40 feet above the sea-level of the bay. The water of the lake is carried off by five very narrow channels, which soon unite, and, being joined by a small river, constitute a wide and tolerably deep stream, called the Rio Pasig, which flows westward to the Bahia de Manila, and has its outlet between the two towns of which the capital consists. The country that surrounds the lake and extends on both sides of the Rio Pasig is very fertile and populous.

From the banks of the river and of the lake the country rises gradually to the south for 10 or 12 miles, when it is followed by a tract of land the surface of which is extremely uneven, and has a number of isolated mountain summits scattered over it, many of which

rise to a considerable height. This region is volcanic, and between the heights are many lakes, some of them of considerable size. The Laguna de Taal contains a volcanic island, from which an eruption issued in 1754, and which showed activity in 1825.

The peninsula of Camarines, or the south-eastern part of the island of Luzon, is not connected with the north-western part by a range of mountains. Towards the eastern extremity of the isthmus, which connects both parts, the mountains entirely disappear, and where the two bays called Seno de Lamon and Seno de Ragay approach nearest to one another, and are only about 15 miles apart, the intervening country is low, and constitutes a valley several miles wide, which runs across the island from one bay to the other. This peninsula is chiefly occupied by a mass of high mountains, which come close to the southern shores, and only in a few places leave a narrow strip of level ground. But the northern declivity of this range is not so steep, and terminates about 6 or 8 miles from the sea. On this tract, and at a short distance from the mountain range, there are ten volcanoes, of which that of Albay or Mahon is noted for the frequency of its eruptions. There is a considerable number of agricultural settlements on this volcanic tract, especially in the country surrounding the Bahía de San Miguel. This bay is about 25 miles long from north to south, with an average width of 12 miles.

2. *Mindoro*, which is separated from the island of Luzon by the Little Strait of Mindoro, and from the islands of Calamianes by the Great Strait of Mindoro, is 100 miles long, and rather more than 40 miles wide on an average. Its area, according to Berghaus, is 4115 miles. The mountains which occupy the interior rise to a very great elevation; but they descend in gentle slopes, and the sea-shore is skirted by low hills, which are covered with forests of lofty trees. There is only a small number of Malay families settled on some points of the coast.

3. *Panay* has the form of an isosceles triangle, the base of which is more than 100 miles long, and the other sides more than 80 miles. The area, according to Berghaus, is 4579 square miles. Along the western coast the country is of moderate elevation, well cultivated, and populous; villages are numerous. At some distance from the shore, a mountain ridge runs from Punta Potol, on the north, to Punta Nasog, or Naso, on the south, and appears to be very steep.

4. *Negros* is about 140 miles long, with an average width of about 25 miles. The surface, according to Berghaus, is 3827 square miles. It seems to be very mountainous, and contains a comparatively small number of agricultural settlements.

5. *Zebu*, or *Cebu*, extends in length from south to north rather more than 100 miles, but it is hardly more than 20 miles wide on an average. The area, according to Berghaus, is 2193 square miles. It is fertile and well populated.

6. *Bohol*, situated between Zebu on the west and Leyte on the east, is the smallest of the larger Philippines except Masbate. It extends in length from west to east about 45 miles, with an average width of 30 miles. Berghaus determines the area to be 1854 square miles.

7. *Leyte*, or *Leite*, extends from south to north about 120 miles, with an average width of 35 miles. According to Berghaus, the area is 4257 square miles.

8. *Samar*, or, as it is also called by the natives, *Ybabas*, is the largest of the Philippines which are subject to Spain, next to Luzon. It has the form of a triangle whose apex is turned to the south: the base measures about 60 miles, and the perpendicular length about 115 miles. The surface is 5547 square miles. A great part of this island, especially towards the north, is covered with high mountains, which are visible from a great distance at sea. The soil in general, though not distinguished by fertility, is far from being sterile.

9. *Maabate* is in the middle of that sea-basin which is called the Bisaya Sea: the islands surrounding this basin and those within it are comprehended under the general name of the Bisaya Islands. Maabate has a triangular form, whose apex is to the east. The base, or western coast, is nearly 40 miles long, and the perpendicular length about 55 miles. Berghaus makes the surface 1225 square miles. This island appears to be a mass of high rocks, and to contain very little cultivable ground. The population of the whole of the Bisayan Islands in 1849 was 803,000.

10. The island of *Magindanao*, or *Mindanao*, is the most southern of the Philippines, and the largest next to Luzon. Its form is extremely irregular. Berghaus makes the area 36,140 square miles. The coastline perhaps considerably exceeds 1000 miles. This island is hilly but not mountainous, except on the eastern coast, though there are some volcanoes, and in one part two deep bays, that of Illano on the south, and that of Siddum on the north, nearly separate the island. Numerous rivers water this large island. Large tracts are destitute of trees and covered with fine grass and finer savannahs than occur in any other island of the Indian Archipelago. The Spaniards have formed a great number of settlements on the eastern and western coast, where the inhabitants consist almost exclusively of Bisayes, or Malays of the Philippines. The large peninsula which extends between the Bay of Illano on the west and the Pacific on the east acknowledges the authority of the sultan of Magindanao, whose subjects are mostly Malays, and inhabit the country along the coast; but the interior is occupied by the Haraforas, who are treated by the Malays not as subjects, but as slaves.

The year is divided between the dry and rainy seasons, which depend on the monsoons. The rains commence in the beginning of May, and do not cease before the end of October or the beginning of November. They attain their maximum in the month of July. Between the beginning of November and the end of April showers sometimes occur. The northern part of Luzon is situated within the range of those terrific hurricanes which are called 'typhoon,' and which are rarely felt south of 14° N. lat. The mean temperature in summer is between 80° and 82° Fahr., and that of winter between 70° and 72°. Earthquakes occur frequently, and sometimes cause great damage.

The staple articles of produce are sugar, indigo, rum, tobacco, sapan-wood, rice, millet, maize, edible birds'-nests, and trepang. Tobacco, which grows very well in many places, and is of the first quality, is only exported in the form of cigars. Rice, for which there is always a ready market, and which constitutes the principal food of the bulk of the population, is the first object of cultivation nearly all over the island. Where the fields cannot be put under water the upland rice is cultivated. Coffee, cacao, ebony, sulphur, cotton, pearls, mother-of-pearl shells, tortoise-shells, and cordage are also exported. Cinnamon and cloves, with the cocoa-nut and banana, are among the products of these islands.

The buffalo is universally used in all field-labour, though in some parts people have begun to substitute the bullock for it. The buffalo here, as on all the islands of the Indian Archipelago, is of uncommon size and strength; the caymans, which are in the Laguna de Bay, and rather of a large kind, never attack a buffalo. Horses have also been introduced by the Spaniards; the breed is small but very hardy; they are only used for riding. Sheep are few but goats are more numerous. Pigs are plentiful, and domestic fowl are reared in immense numbers, especially ducks on the banks of the Laguna de Bay. Except the caymans, which are numerous in the Laguna de Bay, there are no rapacious animals. The Philippines are rather distinguished by the number than by the variety of wild-fowl. The sea abounds with fish, and the inhabitants, like all the tribes of the Malays, prefer fish to meat.

Manila, the capital and seat of the captain-general or governor of the island, is built on the eastern shores of the Bahía de Manila, at the mouth of the river Pasig, or the channel by which the Laguna de Bay discharges its water. It consists of two towns with extensive suburbs. The city, Manila, is built on the southern banks of the Pasig; it is fortified, and inclosed by high walls and a ditch which is connected with the river. The streets are straight, wide, and well paved. The houses are built of stone, and are substantial. There are several well-built churches and convents. The palace of the captain-general is not distinguished by its architecture, but the custom-house, or 'aduana,' is a large and fine building. In the great square is a statue of Charles IV. of Spain in bronze, given to the town by Ferdinand VII. in 1824; it is a fine work of art, and somewhat larger than life. On the land side is a large plain, on which the troops are exercised, and where the fashion of the place display themselves and their equipages in the evening. A well-built bridge leads from the city over the Pasig to a collection of suburbs, the whole of which form what is generally known as the trading part of Manila. The principal suburb is Bifondoc, and the population of the whole amounts to 150,000. In the fortified town, inhabited chiefly by Spanish officials and military, the streets are strait and formal, with granite footpaths, but macadamised carriage roads. In Bifondoc there is more variety; many of the houses are spacious, but from dread of earthquakes none of them are more than one story in height above the ground-floor, and in their construction the bamboo enters largely: the upper floor forms the residence of the family, and is surrounded by a gallery, which can be shut in or thrown open by means of large sliding shutters with panes of mother-of-pearl instead of glass, so as to admit the light while excluding the heat. Several canals communicating with the river intersect the town, upon which numerous pleasure-boats ply for the convenience of the inhabitants, and along the banks of the river are many villa-residences belonging to the principal merchants of the place. Manila contains a royal college for the instruction of youth, a university which was founded by Philip IV. in 1645, a nautical academy, an hospital for the poor, and various other religious and charitable establishments.

Cavite, which lies south of Manila, is a well-built fortress, situated at the extremity of a tongue of land about 2 miles long: it protects the Ensenada de la Estanzuela, the only harbour in the Bahía de Manila. The arsenal is in that fortress, and vessels are built there. The town of *San Roque* is near to Cavite.

The only manufactures of the Philippine Islands consist of a very fine species of grass-matting, of which hats, baskets, &c., are made, and of cigars and cheroots, which have a high reputation. For a long time the commerce of the colony was severely restricted by the Spanish government, and is yet carried on under many difficulties. The chief trade is with Great Britain; the imports consist chiefly of cotton, woollen, and silk manufactures, watches and clocks, jewellery and drugs; the exports are chiefly sugar, tobacco and cigars, indigo and hemp: the amount of each varies from half a million to three-quarters of a million sterling.

History.—The Philippines were discovered in 1521 by Fernando

Magalhaens, who was killed on one of the islands. In 1564 a small squadron under the orders of Lopez de Legaspi was sent from Mexico to form an establishment, which he effected in the following year on the island of Zebu, the inhabitants of which submitted to the Spaniards without any resistance. In 1571 Legaspi founded the town of Manila, and the Spaniards remained in undisturbed possession of the Philippines till 1762, when the English took the town of Manila. In 1764 the English restored Manila to the Spanish government. In 1851 the captain-general, in order to repress piracy, from which the coasting-trade had greatly suffered, undertook an expedition against the neighbouring islands of Sooloo, which was completely successful, and a settlement formed on the principal island.

PHILIPPINES, NEW, more frequently called the *Carolines*, are a number of islands situated in the Pacific, between 138° and 164° E. long., 5° and 13° N. lat. In this wide tract of ocean there are several groups of small islands inclosed by reefs, and others are isolated. The Spaniards, who obtained some knowledge of them from the natives who visited their settlement on the island of Guahan (Ladrones), claim the sovereignty of the New Philippines. They have however never made a settlement on any of them.

The islands, which lie either within the basins formed by the coral-reefs, or contiguous to the reefs themselves on their interior side, are all small, and produce hardly anything except cocoa-nuts and bread-fruit. All the isolated islands are high, and some rise to a great elevation. The cultivated fields contain plantains and arums; from the root of the latter the inhabitants make flour. They also cultivate the sugar-cane, and have several fruit-trees besides the cocoa and bread-fruit. The inhabitants belong to the Malay race; they are industrious agriculturists and fishermen, and they make excellent mats, and canoes of a large size, with which they undertake voyages of several hundred miles.

PHILIPSTOWN. [KING'S COUNTY.]

PHLEGRÆI CAMPI. [NAPLES, PROVINCE.]

PHOCÆA. [IONIA.]

PHOCIS was bounded S. by the Corinthian Gulf, W. by Doris and the Locri Ozolæ, N. by the Locri Epicnemidii and Opuntii, and E. by Boeotia. Strabo says (ix. p. 416) that Phocis was divided into two parts by the range of Parnassos, which extends in a south-easterly direction through Phocis till it joins Mount Helicon on the borders of Boeotia. Parnassos and the mountains which separate Phocis from Locris form the upper valley of the river Cephissus, on the banks of which there is some fertile country, though in many parts the mountains approach very near both banks of the river. The southern part of Phocis is almost entirely covered with the mountains which branch off to the south from the huge mass of Parnassos, though there are a few fertile plains between these mountains, of which the largest is the celebrated Crissean plain.

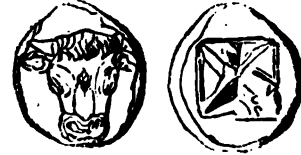
In the Persian invasion Xerxes ravaged the country at the instigation of the Thessalians. The Phocians had no political importance till after the battle of Leuctra; but shortly after that event the celebrated Phocian or Sacred war broke out, in which all the great states of Greece were more or less concerned. The real occasion of this war was the animosity between Thebes and Phocis, which had long prevailed under a show of peace. The Thebans used their influence in the Amphictyonic council to induce the Amphictyons to sentence the Phocians to pay a heavy fine to the god for an alleged violation of the sacred land in the Crissean plain; and, on their refusing to pay this fine, the council passed a decree that if the fine were not paid the Phocians should forfeit their territory to the gods, which decree was in all probability intended to reduce the Phocians to the condition of the Helots in Laconia, subject to the jurisdiction of the temple of Delphi. In these alarming circumstances the Phocians were induced by Philomelus, who appears to have held some high office in the Phocian state, and was a man of great talent and energy, to make the bold attempt at seizing the city and temple of Delphi. This attempt was successful; and the Phocians obtained in the treasures deposited in the temple ample means for carrying on the war. This war lasted for ten years. The Thebans, and almost all the northern states of Greece, were opposed to the Phocians; and though the Athenians and Spartans were willing, in consequence of their fear of the power of Thebes, to afford assistance to the Phocians, both were too weak at the time to render effectual aid. The Amphictyons called in the assistance of Philip of Macedon, who took possession of Delphi, and put an end to the war B.C. 346. The Phocian cities, with the exception of Absæ, were razed to the ground, and their inhabitants dispersed in villages not containing more than 50 inhabitants. Their two votes in the Amphictyonic council were taken away and given to Philip. (Paus., x. 3, sec. 1; Diod., xvi. 59; Æschin., 'De Fals. Legat.', p. 45.) Many of the towns however appear to have been rebuilt soon afterwards.

The principal towns of Phocis were DELPHI and Elateæ. Elateæ was situated on a small hill above the plain watered by the Cephissus. It was taken and burnt by the army of Xerxes; but was soon rebuilt, and became the most important town in Phocis. It commanded the chief road which led from the north of Greece to Boeotia and Attica. The ruins are at the modern Elephtha.

On the sea-coast the first town we come to after leaving the Locri Ozolæ is *Cirrhæ*, situated at the head of the Crissean Gulf (Bay of

Salona) and at the mouth of the Pleistus. Cirrhæ was the port of Delphi. The next town to Cirrhæ on the coast was *Anticyra*, celebrated for its preparation of hellebore, which grew in the mountains above the town. Next to Anticyra was *Mædon*, destroyed with the other Phocian towns after the termination of the Sacred war and never restored; and after it the small town of *Marathus*, beyond which was the Phrygian promontory with a station for ships.

In the modern kingdom of Greece the ancient name of the state has been restored in one of the nomes of Northern Greece, the nome of Phocis and Phthiotis, which had a population in 1853 of 80,693. [GREECE, Kingdom of.]



Coin of Phocis. British Museum. Actual size.

PHENICÆ (incorrectly called *Phœnicia*), even in its most flourishing state, was a very small country. It extended along the eastern coast of the Mediterranean, from the town of Aradus and the river Eleutherus, on the north, to Mount Carmel, or Dora, on the south. (Ptolem., v. 15; Pliny, 'Hist. Nat.', v. 13, 17; Joseph., 'Apion,' ii. 9.) It was bounded E. by the mountains Libanus and Antilibanus, from which numerous streams descended, which rendered the land exceedingly fertile. (Ammianus Marcell., xiv. 8.) This short line of coast was covered with numerous towns, which were more or less celebrated for their arts and manufactures. The most southerly town of importance was Acco, called by the Greeks Acca, subsequently Ptolemaia, and now St. Jean-d'Acre, which the Israelites did not conquer, though it was included in the division of the Holy Land made by Joshua. [ACRE.] North of Acco was TYRE, the principal of the Phœnician cities; and north of Tyre, SIDON. Between Tyre and Sidon was Sarepta (Sarphand), which is mentioned in the history of Elijah (1 Kings, xvi. 9) under the name of Zerephath. About 8½ miles N. from Sidon was Berytus, a very ancient town with a harbour. (Ptolem., v. 15; Strabo, xvi. 755; Joseph., 'Bell. Jud.', vii. 3, sec. 1; Ammian. Marcell., xiv. 8; Mela, i. 12.) The modern town of Bairuth, or Beirut, is still a place of some importance. [BEIRUT.] Twenty-four miles N. from Berytus was Byblus, situated on rising ground, not far from the sea. It was celebrated for the worship of Adonis. [BYBLUS.] North of Byblus was Botrus; and beyond it Tripolis, which originally consisted of three distinct towns, founded respectively by Tyre, Sidon, and Aradus. North of Tripolis was Orthosias (Plin., 'Hist. Nat.', v. 17; Strabo, xvi. 753; 1 Macc., xv. 37), and, still farther north, Aradus, a colony of Sidon, and the most important town in Phœnicia after Tyre and Sidon, situated in an island of the same name, which is called Arvad in the Old Testament. (Ez., xxvii. 8; Gen., x. 18.) This island was at the mouth of the Eleutherus, and 20 stadia from the mainland. It was only 7 stadia in circumference, but was crowded with houses. (Strabo, xvi. 753; Plin., v. 17; Mela, ii. 7.) Opposite to it on the mainland was the town of Antaradus.

The Phœnicians were a branch of the great Semitic or Aramean family of nations, and originally dwelt either on the Red Sea or the Persian Gulf. (Herod., i. 2; vii. 89; Strabo, i. 42.) It is uncertain at what time they emigrated to the coast of the Mediterranean; but it must have been at a very early period, since Sidon was a great city in the time of Joshua. (Josh., xix. 28.) The Phœnicians far surpassed all the other nations of antiquity in commercial enterprise. Their greatness as a commercial people was chiefly owing to their peculiar natural advantages. Their situation at the extremity of the Mediterranean enabled them to supply the western nations with the different commodities of the east, which were brought to Tyre by caravans from Arabia and Babylon; while their own country produced many of the most valuable articles of commerce in ancient times. Off the coast the purple fish was caught which produced the most celebrated dye known to the ancients; and the sand on the sea-shore was well adapted for the manufacture of glass. (Strabo, xi. 753; Plin., xxxvi. 65.) Mount Libanus supplied them with abundance of timber for ship-building, and the useful metals were obtained in the iron- and copper-mines near Sarepta. In the west they in all probability visited Britain; and on the north coast of Africa, in Spain, Sicily, and Malta, they planted numerous colonies, which they supplied with the produce of the east. Their settlements in Sicily and Africa became powerful states, and long opposed a formidable barrier to the Roman arms. By their alliance with the Jewish state in the time of Solomon, they were enabled to sail to Ophir in the south of Arabia, where they obtained the produce of India. (2 Chron., viii. 17, 18; 1 Kings, ix. 27, 28.)

PHRYGIA, a country of Asia Minor. The boundaries of Phrygia differed at various times. Before the establishment of the province of Galatia by the Gauls, who invaded Asia Minor, Phrygia extended as far as the river Halys.

Phrygia is a high table-land, supported on the south by Mount Taurus, and on the north by the high range of mountains which runs from west to east under the ancient names of Ida and Temnon in

Mysia, and Olympus in the neighbourhood of Brusa. The country in the southern and eastern parts is covered with salt marshes, rivers, and lakes, which have no visible outlet. Of these salt lakes, the most curious is the one called Tatta by Strabo (*Tus* or *Tuzla*), which is 45 miles in length, and supplies a vast tract of country with salt. [ANATOLIA, vol. i. col. 328.]

The Phrygians are said to have been a very ancient people. We know scarcely anything of the early history of Phrygia. There appears to have been a kingdom of considerable power in the northern part of Phrygia under the Midian or Gordian dynasty. The Phrygians were conquered by Croesus and added to the Lydian empire, and were subsequently subject to the Persians. On the division of Alexander's dominions, Phrygia first came into the hands of Antigonos, and afterwards formed part of the dominions of the Seleucids. After the defeat of Antiochus the Great, Phrygia was given to Eumenes, king of Pergamos, and on the death of Attalus, B.C. 133, it came by his bequest into the hands of the Romans, together with the other dominions of the kings of Pergamos. [PERGAMOS.]

In Northern Phrygia, the first town of importance on the west was Azani, near the source of the Rhyndacus, which flows into the Lake Apolloniatis. At this place are now extensive ruins, which have furnished materials for the erection of the modern village of Tjandere Hessar. South-east of Azani was Cotysium, or Cotysium (*Kutaya*), on the Thymbrius, which is still a considerable place. Ancyra is mentioned at the close of the article ANCYRA.

In the south-eastern part of Phrygia was Synnada, a place of considerable commerce and traffic, as it was situated on the road from Apameia Cibotus to Galatia, and also in the way, or nearly so, from Apameia to Iconium and Cilicia. At a short distance to the north of Synnada was Docimnia, which was celebrated for its marble quarries.

The most important cities in Phrygia were situated in the south-western part of the province. Of these cities Celense was the most ancient. Herodotus says (vii. 56) that it is situated at the source of the river Meander, and also of the Catarrhactes, a stream not less than the Meander. Xerxes, after his defeat in Greece, is said to have built here the citadel and a palace (Xen., 'Anab.' i. 2, § 9). The younger Cyrus appears to have frequently resided at Celense, where he had a palace and a great park full of wild beasts. Near Celense was Apameia Cibotus, which was founded by Antiochus Soter, who removed to the new city the greater part of the inhabitants of Celense, which became in consequence a place of small importance. Apameia soon became a place of great wealth, and in the time of Strabo was second only to Ephesus in Asia Minor in commercial importance. South-west of Apameia, and a little to the south of the river Lycus, was Colosse, which is mentioned by Herodotus (vii. 30) and Xenophon ('Anab.' i. 2, § 6) as a large and flourishing city. Strabo (xii. 576) and Pliny (v. 29) however speak of it as only a small place. At Colosse, there was formed a Christian church, chiefly, it appears, by the labours of Epaphras (Col., i. 7; iv. 12, 13), to which St. Paul, who does not appear to have ever visited Colosse himself (Col., ii. 1), wrote an epistle. Colosse was destroyed by an earthquake, together with Hierapolis and Laodicea, in the 9th year of the reign of Nero (Oros., vii. 7), but was built again, and became in the middle ages a place of considerable importance under the name of Chonæ. Chonæ is at present a small village, situated under a very high hill; the ruins of the ancient city may be traced for nearly a mile. (Arundell, 'Visit to the Seven Churches,' p. 94-98.)

West of Colosse, and a little to the south of the Lycus, was Laodicea, which was a large commercial town in the time of Cicero ('Ad Fam.' ii. 17; iii. 5) and Strabo (xii. p. 576). There was a Christian church at Laodicea in the time of the Apostles. Strabo says that Laodicea was celebrated for the sheep which fed in the plains around it, and that their wool was considered superior to that of Miletus. The ruins of Laodicea, which are considerable, are seen a little below Denizli.

Nearly opposite Laodicea, to the north of the Lycus, was Hierapolis, which was celebrated for its mineral springs. (Strabo, xiii. 629.) The ruins of Hierapolis, according to Chandler ('Travels in Asia Minor,' p. 290), are on the site called Pambouk-kalissi, and are about a mile in length. There are remains of a very large theatre and of other public buildings.

PIACENZA (*Placentia*), a town in the duchy of Parma, is situated about half a mile from the southern bank of the Po, and 2 miles east of the confluence of the Trebbia with that river, in a fine plain bounded on the south by well cultivated hills. The town is surrounded with old walls and ditches, and has a citadel, which, according to a stipulation of the Congress of Vienna of 1815, is garrisoned by Austrian troops. The streets are wide and straight, but many of them are grass-grown; on the whole the city has a deserted aspect and is much too large for its present population, which is about 30,000. The principal square (Piazza de' Cavalli) in front of the ducal palace is adorned with two equestrian bronze statues of dukes Ranuccio and Alessandro Farnese. Piacenza abounds in fine buildings, the principal of which are the ducal palace Palazzo Farnese, built by Margaret of Austria from designs of Vignola; the podesteria (Palazzo del Comune), or town-house, erected about 1281, in a style combining characteristics of the gothic and romanesque; the cathedral, a handsome gothic structure of the 12th century, with fresco paintings by Guercino and

Luigi Caracci; San Sisto, a handsome church, richly adorned; the fine church of San-Agostino; San-Francesco Grande, a noble building in the romanesque-gothic style, erected by the Franciscans in 1278; and the church of Santa Maria di Campagna, erected by Bramante, in the Roman-Doric style. All these churches are richly embellished with frescoes, paintings, and statuary. The town library contains 30,000 volumes; the new theatre, and the school of design and architecture, are also worthy of notice. Piacenza carries on a considerable trade in agricultural produce. The establishments for public instruction consist of a lyceum, with faculties of arts, law, and medicine; an episcopal seminary, the college Alberoni for boarders, a school of the fine arts, an institution for the education of young ladies, and several elementary schools. The charitable institutions comprise a large hospital, orphan asylums, &c. The industrial products are woollen-cloth, serge, fustian, hosiery, and hats.

Placentia is first mentioned as being a Roman colony, in the year 224 B.C. In the second Punic war it was besieged unsuccessfully by Hasdrubal; it was however taken and destroyed by a band of Ligurians and Gauls, headed by Hamilcar, a Carthaginian officer, after the defeat of Hasdrubal on the Metaurus. (Livy, xxxi. 10.) After the defeat of Hamilcar the colony of Placentia was restored. In modern history Piacenza is mentioned as one of the independent Lombard cities. It afterwards had its lords or tyrants of the families of Pallavicino, Scotti, and Landi. It next fell under the dominion of the Visconti of Milan. After the death of Filippo Maria Visconti, 1447, the citizens of Piacenza revolted against the Milanese, and placed themselves under the protection of Venice. But Francesco Sforza, being appointed commander of the Milanese, retook Piacenza, in December, 1447, when the town was given up to pillage. From that time Piacenza never recovered its former prosperity; it remained subject to the Sforza of Milan, was taken by the French under Louis XII., and retaken from the French by Pope Julius II., after which it remained subject to the popes, together with Parma, until 1645, when Pope Paul III. gave it to his son Pier Luigi Farnese. From that time it has formed part of the duchy of Parma.

PIANELLO. [ABRUZZO.]

PIAUHY. [BRAZIL.]

PIAZZA. [SICILY.]

PICARDIE, LA, a maritime province of France, constituting one of the military governments into which, before the Revolution, that kingdom was divided. It was bounded N.E. by Artois and French Flanders, E. by Champagne, S. by the Ile-de-France, S.W. by Normandie, and W. and N.W. by the English Channel. Its form was very irregular. The part south of the river Authie had its chief extension from west to east, about 145 miles from the mouth of the little river Bresle (which divided Picardie from Normandie) to the neighbourhood of Rocroy in Champagne; but the breadth of this portion from north to south was in no part greater than 60 miles, and generally was much less. A narrow strip of the province projected along the coast, about 50 miles northward from the Authie to Gravelines, but not having in any part a much greater extension inland from west to east than 20 miles.

Picardie was divided into Upper and Lower Picardie. Upper Picardie comprehended the districts of Amiénois, chief town Amiens; Santerre, chief town Péronne; Vermandois, chief town St.-Quentin; and Thiérache, chief town Guise. Lower Picardie comprehended the three districts of Calaisis, Boulonnais, and the county of Ponthieu, of which the capitals were respectively Calais, Boulogne, and Abbeville. The present department of SOMME, the arrondissements of St.-Quentin and Vervins in the department of AISNE, and the arrondissements of Boulogne and Montreuil in the department of PAS-DE-CALAIS, make up the province of Picardie. Its capital was AMIENS.

PICENUM. [ASCOLI.]

PICKERING, North Riding of Yorkshire, a market-town, and the seat of a Poor-Law Union in the parish of Pickering, is situated in 54° 15' N. lat., 0° 45' W. long., distant 26 miles N.N.E. from York, 226 miles N. by W. from London, and 243 miles by the Great Northern and North Midland railways. The population of the town in 1851 was 2511. The living is a vicarage with the perpetual curacy of Newton annexed, in the archdeaconry of Cleveland and diocese of York. Pickering Poor-Law Union contains 25 parishes and townships, with an area of 88,062 acres, and a population in 1851 of 9972. Pickering is a long and irregularly-built town; it is lighted with gas. The town contains an ancient and spacious church, with a lofty spire; places of worship for Wesleyan and Primitive Methodists, Independents, and Quakers; an Endowed Grammar school for 20 boys; a Free school for 20 boys; and a savings bank. The market is on Monday, and there are fairs held monthly, of which eight in the year are cattle fairs. Broom-making is extensively carried on, the adjoining moors supplying the material. The town formerly sent members to parliament. A county court is held in Pickering. On Pickering-moor are vestiges of two Roman encampments.

PICO. [AZORES.]

PICTON. [CANADA.]

PICTOU. [NOVA-SCOTIA.]

PIDDLETOWN. [DORSETSHIRE.]

PIDDLETRENTHIDE. [DORSETSHIRE.]

PIEDIMONTE. [LAVORO, TERRA DL.]

PIEDMONT, PIEMONTE, or PIE' DI MO'NTE, which means a country at the foot of mountains, is the old name of a district of North Italy which forms part of the Sardinian States. It has the title of a principality, and the eldest son of the king of Sardinia is styled Prince of Piedmont.

The name of Piedmont however was also and is still occasionally used as a general denomination for that part of the continental territories of the king of Sardinia which is situated on the Italian side of the Alps, and between the Alps and the Ligurian Apennines, as distinguished from the other great divisions of the monarchy, namely, the duchy of Savoy, the county of Nice, and the duchy of Genoa. In this larger sense Piedmont includes a fine and extensive tract of country 120 miles long from north to south, from the Pennine Alps to the Ligurian Apennines, and between 90 and 100 miles in breadth. It forms a distinct geographical region, having natural boundaries and a peculiar physical character. It comprises the western or highest part of the basin of the Po, from the sources of that river to where it emerges from the hills of Montferrato and enters the great plain of Lombardy, including its numerous and large affluents, the Tanaro, the Stura, the Bormida, the two Dora, &c. It is a country of hills and valleys, being occupied by numerous offsets of the Alps and of the Ligurian Apennines, except towards the eastern borders, where it merges into the plain of Lombardy, on the side of Vercelli and Mortara.

During the middle ages this fine country was parcelled out into several feudal principalities and lordships, under a nominal allegiance to the German emperors as kings of Italy, namely: 1, the principality of Piedmont proper; 2, the duchy of Aosta; 3, the duchy of Monferrato; 4, the marquisate of Saluzzo; 5, the county of Asti; 6, the marquisate of Ceva; 7, the lordship of Vercelli. In course of time the dukes of Savoy became possessed of all these districts, either by conquest or inheritance, the houses of the former lords having become gradually extinct.

The country of Piedmont, generally speaking, is one of the most fertile, healthy, and pleasant in Italy. It produces corn, rice, Indian corn, wine, fruits in abundance, timber-trees, excellent pasture for cattle, hemp, and silk. The system of irrigation has been long practised in Piedmont, and it is carried to considerable perfection wherever the slope of the ground and the vicinity of running water afford the opportunity.

The population of all Piedmont amounts to upwards of 3,000,000, being about two-thirds of that of the whole monarchy, the island of Sardinia included. [SARDINIAN STATES.]

PIERIA. [MACEDONIA.]
PIERRELATTE. [DRÔME.]
PIERRE-LE-MOUTIER, ST. [NIRVRE.]
PIETERMARITZBURG. [NATAL.]
PIEVE. [NICE.]
PIGNEROL, or PINEROLO. [TORINO.]
PILCOMAYO. [PLATA, LA, River.]
PILKINGTON. [LANCASHIRE.]

PILLAU, a seaport in Eastern Prussia, with 8600 inhabitants, is situated at the extremity of a tongue of land between the Baltic and the eastern extremity of the Frisches-Haff. It is a place of considerable importance, for as the Haff is too shallow to allow large or heavily-laden ships to go up to Königsberg and Elbing, they are either lightened of part of their cargo, or remain at Pillau, and the goods are conveyed to those ports by lighters, which also bring back the return cargoes. Near to the town there is a lighthouse, and a fortress which defends the entrance of the Haff. Pillau derives great advantages from its fisheries, especially of sturgeons, from the roe of which caviare is prepared.

PILLIBERT. [BAREILLY.]
PILLNITZ. [PIRMA.]
PILLTOWN. [KILKENNY.]

PILSEN, a fortified town in Bohemia, is situated in the midst of fertile fields, in a beautiful and extensive valley, at the confluence of the Bradawka and the Beraunka, also called the Mies, in 49° 45' N. lat., 13° 23' E. long., 52 miles W. by S. from Prag, and has about 10,000 inhabitants. It is a well-built town, and the houses are mostly of stone. It has three suburbs. The most remarkable public buildings are the gothic church of St. Bartholomew (built in 1292), the gymnasium, the town-hall, and the house of the Teutonic knights. Besides the gymnasium, there are a military academy, a philosophical institution with six professors, and a lyceum. Pilsen has considerable manufactures of woollen cloth, morocco leather, ironmongery, articles made of horn, &c. There are four annual fairs, which are much frequented. The inhabitants carry on an extensive trade in Bohemian products, and in cattle, iron, potashes, feathers, wool, leather, cloth, &c.

PINCHBECK. [LINCOLNSHIRE.]
PINDUS. [THESSALY.]
PINEY. [AUBE.]
PINGUENTE. [ISTRIA.]
PINHEL. [BEIRA.]
PINNA. [ABRUZZO.]
PINSK. [MINSK.]
PIOMBINO. [SIENA.]
PIPERNO. [FROSINONE.]

PIPLEY. [CUTTACK.]
PIPRIAC. [ILLE-ET-VILAINE.]
PIQUA. [OHIO.]
PIRÆUS. [ATHENS.]
PIRANO. [ISTRIA.]

PIRANA, a town in the circle of Meissen, in the kingdom of Saxony, situated on the left bank of the Elbe, 11 miles by railway S.E. from Dresden, and has about 6000 inhabitants. Most of the houses are built of stone from the celebrated quarries near the town. The principal public buildings are the town-hall, the cathedral, which is one of the finest specimens of Gothic architecture in the kingdom, the convent church, the church of St. Kunigunda, the orphan asylum, and a handsome schoolhouse. On a high rock near the town, called the Sonnenstein, there was formerly a strong fortress, which was dismantled by the Prussians in the Seven Years' War, and which is now used as a lunatic asylum. There are flourishing manufactures of cotton, linen, woollen cloths, stockings, hats, leather, ironmongery, starch, &c. Calico-printing is carried on. The inhabitants have a considerable trade also in the natural productions of the country, among which the Pirna sandstone holds an important place. Hops are extensively grown in the neighbourhood of Pirna. About four miles below Pirna, on the right bank of the Elbe, is the village of Pillnitz, adjacent to which is the extensive palace of Pillnitz, the summer residence of the kings of Saxony. In this palace a congress was held in 1791, at which a convention was agreed upon to oppose the French revolution, and to maintain the right of the Bourbons to the throne of France.

PISA, a province of Tuscany, is bounded N. by the province of Lucca, E. by that of Firenze, W. by the Mediterranean, and S. by the province of Siena. It comprises—1, the lower part of the basin of the Arno, with a small part of that of the Serchio; 2, a part of a hilly range, called Montenero, which bounds the basin of the Arno on the south, and runs close to the sea south-east of Livorno; 3, the basin of the Cecina, south of the hills just mentioned; and 4, a strip of land south of the mouths of the Cecina, and extending along the sea-coast, and between that and the hills for about 12 miles, as far as the Torre San Vincenzo. The area of the province is 1177 square miles, and the population in April 1854 amounted to 231,473. The city of Livorno (Leghorn) and territory about it amounting altogether to 38 square miles, and formerly included in the province of Pisa, has been recently formed into a separate government, to which the islands of Elba and Gorgona also are annexed. [LIVORNO; ELBA.] In the changes that occurred after the death of the ex-empress Maria Louisa in 1847, the outlying districts of Pontremoli and Fivizzano, formerly belonging to Tuscany and included in the province of Pisa, were ceded to Parma and Modena respectively; but the detached districts of Pietrasanta, Barga, and Seravezza, are still held by Tuscany in virtue of the Convention of Florence (Nov. 28, 1844). Barga lies in the valley of the Upper Serchio. [GARFAGNANA.] The district of Pietrasanta lies along the sea-coast between the territories of Lucca and of Massa and Carrara. It stretches from the sea to the foot of the Carrara Mountains, or Alpe Apuana, and is chiefly noted for its marble quarries at Seravezza, which are of the same description as those of Carrara.

The central and southern parts of the province are crossed by ramifications of the Apennines, and the northern part is the wide plain in which the city of Pisa stands. The principal rivers are the Arno and the Serchio, which traverse the plain of Pisa and here enter the sea. The other rivers are the Era, a feeder of the Lower Arno, and the Cecina, which rises in the range of high lands, between 1000 and 1500 feet high (which divides the Maremma, or maritime low lands, from the valley of the Ombrone in the province of Siena), and after a tortuous course of about 40 miles in a western direction, enters the sea by two mouths in the Gulf of Vad, 22 miles S.E. of Livorno. In the north-west of the province there are several marshy lakes: a narrow strip along the coast is unhealthy in summer and autumn, owing to malaria. The soil is very fertile in corn, wine, and fruits. The province is crossed by railways and electro-telegraphic wires connecting the city of Pisa with Lucca, Florence, and Leghorn. The chief towns, PISA and VOLTERRA, are noticed in separate articles.

PISA, capital of the province of Pisa in Tuscany, is situated in a plain watered by the Arno, 45 miles by railway W. from Florence, 10 miles N. from Leghorn, and about 4 miles from the sea-coast, in 43° 43' 11" N. lat., 10° 24' 7" E. long., and has about 22,000 inhabitants. The town is divided by the river into two nearly equal parts, connected by three bridges, one of which is of marble. The circumference of the walls is about six miles; the quays along the Arno and several other streets are wide, well paved, and lined with handsome buildings, but the town has an appearance of loneliness; it is too large for its population. The four most remarkable buildings of Pisa, the cathedral, baptistery, belfry, and Campo Santo, are grouped near one another in a vast open place at the western extremity of the town.

The duomo, or cathedral, begun in 1068 by the architect Buschetto and completed in 1118, is a splendid gothic structure, cased externally with marble of various colours, and ornamented with numerous reliefs, inscriptions, and columns of various sizes. The plan is a Latin cross. The interior of the church is lighted through small windows of painted glass; the nave is divided from the aisles by fine columns of granite; and the three bronze gates of the façade are ornamented with figures by Giovanni da Bologna, representing scenes

from the Passion of our Lord. Above the intersection of the nave and transepts rises a dome, which is one of the earliest constructions of the kind in Italy. The pulpit is enriched with valuable sculptures by Giovanni di Pisa; other statues and sculptures by the same master-hand, and by Giovanni da Bologna and other artists, are in various parts of the church. The paintings are by Andrea del Sarto, Razzi, Salvator Rosa, Roselli, and other masters. The pavement is of marble of various colours.

The Baptistery, erected between the years 1152 and 1160 by Diotisalvi, is of a singular design. The plan is circular, with a diameter of 116 feet; the walls are 8 feet thick; the building is raised on 3 steps, and surmounted with a dome in the shape of a pear. The external elevation is divided into 3 stories: in the basement the columns, 20 in number, are engaged, and have arches springing from column to column, with a bold cornice above; in the first story the columns are smaller, stand out in relief, and are placed closer together; and the order is surmounted with pinnacles and high pediments placed at equal distances: the terminations of these parts are crowned with statues. Above this is an attic story, decorated with other high pediments, pinnacles, and statues. The dome, which is covered with lead, is intersected by long lines of very prominent fretwork: all these lines meet in a little cornice near the top, and terminate in another dome, above which is a statue of St. John. The interior is much admired for its proportions: 8 granite columns, placed between 4 piers decorated with pilasters, are arranged round the basement story, which support a second order of piers arranged in a similar manner, on which the dome rests, which is famous for its echo. The interior is ornamented with numerous sculptures: the pulpit, by Nicola Pisano, is considered a masterpiece. In the middle of the Baptistery is a large octagonal basin of marble, raised on three steps. Within the basin there are four circular places hollowed out for water, and round the centre of the basin, which is occupied by a pedestal, is a place likewise hollowed out for the priest, who was thus enabled to turn from one basin to the other.

The Belfry, one of the most celebrated buildings of Pisa, is a round tower built externally of white marble. It is 150 feet high, divided into nine stories by rows of columns. It is generally named the Leaning Tower, from the circumstance that it deviates from the perpendicular line about fourteen feet. It was erected in the latter part of the 12th century by the architects William of Innsbruck and Bonanno of Pisa. From the summit there is a splendid view of the plain, the surrounding mountains, and the sea.

The Campo Santo, or cemetery, constructed in the 13th century by Giovanni di Pisa, is a parallelogram, 430 feet in length, 148 feet wide, with an arcade or cloister running all round the interior, the walls of which are covered with fresco paintings chiefly by Giotto, Orcagna, and Memmi. The paintings are for the most part greatly damaged, and some are entirely obliterated. A series of engravings of the paintings was published by Rosini in 1816. Several ancient sculptures and other remains of antiquity are deposited in the Campo Santo. Among the tombs is that of the Countess Beatrice, the mother of Matilda; of Algarotti, Pignotti, and of the celebrated surgeon and professor Vacca, which last is the work of Thorwaldsen.

Among the other remarkable buildings of Pisa are—the church of San Stefano, which was founded in 1561 by the grand-duke Cosmo; that of San Frediano, which is rich in paintings; San Nicola, with a handsome belfry, the work of Nicola Pisano; San Michele in Borgo contains the monument of Guido Grandi, a celebrated mathematician and contemporary of Newton; Santa Maria della Spina, a handsome church, with good paintings and sculptures; the palaces of Lanfranchi and Lanfreducci; the Torre della Fame (immortalised by Dante in his 'Inferno'), in which Ugolino and his children were starved to death, and now forms part of a structure called Palazzo dell'Orologio, on the Piazza de' Cavalieri; the university buildings, the library, observatory, and botanical garden; the great hospital; the Loggia, or old exchange.

The Certosa, or Carthusian convent and church, is in a pleasant situation, about two miles east of Pisa. The vast farm and forest of San Roisore, belonging to the grand-duke, three miles from Pisa, near the sea, is chiefly remarkable for the camels, about eighty in number, the original stock of which were brought to this spot in the time of the Crusades. The mineral baths, called Di San Giuliano, four miles from Pisa, at the foot of a mountain, have been restored on the remains of ancient Thermae, which were frequented in the middle ages by the countess Matilda. The present buildings are of the last century. In summer the air of Pisa and the neighbouring plain is not considered wholesome, though it is not so deleterious as it once was, owing to improvements in drainage and cultivation. During the winter the climate of Pisa is extremely mild, though rainy.

The origin of Pisa is unknown. It was on the border between Etruria and the country of the Ligurians, and was probably colonised by the Etruscans when they extended their dominion from the Arno to the Macra. It became subject to Rome about the middle of the 5th century of Rome, retaining, like most Etruscan towns, its municipal form of government. Livy (xl. 43) mentions that a Latin colony was sent to Pisa about B.C. 179. Nothing more is said concerning Pisa in Roman history. It had bishops at the beginning of the 4th century. Pisa passed successively under the dominion of the various

conquerors of Italy, the Goths, the Longobards, and the Carolingians. Under the last it governed itself as an independent community, with a nominal allegiance to the emperors and their great feudatories the counts or marquises of Tuscany. In A.D. 874 the Pisans defeated the Saracen pirates, who, after having plundered the Roman coast, landed at San Pietro in Grado, about three miles from Pisa. In 965 Otho I., on his return from Rome, stopped at Pisa, and granted various privileges to the town. About 1003 the Pisans sent their galleys to the coast of Syria against the Seljuk Turks, who had invaded the country, and who vexed the Christians of Palestine.

In the following year began the long struggle between the Pisans and Muscet, the Moorish king of Sardinia, which ended in the final conquest of that island by the united Pisans and Genoese, in the year 1022. At this period Pisa was a republic, having its annual consuls. About 1050 the Pisans subjected the island of Corsica, and in 1089 or 1091, Pope Urban II. made a grant to them of the whole island as a fief of the Apostolic See. In 1063 they sailed to Palermo, cut the Saracen fleet out of the harbour, and carried away a rich booty, part of which was employed in building their splendid cathedral. About the year 1070 began the wars between Genoa and Pisa, which continued, with various interruptions, for more than two centuries, and ended in the downfall of Pisa. In 1088, the two states having made peace, joined their fleets, and sailing to the coast of Barbary, took the town of Mahadiah, then the capital of a considerable Saracen state, and obliged the king to release all his Christian slaves.

It was in this period of their prosperity that the Pisans completed their splendid monuments of art, the cathedral, the belfry, baptistery, and Campo Santo. The Pisans sent a fleet of 120 sail to the first crusade, and their soldiers and sailors assisted at the taking of Nicæa, and afterwards at that of Antioch, as a reward for which they obtained a street of that city to establish a factory in. In 1099 the Pisans were at the taking of Jerusalem. In the following year they sailed into the sea of Marmora, and obliged the emperor Alexius to sign a treaty, by which he allowed them to establish a factory at Constantinople, with ample privileges. The Pisan fleet returned home in triumph, and their city was then entirely surrounded by walls.

In 1114 the Pisans sent a large armament, the largest that had ever sailed from their coast, to the conquest of the Balearic Islands, which were in possession of the Moors, and which had become a nest of Mohammedan pirates. The fleet consisted of 300 ships of various sizes, having on board 35,000 men and 900 horses. The archbishop of Pisa, Pietro Moriconi, himself commanded the expedition. In April, 1117, the Pisans, in conjunction with Raymundo IV., count of Barcelona, accomplished the conquest of the Balears. In the year 1137, the Pisan fleet went to the coast of Naples to aid the Pope and the emperor against the Normans, and took the town of Amalfi.

In the war between Frederic Barbarossa and the Lombard cities, Pisa sided with the emperor. In the following century the Pisans, as Ghibelines, took the part of Frederick II. against the Pope. In 1258, peace was made between Genoa and Pisa, through the mediation of Pope Alexander IV. In 1282 began the fourth war between Pisa and Genoa. In 1284 they suffered a disastrous defeat off the island of Meloria from the Genoese, commanded by Oberto Doria. In the action they lost 3000 men killed or drowned, and 13,000 were carried prisoners to Genoa, where they were confined in chains, and where most of them died. Hence a proverb became current throughout Italy—"Those who want to see Pisa must go to Genoa." In 1290, Conrad Doria attacked the Porto Pisano, destroyed its towers, and sunk ships filled with stones at the entrance. From that time Pisa completely lost its rank as a maritime power, after a glorious career of four centuries, and Venice and Genoa were left alone to dispute for the naval supremacy of the Mediterranean.

In the meantime Florence, at the head of the Guelphs of Tuscany, assailed Pisa by land, and in their distress the Pisans appeared as their captain-general, for 10 years, Ugolino Count Gherardesca, a Ghibeline feudal baron, who, in order to keep himself in power, favoured alternately Guelphs and Ghibelines, while he proscribed the more independent leaders of both parties. He was opposed by the archbishop Ruggiero degli Ubaldini, a staunch Ghibeline; and in 1288, being accused of betraying his country into the hands of the Guelphs of Florence and Lucca, an insurrection broke out against him, headed by the archbishop. Ugolino, being overpowered, was confined, with two of his sons and two of his grandsons, in a tower near the Arno, where the wretched prisoners were left to die of hunger. This catastrophe has furnished Dante with the subject of one of his most powerful descriptions.

The Pisans then appointed Guido da Montefeltro their captain-general. He recovered by force the strongholds which Ugolino had put into the hands of the Guelphs. Peace was made with Florence in 1293, and in 1299 with Genoa also. Pisa continued attached to the Ghibeline party, and at the death of the emperor Henry VII., in 1313, found herself exposed to the attack of all the Guelphs of Tuscany. The Pisans gave the chief command to Uguccione della Faggiuola, a captain of some renown, who took Lucca, in 1314, and afterwards defeated the Florentines in the battle of Montecatino. Pisa resumed its republican form of government in 1316, and in 1322 exiled 15 of the Ghibeline nobles, and made peace with the Guelphs. In the following year a general massacre of the Pisans took place in

Sardinia, and the insurgents offered the island to Alfonso, the son of James II., king of Aragon. Pisa made a last effort to preserve Sardinia, but was obliged to give it up to the Aragonese, in 1326. In 1328 Castruccio Castracani, the great Ghibeline leader, took Pisa by surprise, but his death soon after restored it to freedom. In 1341 the Pisans, who still retained much of their martial spirit, defeated the Florentines, took possession of Lucca, and kept it till 1369, when the emperor Charles IV. obliged them to restore Lucca to its independence.

Pisa was now distracted by internal feuds between the democratic party and the Ghibeline nobles, the result of which was that the city was sold by one of its tyrannical chiefs to Gian Galeazzo Visconti, in February, 1399. At the death of Gian Galeazzo, in 1403, his natural son Gabriello Maria had Pisa for his share, but not feeling himself secure, he placed himself under the protection of Charles VI. of France. Marshal Boucicault, the representative of Charles, sold the citadel and the other strongholds which he had in the territory of Pisa for 206,000 florins. Gabriello Maria demanded his share of the purchase money, but Marshal Boucicault rid himself of his importunities by having him beheaded as a traitor to the French king.

The Florentines had the citadel of Pisa, but not the town, and the citizens soon retook the citadel. They now asked peace of the Florentines, offering to repay them the money which they had paid to Boucicault. The Florentines however would hear of no proposal except the surrender of Pisa. They accordingly blockaded Pisa for about a year, and when the inhabitants were reduced to the greatest distress for want of provisions, Giovanni Gambacorta, whom they had recalled from exile to conciliate their enemies, secretly opened the gates to the Florentines for 50,000 florins on the night of the 8th November, 1406. Rather than submit to the yoke of Florence, the principal families of Pisa now emigrated to Sardinia and Sicily. Thus ended the career of Pisa as an independent state.

After 88 years of Florentine dominion, when Charles VIII. of France came to Italy, in 1494, the people of Pisa rose in arms, drove away the Florentines, and restored their republican government under the protection of France. In 1499, after the French had left Italy, the Florentines besieged Pisa, but were repulsed. In 1504 the Florentines resumed the siege, but they failed again. At last, in 1509, they formed a close blockade round the town, and Pisa was obliged to surrender through famine. A second emigration then took place, the wealthier families preferring exile to the loss of independence. Since that time Pisa has remained subject to Florence.

The university of Pisa has been the chief means of maintaining some life in the town. It is divided into three faculties, theology, law, and medicine; it is attended by about 400 students.

PISIDIA formed the northern and mountainous part of the Syrian and Roman provinces of Pamphylia. [PAMPHYLIA.] In their mountains, which formed a part of Mount Taurus, the Pisidians maintained their independence under the Persian empire. Neither the Syrian kings nor the Romans were able to subdue them, though the latter obtained possession of some of their towns. In the time of Strabo the Pisidians were governed by petty chiefs, and principally supported themselves by plundering their neighbours.

Mr. (now Sir Charles) Fellows, who visited the western part of Pisidia in 1838, says that the rocks are generally of marble, and some of common limestone with veins of marble running through them in all directions. The most singular features in this district are mountains of volcanic dust accumulated round marble rocks. This light sand or dust is tufa, the dust of the pumice-stone; the decomposed lime has in many parts mixed with this tufa and formed hills of Roman cement.

The chief towns of Pisidia were ANTIOCHEIA, Sagalassus, and Selge. South-west of Antiocheia was *Sagalassus*, or *Selgeus*, the ruins of which, according to Fellows, are very extensive, consisting of seven or eight temples; three other long buildings, ornamented with cornices and columns, and with rows of pedestals on each side; and a most beautiful and perfect theatre on the side of a higher hill than the rest of the ruins occupy. The town has no trace of walls, but its tombs are to be seen carved in the rocks for miles around, with much architectural ornament. These ruins are near the village of Allahsuun to the south of Isbarta. To the south rises a high insulated conical hill with the remains of the wall round its summit. On this hill stood the Acropolis of Sagalassus. (Hamilton, 'Researches in Asia Minor.')

South-east of Sagalassus was *Selge*, the most important town in Pisidia. When Alexander marched through Pisidia, the inhabitants of Selge sent ambassadors to him, and obtained favourable terms from him. (Arrian, i. 28.) The territory of Selge, though mountainous, was, according to Strabo, very fertile. It produced abundance of oil and wine, and afforded pasturage for great numbers of cattle. The forests supplied a great number of timber-trees, of which the styrax was reckoned the most valuable. Mr. Fellows visited the ruins of a large city, situated about 10 miles north-east of the village of Boojak, which are in all probability those of Selge. He rode (he says) for at least 3 miles through a part of the city, which was one pile of temples, theatres, and buildings, vying with each other in splendour.

PISINO. [ISTRIA]

PISTICCIO. [BASILICATA.]

PISTOIA, the ancient *Pistorium*, a town in the Tuscan province of

Firenze, is situated 21 miles by railway through Prato N.W. from the city of Florence, in a plain at the foot of the Apennines, and near the Stella, a tributary of the Ombrone, which is an affluent of the Arno. Pistoia lies on the high road leading from Florence to Modena over the Apennines. It is a well-built town of considerable size, but rather thinly inhabited; it contains about 12,000 inhabitants, and gives title to a bishop. Pistorium does not appear to have been a place of importance under the Romans, except that it was near one of the passes leading into Cisalpine Gaul. Sallust mentions the Pistorian territory in his account of the movements of Catiline and his insurgent followers. Pistoia was a place of importance under the Longobards, whose king Desiderius inclosed it with walls. It was afterwards an independent municipality, until it was subjugated by Florence, about 1150. In the bloody feuds of the numerous branches of a distinguished Pistoian family, named Cancellieri, in the latter part of the 13th century, the two factions of the Bianchi and the Neri originated, which spread also to Florence, and caused incalculable misery to both cities in this and the following century. The Florentine Neri blockaded Pistoia, and after terrible barbarities got it into their power by surrender, April 10, 1306, when they razed the walls to the ground. Pistoia never recovered from this blow. It has continued, with some short interruptions, to be subject to Florence ever since.

There are many remarkable buildings in Pistoia. The cathedral, which was built by the Countess Matilda, in the early part of the 12th century, and restored by Niccolo di Pisa, contains some good paintings, basso-relievos, and monuments. The other churches worthy of notice are San-Pietro-Maggiore, L'Annunziata, San-Filippo-Neri, Santa-Maria-dell'Umiltà, San-Giovanni-Battista, San-Domenico, and San-Giovanni-Rotondo. The palace dell'Commune, or degli Anziani, dates from the 13th century, and contains several monuments of the middle ages. The episcopal palace and the clerical seminary, both built in the 15th century by Bishop Ricci, are handsome buildings. La Sapienza (the public schools) has a good library. There is also at Pistoia an academy of sciences and belles-lettres. The private palaces of the families Bracciolini, Cancellieri, Rospigliosi, Tolomei, and Forteguerri, contain good paintings. The chief manufactures are woollen cloth, silk, leather, iron wares, and gun-barrels. The pistol is said to derive its name from this city. Pistoia was the birthplace of Pope Clement IX.

PITCAIRN'S ISLAND, a small settlement in the Pacific Ocean, situated in 25° 4' S. lat., 130° 8' W. long., is dependent on the British government, from the circumstance of its having been resorted to by some of the mutineers of the *Bounty* in 1790. The first settlers consisted of 9 English sailors, 6 Otaheitean men, and 13 Otaheitean women. The 6 Otaheiteans and 6 of the Englishmen were slain in quarrels. The population in October 1854 amounted to 200, all but 3 of whom were born on the island, and nearly all are descendants of the original settlers. The islanders speak both the Tahitian and English languages fluently.

Pitcairn's Island was so named on account of its having been first seen by a young gentleman of the name of Pitcairn on the 2nd July, 1767, as stated in Commander Carteret's narrative of his 'Voyage Round the World.' The island is about 4½ miles in circumference, about a mile and a half in its greatest length, and the highest point is 1008 feet above the sea. The coast is formed for the most part of rocky projections, off which lie scattered numerous fragments of rock rising like black pyramids amidst the surf, which on all sides rolls in upon the shore. Bounty Bay is the only accessible landing-place. The island has great variety of soil and aspect, is well wooded, and healthy. The thermometer ranges from 59° to 89° Fahr. Cocoa-nut, plantain, banana, bread-fruit, banyan, orange, and other trees flourish; potatoes, sweet potatoes, yams, water-melons, sugar-cane, tobacco, the tea-plant, and maize are cultivated; goats, hogs, and poultry are reared; and fish is abundant. About a dozen vessels, chiefly whalers, visit the island annually, and obtain provisions in exchange for clothing and other articles which the inhabitants stand in need of. Occasionally the island is visited by a British man-of-war. Rear-Admiral Moresby, the British Commander-in-Chief in the Pacific, visited and spent a few days on the island in August 1852, and the accounts given by him and by other visitors agree in ascribing to the islanders the highest character for virtue, good order, and intelligence. John Adams, the last survivor of the mutineers, died in 1829 in the 65th year of his age. This man at the time of the mutiny was 28 years of age; ten years later, he found himself the only man left of those who had come to the island; of the others only one had died a natural death; most of the men had been killed in quarrels fomented by the use of ardent spirits. The spirits were distilled from a root found on the island by one who himself committed suicide in a fit of delirium tremens. Adams became seriously impressed with a sense of his duty to the children of his companions, and devoted himself assiduously to the instruction and government of his little community. A Bible and prayer book saved from the *Bounty* were his only assistants; strict regulations were made against making intoxicating drinks, or landing them from ships; the little territory was divided first into 9, afterwards into 22 allotments, corresponding to the number of families; a chief magistrate and two councillors, elected annually, were appointed to direct the insular government; and an industrious, orderly, and virtuous community gradually sprang up. Four months before Adams' death an Englishman named Nobbs, who had been interested in the islanders-

by the accounts he had heard of them, arrived at Pitcairn, and was engaged by Adams as schoolmaster. After Adams' death, Mr. Nobbs continued to set as teacher and chaplain. In 1852, by the kindness of Admiral Moresby, he was enabled to visit England. After receiving ordination from the Bishop of London, and obtaining an interview with the Queen, he returned to Pitcairn. The Admiral's chaplain, who remained on the island in the absence of Mr. Nobbs, writes under date of September 5th 1852, as follows:—"The accounts of the virtue and piety of these people are by no means exaggerated: I have no doubt they are the most religious and virtuous community in the world; and during the months I have been here, I have seen nothing approaching a quarrel, but perfect peace and good-will among all."

(Murray, Rev. E., *Pitcairn*: London, 1853.)

PITCAITHLY. [PERTHSHIRE.]

PIŦEA. [BOTANIA.]

PITHIVIERS. [LOIRET.]

PITTENWEEM. [FIFESHIRE.]

PITTSBURG. [PENNSYLVANIA.]

PITTSFIELD. [MASSACHUSETTS.]

PITIC. [MEXICO.]

PITYUSAI. [BALEARIC ISLANDS.]

PIZZIGHETTONI. [CREMONA.]

PIZZO. [CALABRIA.]

PIZZOLI. [ABRUZZO.]

PLABENNEC. [FINISTÈRE.]

PLACENCIA. [ESTREMADURA, Spanish.]

PLACENTIA. [PIACENZA.]

PLACERVILLE. [CALIFORNIA.]

PLAISTOW. [ESSEX.]

PLATA, RIO DE LA, is the name applied to the wide estuary formed by the confluences of the rivers Paraná and Uruguay, in South America. Where the Rio de la Plata enters the sea, between Punta del Este and Cape San Antonio, its width is about 180 miles; and between Punta de las Pedras and the Barrancas de Santa Lucia above Monte Video, it is still 58 miles wide; but above these places the shores gradually approach nearer, and opposite Colonia they are only 20 miles apart; this width continues to the confluence of the two large rivers which fall into it. The Rio de la Plata is very shallow; at its mouth it is only 10 fathoms deep on an average, and this depth gradually decreases. Between Monte Video and Buenos Ayres the average depth is not more than 3 fathoms; but vessels drawing 16 feet of water can, except when the water is very low, ascend the Paraná as high as San Juan (80° 36' S. lat.), and those drawing 12 feet can go up to Corrientes (27° 30' S. lat.). The deep part of the Plata opposite Buenos Ayres, called the outer roads, is from 7 to 8 miles from that town; and between the outer and the inner roads there is a sand-bank. Smaller vessels anchor in the inner roads, at from one to two miles from the shore. The navigation of the Rio de la Plata is very difficult, owing to the dangerous shoals, the strong and irregular currents, and the sudden tempests to which it is subject. The strength and irregularity of the currents are easily accounted for, when it is considered that the larger of the two tributaries, the Paraná, rises within the tropics, and during the rainy season brings down an immense volume of water, and that the wide expanse of the estuary, being bounded either by low and level or very slightly elevated ground, is subject to be influenced by every strong wind which drives a great volume of water to the point of the compass opposite to that from which it blows. The 'pamperos,' or south-western gales, which frequently blow with inconceivable fury, cause very remarkable fluctuations in the depth of water. The extremely difficult and dangerous navigation of this estuary has obtained for it the designation of El Infierno de los Marineros; but Captain Fitzroy mentions as very redeeming qualities, that it affords anchoring-ground everywhere, and soundings where the indications are certain if the vessel is approaching danger. Little or no tide has been hitherto noticed in this wide expanse of water, but Captain Fitzroy thinks that "this anomaly may be more apparent than real; for where the depth of water is so fluctuating, and the currents are so variable, it is difficult to distinguish the precise effect of tides, except by a series of observations far longer than has yet been made." Mr. Darwin, when off the coast, noticed the slowness with which the waters of the Rio de la Plata mingled with those of the sea; the muddy and discoloured river-water, from its less specific gravity, floating for a great distance on the surface of the salt-water, and producing a very singular effect where the vessel crossed it. Other observers have found that the current occasioned by the discharge of the Plata preserves an easterly direction, and is still found to have a velocity of a mile an hour, and a breadth of more than 800 miles, at a distance of not less than 600 miles from the mouth of the river. (Sabine, 'Notes to Humboldt's Cosmos.') The vast body of water which issues from the Plata may be readily conceived when it is stated that the basin drained by the rivers which flow into it is estimated at 1,200,000 square miles.

Through the Rio de la Plata the commercial produce of about one-fourth of South America is brought to the market of the world. It is therefore a great advantage to the countries from which the estuary of the Plata receives its waters, that the rivers which flow into it offer less obstruction to navigation than is usual in large streams. The largest of these rivers, the Paraná, as already mentioned, is navigable

for vessels drawing 12 feet of water as far as Corrientes, a distance of 800 miles from its mouth. The Rio Paraguay, the largest affluent of the Paraná, may be navigated by large boats more than 1000 miles above its confluence with the Paraná. The Rio Vermejo, another affluent of the Paraguay, is navigable up to the confluence of its two principal branches, the Lavayen and Rio de Tarija, a distance of more than 400 miles. The Salado, which joins the Paraná in its lower course, is navigable to the town of Matara, 350 miles from the mouth of the river. The navigation of the Uruguay is obstructed by two cataracts, which occur about 180 miles above its mouth.

(Fitzroy and King, *Surveying Voyages of the Adventure and Beagle*; Parish, *Buenos Ayres and the Provinces of the Rio de la Plata*; Ignacio Nuñez, *Account of the United Provinces of the Rio de la Plata*; Mackinnon, *Steam Warfare on the Paraná*.)

PLATA, LA, States of. [ARGENTINE CONFEDERATION.]

PLATÆA, or PLATÆÆ, was a city of Bœotia under the ridge of Mount Cithæron, about 60 stadia, or rather more than 7 miles, S.W. from Thebes. The river Asopus ran between, at nearly an equal distance from each. Platæa, in order to escape being subjugated by Thebes, allied herself with Athens (B.C. 519). The Platæans were the allies of Athens at the battles of Marathon, Artemisium, and Platæa (B.C. 479), when the rest of the Bœotians joined the Persians, and also in the Peloponnesian War. One of the most remarkable events of the Peloponnesian War was the siege of Platæa by the Lacedæmonians. The inhabitants held out to the last extremity, and on their surrender were put to death by the Lacedæmonians to the number of 200, the rest having escaped by a sortie in the night. The Thebans (B.C. 427) afterwards razed the city to the ground. The citizens were restored (B.C. 386) after the peace of Antalcidas. The town was however again destroyed by the Thebans B.C. 374. The Platæans were again restored to their city sixty years after their last expulsion by the Thebans. (Clinton's 'Fast. Hell'.)

PLATTSBURG. [NEW YORK.]

PLAUBEN, one of the most considerable manufacturing towns in the kingdom of Saxony, is situated in a beautiful valley on the banks of the White Elster, 74 miles by railway S. from Leipzig, and the same distance S.W. from Dresden. It is in part well built, and has about 10,000 inhabitants. Among the public buildings there are two churches, a royal palace, a lyceum, a training school, two hospitals, and two orphan asylums. The industrial products are muslins and other cotton goods, hosiery, net-lace, bobbin-net, gauze, oil-cloth, buttons, and distilled spirits. Plauen is the chief town of the Saxon Voigtland.

PLEASLEY. [DEBBYSHIRE.]

PLEINE-FOUGÈRES. [ILLE-ET-VILAINE.]

PLÉLAN-LE-GRAND. [ILLE-ET-VILAINE.]

PLENCIA. [BASQUE PROVINCES.]

PLESHY. [ESSEX.]

PLESKOW. [PŁEKOW.]

PLESTIN. [CÔTES-DU-NORD.]

PLEYBEN. [FINISTÈRE.]

PLINLIMMON. [CARDIGANSHIRE; MONMOUTHSHIRE.]

PLOCK, the capital of the Russian government of Plock, is situated on the Vistula, about 50 miles N.W. from Warsaw. It has about 8000 inhabitants, of whom 3000 are Jews. Plock gives a title to a Roman Catholic bishop, who resides at Pultusk. There are in the town 11 churches, 5 convents, an episcopal palace, a Piarist gymnasium, a seminary of secular priests, an orphan house, a lunatic asylum, a literary society, &c. The inhabitants subsist partly by agriculture and partly by a brisk trade in corn with Danzig and other places. The government of Plock is noticed in the article POLAND.

PLORHREL. [MORBIHAN.]

PLŒUC. [CÔTES-DU-NORD.]

PLŒZEL. [CÔTES-DU-NORD.]

PLOMESGATE, a hundred in the county of Suffolk, which gives name to a Poor-Law Union, is situated in the eastern division of the county. It contains 23 parishes, with an area of 45,389 acres, and a population in 1851 of 11,424. Plomesgate Poor-Law Union, which is nearly continuous with the hundreds of Plomesgate and Loes, contains 40 parishes and townships, with an area of 75,064 acres, and a population in 1851 of 21,416.

PLON. [HOLSTEIN.]

PLOUARET. [CÔTES-DU-NORD.]

PLOUARZEL. [FINISTÈRE.]

PLŒUAY. [MORBIHAN.]

PLŒBALAY. [CÔTES-DU-NORD.]

PLŒDALMÉZEAU. [FINISTÈRE.]

PLŒGENAST. [CÔTES-DU-NORD.]

PLŒHA. [CÔTES-DU-NORD.]

PLŒUESCAT. [FINISTÈRE.]

PLŒVIGNER. [MORBIHAN.]

PLYMOUTH, Devonshire, a market-town, seaport, and municipal and parliamentary borough, is situated on the south coast, at the mouth of the river Plym, in 50° 22' N. lat., 4° 9' W. long., distant 42 miles S.W. from Exeter, 216 miles W.S.W. from London by road, and 246 miles by the Great Western, Bristol and Exeter, and South Devon railways. The population of the borough of Plymouth in 1851 was 52,221. The population of the municipal borough of Devonport, consisting of the parish of Stoke Damerel, was 38,180 in 1851; that of

Devonport parliamentary borough, which includes also the parish of East Stonehouse, was 50,159. Devonport and Stonehouse are contiguous to and usually regarded as forming one town with Plymouth. Plymouth is governed by 12 aldermen and 36 councillors, of whom one is mayor; and returns two members to the Imperial Parliament. The borough of Devonport also returns two members to Parliament. The livings are in the archdeaconry of Totnes and diocese of Exeter. For Poor-Law purposes, the two parishes of which the borough of Plymouth is composed, are governed under the provisions of a local act. Stoke Damerel is likewise under a local act, and East Stonehouse parish is governed by a board of guardians.

Plymouth was originally inhabited by fishermen. By the Saxons it was called Tameorworth; after the Conquest it was called Sutton (that is, South-Town); in the reign of Henry VI. it received the name of Plymouth. In the reign of Henry IV. the town was attacked and partly burnt, but the castle and the highest part of the town were not taken. In 1438, in the reign of Henry VI., Plymouth was incorporated by charter. The town was then walled in. In the civil war of Charles I. the town, which had embraced the parliamentary side, was besieged by the Royalists under Prince Maurice, and was soon after attacked by the king in his march into Cornwall, and subsequently blockaded by Sir Richard Grenville, but in each case without success.

The town of Plymouth is on the north side of Plymouth Sound, between the two great arms of that harbour, Catwater on the east, and Hamoaze on the west. The small inlet of Sutton Pool is close to the town on the east side, and Mill Bay, another inlet, not far from it on the west. The older streets are narrow and ill-built, and some of them steep. The town is well lighted with gas; the supply of water is under the direction of the corporation, and is still furnished by Sir F. Drake's channel, or 'leat,' from Dartmoor, which has a course of about 30 miles. The water is received in three large reservoirs, and distributed by iron-pipes.

St. Andrew's church is a spacious structure of ancient foundation, with a square embattled tower. Charles church was begun just before the civil war of Charles I., but was not completed until after the Restoration, when it was dedicated to King Charles the Martyr. It is a neat building, with a square tower and well-proportioned spire. There are two chapels of ease, besides six other Episcopal places of worship; chapels for Baptists, Independents, Presbyterians, Unitarians, Quakers, Wesleyan Methodists, and other Dissenters, and a Jews' synagogue—numbering in all 38 places of worship, containing 23,805 sittings. The Grammar school, founded by Queen Elizabeth in 1572, had 60 scholars in 1851. The New Grammar school, founded in 1822, had 70 scholars in 1854. The Western College, instituted in 1752, for the education of young men for the ministry amongst Protestant Dissenters, is in connection with the University of London. It had 21 students in 1854. There are National and British schools, Charity schools, a savings bank, and various benevolent institutions. The Royal hotel, with an assembly-room and a theatre adjacent to it, erected in 1811 by the corporation at a heavy expense, form a very extensive range of building. The custom-house, the royal baths, the new hospital, the Athenæum or building of the Plymouth Institution, the public library, the freemasons' hall, the Natural History Society's hall, and the mechanics institute, are worthy of notice. The guild-hall is an irregular structure, comprehended in which are, besides the town-hall, the central watch-house, and the town prison.

The harbour of Plymouth comprehends the Sound and its various arms. About 14 miles south stands the EDDYPTON LIONTHOUSE, built in 1759, on a reef of rocks stretching north and south 100 fathoms. The Sound is a considerable inlet of the English Channel, 3 miles wide at the entrance from Penlee Point on the west to the opposite headland on the east, and extending inland about 3 miles to the citadel and town of Plymouth. On the western side of the Sound is Cawsand Bay. The coast is generally rocky and abrupt, and the rocky island of St. Nicholas (sometimes called Drake's Island) rises out of the water not far from the north shore. The estuary of the Tamer forms the harbour for the ships of war, and is called Hamoaze; it opens into the north-west corner of the Sound. The estuary of the Plym, or Lara, forms another harbour, chiefly used for merchant vessels, and in time of war for transports, captured vessels, &c.: it is called Catwater, and is capable of containing 1000 sail of such vessels. Here is also an extensive wet- and dry-dock. Catwater opens into the north-east corner of the Sound, and has at its mouth the rocky promontory of Mount Batten, opposite Plymouth. It is not so deep as Hamoaze. Sutton Pool is a tide-harbour, also used by merchant vessels; and a pier in Mill Bay accommodates the largest class of steam-ships at all times of the tide. Extensive docks for vessels of large tonnage are being constructed at Mill Bay harbour. The harbour of Hamoaze is 4 miles long, and has a depth of water of 15 fathoms at ebb-tide; there are moorings for nearly 100 sail of the line. The dockyard is on Hamoaze. The harbour was long exposed to the heavy sea which rolled into the Sound with gales from the southward, and great damage was at various times done. To remedy this a breakwater, or dyke, formed of loose stones, was commenced in 1812. It runs across the middle of the Sound, having a total length of 1700 yards, namely, 1000 yards in the centre, which runs in a direction nearly from east to west, with a continuation of

350 yards at each end, turning more to the north, and forming a considerable angle with the direction of the centre. A lighthouse has been erected at the western end. The total cost of this noble work has been about 1,700,000*l.* Its efficiency as a protection to the harbour has been proved in many severe gales. The harbour and town are defended by the citadel of Plymouth, by the fortifications on the island of St. Nicholas, and by other works, of which some important parts are now in process of construction.

The number and tonnage of vessels registered as belonging to the port of Plymouth on December 31st 1853 were:—Sailing-vessels under 50 tons 250, tonnage 7394; above 50 tons 200, tonnage 36,759; steam-vessels 6, tonnage 371. During 1853 there entered the port in the coasting-trade, sailing-vessels 3197, tonnage 264,739; steam-vessels 466, tonnage 185,497; and there cleared 1848 sailing-vessels of 102,230 tons, and 455 steam-vessels of 156,121 tons aggregate burden. In the colonial trade there entered 218 sailing-vessels of 23,604 tons, and 33 steam-vessels of 3069 tons; and there cleared 266 sailing vessels of 25,362 tons, and 22 steam-vessels of 2046 tons. In the foreign trade there entered 248 British vessels of 17,345 tons, and 216 foreign vessels of 26,058 tons; and there cleared 150 British vessels of 10,569 tons, and 149 foreign vessels of 19,704 tons.

The trade of Plymouth is important. Considerable commerce is carried on with the West Indies, the Baltic, and the Mediterranean, and coastwise with London and other ports; and there is an active fishery, especially of whiting and hake. The imports are timber and West India produce; the exports, manganese to Scotland, wool to Hull, and lead to London and Bristol. There are an extensive sail-cloth manufactory, a sugar refinery, a glass-house, a very large soap factory, distilleries, and a starch factory. Granite, slate, limestone, and marble, are quarried in the neighbourhood. The limestone or marble of the Oreston quarries, on the shore of Catwater, opposite to Plymouth, was the material chiefly employed for the breakwater. Near these quarries is an iron bridge of five elliptical arches over Catwater, built at the expense of the Earl of Morley. A floating steam-bridge crosses the Hamoaze between Devonport and Torpoint at short intervals throughout the day, and conveys the mail-coaches, carriages, horses, and passengers. A railway from Sutton Pool, 24 miles long, connects Plymouth with Prince Town, on Dartmoor. There are markets on Monday, Thursday, and Saturday; and fairs in April and November. A county court is held in Plymouth. Races are annually held in a meadow near the town, and a regatta in the Sound. There are a hospital for merchant seamen, a public dispensary, an eye infirmary, and several other charities.

Devonport contains the government dockyards, and is familiarly called 'The Dock,' its name having been, till 1824, Plymouth Dock. It is now the most important of the maritime ports in Devonshire. The military and naval officers reside at Devonport. The town owes its importance to a naval arsenal established here in the reign of William III. It was first fortified in the reign of George II., but the fortifications have since been considerably enlarged and improved.

Devonport is bounded on the south and west by the mouth of the Tamar, and on the east by Stonehouse Creek. The streets are wide and regular, well paved, and lighted with gas; the footpaths are made of marble obtained in the neighbourhood. The Fore-street is approached from the east through a handsome gateway, with a fosse and a draw-bridge, and forms a thoroughfare to the dockyard. A wall 12 feet in height, called 'the king's interior boundary wall,' defends the town on the north-east and south sides; and the heavy batteries on Mount Wise protect the entrance from the sea. Without the wall is a line, or breast-work, with a fosse excavated in the solid rock from 12 to 20 feet deep. There are three gates in the line, the North-gate, the State-barrier, and the Stonehouse-gate. A chapel erected by government is in the dockyard. There are two chapels of ease at Devonport—St. Aubyn's, erected in 1771, and St. John's, erected in 1799. The inhabitants have access also to the dockyard chapel. There are places of worship for Baptists, Independents, Wesleyan Methodists, and Moravians. A classical school was established by subscription in 1821, and a public school for boys in 1808. There is a school for girls, where about 100 are educated and clothed. The Baptists and Methodists have each their respective schools. A public dispensary for this town and East Stonehouse was erected in 1815. There is a savings bank in the town, also one connected with the dockyard, and one entitled the Royal Naval Annuitant and Naval Savings Bank. The markets on Tuesdays, Thursdays, and Saturdays are well supplied with provisions of all kinds. There are in Devonport a small theatre, a subscription library, and a spacious and elegant assembly-room at the Royal hotel, where balls are held. Water is brought from Dartmoor in a circuitous line of about 30 miles, to a reservoir on the north side of the town, whence it is conveyed in pipes to the different houses. The town-hall is a spacious and handsome building, with a Doric portico. It contains a county meeting-room, 75 feet by 40 feet, a watch-house, temporary prison, &c. Near it is a fluted column of the Doric order, to commemorate the naming of the town in 1824. From the top of the column a splendid view of the harbour is obtained. The post-office, the mechanics institute, and the public library are fine buildings. To the south of the town are the houses of the port-admiral and the governor, the telegraph establishment, and the Grand Parade.

The Dockyard, one of the finest in the world, comprises an area of 71 acres. Within the yard are the basin, constructed in the reign of William III., and the dock, sufficiently capacious for the reception of a 74-gun ship, as well as six building-slips, and three other docks, one of which, the new north dock, is 280 feet by 85 feet, and 27 feet 8 inches deep. The building-slips are roofed over with sheet-iron, copper, or zinc. A new and very extensive basin or dock has been for several years in progress of construction. In the anchor-smithery Nasmyth's steam-hammer is employed in the forging of anchors. The 'rigging-house' is a handsome edifice 480 feet in length, and three stories high; it forms one side of a quadrangle, the whole of the buildings in which are entirely composed of stone and iron. The rope-houses are limestone buildings 1200 feet long, parallel to each other, and two stories high. Cables were formerly made here 100 fathoms in length, and measuring in circumference 25 inches. In the dockyard is a large chain-cable storehouse; but the annual consumption of hemp for the manufacture of ropes, cordage, cable, &c., is still very considerable. The immense roofs over the docks, being on the span of an arch without a buttress, are remarkable specimens of architectural skill, the area of one of them amounting to 1 acre 39 poles and 200 feet. At Keyham Point the construction of a great dock for the repair and fitting of war-steamer was commenced in 1844. The designs, which were prepared by Mr. Barry, embrace an extent of quay or wharfrage in the south basin amounting to 1570 feet, and in the north basin to 2240 feet. The area included is 72 acres.

Devonport was enfranchised by the Reform Act in 1832, and since that period has returned two members to the Imperial Parliament. The parliamentary borough includes, in addition to the town of Devonport, the whole of the parish of Stoke Damerel, and the township of Stonehouse. Petty sessions are held by the county magistrates weekly in the town-hall, for the dispatch of business connected with the town and parish.

Stonehouse, or East Stonehouse, is situated between Plymouth and Devonport, and almost reaches both, in consequence of the erection of new houses in all the towns. In Stonehouse are the Royal William Victualling-yard, the Royal Naval Hospital, the Royal Military Hospital, and the Marine barracks. The Royal William Victualling-yard is situated on Cremill Point, a rocky promontory connected with Stonehouse by a narrow isthmus. Over the entrance-gateway is a colossal statue of William IV. in Portland stone, upwards of 13 feet high. The interior of the victualling-yard consists of large quadrangular ranges of substantial buildings, separated by open courts, which have been hewn out of the solid rock. The area inclosed is about 15 acres, in part recovered from the sea by sea-walls and embankments, and the rest hewn from the solid rock. The machinery employed consists of a corn-mill (capable of grinding 1000 bushels of corn in ten hours), with 24 pairs of mill-stones, worked by two steam-engines; a bakery, worked by machinery, with 12 ovens; an oatmeal-mill; and two wheat-drying mills. There are in Stonehouse three churches of the Establishment; chapels for Independents, Baptists, and other Dissenters; National and Infant schools; and schools for boys and girls in the Marine barracks.

Connected with the towns of Plymouth, Devonport, and Stonehouse are the towns of Stoke Damerel and Morice Town; and several important villages are in the neighbourhood. The land and river scenery is exceedingly picturesque, and the sea-view is singularly interesting.

PLYMOUTH. [MASSACHUSETTS; MONTERRAT.]

PLYMPTON ST. MARY, Devonshire, the seat of a Poor-Law Union, is situated near the left bank of the river Plym, in 50° 23' N. lat., 4° 4' W. long., distant 4 miles N.E. from Plymouth, and 213 miles W.S.W. from London. The population of the parish in 1851 was 2815. The living is a perpetual curacy in the archdeaconry of Totnes and diocese of Exeter. Plympton St. Mary Poor-Law Union contains 19 parishes and townships, with an area of 75,569 acres, and a population in 1851 of 19,723. A priory was founded at Plympton St. Mary during the Heptarchy by one of the Saxon kings. The parish church, which stands within the cemetery of the priory, was originally built by William Warlewast, nephew of the Conqueror, and bishop of Exeter. The church is chiefly in the perpendicular style; some portions are of early English date. There are two National schools. Plympton St. Mary Union workhouse is a large building in the Elizabethan style.

PLYMPTON ST. MAURICE, PLYMPTON EARLE, or EARL'S PLYMPTON, Devonshire, a municipal borough and market-town, and one of the ancient stannary towns, adjoins Plympton St. Mary on the south-east. It is governed by a mayor, recorder, and eight aldermen. The living is a perpetual curacy in the archdeaconry of Totnes and diocese of Exeter. The population of the borough in 1851 was 1260. The parish church, a structure of the middle of the 15th century, is of perpendicular character; the chancel is decorated. A handsome painted window has lately been inserted at the eastern end. Hele's Grammar school, founded in 1659, has an endowment of 180*l.* a year, and had 18 scholars in 1851. Many of the inhabitants are engaged in mining. A cattle-market is held on the first Monday in each month; a market for butcher's meat is held every Friday. Plympton Castle, now in ruins, was built soon after the Conquest. Earl's Plympton was the birthplace of Sir Joshua Reynolds; his portrait, painted and pre-

sented by himself, adorned the guldhall till a few years back, when it was sold by the corporation.

PO, a river of Italy, called Padus and Eridanus by the Romans, rises from two springs in about 44° 40' N. lat., 7° E. long., on the eastern side of Monte Viso [ALPS], about 6000 feet above the sea. Flowing first east and then north-east through a deep valley called Val d'Oro, the Po receives on its left bank the Chisone and other streams from the valleys of Pignerol; and on its right bank the Vraita, the Maira, and the Grana, which, rising in the recesses of the Maritime Alps, flow in a north-east direction, and join the Po in succession above the town of Carignano, whence the river flows nearly due north to Turin through a broad valley bounded by the offsets of the Cottian Alps on the west, and the hills of Monferrato on the east. Passing Turin, where it is crossed by a handsome stone bridge, the Po receives on its left bank the Dora Riparia from the valley of Susa and Mont Cenis, and afterwards the Stura from the valley of Lanzo, a romantic district among the Alps north-west of Turin. The river now inclines to the north-east, receives the Orca from the north, and passing by the town of Chivasso, turns to the east, or east-by-south, in which general direction it continues to flow for the rest of its course to the sea, making however numerous windings. Below Chivasso the Po receives from the north the Dora Baltea, with all the drainage of the valley of Aosta; and about thirty miles farther the Sesia, a considerable stream, which rises in the glaciers of Monte Rosa, and which, after draining the Val-Sesia, an alpine valley, enters the plain of Verocelli, receives the Cervo and other streams, and after a course of about ninety miles enters the Po below the town of Casale. The Po here makes a bend to the south, but on reaching Valenza resumes its eastern course. In all its course from Carignano to Valenza, for a length of nearly eighty miles, the Po receives no affluents of any importance on its right bank, being skirted all along on that side by the hills of Monferrato, owing to which the river describes a kind of semicircle. But to the south of those hills, and between them and the Ligurian Apennines, flows the Tanaro, a large stream which rises near Ormea in the Maritime Alps, and, flowing northward, receives the Ellero, Pesio, and Gesso, and the Stura from Cuneo (Stura is the name of several rivers of Piedmont); and after passing by Cherasco and Alba it then turns to the east, receiving the drainage of the hills of Lower Monferrato on one side, and of the Ligurian Apennines on the other. The Tanaro flows by Asti, the principal town of Monferrato, receives the Belbo from the south, and farther on the Bormida, swelled by the Orba from the mountains of La Bocchetta; after which it flows through the plains of Alessandria and Marengo, and enters the Po about eight miles below Valenza, after a tortuous course of about 150 miles, in which it describes a segment of a circle nearly parallel to that described by the Po, being separated from the latter river by the hills of Lower Monferrato.

After receiving the Tanaro the Po continues its course in an easterly direction through the wide plain of Lombardy, receiving on its right or southern bank the Scrivia from Tortona and the Staffora from Voghera, and on its left or northern bank the Agogna and the Terdoppio from Novara. Between Voghera and Piacenza several offsets of the Ligurian Apennines approach close to the southern bank of the Po, whose only affluent of any importance from that quarter is the Trebbia, a mountain torrent which swells greatly in the rainy season, but is shallow in time of drought. The northern feeders of the Po east of the Tanaro are deep perennial rivers, being fed by the glaciers of the Alps; but the southern partake more of the nature of torrents, being chiefly supplied by the rains which fall in the Apennines.

The Ticino is one of the principal affluents of the Po. It issues out of several small lakes near the summit of the St. Gothard, flows through the canton of Ticino, and enters the Lake Maggiore, out of which it issues again at Sesto, whence it flows for sixty miles through the great plain, marking the boundary between the Austrian and Sardinian territories. It passes by Pavia, and enters the Po a few miles below that city. The Ticino is a very rapid river, but is navigable in the lower part of its course. East of the Ticino the Po receives the Lambro, swelled by the Olona, the river of Milan; and lower down the Adda, a deep and rapid stream, which is the outlet of the Lake of Como, and is swelled by the Brembo and the Serio from the mountains of Bergamo. [Adda.] East of the Adda runs the Oglio, a considerable river, which rises in Valcanonica on the borders of the Valtellina, forms the little lake Iseo, and, issuing out of it at Sernico, receives the Mella from Brescia, and the Chiese (which is the outlet of the Lake of Idro), and enters the Po above Borgoforte. The Oglio is navigable by large boats below Pontevico. Its whole course, from its source to its confluence, is about 140 miles. Proceeding to the eastward, the next great affluent of the Po is the Mincio, an important river, which is the outlet of the Lake of Garda, and with it forms a geographical division between the Milanese territory, or Lombardy proper, and the old Venetian territories. The Mincio, after issuing out of the lake at Peschiera, forms the lagoons in the middle of which lies Mantova. Below Mantova it is navigable for large boats down to its confluence with the Po near Governolo.

The Po below Piacenza receives on its southern bank the following rivers, or rather torrents, which rise in the Apennines:—The Nura, a small stream; the Taro, a larger river, which rises in the mountains of Pontremoli, and after a course of about sixty-five miles enters the Po above Casal Maggiore; the Parma and Lenza, two small streams in

the state of Parma; the Crostolo, a small stream which passes by Guastalla; the Secchia, a considerable river which crosses the duchy of Modena, and enters the Po a few miles below the confluence of the Mincio (the Secchia is navigable for large boats up to Pontebasso, near Modena); the Panaro, called Scoltenna in the upper part of its course, which rises at the foot of Mount Cimone near the frontiers of Tuscany, crosses the duchy of Modena and part of the papal province of Ferrara, and after a tortuous course of nearly 100 miles enters the Po below Bondeno. The Panaro is navigable for 30 miles above its confluence with the Po. The Panaro is the last affluent of the Po from the south; but on the north bank, below the confluence of the Mincio, various canals bring into the Po part of the waters of the Adige, and the drainage of the marshy country which lies between the two rivers. The Po in former times passed south of Ferrara, but after the flood of 1152 the main stream changed its bed, and it now passes about three miles north of Ferrara. About twenty miles lower down, near Papozzo, the river divides into two branches. The left, or northern one, which is the larger, is called Maestra, or Po Grande, and also Po delle Fornaci; it enters the sea by several mouths, the principal of which, called Maestra, is always navigable by merchant vessels. The length of its course from the point of bifurcation to the mouth is about twenty miles. The right, or southern branch, called Po d'Ariano, also divides into several mouths, the principal of which is called Po di Goro, and is likewise accessible to merchant vessels from the sea. The tide is only felt in a slight degree about seven or eight miles above the mouths, and it does not rise quite two feet. Small merchant vessels ascend the river as far as Lagoscura, near Ferrara. Higher up the navigation is carried on by boats of the burden of sixty tons as far as Cremona in all seasons, and higher up as far as Casale in Piedmont, except in times of great drought. Above Casale the Po is only navigable for small boats or rafts. The whole course of the river, including its windings, is reckoned at about 450 miles.

The width of the bed of the Po, from the confluence of the Ticino to its bifurcation, is from 1200 to 1800 feet. The depth of water varies from 12 to 36 feet. The periodical floods take place in the summer months, in consequence of the melting of the snows in the Alps, but extraordinary floods occur at other seasons also after great rains. From the confluence of the Ticino to its mouth, a distance of about 200 miles, the fall in the bed of the river is about 300 feet of perpendicular height. The Po is not fordable below Turin, and has no bridge across it below that city. It is embanked from below Piacenza to the sea, to protect the country from inundations. The Etruscans are said to have first applied themselves to embank the Po. Near Ferrara, and below that town down to the estuary of the Po, the ordinary level of the water in the river is higher than the country near its banks. The old bed of the Po, which runs south of the town of Ferrara, and which is still called Po di Ferrara, still receives some of the water of the great river by means of canals, but is chiefly filled by the water of the *Reno*, a rapid river which rises in the Tuscan Apennines, passes near Bologna, and after a course of above 70 miles joins the Po of Ferrara below that city. The Reno is navigable for boats in the lower part of its course, but only in the winter and spring. The Po of Ferrara divides into two branches: the left or northern is called Po di Volano, from the name of the place where it enters the sea; the right or southern branch, called Po di Primaro, receives several rivers, or rather torrents, from the Tuscan Apennines, namely the Savena, Idice, Silora, Santerno, and Senio. The Po di Primaro enters the sea at Primaro a few miles north of Ravenna. The Lamone, which passes by Faenza, enters the sea by a separate mouth between Primaro and Ravenna. In ancient times the Lamone communicated with the Po, and Ravenna itself stood on an island in the delta of that river. The delta of the Po may now be considered as terminating on the south at Primaro: it extends to the northward as far as the mouth of the Adige at Brondolo near Chioggia, distant from Primaro about 40 miles in a direct line from north to south.

The length of the basin of the Po, from the sources of the Dora Riparia at the foot of Mont Genève, which is its most western point, to the great estuary of the Po of Maestra, is 280 miles from west to east. The width of the basin is about 140 miles from the Ligurian and Tuscan Apennines to the Alps of Switzerland and of the Tyrol. The area, if we include in it the whole course of the Adige, is near 40,000 square miles, or about four-fifths of the area of England. The whole of Piedmont in its larger sense, Lombardy proper, Southern or Italian Tyrol, the western half of the Venetian territory, the Swiss canton of Ticino, some districts of the canton of the Grisons, the duchies of Parma and Piacenza, the papal legations of Bologna, Ferrara, and Ravenna, and that small part of Tuscany which extends along the northern slope of the Apennines and is called Romagna Gran-Ducale—all these countries belong to the basin of the Po.

By a treaty concluded between Austria, Parma, and Modena in July, 1850, the navigation of the Po and its tributaries from the confluence of the Ticino to the Adriatic was declared free. And it was proposed at the same time to carry on the navigation by a flotilla of Austrian steamers and steam tugs.

POCKLINGTON, East Riding of Yorkshire, a market-town and the seat of a Poor-Law Union in the parish of Pocklington, is situated in 53° 55' N. lat., 0° 47' W. long., distant 16 miles E. by S. from

York, 212 miles N. by W. from London by road, and 223 miles by the Great Northern and North Midland railways. The population of the town in 1851 was 2546. The living is a vicarage in the archdeaconry of the East Riding and diocese of York. Pocklington Poor-Law Union contains 47 parishes and townships, with an area of 107,636 acres, and a population in 1851 of 16,098. Pocklington is situated in a level country, about 2 miles from the western edge of the Wolds, and is connected with the river Derwent by the Pocklington Canal. The town is lighted with gas. The parish church is a plain structure, erected in the year 1252. There are places of worship for Independents, and Primitive and Wesleyan Methodists. The Free Grammar school, founded in the 6th year of Henry VIII, by John Dowman, LL.D., with which are connected five exhibitions at St. John's College, Cambridge, has a revenue of about 900*l.* a year, and had 40 scholars in 1854. There are National schools, a literary institute, a news-room, an Odd Fellows' hall, and a temperance hall. Petty sessions and a county court are held in the town. The market is on Saturday, and large sheep and cattle fairs are held on March 7th, May 6th, August 5th, and November 8th, and a statute fair on November 9th.

PODLACHIA. [POLAND.]

PODOLIA, or **KAMENETZ-PODOLSK**, a government of European Russia, formerly a part of Poland, extends from 47° 25' to 49° 45' N. lat., 26° 20' to 28° 50' E. long. It is bounded N. by Volhynia, N.E. by Kiew, E. and S.E. by Kherson, S. by Bessarabia, from which it is separated by the Dniester, and S. and S.W. by Austrian Galicia. The area is estimated at 16,375 square miles. Podolia is generally a table-land of no great elevation, and is traversed by a branch of the Carpathians, which enters it from Galicia; but the most elevated parts of this chain are scarcely 500 feet above the level of the sea, and their effect is chiefly to heighten the picturesque beauties of this fine province. The south-eastern parts, which formerly belonged to the Ukraine, are sandy, and form a kind of steppe. The province is well watered. The Dniester, which is the principal river, flows indeed only along the frontier towards Bessarabia, but most of the small rivers run into it. The second principal river is the Bug. There are numerous small meres in the western part of the province, but no large lakes.

The climate is mild and in general very healthy; there are scarcely any endemic disorders, except the Plica Polonica, which will probably remain endemic as long as the uncleanness of the Russiaks and Poles continues. The soil of Podolia is proverbially fruitful. In addition to all kinds of corn, hemp, flax, tobacco, and hops are cultivated. The peasants have generally gardens, in which they cultivate cabbages, onions, cucumbers, water-melons, and some fruit-trees. The grass is remarkably luxuriant, and the forests are extensive. In the fields and in the steppe between the Bug and the Dniester there are hares, wolves, foxes, a species of antelope, and bustards. Storks are numerous. Swarms of locusts come periodically from the Black Sea. The oxen of Podolia are remarkably large and fine, and great droves of them are annually sent even to the middle of Germany. The race of horses is much esteemed. The sheep are of a good breed, and their wool is tolerably fine. Swine are very numerous. The farmers breed great quantities of domestic poultry and of bees. The fisheries are productive. The mineral products are saltpetre, stone for building, lime, gypsum, and alabaster. Education is very limited. The schools are few in number. Most of the inhabitants are of the Greek religion. The population of the province in 1846 was 1,703,000.

The principal town is *Kamieniec*, the capital of the province, on the river Smotryza, at a short distance from its junction with the Dniester. It was formerly the most important fortress in Poland, but is now deprived of its fortifications; it consists of the upper town, of the lower, which is well built, and several suburbs. It has a very fine cathedral, a gymnasium, some manufactories and trade, and 16,000 inhabitants, half of whom are Jews. The other principal towns are the capitals of the circles (12 in all), but none of these are of great importance. Mohilew alone has 7000 inhabitants, a silk manufactory and some trade.

PODSCHINSKI. [NISCHNEI-NOVGOROD.]

POGGY ISLANDS. [NASSAU ISLANDS.]

POINT COUPE. [LOUISIANA.]

POINT-DE-GALLE. [CEYLON.]

POISSY. [SEINE-ET-OISE.]

POITIERS, a town in France, capital of the department of Vienne, is situated on a rocky hill on the left bank of the Clain, a feeder of the Vienne, in 46° 34' 55" N. lat., 0° 20' 31" E. long., at an elevation of 387 feet above the sea, 211 miles by railway S.S.W. from Paris, through Orléans and Tours, and had 25,818 inhabitants in the commune in 1851. It is one of the oldest towns in France, and occupies the site of *Lemonum*, the chief town of the Pictones, which is mentioned by Julius Cæsar ('Bell. Gall.' iii. 11; vii. 75; viii. 26), and which afterwards took the name of Pictones, or Pictavi, whence the present names Poitiers for the town and Poitou for the province are said to be derived. Upon the downfall of the Roman empire, the town was pillaged by the Vandals, A.D. 410; it subsequently came into the hands of the Visigoths, from whom it was taken by the Franks. The neighbourhood of Poitiers has been the field of three of the greatest and most decisive battles ever fought in France—the defeat of the Visigoths under Alaric A.D. 507 by Clovis and his Franks at Vouillé,

a village a few miles west of the town; the defeat of the Saracens under Abd-el-Rahman, under the walls of Poitiers by the Franks, commanded by Charles Martel A.D. 732; and the victory of the Black Prince at the head of 8000 English and Gascon soldiers in 1356, over an army of 50,000 French troops under Jean II, who was taken in the action. By the marriage of Eleanor of Guienne to Henry Plantagenet, Poitiers came into the hands of the English kings, who held it till 1204, when it was wrested from them by Philippe Auguste. By the treaty of Bretigny in 1360 it was ceded to England, but it reverted to France in 1372, by the voluntary surrender of the townsmen to Charles V. For 14 years, while the English were masters of the greatest part of France, Charles VII. kept his court and parliament in Poitiers, and great additions were then made to the extent of the town. During the religious wars it was taken from the Huguenots by the Catholics, and was the scene of great cruelties; Admiral Coligny made an unsuccessful attempt to retake it in 1569.

Poitiers is inclosed by old turreted walls pierced by six gates, four of which open on bridges over the Clain. The space within the walls comprises large gardens and orchards, so that the extent of the place is much greater than the population would lead one to suppose. The streets are mostly narrow and steep; a few of them have been widened and modernised of late years; the leading thoroughfares are well paved and furnished with sidepaths for foot passengers. On the whole it is an irregular ill-built place, with houses mostly old, lumbering, and inconvenient, squares small and mean; yet its position on a hill-slope above the winding river, and its public buildings, remarkable for their antiquity, give Poitiers a picturesque and interesting appearance. The most remarkable structure is the cathedral of St. Pierre, which was commenced by the English Henry II., in 1152, but not finished till 1379. The western front, which is flanked by two low but graceful towers, presents three magnificent portals of great depth and richly decorated, the central one being surmounted by a handsome rose window. The interior, consisting of choir, nave, and aisles, is 323 feet long, 99 feet wide, and 96 feet high; in the choir are 70 stalls of carved woodwork, which date from the 13th century. The other remarkable churches are—the church of Sainte-Radegonde, with a crypt and nave, which date from the 12th century; the church of Montierneuf, which belonged to a Benedictine abbey and was finished in 1096; the church of Notre-Dame, a Byzantine structure, which, dating partly from the 9th, partly from the 11th century, is the admiration of archaeologists for its magnificent portal, and the delicacy and multiplicity of its sculptured ornaments; the church of St. Porchaire; what remains of the ancient basilica of St. Hilaire erected in the beginning of the 11th century; and near the cathedral the church of St. Jean, a venerable monument of the 5th century, which now serves for a museum of antiquities. In the centre of the town stands a large building called Le-Palais, formerly the residence of kings and of the hereditary counts of Poitou, but now used as a town-hall and chambers for the courts of justice. The house occupied by Diane de Poitiers still stands at the corner of the streets St. Paul and Du-Coq. Besides the collection of antiquities, Poitiers has a public library of 25,000 volumes, a cabinet of natural history, a botanical garden, and a departmental nursery. Of Roman structures there are still remaining some arches of an aqueduct to the south of the town, and within the walls the ruins of a vast amphitheatre, which is called les Arènes.

Poitiers gives title to a bishop, whose see is formed by the departments of Deux-Sèvres and Vienne; it is the seat of a High Court, which has jurisdiction over the departments of Charente-Inférieure, Deux-Sèvres, Vendée, and Vienne. It has a University-Academy, which embraces within its limits the departments just mentioned and those of Charente, Indre, Indre-et-Loire, and Haute-Vienne. Connected with the University-Academy, there are in the town a faculty of law, a secondary school of medicine, and a national college. The other institutions of the town are tribunals of first instance and of commerce, a consultative chamber of manufactures, a free architectural and drawing school, and several literary, scientific, artistic, and agricultural societies.

The chief manufactures are coarse woollen-cloth, blankets, hosiery, lace, playing-cards, vinegar, leather, and dressed skins. The trade in these articles and in seeds, wheat, wine, hemp, flax, wax, honey, hides, and dressed goose-skins, with the down on for furriers, is considerable.

(*Dictionnaire de la France; Annuaire pour l'An 1854.*)

POITOU, a province of France which now forms the departments of Vienne, Deux-Sèvres, and Vendée, was bounded N. by Anjou and Bretagne, E. by Touraine, Berri, and Marohe, S. by Saintonge and Aunis, and W. by the Océan. It was divided into Haut-Poitou and Bas-Poitou, which had Poitiers and Fontenay for their respective capitals. Poitou is the country of the Celtic Pictones. Under the Roman empire it formed part of Aquitania Secunda; it was invaded successively by the Vandals, the Visigoths, and the Franks; and was under the sway of the last, governed by its own counts, or dukes, until it fell into the hands of the English on the marriage of Henry Plantagenet to Eleanor of Guienne in 1152. Conquered by Philippe Auguste in 1294, it was ceded to the English by the treaty of Bretigny in 1360; and finally reunited to the crown of France in 1375 by Charles VII. The inhabitants of the province were called Poitevins.

POL-DE-LEON, ST. [FINISTÈRE.]

POL, ST. [PAS-DE-CALAIS.]

POLA. [ISTRIA.]

POLAND, a portion of the once powerful kingdom of the Jagellons, which now constitutes a vice-royalty and forms an integral part of the Russian empire. It consists chiefly of a large quadrangular territory, from the north-eastern angle of which a long narrow tract, forming part of the government of Augustovo, projects to the northward, the whole lying between 50° 4' and 55° 5' N. lat., 17° 30' and 24° 20' E. long. The narrow projection extends between 53° 20' to 55° N. lat., being about 120 miles in length, its breadth varying from 20 to 50 miles. The mean breadth of the quadrangular portion, from east to west, is above 200 miles, and its length from north to south about the same. The area of Poland, as we have defined it, is 49,091 square miles. The population in 1851 was stated to be 4,851,639, among whom were 563,970 Jews, 291 Mahometans, and 162 gipsies. The vice-royalty forms a vast solid projection, extending westward from the Bug to the frontier of Germany, and separating Austria from Prussian Poland. It is bounded N. by East and West Prussia; E. and N.E. by the Russian provinces of Wilna, Grodno, and Volhynia, S. by Galicia, which includes the suppressed republic of Cracow, and W. by Prussian Silesia and Posen. The Bug, the Narew, and the Niemen run along the eastern boundary, and the Vistula to its junction with the San along the south. From the junction the Vistula sweeps through the centre of the country, passing Warsaw and leaving the vice-royalty at its north-western extremity a little above the Prussian town of Thorn. The Proana, a feeder of the Warta, a tributary of the Oder, forms a large part of the western boundary.

Soil and Surface.—Though Poland is generally considered a perfect level, the surface exhibits considerable diversity, and some districts rise many hundred feet higher than others. The northern boundary of Poland runs over the southern declivity of that swell of high ground which must be considered as the southern limit of the plain of the Baltic, and which, beginning west of the western corner of that sea, and between it and the North Sea, extends eastward, at a varying distance from its shores, to the heights of Waldai and the source of the Wolga, into the centre of Russia. The most elevated parts of the surface of this tract (300 to 500 feet above the sea) are interspersed with numerous lakes, and some districts are literally dotted with them. Though the soil is sandy, the abundant moisture by which it is saturated for a great part of the year imparts to it a moderate degree of fertility, and it produces tolerable crops of rye, buckwheat, barley, and oats. The southern declivity of the swell is still more gentle. The river Bug in its western course is probably not more than 300 feet above the sea-level, so that in a distance of more than 50 miles the country hardly descends 150 feet. Hence the rivers in many parts have a sluggish course, not being able to carry off the great supply of water in spring-time, and a considerable portion of the adjacent lowlands is inundated at that period. Several large tracts along the Bug, Narew, and Bobr remain under water for the greatest part of the summer. A large portion of this region is covered with woods; the most common tree is pine.

The most southern districts of Poland, the greater part of the provinces of Cracow and Sandomir, and that portion of Lublin which lies between the rivers Vistula and Wieprz, are hilly, and rise in some places to a considerable elevation. The surface of the Vistula above Sandomir is about 600 feet above the sea-level. At no great distance from the banks of the river the country rises with a steep ascent until it has attained an elevation of more than 1000 feet, which may be considered the mean height of nearly the whole country between the Vistula and Pilica, with the exception of some tracts along the banks of the first-mentioned river. The country between the Vistula and Wieprz has a less elevation, though it is not less hilly. In the wide valleys of this hilly region the soil, though somewhat sandy, is of excellent quality, and yields good crops of excellent wheat.

The country which extends from the hilly region to the banks of the rivers Bug and Vistula, where they flow westward, and to the western boundary line of Poland, may be considered level, as the highest ground, which runs in a south-eastern and north-western direction, hardly rises more than from 200 to 300 feet above the low tracts along the rivers, and the slopes are long and very gentle. The more elevated parts of these higher grounds contain large tracts of sand, nearly without vegetation: in other places they are covered with heath, and here and there some swamps occur, but they are not of great extent. The slopes have a more fertile soil, but even there the crops of rye and oats are scanty. In the vicinity of the rivers fertile tracts are numerous, especially on the low lands along their banks; but in some places, and more especially along the banks of the Warta, these tracts are so low, that the soil is wet nearly all the year round, and they serve only as pasture-ground in the latter part of the summer and the beginning of the autumn. A large portion of this region also is covered with pine forests.

Climate.—The range of the temperature is above 100 degrees in the course of the year. The summers are generally very hot, the thermometer rising to above 90° under the influence of the south-eastern wind, which blows from the steppes of Southern Russia; but these winds are not frequent, and when succeeded by north-western winds, the thermometer in a few hours sinks 15 degrees. The winters are very cold, the thermometer generally descends to 10° below zero,

and sometimes to 15° and even 18°. The country is usually frozen and covered with snow for four or five months.

The most considerable rivers are the Niemen and Vistula [NIEMEN; VISTULA], which are navigable for large river barges as far as they drain Poland and flow along its boundary-line. The Vistula receives from the east the Wieprz and Bug, which latter river is joined several miles above its mouth by the Narew. The two last-mentioned rivers are navigable to a considerable distance; the Narew to the town of Lomza, and the Bug to Terespol, opposite the Russian town of Brzesko Litawski. From the west the Vistula receives the river Pilica, which is only navigable in the lower part of its course, and to no great distance from its mouth. The river Warta, an affluent of the Oder, which drains the most western part of the viceroyalty, begins to be navigable above Kolo, and the Bresna, an affluent of the Warta, above Kalisch. The last-mentioned river forms for the greater part of its course the boundary line between Poland and Prussia. Lakes are most numerous in the north-eastern district, but not of great extent. The largest lake, that of Goplo, which is about 10 miles long, lies on the north-western boundary-line. The larger and wider part of it belongs to Prussia.

Productions.—Though Poland is not distinguished by fertility, it produces more grain, flax, hemp, and tobacco than are required for its consumption, and it exports these articles to other countries. Wheat is abundant only in the hilly southern region; the principal species of grain which are cultivated in the other parts of the kingdom are rye, oats, and buckwheat; barley is also grown, but less extensively. Leguminous plants are much valued, and their cultivation attended to. Horses and cattle are of inferior size, but rather numerous; and cattle, as well as hides and tallow, are articles of export. Hogs also are numerous, and bacon to a considerable amount is exported. Sheep and goats are less abundant, though some parts of the country are well adapted for sheep-walks; the wool is coarse, and little of it is exported.

As a considerable part of the country is still covered with forests, timber constitutes an important article of export. The forests consist of oak, ash, lime-trees, and birch, but chiefly of pine and fir. In those parts where the lime-trees are numerous the forests swarm with wild bees, and the excellent honey which is obtained from them is sent to the neighbouring countries. Wild animals are numerous, especially wolves. Bears and lynxes have become rather rare, as well as the beaver, ermine, and elk; but deer, foxes, martens, polecats, badgers, and weasels are still very common.

Several metals and minerals are abundant in the hilly region. Among the metallic ores are those of silver, iron, copper, lead, and zinc. Rock-salt, marble, and coral are met with. The principal exports—corn, wool, oil, seeds, timber, and zinc—are sent down the Vistula and shipped at Danzig. A considerable portion also of the surplus produce of Poland is ordinarily absorbed by Austria. According to an official return for the year 1851, the exports through Prussia amounted to 4,015,871 silver rubles; to Austria, 1,373,537 silver rubles. The total value of the imports in 1851 was 9,403,792 silver rubles; they comprise wine, tobacco, spices, salt, metals, manufactured goods, colonial produce, &c. The custom-house receipts in 1852 were 1,423,549 rubles. Since January 1st 1851 the customs' line between Poland and Russia has been abolished, and along the whole of the western frontier a strict military cordon has been established, with stations at every half mile distance, and sentinels pacing between the stations night and day. The manufactures of Poland, which were very flourishing before the insurrection of 1830, comprise woollen-cloth, merinoes, flannel, hosiery, shawls, carpets, cotton tissues, and twist, chiefly at Lody and Lublin; some linen and plain silk, leather, paper, beet-root sugar, beer, distilled spirits (chiefly from potatoes), glass, &c. The most important branch of industry is the manufacture of metals, especially iron and zinc. Almost all the mines are in the southern part of the viceroyalty. Pit-coal is found in connection with the iron-ores, and it is used extensively in the iron blast-furnaces and in the zinc smelting-works. There are cast-iron foundries and establishments for the manufacture of machinery and agricultural implements at Warsaw, which is famous for its musical instruments, carpets, and carriages. Steam machinery is used in several of the factories, in the mines, and in some of the flour-mills. A railway runs from Warsaw to the Austrian line from Cracow to Vienna.

The great majority of the inhabitants are Catholics (they numbered 3,400,000 in 1838), who used to be governed by an archbishop (Warsaw) and seven other bishops. The Catholics, it is said, have been greatly persecuted in recent times. Of the eight sees only one, that of Lublin, is at present filled; all the others are managed by administrators. The Russo-Greek Christians, who numbered 100,000 in 1838, have an archbishop of Warsaw. There were also in that year about 150,000 Lutherans and about 10,000 Calvinists.

Divisions.—The kingdom of Poland is divided into eight provinces, which were formerly called waywodships.

1. *Cracow, or Krakow*, so called after the ancient capital of Poland, lies between 50° 8' and 51° N. lat., 19° and 21° 15' E. long. It is bounded N.W. by Kalisch, N. and E. by Sandomir, S. by Galicia, and W. by Prussian Silesia. Its area is 4057 square miles; the population is about 438,361. The Vistula separates it from Galicia; it is traversed by the Nida, a feeder of the Vistula, and has in it the sources of the

Pilica. It is traversed by a low range from the Carpathian Mountains. There are some tracts of excellent land, good pasturage, forests, and valuable minerals, especially iron. *Kielce*, the chief town, is situated in a picturesque country surrounded by high mountains. It has an episcopal palace, four churches, a convent of gray nuns, an ecclesiastical seminary, a lyceum, iron-works, and, in the neighbourhood, mines of iron, lead, copper, coal, and calamine. The population is about 5000, without the garrison. Among the other towns the principal are—*Pinczow*, on the Nida, which has 5000 inhabitants. Charles XII. of Sweden defeated the Poles and Saxons near this town in 1702. *Chencoty*, with a castle on a lofty hill, and lead- and silver-mines in the vicinity, has 2500 inhabitants. *Slawkow*, on the river Biala, and on the Warsaw railway, which traverses the west of the province, has 2000 inhabitants. *Zaski*, N. of Slawkow, has iron-mines and 2300 inhabitants. The province of Krakow is called *Kielce* by the Russians, from its present capital.

2. *Sandomir* is situated between 50° 25' and 51° 50' N. lat., 19° 50' and 23° E. long. It is bounded N.W. by Masovia, N.E. by Podlachia, E. by Lublin, S. by Galicia and Cracow, and W. by Kalisch. Its area is 5230 square miles; and the population 420,909. The Vistula divides it from Podlachia, Lublin, and Galicia; the Pilica, a feeder of the Vistula, from Masovia and Kalisch. The face of the country is undulating, and there are here and there some mountains and forests, with tracts of very rich fertile soil. *Radom*, the chief town, on the river Radomka, has a Piarist college, a gymnasium, and 8700 inhabitants. *Sandomir*, on the Vistula, in the south of the province, has above 3000 inhabitants. It is a walled town, with six gates and an ancient castle on a steep rock, which was razed by the Swedes in 1656. There are here a collegiate church, four convent churches, a synagogue, and a gymnasium. *Opoczno*, on the Drzewica, a feeder of the Pilica, has an ancient castle and 3500 inhabitants. *Opatow*, on the Opatowka (which enters the Vistula nearly opposite the mouth of the San), is situated in a fertile and pleasant country, has a cathedral and three other churches, a synagogue, and 2500 inhabitants. *Szawow* is a well-built walled town on the Czarna, with a suburb. It has above 3000 inhabitants, who have manufactures of cloth, woollens, and stockings.

3. *Kalisz*, the most westerly province, lies between 50° 40' and 52° 35' N. lat., 17° 40' and 20° E. long. It is bounded N. and W. by Posen, E. by Masovia and Sandomir, S. by Cracow, and S.W. by Silesia. The area is 6573 square miles; population, 6,6148. This province has mountains in the south and plains and forests in the north. The soil is in part sandy and swampy, but on the whole not unfruitful. The principal river is the Warta, a feeder of the Oder. *Kalisch*, the capital, one of the handsomest towns in Poland, is situated between two arms of the Prozna, in a marshy valley surrounded with hills. Most of the houses are built of stone, the streets broad and well paved, and some of them planted with trees. The population amounts to 15,000, of whom 2500 are Jews. There are five Roman Catholic churches, one Lutheran church, a cathedral, and six convents. Among the public institutions are several schools and three hospitals. Woollen-cloth and linen are manufactured here, and there are several tanneries. *Petrzkow*, 89 miles by railway S.W. from Warsaw, has seven Roman Catholic churches, a Lutheran church, a gymnasium, a handsome town-hall, and 4276 inhabitants. *Konin*, on the Warta, has a great manufactory of woollen-cloth and 3600 inhabitants. *Sieradz*, on the Warta, has 2650 inhabitants. *Wielun* has 3000 inhabitants, who manufacture some woollen-cloth. *Czenstochau*, 143 miles by railway S.W. from Warsaw, lies at the foot of the Klarenberg, on which there is a celebrated convent of St. Paul the Hermit, which was formerly fortified; population, including Old Czenstochau, 5000.

4. *Lublin*, the most south-eastern part of the viceroyalty, is composed of the circles of Lublin, Chelm, Josefow, and Zamoski, which formerly belonged to Galicia, and were ceded by Austria in 1810 to the then duchy of Warsaw. It lies between 50° 17' and 51° 48' N. lat., 21° 45' and 24° 7' E. long., comprising an area of 6455 square miles, with a population of 530,190. It is bounded N. by Podlachia, E. by Volhynia, S. by Galicia, and W. by Sandomir. The Vistula separates it from Sandomir, the Bug from Volhynia, and the Wieprz (which flows through it) for some distance from Podlachia. This province has extensive forests, and in some parts morasses, but likewise contains tracts of good arable land, and pasturage with a fine breed of cattle. There are no metals except bog-iron.

The principal towns in the circle of Lublin, besides the capital [LUBLIN] are the following: *Lubartow*, on the Wieprz, has a fine castle, three churches, a Capuchin convent, and 8200 inhabitants. *Krowo*, on the Kurowka, has a fine palace of Count Potocki, two churches, and 1920 inhabitants. In 1816 a mineral spring was discovered, the waters of which resemble those of Pyrmont: *Pulawy*, on the Vistula, in the north-west of the province, was once the residence of Prince Czartoryski, whose splendid palace, with its library of 60,000 volumes, many manuscripts, a collection of rare Polish antiquities, and countless treasures of art, was celebrated throughout Europe. The park was the finest in Poland. The Russians laid the whole waste in 1831, during the ill-fated Polish revolution. *Zamosz*, a very strong fortress on the Wieprz, was founded in 1588 by John Zamoycki, after his victory over the archduke Maximilian of Austria. The houses were built in the Italian style; and a high school with a considerable

library was founded in 1695. On the partition of Poland, it fell to the share of Austria. In 1820 the Russian government bought the town and environs from Count Stanislaus Zamoycki, who received for it above fifty estates belonging to the state. Hereupon the place was still more strongly fortified, and was deprived of its extensive suburbs. It has however still above 5000 inhabitants, with the fine palace of Count Zamoycki, an arsenal, four churches, the town-hall, two convents, and a theatre. *Hrubieszow*, situated on an island in the Hulsza, a small feeder of the Bug, has three churches, a convent, and 8900 inhabitants. *Krasniaw*, on the Wieprz and a lake, is a walled town; it has an old episcopal palace, several churches, and 2252 inhabitants, among whom are many Jews. *Chelm* has a castle on a high hill, several churches, a Piarist college, a gymnasium, and 2000 inhabitants.

5. *Plock* lies between 52° 15' and 53° 30' N. lat., 18° 45' and 22° 35' E. long. It is bounded S. by the Bug and the Vistula, E. by the Drawens; the Narew flows through it. In some parts there are tracts of the finest arable land and meadows, in others extensive forests and marshes. It is bounded N. and W. by Prussia, E. by Augustowo, and S. by Podlachia and Masovia. The area is 6411 square miles. The population is 547,455. *Plock* is the capital. [*PLOCK*] *Paltusk* on the Narew is a bishop's see, and has a palace, a cathedral, three churches, several suppressed monasteries, a synagogue, and a gymnasium. The population is 3760. *Wyszogrod* on the Vistula has 3500 inhabitants, of whom 1500 are Jews. *Modlis* at the confluence of the Bug and the Vistula has always been a strong fortress, but since the insurrection of 1830 a new fortress of the first rank has been erected.

6. *Masovia* is situated between 51° 30' and 52° 55' N. lat., 18° and 22° E. long. It is bounded N. by *Plock*, E. by Podlachia, S. by Sandomir, and W. by Kalisz and Posen. Its area is 7646 square miles. It lies on both sides of the Vistula, which flows through it, and has on the whole a rich fertile soil, which is well cultivated in the neighbourhood of the capital, and it also contains extensive forests. *Warsaw* the capital of the viceroyalty is within Masovia, but now forms a distinct government. *Losica* on the Bzura has 6700 inhabitants, an ancient castle, a cathedral, and three other churches, a gymnasium, four convents, and a seminary for schoolmasters. The inhabitants are partly employed in the manufacture of linen and in bleaching wax. There are two annual horse and cattle fairs, where a great deal of business is done. *Tomaszow*, a new manufacturing town at the confluence of the Wolborka and the Pilica, has important manufactures of woollens, cotton, and iron, a considerable trade, and 8000 inhabitants. *Alexandrowo*, a newly established manufacturing town, with manufactures of woollen cloths, has 3200 inhabitants. *Osokow* on the Bzura has also manufactures of woollen cloth, and the population is said to be near 8000. *Kuzno* is a flourishing town, with 4000 inhabitants.

7. *Podlachia*, situated between 51° 15' and 52° 40' N. lat., 21° 10' and 23° 40' E. long., is bounded N. by *Plock*, E. by Grodno, S. by Lublin, and W. by Sandomir and Masovia. Its area is 6469 square miles: population, 384,646. This province has the Bug running along the east and northern frontiers, on the west the Vistula, and on the south the Wieprz; on the south-east there are numerous small lakes, and in the interior extensive marshes and forests; but it is otherwise a good agricultural country, rich in corn, pulses, cattle, honey, and wax; but a considerable portion is still in a very uncultivated state. *Siedlec*, the capital, is a regularly built town, with a palace and a beautiful park, several churches, a gymnasium, and 4420 inhabitants. *Sokolow*, *Wingrow*, *Lukow*, and *Wlodawa* have each above 3000 inhabitants. *Kock* on the Wieprz has an elegant town-hall, a beautiful church, a palace with grounds in the English style, and 2000 inhabitants. *Biala* on the Ina has a fine palace and park, and 3386 inhabitants. *Miedzerzyca*, a well built town on the Ina, has 4340 inhabitants. A large portion of Podlachia was formed into the government of BIALYSTOK, and is now incorporated with GRODNO. The remaining portion here called Podlachia was sometimes called *Siedlec*, or *Siedles*, from its chief town, which was the scene of severe fighting in the insurrection of 1831.

8. *Augustowo* lies between 52° 40' and 55° 5' N. lat., 21° 25' and 24° 15' E. long. To the north and east lie the governments of Vilna and Grodno, from which it is separated chiefly by the Niemen, Bobr, and Narew; on the south is the government of *Plock*, and on the west Eastern Prussia. The length of this government is about 170 miles, and it is about 65 miles in its greatest breadth. Its area is 7237 square miles; and its population is 622,195. It abounds in small rivers, lakes, and morasses; some of the latter produce considerable quantities of wild hops, which form an article of export to Königsberg. It is likewise rich in forests, these which skirt the Niemen being full of linden-trees, whence the celebrated 'Linden honey.' The northern districts of Augustowo form an extensive plain, and the soil being fertile and well cultivated produces a fine description of wheat; excellent rye is also grown in the southern districts, which are watered by the Narew. *Augustowo*, the capital, is on marshy ground at the southern extremity of Lake Stabryna (out of which the Netta flows), and at a distance of 110 miles N.E. from Warsaw. It was founded by Sigismund Augustus, king of Poland, in the year 1560; it is fortified, contains two churches, an hospital, and about 3300 inhabitants, and has large fairs for horses and cattle, as well as a depôt for salt. *Swalky* has handsome

buildings, broad regular streets, and 3000 inhabitants. *Scymy*, situated on a lake, has 2700 inhabitants. *Lomsa*, on the Narew, in a woody country, has a Piarist college, a gymnasium, and 2300 inhabitants. *Szczuczyn* is a well-built town, with 3100 inhabitants. *Wilkowyzki*, in a very fruitful corn country, has 3000 inhabitants. *Nowomiesto*, at the conflux of the Schirwind and the Scheschuppe, surrounded by water on three sides, is on the Prussian frontier; it has much trade, and 3250 inhabitants. *Kalsary*, situated in a fruitful country, has 5500 inhabitants.

The old divisions have been retained under their old names in the preceding notice. But the Emperor of Russia, by a ukase, dated August 21, 1844, divided Poland into five governments, exclusive of the city of Warsaw, which are governed in the same manner as the other provinces of the empire, each having a military and a civil governor. The following table shows the area and population of the present divisions according to the official returns for the year 1851:—

Governments.	Old Provinces.	Area in Square Miles.	Population in 1851.
Warsaw . . .	Masovia . . .	14,219	1,544,790
Radom . . .	Kalisz . . .	9,299	939,344
Lublin . . .	Kielce, or Cracow . . .	11,934	1,038,883
Plock . . .	Sandomir . . .	6,411	548,413
Augustowo . . .	Podlachia . . .	7,237	626,594
Warsaw City . . .	Lublin . . .	—	164,115
Total . . .	. . . . .	49,090	4,851,639

Of the geography of the historical monarchy of Poland this article does not treat. Out of that monarchy (besides the governments above named) the whole of West Russia is formed, comprising the governments of Wilna, Grodno, Minsk, Mohilev, Witabek, Volhynia, and Podolia: Austria obtained Galicia, with which the former republic of Cracow is now incorporated; and Prussia obtained West Prussia and the grand-duchy of Posen.

History.—The history of Poland previous to the introduction of Christianity is involved in darkness. Tradition says that the Polish part of the Slavonic race elected for their chief a peasant named Piast, who was endowed with great and noble qualities, and who fixed his residence at Gnesen in Posen. Christianity was introduced by his descendant the Duke Miecyslaw, A.D. 965, after his marriage with a Bohemian princess, an event which brought the Polish sovereign into connection with the German empire. His successor, Boleslav Chrobry, or the Brave (992-1025), received (1000) the royal crown from the emperor Otho III., who came to Poland on a pilgrimage to the shrine of St. Adelbert, and on that occasion declared him king of the Poles and protector of all the Slavonians. The emperor also recognised his independence of the empire. Boleslav not only considerably extended the frontiers of his kingdom, but strengthened it by wise regulations, and particularly by a skillful organisation of the military force. He transferred the government from Gnesen to Krakow. Under his son Miecyslaw II., and during the minority of Casimir I., Poland was a prey to all the horrors of anarchy. Casimir I., grandson of Boleslav, governed the country with great wisdom, and was succeeded (1058) by his son Boleslav II., surnamed the Dauntless, who was a skillful soldier and a man of chivalrous character. He restored two monarchs of Hungary, Bela and his son Geyza, as well as the Duke of Bohemia and Grand-Duke of Russia (Tsia-laf) to their respective thrones. Towards the end of his reign he became cruel and rapacious. He murdered Stanislaw Szczepanowski, bishop of Krakow, who had remonstrated against his excesses, and being in consequence excommunicated, his subjects refused to pay him allegiance. He was obliged to retire from the country, and died in exile.

The vacant throne of Poland was occupied (1089) by his brother Vladislav Herman, a weak monarch, whose reign was disturbed by foreign aggression and domestic war. Vladislav's son, Boleslav III., was a great monarch, whose reign was illustrious for many victories and for the conversion of the idolatrous Pomeranians. At his death in 1139 Boleslav divided the kingdom among his four sons, who were styled dukes; and the subdivision of the kingdom did not stop till the aristocratical government of territorial lords was substituted for the absolute sway of the kings. In the 13th century Poland was ravaged by the Tartars, and the petty princes of the country peopled their deserted towns with colonies from Germany. Vladislav II., crowned at Krakow in 1319, resumed the title of king; he was one of the greatest monarchs that ever governed Poland. He was educated in the school of adversity, having been twice driven from his throne into exile; and it was only on his last restoration that he succeeded in firmly establishing his authority. He exerted himself to settle the disturbed state of the country, to repel foreign aggression, and to curb the licence of the powerful vassals. His most formidable enemies were the Lithuanians and the Teutonic Knights, who having subdued the half-savage Prussians, became the most dangerous neighbours of Poland. Vladislav gained a great victory over them in the battle of Plowoc, in 1331. He was then 70 years of age; he died two years

afterwards. But the most memorable event of his reign is the first diet of Poland, which he assembled at Chenciny a few months before the battle of Plowoc.

The reign of his son, Casimir the Great, was devoted to the consolidation of the advantages gained by his father. He made great territorial concessions to Bohemia and the Teutonic order for the maintenance of peace, which was necessary to a kingdom that had so long laboured under the evils of war. His chief care was directed to the protection of agriculture; and the nobles, who were no longer permitted to oppress the peasants at their will, gave him the nickname of the Peasant King. The first code of laws was published in Poland by his orders at the assembly of Vislitz, in 1347. It was during his reign that the Russian principality of Halich (now Galicia) was united with Poland.

The ancient dynasty of Piast, which reigned in Poland from a date anterior to the introduction of Christianity, ended with Casimir's death, 1370. He was succeeded by his nephew Louis, king of Hungary. This monarch entirely neglected Poland, which he visited only twice during his reign. His youngest daughter, Hedvige, was proclaimed after his death Queen of Poland, in 1382, and was crowned at Cracow, being then only 15 years of age. The extraordinary beauty of this princess, which was united to the noblest qualities and the most exalted virtues, have rendered Hedvige's memory an object of national veneration. She married Jagellon, grand-duke of Lithuania, a pagan prince, who was baptised on that occasion, and converted to the Christian religion. This completely united Lithuania with Poland. Hedvige died in 1399, but Jagellon, who on his baptism had received the name of Vladislav, continued on the throne till his death, 1434. In his reign the power of the Teutonic knights was crushed in the battle of Gunwald by the united forces of Poland and Lithuania. The Hussites offered Jagellon the throne of Bohemia. He refused the offer; but permitted the princes of his house to assist the Hussites against the Roman Catholics. Jagellon was succeeded by his son, Vladislav III., a prince 11 years old. He was scarcely of age when the Hungarians, threatened by the fast-spreading power of the Ottomans, invited him to their throne. In prosecuting a hostile attack against the Turks, Vladislav perished at the battle of Varna, in the 21st year of his age. The throne of Poland remained vacant till 1445, when it was offered to Casimir, brother to Vladislav, and grand-duke of Lithuania. Casimir was reluctant to accept the crown of Poland; but when the states of Poland threatened to transfer their allegiance to a new sovereign he accepted their offers, and left Lithuania, for which he preserved to the end of his life a strong predilection. The most important event of his reign was the union with Poland of the Prussian provinces, which revolted from the Teutonic knights, and placed themselves under the crown of Poland. A war ensued (1454)—terminated in 1462 by the peace of Thorn, which gave to Poland a rich and fertile country with a large population. The acquisition of Danzig proved particularly advantageous to the commerce of Poland. Under Casimir's reign Poland was divided into electoral districts, each returning a representative in order to form a deliberative body distinct from the senate or nobles (whose representatives were styled 'nuncios'). A measure to become law had to pass these assemblies, and then be sanctioned by the king. Deputies from the towns were admitted to the senate or chamber of nuncios. Of the subsequent sovereigns of the Jagellon dynasty, one of the most illustrious was Sigismund, who was elected king after the death of his brother Alexander in 1506. Sigismund engaged in a severe and protracted contest with Russia, which was concluded by a treaty that left the frontier of the belligerent powers in the same state as it was before the war. In 1510, Bohdan, prince of Moldavia and Wallachia, invaded the southern provinces of Poland: he was however soon defeated, and compelled to conclude a treaty, by which he acknowledged himself the vassal of the kings of Poland. This acquisition became afterwards the origin of long and bloody wars with the Ottoman Porte, but an immediate collision with that power was avoided by the prudence of Sigismund.

Sigismund died in 1548, in the 82nd year of his age, with the character of a wise, just, and magnanimous prince, notwithstanding that in the latter years of his reign he had become unpopular, owing to the misconduct of his queen Bona, to whom he was dotingly attached. He was succeeded by his son Sigismund Augustus, who had been elected and crowned during his lifetime, and was then only ten years old. The most remarkable events of his reign are the acquisition of Livonia, which voluntarily submitted to Poland in order to save itself from the Muscovite yoke; and the legislative union between Poland and Lithuania, which was effected at the diet of Lublin, 1569. By this arrangement it was agreed that the deputies and senators of both nations should deliberate in common. The rights of the Polish nobles were extended to those of Lithuania, and the throne of both countries became equally elective; yet the laws, finances, and army remained distinct. This union continued until the final dissolution of Poland. Under the reign of Sigismund Augustus the doctrines of the Reformation acquired considerable influence in Poland.

The interregnum produced by the death of Sigismund Augustus (1572) was dangerous to the peace of the country, particularly as the election of the new king was embarrassed by religious differences. The diet of convocation however, which assembled in January 1573, enacted that all the religious sects which at that time divided Poland should

enjoy equal rights and privileges. The extraordinary address of the French ambassador Monluc, bishop of Valence, secured the election of Henry of Valois, brother of Charles IX. of France. Henry went to Poland; but a few months after his arrival, having learned the death of his brother Charles IX., by which he inherited the throne of France as Henry III., he secretly left Krakow (1574), and escaped from his new kingdom. The throne was declared vacant in 1575, and Stephen Batory was elected. He was a very remarkable person, who had risen by his great merit from a simple Hungarian noble to the dignity of sovereign prince of Transylvania. Batory defeated in repeated battles the Muscovites, retook many towns and districts of Lithuania which had been seized by them, and invaded their own country. His death took place in 1586, at the moment when he was making great preparations against Muscovy. His successor was Sigismund III. (Vasa), son of the king of Sweden, and nephew by his mother to Sigismund Augustus. Sigismund III., strongly attached to the Roman Catholic religion, lost his hereditary dominions, and created a general discontent in Poland by his complete subserviency to the Jesuits and the house of Austria, as well as by his tendency towards despotism. A civil war ensued; but the insurgents being defeated, the country was restored to peace. Soon after, Sigismund, taking advantage of the distracted state into which Russia fell after the murder of the pretender Demetrius, declared war against that country; and the Polish general Zolkiewski, having defeated the Muscovite army and an auxiliary Swedish force, entered Moscow; and concluded a treaty by which Vladislav, eldest son of Sigismund, was elected Czar of Moscow, 1610, on conditions which limited the absolute power that the monarchs of that country hitherto possessed. Sigismund delayed his confirmation of that treaty under various pretences, and in the meantime endeavoured to possess himself of some towns and provinces of Russia. The Muscovites, justly irritated by Sigismund's conduct, rose in arms, and a war ensued, during which the Polish general maintained himself for a long time against the Muscovites, but was finally obliged to retire. The refusal of the diet to grant the necessary supplies produced insubordination in the army, which was unpaid, and the Russians gained great advantages. Sigismund at last made an effort, and sent his son Vladislav to recover at the head of an army the throne which was lost through his father's incapacity, and already occupied by Michael Federovich Romanow, who was elected in 1613. Vladislav penetrated to the walls of the capital; and after an unsuccessful attempt to carry it by storm, occupied a strong position in its vicinity; but the insubordination of the army hastened the conclusion of a truce of fourteen years, by which the Czar Michael Federovich was recognised by Poland, which retained Smolensk, with other provinces. Among the principal events during the remainder of the reign was the war with the Turks (1620-1), who advanced to the Dniester 400,000 strong under the Sultan Osman, and were bravely held in check by 35,000 Poles and 40,000 Zaporogue Cossaks. Peace was concluded October 7, 1621, which restored the statu-quo of the two countries. In a war with Sweden, 1625, Poland lost Riga and other towns in Livonia.

Sigismund III. died in 1632, in the 66th year of his age. His son Vladislav IV. was elected without opposition. He was a virtuous and enlightened prince. Immediately after his coronation he marched against the Muscovites, who had invaded the Polish frontiers, and having defeated them, he entered the frontiers of Muscovy, where he occupied several towns. Peace was concluded in 1634, on terms advantageous to Poland. Poland enjoyed a long peace during the reign of Vladislav, who died in 1648, at the very moment when a most dangerous rebellion was breaking out among the Cossaks of the Ukraine. The rebellion raged for many years under John Casimir, the brother and successor of Vladislav, until Chmielnitaki, the chief of the Cossaks, in 1654, applied for aid to the czar of Muscovy, Alexius, who sent a numerous army to his assistance and another force to attack Lithuania. The situation of Poland was already very critical, but the imprudence of the king made it desperate. Charles Gustavus having ascended the throne of Sweden in consequence of Christina's abdication, John Casimir's ambassador at Stockholm made a protest against his accession to the throne of Sweden, of which his master was the legitimate heir. Charles Gustavus declared war against Poland, which he entered from Pomerania, and soon overran the whole country, seizing both Warsaw and Krakow. John Casimir had fled before the Swedes, and was now in Silesia, and the Poles, captivated with the vigour of Charles Gustavus, sent him a deputation to request him to convoke a diet for the purpose of electing him King of Poland. The reply of the Swede, "that he required no election, as he was already master of the country by conquest," wounded the pride of the nation, which rose en masse, and under the brave Stephen Czavniecki, expelled the Swedes, and restored John Casimir to the throne.

This war, which terminated by the peace of Oliva in 1660, was followed by hostilities against Muscovy, which lasted till 1667. By the peace of Andrashov in that year, Poland ceded Smolensk and a great part of the Ukraine to the Czar. John Casimir abdicated the throne in 1668, and retired to France, where he died in 1672. He was personally brave, and not without military talent. He had served with distinction in the Imperial armies during the Thirty Years' War. Besides the losses before enumerated, some important districts were

also ceded during his reign to the elector of Brandenburg, whose independence of Poland was further recognised by the treaty of Velau, in 1657. The country was depopulated by constant war and pestilence, and emigration to adjoining countries, which was caused by the horrors of war and by religious persecution. In the election of a successor to John Casimir, the minor nobility, jealous of the overgrown influence of the magnates, united to place upon the throne Michael Prince Wisniowietzki, a young man who had no pretensions to this dignity. It was during his reign that the heroic John Sobieski rose, displaying great military skill, and performing prodigies of valour, in the service of his country.

On the death of Michael in 1673, Sobieski was elected king of Poland in his stead, notwithstanding the competition of numerous candidates. Almost immediately after his election to the throne the Turks invaded Poland with a large force, and Sobieski was obliged to shut himself up with a few thousand men in Lemberg, which was speedily invested. Taking advantage of a snowstorm which blew right into the face of the Turks, the king issuing out of the town with his small devoted band and a simultaneous cry of 'Christ for ever!', completely routed the besiegers. A fresh Turkish army headed by the brave Pasha of Damascus advanced to the Dniester, where John Sobieski, with 10,000 men, entrenched himself between two villages, and sustained for 20 days the attacks of the enemy and a continued cannonade from a formidable artillery. At last (Oct. 14, 1676), the king left his entrenchments and drew up in order of battle against the Turks, who numbered between 200,000 and 300,000 men. The Turkish Pasha, notwithstanding the odds in his favour, knowing that a *levy en masse* of the whole of Poland was at hand, offered the king an honourable peace, which was accepted.

A few years of external peace followed, during which unfortunate Poland was harassed by the obstinate conduct of her untractable nobles, who by their veto dissolved every diet that attempted to reform or remedy the evils and grievances of the state. But soon the noble energies of John Sobieski were again called into action by the most terrible storm which had threatened Christendom since the days of Charles Martel. A most formidable Turkish army, commanded by the grand vizier Kara Mustapha, after sweeping over Hungary invaded Vienna, from which the emperor Leopold and his family had fled in July 1683. Without hesitation the Polish king, at the head of only 16,000 men, marched from Cracow to the Danube, where contingents from Lorraine and Germany joined him, raising his force to 70,000. On the morning of the 11th of September he reached the ridge of the Kalemberg which overlooks Vienna and gave him a view of the wide-spread tents of the infidels. Next day rushing down he attacked the Turks, and after a hard contest obliged them to take refuge in their fortified entrenchments, which seemed too strong to be forced. After a respite of a few hours these too were assaulted. The Polish lancers cleared the ditch right into the Turkish camp; the infantry poured in at their heels, and the Ottomans were driven in a confused mass to the vizier's tent, where a short stand was made, and all was lost; Kara Mustapha fled with all the Turks that were left alive, and John Sobieski remained master of the whole camp, artillery, and baggage. Christendom was thus saved from the heel of the Turk. All Europe rang with acclamations, while Sobieski pursued the Turks into Hungary, and although defeated once at Parang, he checked not his career till he had swept the infidels across the Danube. Returning to Poland, he spent the remainder of his life in vain endeavours to regenerate his country by reforming abuses and the vicious system engrafted upon its constitution, but in every attempt he made he was thwarted by the veto of the turbulent nobles. He died after a short illness on Corpus Christi, 1696, and with him the greatness of Poland may be said to have expired.

During the reigns of his successors Augustus II. of Saxony (1690-1733) and Augustus III. (1733-1763), the crown of Poland became subservient to the Russian court. This gave rise to two parties among the nobles. The majority headed by the Potockis and Radzivils, wished to maintain all the privileges of their order, and were strongly attached to the Saxon dynasty, which was favourable to their opinions. This Saxon or court party was opposed by the Czartoryskis, who, perceiving that a liberty which was destroying national independence was only an idle name, wished to establish a strong government as the only means of raising the country from its deplorable condition.

Prince Michael Czartoryski and his brother Augustus, who were descended from a collateral branch of the Jagellon dynasty, possessed at that time immense wealth and great influence. Both of them also possessed great abilities and activity. They undertook to change the republican constitution of Poland into a well-organised monarchy, which, they thought, was the best means of raising Poland from the humiliating position into which she had fallen through her feeble government. They encouraged science and literature, sought out and patronised men of superior talent, and such as by their writings exerted an influence on public opinion, by which means they powerfully contributed to the restoration of literature in Poland. Some of the patriotic plans of the Czartoryskis were carried into effect, some of them with the aid of the Russian power; but on the accession of Catherine II. to the throne of Russia, the Muscovite power was directed against the Czartoryski policy.

In order to save the country from foreign influence, a confederation was organised at Bar, a little town in Podolia, by the patriotic bishop

of Kamieniec, Adam Krasinski. Ill supported and without any regular troops, it struggled for several years against the forces of Russia, until it fell by exhaustion. The Turks, who had taken up arms in favour of Poland, after having represented in vain to the cabinets of Europe the danger of Russian predominance in Poland, were defeated, and the first partition of Poland, which was planned by Frederick II. of Prussia, took place in 1772. By this partition Poland lost of its territory above 83,000 square miles, which comprehended its best provinces, and were unequally divided between Russia, Prussia, and Austria. This great calamity roused the nation, which now strove to compensate its heavy loss by internal improvements. An excellent system of public education was introduced, and literature was encouraged; industry was re-animated, and every kind of improvement rapidly advanced. The chancellor, Andrew Zamoyaki, an enlightened and patriotic nobleman, prepared a new code, which removed many ancient abuses and partly emancipated the peasants. The code was rejected however by the diet of 1780. The diet which assembled in 1788, having declared itself permanent, continued till 1792, when, on the 2nd of May, it proclaimed a new constitution, which abolished the veto, made the throne hereditary in the Saxon family (which was to succeed after the demise of Poniatowski, the reigning king), and introduced some useful regulations. Russia, which had guaranteed the former state of things in Poland, excited a party composed of a few factious nobles, who, assisted by her troops, formed a confederation at Targovitsa, in order to overthrow the new constitution. The king soon became a party to this infamous confederation. The king of Prussia, who had encouraged the patriots to amend the constitution, then joined the Russians and invaded Poland. The consequence was a second partition of the Polish territory in 1793, by which Prussia took 22,500, Russia 83,000, and Poland retained 85,000 square miles. The remaining part of Poland was subjected to every kind of vexation from the confederates of Targovitsa, who, encouraged by the presence of Russian troops, persecuted the patriots in every possible manner, and the chief persons among them were obliged to seek refuge abroad. An extensive conspiracy was organised, and insurrections broke out in several parts of Poland. In 1794 Kosciuszko arrived at Cracow, and having assembled a number of peasants armed with scythes, he defeated a superior number of Russian troops. The inhabitants of Warsaw, which was occupied by a strong Russian army, rose against their oppressors, and expelled them after a bloody contest. Vilna did the same. Several individuals were convicted of high treason and executed, but the king was treated with respect. The Poles fought with the utmost bravery, but their courage and patriotism proved unavailing against the overwhelming numbers of Russia and Prussia. Kosciuszko was defeated, wounded, and taken prisoner at the battle of Maciejowica, and Praga, the suburb of Warsaw, was carried by storm by Suwaroff, and all the inhabitants were massacred. Warsaw capitulated, and the remainder of Poland was divided in 1795 among Russia, Prussia, and Austria.

The fate of the dismembered provinces differed according to the governments under which they fell. The Prussian part was well treated in some respects, but the advantages it enjoyed were more than counterbalanced by a decided tendency to establish Germanism on the ruin of everything that was national. The Austrian government was not more favourable to the nationality of its Polish subjects; it introduced some few improvements, such as roads, but it exhausted the Poles by heavy taxes and levies of soldiers in its long wars with France. The Russian part may be considered as having been in some respects the most favoured of all. The national language was preserved in all official transactions, and an excellent system of public education, which was carried on in the same language, was introduced by the university of Vilna under the superintendence of its curator Prince Adam Czartoryski, who, supported by the friendship of the emperor Alexander, whose minister he had become, preserved with his sanction the nationality of Poland in the Russian provinces, where the ancient laws relating to civil affairs were also retained.

The success of the French arms against Prussia in 1806 reanimated the hope of the Poles to see their country restored. As soon as the French entered the Polish territory, the inhabitants rose in their favour, and organising themselves into a military force with amazing rapidity, immediately joined the French in combating the enemy. Yet Napoleon, after his success against the Russians, stopped at the banks of the Niemen, and concluded at Tilait a peace with Russia. The Polish territory which had been taken by Prussia in 1793-6 was erected into a sovereign state under the name of the Duchy of Warsaw, with the exception of the province of Bialystok, which was given to Russia. A representative constitution was granted, the French code of laws introduced, and the sovereignty declared hereditary in the house of Saxony. In 1809 the Austrians invaded the duchy and occupied Warsaw, which the Polish forces were obliged to evacuate after an unequal contest; but having entered Austrian Poland, their numbers were rapidly swelled, so that their insignificant force soon became a considerable army, and compelled the Austrians to evacuate the duchy of Warsaw, and also a large part of the Polish territory which they held.

At the congress of Vienna in 1815, the affairs of Poland were arranged in the following manner:—A part of the duchy of Warsaw was given to Prussia under the title of the duchy of Posen. The salt-mines of Wieliczka and some districts were given to Austria.

Cracow with a territory of 490 square miles was erected into a republic; and the remainder was entitled the kingdom of Poland, and united to Russia under one sovereign. The new kingdom received a representative constitution, which guaranteed security of person and property, the liberty of the press, the responsibility of ministers, the independence of the judges; the use of the national language; and a national military force. The representative body was composed of two chambers, senators and deputies.

Such a liberal constitution granted to a kingdom with 4,000,000 of inhabitants, whose sovereign was monarch over more than 50,000,000 subjects, was a perfect anomaly. It could not be expected that such a constitution should be faithfully maintained; and it was not. The hopes raised by the emperor Alexander, that the Polish provinces incorporated with Russia should be united with the new kingdom, were soon dissipated, and discontent began to spread among all the Polish population. The country, it is true, began to make rapid progress in agriculture, and industry was greatly increased; but the acts of government evinced a systematic hostility to all that was national, particularly with respect to the system of public education. The free expression of opinion on the part of the students at the university of Vilna was forcibly repressed, and the utmost severity was exercised upon young men who had been imprudent enough to speak plainly what they felt strongly. Similar persecution of the students took place at Warsaw, and the system of instruction was continually rendered less efficacious by substituting absurd modes of teaching for sound methods, and by limiting the subjects of instruction. A severe censorship prevented not only the printing of every work of liberal principles, but even the introduction of similar works from abroad.

These causes produced their natural result. The French revolution of July 1830, which produced a general excitement all over Europe, was not without effect on public opinion in Poland: an insurrection was meditated, and the time was fixed for the spring of 1831. Information of this projected movement having reached the government, some of those who were implicated were arrested—a circumstance which hastened the development of the plot. The insurrection broke out on November 29th 1830, and was effected by the military school, composed of about 200 young men, who were joined by many students of the university and a few thousands of Polish troops stationed at Warsaw. The Russian troops, which had made some ineffectual attempts to put down the insurrection, took up a position near the town under the grand-duke Constantine, with whom two regiments of Polish guards remained. A provisional government was organised, which acted in the name of the emperor Nicholas as king of Poland, and the grand-duke Constantine remained in his position awaiting the arrival of the army which was summoned to Warsaw from different places. The army having assembled and declared for the insurrection, the grand-duke, as its commander, by an order of the day, transferred his authority to the national government, and was allowed to retire from the country with 8000 Russian troops and 24 guns. In January 1831 the Diet declared the throne vacant, and organised a national government under the presidency of Adam Czartoryski. A vigorous defence was resolved on. The nation however could hardly muster 60,000 men to oppose a Russian army of 130,000 men and 396 guns. In the campaign which followed the Poles fought with great bravery and gained several victories; but on more than one occasion, advantages they had secured over the Russians appear to have been thrown away from the inefficiency of their commanders. In a battle which took place at Ostrolenka, on May 26th 1831, the Polish army sustained an enormous loss, particularly of officers. After this Polish affairs assumed a melancholy appearance. The want of ammunition and of every kind of resources was severely felt. This was chiefly caused by the Prussian government, which did not permit the slightest assistance to the Poles to cross the frontier. The Russians, on the contrary, were allowed to have their magazines on the Prussian territory, and always found a friendly asylum whenever they were obliged to retreat there, while the Poles in such cases were invariably disarmed and retained prisoners.

The Russian commander-in-chief Diebitch died suddenly on June 9th, and was succeeded by Paskievitch, who had distinguished himself in Asia against the Persians and the Turks. Paskievitch resolved to cross the Vistula, and he accomplished his plan by marching near the Prussian frontier, where his magazines were in perfect safety, and where the bridges by which he effected his passage were prepared.

Meanwhile the national government resigned its authority, and General Krukowiecki was chosen president of the government. The town being in want of food, a considerable force was detached to collect provision in the provinces on the right bank of the Vistula, and only 30,000 men were left to defend Warsaw. Provisions were supplied, but the forces sent for them could not reach Warsaw in time, which, being attacked on September 6th by the Russians, was surrendered to them by Krukowiecki on the 8th. The army, followed by the members of the diet and many leading persons, retired towards the frontiers of Prussia, which they entered on October 8th; whilst another part of the army was compelled to retire on the Austrian territory.

The consequences of the failure of this insurrection were most deplorable to Poland. The emperor Nicholas exercised the utmost severity against the Poles. Many individuals who had taken a part in

the insurrection were condemned either to the mines of Siberia or sent to serve as soldiers in the Caucasus and other Asiatic provinces. The constitution was formally abrogated, and another form of government, called the Organic Statute, introduced. The universities of Vilna and Warsaw, as well as many minor schools, were abolished, and the public libraries and museums were carried away to St. Petersburg and other parts of Russia. Various other measures were taken to destroy the nationality of Poland, to abolish its language, and to overthrow its religion, all of which it is said have been persistently carried out up to the present time. After the surrender of Warsaw a great number of the patriots emigrated to foreign countries. In 1832 Poland was declared an integral part of the Russian empire. A feeble attempt at independence was made at Cracow in 1846, which led to the annexation of this last remnant of Polish nationality to Austria. [CRACOW; GALICIA.]

POLAR COUNTRIES AND SEAS. The countries and seas which lie between the northern coasts of America and the North Pole are noticed in the article NORTH-WEST PASSAGE; those which are situated on the other sides of the North Pole are described under their respective names. [GREENLAND; ICELAND; SPITZBERGEN; NOVA ZEMBLA; SIBERIA.] It only remains to notice certain conditions of the countries and seas which surround the North Pole, and then to give an account of the discoveries which have been made in the seas surrounding the South Pole.

The seas which surround the North and South Poles are named the Arctic Ocean or North Polar Sea, and the Antarctic Ocean or South Polar Sea. These two oceans are bounded by two imaginary circles which surround the globe at about 66° 30' N. lat. and 66° 30' S. lat. At the Poles themselves there is only one day of six months, during which the sun never sets, and one night of six months, when the sun never rises. In the spaces comprised between the Polar Circles and the Poles the quantities of continuous day and continuous night vary according to the distances from the Poles. Thus, at the north point of Nova Zembla, 75° N. lat., there is uninterrupted light from May 1st to August 12th, and uninterrupted darkness from November 8th to February 9th. At the Arctic Circle the greatest length of continuous light is 24 hours at the summer solstice, or Midsummer's-Day, whilst, at the same time, at the Antarctic Circle, the sun is 24 hours below the horizon; and the reverse at the opposite seasons of the year. The general coldness of the Polar Regions arises from the sun's rays striking the earth obliquely, as at the equator the heat is produced by the sun's rays falling upon the earth vertically.

The two great continents of the Northern Hemisphere terminate towards the North Pole near 70° N. lat., which parallel may therefore be considered as the general boundary-line of the North Polar Sea. The lands comprised within this polar basin, besides the northern shores of Europe, Asia, and America, include the northern parts of Greenland and Nova Zembla, the islands of Spitzbergen, the Liakheov Islands, and the great mass of islands which lie opposite to the northern coasts of British America. The North Polar Sea has only one entrance from the Pacific Ocean, by Behring's Strait, the narrowest part of which, between East Cape and Prince of Wales Cape, is only about 18 miles across. From the Atlantic Ocean, besides the great entrance by the Spitzbergen Seas, it is now known that there are entrances by Smith's Sound from Baffin's Bay, and by the Wellington Channel from Barrow's Strait.

A large portion of the Arctic Ocean is constantly filled with extensive fields and moving masses of thick and impenetrable ice. This portion seems to extend round the Pole at variable distances from the shores of Siberia, Russian America, and British America. In an easterly direction it extends from the north point of Nova Zembla to the western side of Melville Island. Here the navigation westward up Barrow's Strait ceases, the 'pack-ice,' as it is called, presenting an impassable barrier. On entering the Arctic Ocean from the Pacific through Behring's Strait, the most daring and skilful navigators have not been able to penetrate much farther in a northern direction than 70° N. lat. Captain Cook, in his last voyage, after passing through Behring's Strait, sailed as far westward as North Cape, 180° W. long.; but here the masses of ice prevented any farther advance. If the navigator, after passing through Behring's Strait, turns eastward, he finds, in summer, between the American shores and the pack-ice, a narrow passage much encumbered with broken ice, and may thus with some difficulty reach the most north-eastern point of the American continent; or, having reached Baring Island, may turn northward and try to accomplish the North-West Passage by following either of the tracks of Captain M'Clure.

The great entrance to the Arctic Ocean by the Spitzbergen Seas is not attended with much difficulty. Ships sail every year from the shores of the Atlantic Ocean to Archangel, and must necessarily pass round North Cape, 71° 10' N. lat.; other vessels proceed annually to fish for whales, which they never expect to take south of about 73° N. lat.; and others much smaller go every year from Hammerfest and other places to fish for walrus along the western shores of Spitzbergen. Barentz, the Dutch navigator, in 1594 and 1596, traced the western shores of Nova Zembla as far as North Cape, 75° N. lat.; and the Russian navigator Ziwoika, who in 1836 surveyed the island of Nova Zembla, found no difficulty in tracing the western coast to Cape Nassau, and even the eastern coast to 61° E. long.; but impenetrable masses of ice prevented his advance farther to the east.

The greater or less severity of cold in the Arctic Seas seems to depend more on circumstances of locality than on the degrees of latitude. Thus, on the European side of the Polar Basin, the navigation, as has been shown, is open as far as 80° N. lat.; on the Asiatic side it is generally closed by masses of ice; on the American side the cold is very severe, and the navigation everywhere difficult and in many parts dangerous. At North Cape, in Europe, 71° 10' N. lat., the mean temperature of the year is 32° Fahr.; at Bear Island (Cherry Island), between North Cape and Spitzbergen, 74° 30' N. lat., the mildness of the climate is extraordinary; but opposite the coasts of Siberia, farther to the east, the floating masses of ice render the navigation so dangerous that some portions of the coast-line have not been surveyed. This tract includes the most northern point of Siberia, Cape Severo (Severo Vostochinii Noss). In this part of the Polar Basin are the Liakhov Islands, the largest of which are named Kotelnof Fadiefkof, New Siberia, and Liakhov. They are situated between 73° and 76° N. lat. On these islands the snow does not entirely melt even in summer, and there is no vegetation whatever. Along these coasts of Siberia it has been ascertained that in winter the large body of the sea is free from ice at certain distances from the shore. North of New Siberia and Kotelnof the distance is less than 20 miles. Farther east it approaches nearer to the coast. Near 165° E. long. it is about 170 miles distant; but between 175° and 180° E. long., opposite Cape Yacan, it is only about 4 miles distant. At Ustyansk, in Siberia, near the mouth of the river Yana, 70° 55' N. lat., the mean temperature of the year is only 4° Fahr. At Winter Island, on the north-eastern coast of America, in 66° 11' N. lat., 83° 30' W. long., the mean annual temperature is not more than 7° Fahr., while on the south shore of Melville Island, about 74° N. lat., the mercury of the thermometer is frozen every winter during four or five months.

That there is a great sea comparatively unincumbered with ice in the vicinity of the North Pole, and perhaps flowing over it, seems to have been rendered probable by many facts and circumstances. Barentz, in 1594, remarked, "as soon as we made from the land [Nova Zembla] and put more into the sea, although it was much farther northward, presently we felt more warmth." Captain Parry, in his attempt to reach the North Pole in 1827, leaving his ship, the *Hecla*, moored in a bay on the north-east coast of Spitzbergen, proceeded with his party over the ice, dragging the boats and sledges which had been constructed for the purpose. On July 27th they reached 82° 45' N. lat., 19° 25' E. long., when, the season being far advanced, and finding that the ice over which they were travelling northward was itself drifting southward, they relinquished their attempt, and commenced their return-journey. On August 12th they reached Little Table Island, or rather a rock north of it, which Captain Parry named Ross's Islet, and which is the farthest land known in the northern hemisphere; it is in 80° 47' 30" N. lat., 20° 24' E. long. Captain Parry and his party were absent from the *Hecla* 61 days, the distance traversed being 654 miles. On July 15th, being then in 82° 17' N. lat., it rained incessantly for 21 hours. On July 16th the temperature was 37½° Fahr. in the shade. "In the evening it was so warm in the sun, though the temperature in the shade was only 35°, that the tar was running out of the seams of the boats." They found the ice everywhere broken, but most so when they were farthest north. After the middle of July no ice entered the bay where the *Hecla* was moored, and for some weeks afterwards not a piece was seen in the vicinity.

In further confirmation of there being a great sea in the vicinity of the North Pole, it may be stated that Sir Edward Belcher saw an extensive sea with little ice north of the Wellington Channel, as did also Captain Penny north-west of the Victoria Channel; that Captain Ingfield saw a great sea north-east of Whale Sound, near the head of Baffin's Bay, and also north of Smith's Sound, which seems to be an outlet into the Polar Basin from the head of Baffin's Bay.

The difference of temperature between the north-western shores of Europe and the north-eastern shores of America seems to be owing to two main causes—the Gulf-Stream, and the drifting of the ice-masses from the shores of Siberia. The Gulf-Stream is a great warm current many miles in width, which flows in a north-eastern direction from the Gulf of Mexico across the Atlantic, and passing by the British Islands and along the coast of Norway, penetrates the Polar Sea as far as the northern shores of Spitzbergen and Nova Zembla. Here in the spring it meets the powerful current caused by the breaking-up of the ice in the great rivers of Siberia. As this vast body of water and broken ice advances towards the shores of Nova Zembla and Spitzbergen the Gulf-Stream opposes its farther progress south and gives it a direction westward, so that it passes by East Greenland and Iceland, and reaches the shores of America and Newfoundland, where the masses of floating ice (sometimes miles in length and of great thickness) descend in the spring as low as 40° N. lat. On the coast of Norway, on the contrary, as far as 71° N. lat., not a piece of drift-ice is ever seen.

The countries which surround the north pole generally afford an abundant supply of animal food, consisting of the walrus, the polar bear, the moose-deer, the rein-deer, the wolf, the polar hare, and the seal. The number of aquatic birds is very large, and various kinds of fish are in great abundance.

We now proceed to give a sketch of the discoveries which have been made in the Antarctic Seas.

The southern hemisphere, as is now well known, contains a much

less proportion of land to sea than the northern hemisphere. But it was formerly supposed that the remote and then unknown parts of the southern hemisphere were occupied by an extensive continent, which surrounded the Antarctic Pole, and extended to a great distance from it. This imaginary continent, called Terra Australis Incognita, makes a conspicuous figure on all maps which are more than a century old. Little could be adduced in support of the supposed existence of this continent except some imaginary law of equipoise. In the middle of the last century however it was determined to solve the problem of the existence of this Terra Australis, and Cook undertook his second voyage (1772-1775) for the purpose. He found large masses of floating ice, and only in three places succeeded in penetrating beyond the Antarctic Polar Circle. In one place he attained 71° 10' S. lat., but he was generally unable to go much farther south than 60° S. lat. This was the case between 90° and 150° E. long., within which limits the most extensive and continuous line of coast has been since discovered. This line of coast however lies between 4° and 5° south of Cook's track. As Cook had found no land south of 60°, the Terra Australis disappeared from our maps, though he himself thought that there must be land in the vicinity of the pole, being convinced that ice can only be formed in the neighbourhood of land.

Thus the matter rested up to 1819, when the South Shetland Islands were seen by William Smith, on a voyage from Monte Video to Valparaiso. In 1821 Powell discovered Trinity Land south of the South Shetlands and the South Orkneys, between 60° 30' and 61° S. lat., 44° 30' and 46° 30' W. long. Palmer, an American, discovered a coast-line west of Trinity Land, which is called Palmer's Land; and the Russian navigator, Bellingshausen, discovered Alexander's Land, south-west of Palmer's Land. In 1823 Weddell tried to find land east of the meridian of the South Shetland Islands. He did not find land, but he succeeded in advancing as far as 74° 15' S. lat., where he found a sea clear of ice. In 1831 and 1832 Biscoe sailed round the icy masses which inclose the south pole, and added to former discoveries Enderby's Land and Graham's Land. The first lies at a great distance from the countries south of the Shetland Islands, between 49° and 51° E. long.; but Graham's Land is between Alexander's Land and Palmer's Land. Thus a nearly continuous coast-line has been discovered south and west of the South Shetland Islands, extending from 36° to 70° W. long., and comprehending from east to west Trinity Land, Palmer's Land, Graham's Land, and Alexander's Land. In 1837 the French government sent some vessels to these parts, under the command of Dumont D'Urville, who explored the coast which Powell named Trinity Land, and changed its name to that of Louis Philippe's Land. In the following year Balleny directed his course to those parts of the ocean which are south of New Zealand and Australia, and discovered some islands in 66° 44' S. lat., 163° 11' E. long., which he called Balleny Islands. He also discovered a projecting coast-line near 116° E. long., which was called Sabrina Land. But the largest tract of sea-coast was discovered in 1840. In 1839 the French government and that of the United States of North America sent out expeditions for the purpose of making discoveries in the Antarctic Seas. The French expedition consisted of two vessels, under the command of Dumont D'Urville, and the American of four vessels, commanded by Charles Wilkes. Both directed their course to the seas which the year before had been visited by Balleny. Wilkes found a coast-line in 154° 27' E. long., and in continuing his course westward for four weeks, he had either always a coast in sight, or unequivocal indications of land being at no great distance. He advanced as far as 97° 30' E. long., so that, including Sabrina Land, he discovered a coast-line extending over near 50 degrees of longitude. Dumont D'Urville reached the same coast in 140° 41' E. long., and pursued his course westward to 130° E. long. He called it Adélie Land. It is remarkable that the coast of this Antarctic Continent, if the appellation may be adopted, lies near the Antarctic Circle, either to the south or to the north of it, and this is also the case with Enderby's Land and Graham's Land, both of which are traversed by that line. Only the tract of coast south of the South Shetland Islands extends farther north, and approaches to 63° S. lat.

An expedition was fitted out in England in 1839 for the purpose of making an attempt to reach the south magnetic pole, and it was placed under the command of Captain James Clarke Ross. He directed his course several degrees east of Balleny Island, and on the 1st of January, 1841, passed the antarctic circle near 178° E. long. On the 11th of January he discovered land near 70° 41' S. lat., 172° 36' E. long., and soon found that it was a continuous coast, trending southward and rising in mountain peaks to the height of from 9000 to 12,000 feet, and covered with snow. On the 12th of January he effected a landing, and took possession of it in the name of the queen. He continued his course along the shores to 78° 4' S. lat., tracing a coast-line of above 600 miles in length. In 77° 32' S. lat., 167° E. long., he saw a mountain about 12,400 feet above the sea-level, which sent forth abundance of fire and smoke, to which he gave the name of Mount Erebus. East of this volcano he observed an extinct crater of somewhat less elevation, which he called Mount Terror. At 78° 4' S. lat. his progress to the south was prevented by a barrier which presented a perpendicular face of at least 150 feet, along which he sailed eastward until he attained 168° 37' W. long. In the voyage of the following year he reached 6 miles farther south,

and was stopped by the barrier in 78° 11' S. lat., 161° 27' W. long., the surface extending southward having the appearance of high mountains covered with snow. In 1843 Captain Ross, after adding to previous discoveries in Louis Philippe's Land, sailed eastward between 60° and 70° S. lat., and then southward, between the routes of Bellingshausen and Weddell, to 71° 30' S. lat., 14° 51' W. long., without any appearance of land.

The discoverers of these new countries have only in a very few cases been able to effect a landing, the coasts being skirted with a bank of either solid or broken ice, which generally extends from five to ten miles, and in some places to twenty miles, from the shore. The land is elevated, and even mountainous, at no great distance from the shores. Dumont D'Urville estimates the average elevation of the mountains in Adélie Land at about 1500 feet. They are covered with snow, even in February, and might easily be mistaken for icebergs, if some rocks did not rise from them, to the perpendicular sides of which the snow cannot adhere. Between the mountain ridges valleys are observed, but they are filled with snow and ice nearly to the summits of the mountains, and these icy masses, being converted into glaciers, protrude into the sea. In summer enormous pieces are broken off from them, and to this cause are owing the numerous icebergs which render the navigation along these coasts more difficult and dangerous than in the most northern latitudes which have been visited by our whalers. Some portions of the coasts are of volcanic origin, especially those which lie south of the South Shetland Islands. Bellingshausen found an active volcano near 69° S. lat., and there is another on Palmer's Land. A volcano occurs also on Balleny Islands, which continually emits smoke.

No traces of vegetation have been discovered on any part of the more southern coasts, nor any quadrupeds. The birds were albatrosses, penguins, eaglets, Cape pigeons, king-birds, and noddies. Whales have been observed in several places, especially humpbacked and fin-backed whales, as also several kinds of seals. On Cockburn Island, in Louis Philippe's Land, there were found nineteen species of plants, comprising mosses, algae, and lichens, seven of the species being peculiar to the island.

POLICASTRO. [PRINCIPATO CITRA.]

POLIGNANO. [BARI, TERRA DI.]

POLIGNY. [JURA, Department of.]

POLISTENA. [CALABRIA.]

POLLENZA. [MALLORCA.]

POLPERRO. [CORNWALL.]

POLTA'VA, or PULTAVA, a government in European Russia, lying between 48° 48' and 51° 4' N. lat., 30° 25' and 36° E. long., is bounded N. by Tschernigov, E. by Kurak and Charkov, S. by Ekaterinoslav Kherson, and W. by Kiev. The area is about 18,973 square miles. The population in 1846 was 1,783,800.

The surface is one continuous plain, with the exception of some elevations along the elevated banks of the Dnieper and some other rivers. The soil consists of a thick layer of black mould on a basis of clay and sand; it is either arable land or rich meadows; the forests are few and inconsiderable. The heaths are covered with nutritious grass; those where furze and broom predominate are common only in the south-east part of the government. The principal river, towards which the whole country slopes, is the Dnieper, which forms the western boundary, and is everywhere navigable. Its chief tributaries are the Trubesch and the Sula, with the Udai coming from Tschernigov, the Psiol and the Worakla from the Ukraine, and the Orul, which forms for some distance the southern boundary. The Sula and Psiol are navigable in the spring, are free from rocks, and flow through a rich country. There is no considerable lake in this government. The climate is mild; in winter however, when the cold north winds sweep over the open plains, the cold is severe. The summer is very hot. Little rain falls in the summer.

Of all the provinces of Little Russia, Poltava is the most fertile and the best cultivated. The grains chiefly cultivated are rye, barley, and oats, then wheat, buckwheat, Egyptian barley, and millet. Peas, lentils, rapeseed, linseed, and tobacco are also cultivated. All kinds of vegetables known in Russia thrive; fruits abound; from cherries, plums, melons, and berries of various kinds, liqueurs are manufactured, and excellent preserves made. On the Dnieper the inhabitants use the reeds growing on its banks for thatch and for fuel; in the interior they burn cow-dung and straw.

The steppes are covered with rich pastures, and it is said that the climate is so favourable that the cattle remain in the open air all the year round. In these steppes the magnificent ox of the Ukraine attains its extraordinary size; horses are bred in great numbers; and the Russian sheep appear in large flocks. The breed of sheep has been greatly improved by the importation of Merinos. The breeding of swine is not much attended to; bees are common, and many farmers have above 100 hives. Common poultry is abundant; there are likewise blue Caspian or Chinese geese and Persian ducks. Hares and partridges are abundant. The Dnieper and other rivers abound in fish. The Dnieper furnishes the *Silurus Glanis*, of the bladders of which glue is made, and the dried skin is used as a substitute for window-glass. The country is periodically infested by immense swarms of locusts; gad-flies and a kind of musquito are very troublesome. Potters' clay, brick-clay, lime, chalk, and saltpetre are found

in the government. The inhabitants manufacture articles of various kinds for domestic use; it is only of their fine liqueurs and preserved fruits that there is a surplus for exportation. The distilleries of brandy are considerable. Large quantities of corn are exported to Odessa. The chief articles of export are corn, flour, groats, brandy, linseed oil, hemp, flax, tobacco, honey, wax, wool, tallow, butter, horses, oxen, preserved fruit, and liqueurs.

The most important trading towns are Poltava and Kremmentschuk. There are not more than seven or eight towns in this government, in addition to the capitals of the fifteen circles; but the number of villages is very large, and though, for want of timber, the buildings are mostly of clay, they are kept very clean, both within and without; and the villages, being surrounded with orchards and gardens, have a cheerful appearance.

Poltava, the capital of the government, is situated in 49° 30' N. lat., 34° 15' E. long., near the confluence of the rivers Poltawka and Worakla. The population in 1842 was 16,000. The town is built of wood, but the streets are wide and straight, and in the centre there is a good square surrounded with stone houses, and in the middle of it a handsome monument, of granite, in honour of Peter the Great. It is surrounded by a rampart. This town made a vigorous resistance to Charles XII., which led to the battle of Poltava, in which the Swedes were totally defeated, and Charles obliged to seek refuge in Turkey. A fine obelisk is erected on the field of battle, near which divine service is performed annually in commemoration of this victory. Poltava has 10 churches (including the cathedral), a convent, a gymnasium, and a school. The inhabitants have considerable distilleries and tanneries, and carry on an extensive trade in the produce of the country. The town is surrounded with vast cherry-orchards, from the fruit of which a very strong ardent spirit is distilled. There are four annual fairs. In the vicinity there are extensive saltpetre works.

Among the chief towns are the following:—*Mirgorod*, on the Khorol, which has about 7500 inhabitants, and great horse-fairs. *Lubny* and *Lokhwiza*, both on the Sula, have each a population of about 6000. *Pereaslavl*, at the confluence of the Alta and the Trubesch, has a great trade in cattle and corn, and 8000 inhabitants. *Kremmentschuk*, a well-built town, at the confluence of the Kaganlik and the Dnieper, has a considerable trade and a wool-fair, and 18,000 inhabitants. Its liqueurs and preserved fruits are very excellent, and there are manufactures of nitre, soap, and refined sugar. The Dnieper is here crossed by a bridge of boats. *Kobijaki*, on the Worakla, has a population of 7000. Part of the former fortified lines of the Ukraine traverses the south-east of the government of Poltava.

POLYNESIA (the name is formed from two Greek words, signifying 'many islands'), comprises those countless islands and groups of islands that lie in the Pacific Ocean, to the east of the Philippines, Moluccas, and Australia, and extend to within a few degrees of the western coast of America. The large islands and the groups of smaller islands comprehended under the name are merely enumerated here, as a particular notice of the more important is given under their separate heads. South of the equator are Papua, the Admiralty Islands, New Ireland, with New Hanover, New Britain, Louisiade, New Georgia Archipelago, Queen Charlotte Islands, New Hebrides, New Caledonia, Fiji Islands, Friendly Islands, Navigator's Islands, Society Islands, Marquesas Islands, Paamuto Islands, and the isolated Easter Islands; to which are to be added, south of the southern tropic, Pitcairn's Island, Norfolk Island, and the islands of New Zealand. North of the equator are the Pelew Islands, the New Philippines, the Ladrões, the Ralick, the Radack, and the Sandwich Islands. It will be seen that Polynesia thus comprises a part only of what is expressed by the more general term OCEANIA, before explained.

POMERANIA (*Pommern*), a province of Prussia, is situated between 52° and 54° N. lat., 12° 30' and 18° E. long. It is bounded N. by the Baltic, E. by West Prussia, S. by Brandenburg, and W. by Mecklenburg. It is a long tract of coast, extending 200 miles along the Baltic, and varying in breadth from 30 to 80 miles. The area is 12,153 square miles. The population in 1852 amounted to 1,253,904, of whom 1,232,376 were Protestants of various sects; 10,912 Catholics; 26 of the Greek Church; 156 Mennonites; and 10,434 Jews. The province is divided into the three governments of CÖSLIN, STETTIN, and STRALSUND.

Pomerania is one of the lowest and flattest countries in Germany; only a few hills of a moderate height break its continuous level. The coasts are defended by dykes. The soil consists of sand, mixed in some places with clay. The province is crossed in its broadest part by the Oder, which, flowing through a marshy tract, divides into many arms or channels, one of which, the great Regelitz, forms, towards its mouth, the Great Dammer Lake, and, together with the main stream, falls into the extensive inland water, the FRISCHES-HAFF. The two islands of Usedom and Wollin separate the Haff from the Baltic, with which it is connected by three outlets. The other rivers of Pomerania are the Uker, Peene, and Ilna. There are many small lakes; that of Madine, which is celebrated for its lampreys, is one of the largest.

The climate of Pomerania is cold, and the weather is changeable; storms on the coast are not uncommon. The natural productions of the country are—horses, horned cattle, sheep, goats, swine, small game, domestic poultry (especially geese), sea and river fish, and bees; corn, peas, and beans, potatoes, fruit, timber, flax, and tobacco; alum,

bog-iron, salt, turf, and amber. The Pomeranian forests are very extensive and productive. The chief manufactures are linen and woollen stuffs, iron, and glass-ware, leather, beer, and spirits. Ship-building is carried on in the coast towns. The principal branches of industry however are agriculture and cattle breeding. The salmon and sturgeon fisheries are productive. Smoked geese are largely exported. The trade of this province in corn is very important.

The inhabitants are by descent partly Slavonians and partly Germans. The Slavonian language is still spoken in the north-east of the province. The nobles are numerous, chiefly consisting of German families who have settled here since the 12th century. The vassalage of the peasants was abolished by Frederick William III.

Pomerania was formerly a considerable part of the ancient kingdom of the Wends, or Vandals. From the year 1062 it had its own dukes. The Christian religion was introduced in the 12th century. The line of the dukes became extinct on the death of Boleslaus XIII. in 1637. On the death of the last Duke of Pomerania, the electoral House of Brandenburg, conformably to a family compact, claimed the whole country; but Pomerania having been occupied by the Swedes during the Thirty Years' War, Prussia was obliged to be content, at the peace of Westphalia, with Further Pomerania (to the east of the Oder), leaving Sweden in possession of Hither Pomerania, with the island of Rügen. After the death of Charles XII., by the treaty of Stockholm in 1720, the southern part of Pomerania and the islands of Usedom and Wollin were ceded to Frederick William I., king of Prussia. Sweden ceded her part of Pomerania to Denmark as a compensation for Norway. About a seventh part of Pomerania, forming the western part of the country, was still held by the Swedes and was called Swedish Pomerania. At the general settlement of the continental states in 1814, and finally by a convention dated June 4, 1815, Denmark gave Swedish Pomerania to Prussia in exchange for the duchy of Lauenburg (which had been received from Hanover in exchange for East Friesland) and a large sum of money.

POMONA. [ORKNEY ISLANDS.]

POMPADOUR. [CORRÈZE.]

POMPEII, an ancient town of Campania, situated about 13 miles S.E. from Naples, in a plain at the foot of Vesuvius, through which runs the little river Sarno. The town appears to have been once close to the sea, and much resorted to as a bathing-place by the wealthy citizens of Rome. It is now nearly 2 miles from the sea in consequence of the physical changes which have taken place in the district. It stood on an eminence formed by a bed of lava, which seems to have been thrown up from the ground in this spot, and in several other places round the foot of Vesuvius, long before any of the eruptions recorded in history. Pompeii, as well as the neighbouring town of Herculanium, is said by Strabo (p. 247) to have been originally possessed by the Osci, and then by the Tyrseni and Pelasgi. It afterwards fell under the power of the Greek colonies of Cumæ and Parthenope, and lastly of the Samnites (about B.C. 440), who made themselves masters of this coast as far as the river Silarus. About 80 years later the inhabitants of Campania threw off the yoke of the Samnites, and placed themselves under the protection of Rome. In the second Punic war the Campanians joined Hannibal, but were severely punished for it by the Romans, who brought the country under subjection. In the Social War (B.C. 90) the Campanian towns revolted, and Pompeii, among them, joined the Marsian Confederacy. A fearful earthquake threw down a great part of Pompeii, A.D. 63. In the year A.D. 79, in the month of August, the first recorded eruption of Vesuvius took place, which is well known from the letter of Pliny the Younger, whose uncle lost his life on the occasion. In this eruption Pompeii was buried under showers of stones, cinders, and ashes, which in course of time became a bed of earth, and corn was sown and the vine was planted above the buried town, whose existence was forgotten until 1689, when the ruins protruding above the ground were first noticed. In 1755 the excavations began. They have been continued at intervals, and are still being carried on under the superintendence of the Neapolitan government. About a fourth part of the city along the western side of the walls has been excavated and cleared of the rubbish. This portion, which appears to have been the finest part of the town, contains about eighty houses and numerous small shops, two theatres, a basilica, nine temples, three forums, the amphitheatre, the baths, the prison, and other public buildings of less note. The city was anciently surrounded by walls, of which the greater portion has been traced, including six gates and twelve towers. The walls had a parapet on each side. The circuit of the walls is nearly 2 miles, and the area within measures about 161 acres. There were however suburbs, one of which, at the north-western or Herculanium gate, is partly excavated, and is called the street of tombs, from a number of handsome tombs which line the road leading to the town. The suburban villa, called the villa of Diomedes, is in this quarter. On entering the gate the visitor finds himself in a long tortuous street leading to the great forum. To the left of this street is the house called that of Sallust, which occupies a square of about 40 yards; and near it is the house of Pansa, which, with its court and garden, is about 100 yards long by 40 yards wide. Nearer to the forum are the baths, in very good preservation, which appear to have been finished a short time before the destruction of the town. Upon entering the forum the spectator finds himself in a

large oblong area, about 120 yards long and 40 yards wide, surrounded by columns, pedestals which once supported statues, the ruins of temples, triumphal arches, and other public buildings. Around the west, south, and east sides there runs a Grecian Doric colonnade, some of the columns of which are standing; they are 2 feet 3 inches in diameter, and 12 feet in height; the interval between them is 6 feet 10 inches. At the north end of the forum stand the ruins of a building, which has been called the temple of Jupiter, 120 feet long and 43 feet wide: when entire, it must have been 60 feet high. The columns are of the Corinthian order, and 3 feet 8 inches in diameter. On the west side of the forum is the temple of Venus, which stood in an open area surrounded by a wall and portico. Beyond it, to the south, is the basilica, or court of justice, the largest building in Pompeii, 220 feet long and 80 feet wide: the lateral walls remain, but the roof and upper gallery have fallen in. On the eastern side of the forum, towards its northern end, is the Pantheon, so called from 12 pedestals placed in a circle round an altar in the centre of an extensive area.

The other public buildings of Pompeii which have been excavated are the two theatres, the larger of which is capable of containing about 5000 persons; the temple of Hercules, which is the oldest building in the town, and the amphitheatre. The latter, which is at the eastern extremity of the town, separate from the other excavated parts, is 430 feet long and 335 feet broad, and is estimated to have been capable of accommodating 10,000 persons.

A description of these buildings is given in the work entitled 'Pompeii,' in the 'Library of Entertaining Knowledge,' and in the elaborate works of Masoia, Sir William Gell, and Donaldson. The numerous statues, medals, and other moveable antiquities found at Pompeii have been deposited in the Royal Museum of Naples, and are described in the work entitled 'Museo Borbonico,' published at Naples. An interesting view of the character of the architecture and antiquities of Pompeii is presented in the Pompeian Court in the Crystal Palace, Sydenham, and the descriptions and plans given in the 'Official Handbook' by Mr. G. Scharf, illustrate the subject in a very satisfactory manner.

POMPTINE or PONTINE MARSHES is the name of a low marshy plain in the Papal State, about 24 miles long from north-west to south-east, and varying from 8 to 10 miles in breadth. The plain is bounded E. by the Monti Lepini; W. by a range of downs from 30 to 60 feet high, which begin on the south at Mount Circeo, and thence run to the northwards parallel to and at the distance of from two to three miles from the coast, leaving a belt of land between them and the sea, which is partly covered by forests and partly occupied by lagoons. This belt has no water communication with the basin of the Pomptine Marshes. From Mount Circeo eastward to Terracina another ridge of downs of much smaller dimensions runs close to the sea-coast, and is cut through by the canal called Portatore di Badino, which is the great outlet of the waters of the Pomptine Marshes. On the north and north-west the Pomptine Marshes border on the dry plains of Cisterna and Sermoneta. The greatest depression is towards the south-east extremity, where an extent of about three or four square miles is below the level of the sea. The rivers which flow into this basin are the Toppia, Ninfa, Cavata, Ufente, Amazeno, and Pedicota.

There is every appearance that the basin of the Pomptine Marshes was once a gulf of the sea, which has been gradually filled up by alluvium from the mountains. Within the historical period it was a fertile district containing towns and a considerable population. It was occupied by the Volsci, one of whose towns, *Suessa-Pometia* (destroyed by Tarquinius Superbus), was situated in it, and is supposed to have given its name to the whole region. Both under the Republic and the Empire of Rome great works were undertaken for the draining of the Pomptine Marshes; and the Appian Road traversed part of them to Terracina. Something was done towards draining them by the popes, from Boniface VIII. to Pius VI., and by the French during their occupation of the Roman States. Since that time all that has been done for the Pomptine Marshes has been to maintain the drainage in the state in which Pius VI. left it, by keeping the canals clear and the dykes in repair. The greater part of the plain is covered with rich pastures, in which are numerous herds of buffaloes and other horned cattle, and other parts of it are sown with rice, wheat, and Indian corn, and afford rich crops. In the spring, before the great heat renders the atmosphere unwholesome, it has the appearance of a most delightful region. But, except the post stations along the high road, and some scattered huts here and there, there is no permanent population throughout the whole of the plain.

PONANY. [HINDUSTAN.]

PONCIN. [AIN.]

PONDICHERRY, a considerable town on the sea-coast of the Carnatic, in Hindustan, the principal seat of the French power in the East Indies, is situated in 11° 57' N. lat., 79° 54' E. long., 85 miles S. by W. from Madras.

The first commercial expedition of the French which succeeded in reaching the East Indies by sea was composed of two vessels fitted out from a port in Bretagne (A.D. 1601); but the vessels were wrecked on the Maldiv Islands before reaching their ultimate destination, and their commander returned ten years afterwards to France. In 1616, 1619, and 1633, attempts were made to form settlements in Java and Madagascar, but these attempts did not succeed. In 1664 Colbert

presented to Louis XIV. the plan of an India Company, which received the royal sanction. The new Company turned their attention to the establishment of factories in Hindustan, and fixed the principal one at Surat on the coast of Gujerat (180 or 140 miles north of Bombay), at that time one of the largest and most commercial cities of Hindustan. Leaving Surat they attempted to form an independent settlement at Trincomalee on the north side of Ceylon (1672). From this place they were very soon driven by the Dutch, and sailing to the coast of the Carnatic, they took by assault the Portuguese settlement of St. Thomé, or Malipoor, not far from Madras, from which they were again expelled (1674), and the wreck of this unfortunate expedition took refuge at Pondicherry, a little town on the same coast, which they had purchased two years before (1672) of the king of Visiapor, or Bejapoor. [BEJAPOR.] Pondicherry was taken by the Dutch (1693), but restored at the peace of Ryswick (1697), with the fortifications greatly improved. The town at this period owed much to the wisdom and probity of M. Martin, its subsequent governor. Its defences were subsequently further augmented, and Dumas, who was sent out as governor, obtained from the court of Delhi the permission to coin money, and the cession of the territory of Karikal in the district of Tanjore. In 1748 Pondicherry was attacked by the English with a considerable fleet and army under Admiral Boscawen and Major Lawrence; but the siege was raised after several days, and the English retreated.

In 1757 the war in the Carnatic was renewed: in 1758 the Count de Lally arrived at Pondicherry with strong reinforcements from France, and immediately attacked Fort St. David, about 16 miles south of that town, which he took by capitulation, and forced the English to abandon Devicottah, another of their posts. He next attacked the king of Tanjore, but unsuccessfully. Arcot and the black town of Madras were indeed taken, but Fort St. George (the fort of Madras) was relieved by an English fleet (1759), and Lally, with an exhausted commissariat and an empty pay-chest, retreated to Pondicherry. Subsequent hostilities were entirely to the disadvantage of the French. The English laid siege to Pondicherry, which surrendered early next year, and was subsequently demolished. The posts which the French retained in the Carnatic followed its example; and Lally returned to Europe to perish by an iniquitous sentence on the scaffold. At the peace of 1763 the French possessions in the Carnatic were restored. Subsequently Pondicherry was several times taken and retaken by French and English. In 1814 it was restored to France.

Pondicherry is built in a sandy plain not far from the shore, and consists of two parts, the white town and the black town. The white town is handsome; the streets are built with remarkable regularity, intersecting each other at right angles, and are of a uniform width. The houses are tolerably high, and have flat roofs; they are covered with stucco, white or yellow, and are adorned with fore courts or gardens. In the centre of the city is a spacious square planted with trees and laid out in walks, and open on the east side to the sea. The black town lies to the south of the white town, from which it is separated by a ditch or canal, with trees planted along the bank: it is laid out almost as regularly as the European quarter, but the houses are for the most part mere huts. The French are debarred by treaty from restoring the fortifications, or from maintaining any force beyond what is necessary for the purposes of police. The government-house is a handsome building; there are also a bazaar, two churches, and a residence for the Catholic bishop and his clergy. The grand pagoda in the black town is a building of vast size and grotesque architecture.

The population of the town and the district attached to it is about 80,000. There is no harbour, but a tolerable roadstead; a lighthouse was erected in 1836. Indigo, sugar-cane, millet, dye and aromatic woods, and mulberry-trees are cultivated in the neighbourhood. The exports consist of rice, drugs, sugar, indigo, and blue linens. The imports are lace, and articles of dress, furniture, jewellery, and books. There are two courts of justice, a mint, a college, schools for whites and for blacks, a botanic garden, a mont-de-piété, and several charitable institutions.

PONFERRADO. [LEON.]

PONS. [CHARENTE-INFÉRIEURE.]

PONS, ST. [HÉRAULT.]

PONT-A-MOUSSON. [MEURTHE.]

PONT-AUDEMER. [EURE.]

PONT-CHATEAU. [LOIRE-INFÉRIEURE.]

PONT-CROIX. [FINISTÈRE.]

PONT-D'AIN. [AIN.]

PONT-DE-L'ARCHE. [EURE.]

PONT-DE-SALARS. [AVEYRON.]

PONT-DE-VAUX. [AIN.]

PONT-DE-VBYLE. [AIN.]

PONT-DU-GARD. [GARD.]

PONT-L'ABBÉ. [FINISTÈRE.]

PONT-L'ÉVÊQUE. [CALVADOS.]

PONT-LE-ROY. [AUBE.]

PONT-ST-ESPRIT. [GARD.]

PONT-ST-MAXENCE. [OISE.]

PONT-SUR-SEINE. [AUBE.]

PONT-Y-POOL, Monmouthshire, a market-town and the seat of a Poor-Law Union, in the parish of Trevehan, stands on a bold cliff on

the right bank of the Afon Llwyd river, in 51° 42' N. lat., 8° 2' W. long., distant 19 miles S.W. by W. from Monmouth, 149 miles W. by N. from London by road, and 167 miles by the Great Western and South Wales railways. The population of the town of Pont-y-Pool in 1851 was 3708. The living of Trevehan is a perpetual curacy in the archdeaconry of Monmouth and diocese of Llandaff. Pont-y-Pool Poor-Law Union contains 22 parishes and townships, with an area of 51,429 acres, and a population in 1851 of 27,993.

Pont-y-Pool depends chiefly on the employment afforded by the coal and iron-mines in the vicinity, and the iron and tin manufactures. The town contains many well-built houses and shops. It is partially lighted with gas, and well supplied with water. The parish church of Trevehan, about a mile from Pont-y-Pool, is a very handsome structure in the early English style. In the parish are four churches, several school-rooms licensed for public worship, chapels for Wesleyan, Welsh, and Primitive Methodists, Independents, and Roman Catholics; National and Infant schools; a reading-room; and a savings bank. A county court is held. Markets are held on Wednesday and Saturday; fairs on April 2nd and 22nd, July 5th, and October 10th.

PONTARLIER. [DOUBS.]

PONTE. [IVREA.]

PONTE-DE-LAS-VELAS. [AZORES, St. George's.]

PONTE-DE-LIMA. [ENTRE-DOURO-E-MINHO.]

PONTE DELGADA. [AZORES, St. Michael's.]

PONTE VICO. [BRESCIA.]

PONTECORVO. [LAVORO, TERRA DI.]

PONTEFRAC, West Riding of Yorkshire, a municipal and parliamentary borough and market-town, in the parish of Pontefract, is situated near the confluence of the rivers Aire and Calder, in 53° 42' N. lat., 1° 19' W. long., distant 24 miles S.S.W. from York, 177 miles N.N.W. from London by road, and 193 miles by the Great Northern railway. The population of the municipal borough of Pontefract in 1851 was 5106; that of the parliamentary borough was 11,515. The borough is governed by 4 aldermen and 12 councillors, of whom one is mayor, and returns two members to the Imperial Parliament. The living is a vicarage in the archdeaconry and diocese of York.

Pontefract is a town of considerable historical importance. It was called Kirkby in the time of the Saxons. After the Conquest, Ilbert de Lacy received a grant of the place, and built here a very strong castle. The vast possessions of De Lacy, who was a great favourite with William, passed about 1310 by marriage to Thomas, Earl of Lancaster, uncle to Edward II. When the Earl of Lancaster took part with the barons he was taken prisoner and brought to Pontefract Castle, where he was soon after beheaded. Pontefract Castle was subsequently the scene of Richard II.'s imprisonment and death, and of several other incidents of importance in English history. After the execution of Charles I., Pontefract Castle was dismantled by order of the parliament, and the valuable materials were sold. At the present day little even of its ruins remains: the area is now chiefly occupied by gardens and a quarry of filtering-stones.

Pontefract possesses several spacious streets, which are well-paved, cleansed, lighted with gas, and supplied with water. The parish church is small and plain. The more ancient church of All Saints, the original parish church, is cruciform, with a handsome tower in the middle. It is in the early English style, and has been partially restored and made available for public worship. The Roman Catholics, Independents, Wesleyan and Primitive Methodists, and Quakers have places of worship. The town has a subscription library, a mechanics library, a public news-room, a savings bank, and a dispensary. The Free Grammar school was established in the reign of Edward VI.; it has an interest in several exhibitions and scholarships at Oxford; its income from endowment is 50*l.* a year: the number of scholars in 1852 was 19. There are also National and British schools. The town-hall is a handsome building, erected on the site of the old moot-hall, at the joint expense of the county and the corporation; the borough and petty sessions are held in it. The spring quarter sessions are held in the court-house, a commodious modern building, erected at the expense of the West Riding. A county court is held. The market is on Saturday, and there are eight annual fairs for the sale of cattle. The town is chiefly celebrated for its extensive gardens, nurseries, and liquorice-grounds: the soil is rich and deep. Several coal mines, brick- and tile-works, potteries, flour-mills, iron- and brass-foundries, hat-manufactories, and breweries afford employment.

PONTEVEDRA. [GALICIA, Spanish.]

PONTIVY. [MORBIHAN.]

PONTOISE. [SEINE-ET-OISE.]

PONTREMOLI. [PARMA.]

PONTS-DE-CÉ. [MAINE-ET-LOIRE.]

PONTUS, a country of Asia Minor, derived its name from the expression 'on the Pontus Euxinus' (*ἡ Πόντος*), and was used rather as a political than a geographical division of the country. Under Mithridates the Great it included the whole of Paphlagonia and part of Bithynia; but the name is usually applied to the country between Colchis and the river Halys, bounded W. by Paphlagonia, S. by Cappadocia, and E. by Colchis. The boundary between Colchis and Pontus is differently given by different writers; Ptolemy places it as far as the Phasis, and Strabo at Trapezus. (Strabo, xii, p. 548.) The whole is now included and described under ANATOLIA.

Pontus was first erected into a separate kingdom by Ariobarzanes I., about the beginning of the 4th century before the Christian era. In the troubles which followed the death of Alexander the Great, Mithridates II., one of his lineal successors, was enabled to extend greatly his paternal dominions, whence he is frequently called the founder of the kingdom of Pontus. Under Mithridates VI. a fierce war was maintained for a considerable time with the Romans, which was ended B.C. 63 by the conquest of Pontus and the death of Mithridates. A son of Mithridates however, Pharnaces II., was suffered to hold, as an ally of the Romans, the kingdom of Bosphorus, while the remainder of the kingdom was annexed to the provinces of Bithynia and Galatia. In the civil war Pharnaces sided with Pompey, was defeated by Caesar, and murdered after his escape from the battle in B.C. 47. Pontus was subsequently reduced to the form of a province, and afterwards subjected to various divisions into districts. The history of the kings of Pontus is given in an Appendix to the third volume of Clinton's 'Fasti Hellenici.'

The chief towns on the coast of Pontus, proceeding from east to west, were Trapezus [TRAPESUND], a colony of the Greek colony Sinópe; Céræus (Kheræoun), afterwards called Pharnacia, from Pharnaces, who was one of the kings of Pontus. Pharnacia is said to be the place from which L. Lucullus brought the cherry to Europe; Cotýra, also a colony of Sinópe; Themiscyra, and Amisus (Samsoun), a Greek colony and a flourishing city when it was besieged by L. Lucullus. In the interior the chief towns were Amasia [AMASIEE], the birth-place of Strabo; and Comána, called Pontica, to distinguish it from a town of the same name in Cappadocia. Comana had a great temple dedicated to the goddess Ma, supposed to be an equivalent of the Roman Bellona, to which were attached several thousand slaves, most of whom were females: the office of high-priest of this temple was a place of honour and emolument. (Strabo, pp. 557-559, ed. Casaubon.) Zela and Necessarea were also considerable places; at Zela was an ancient temple to the goddess Anaitis, the chief-priest of which was also sovereign of the town.

PONTYPOOL. [PONT-Y-POOL.]

PONZA, an island in the Mediterranean Sea, off the coast of Naples, 20 miles S. by W. of Mount Circeo, and 35 miles S.W. of Gaeta. It is about 5 miles long, from 1 to 2 miles wide, and in shape like a crescent, the concave side of which faces the mainland of Italy. On the same side is the harbour, which is a natural basin with a narrow entrance, surrounded by high ground, and perfectly safe in all weathers. The island is one continuous rock, mostly barren, but affording some pasture for cattle. Round the harbour are ranged some buildings, consisting of a castle, which is used as a state prison by the government of Naples, some other buildings, houses, and huts occupied by persons attached to the garrison and by fishermen. The Roman name of the island was Pontia. About 4 miles west of Ponza is the smaller island of *Palmarola*, or *Palmoria*, and 2 miles north-east of Ponza is an uninhabited rock called *Zannona*. About 24 miles south-east of Ponza, and halfway between it and the island of Ischia, is the island of *Vandotene*, the ancient *Pandataria*, whither Julia, the daughter of Augustus, and afterwards Octavia, the wife of Nero, were banished. Vandotene is about 2 miles long, and is inhabited by sailors and fishermen. East of Vandotene, and separated from it by a narrow channel, is the smaller island of *Santo Stefano*. The whole group of these islands is of volcanic formation.

POOL, or WELSHPOOL, Montgomeryshire, a market-town, and municipal and parliamentary borough, in the parish of Pool, and conjointly with MONTGOMERY the seat of a Poor-Law Union, is situated in a hollow near the left bank of the river Severn, in 52° 39' N. lat., 3° 8' W. long., 10 miles N. from Montgomery, and 171 miles N.W. by W. from London. The population of the parliamentary borough of Welshpool in 1851 was 4484; of the municipal borough, 6564. The borough is governed by 4 aldermen and 12 councillors, one of whom is mayor, and is contributory to the Montgomery district of boroughs in returning one member to the Imperial Parliament. The living is a vicarage in the archdeaconry of Montgomery and diocese of St. Asaph.

Welshpool (so called to distinguish it from the town of Poole in Dorsetshire) derives its name from a pool or lake called Llyn Du, near which it is situated. Cadwgan, a powerful chieftain of the district of Powys, built a castle here in 1109, which was dismantled in 1223 by the Prince of North Wales. It was afterwards restored, and received its present name of Powys Castle.

The town is watered by two brooks, which flow into the Severn; it is partially paved and lighted with gas. It consists of two parts, Pool Town and Welsh Town. The town- and county-hall has a space beneath for a corn-market. The church, which is spacious, was rebuilt, with the exception of the chancel and the tower, in the latter half of the last century, and has been since enlarged. A new church of Anglo-Norman character, erected by subscription, is on high ground close to Powys Park. Independents, Baptists, and other Dissenters have places of worship, and there are National schools and a savings bank. Some flannel is manufactured. Monday is the weekly market-day for provisions; the market for Welsh flannels is held on alternate Mondays. Seven fairs are held in the course of the year. The assizes and a county court are held in Welshpool. The Severn is navigable for barges to within a mile of the town. The Montgomeryshire Canal passes on the eastern side.

Powys Castle, the seat of the Clive family, stands on a rocky elevation in a spacious and well-wooded park, on the south side of Welshpool town. It has of late years been to a considerable extent improved and its different parts made to harmonise. In a gallery, 117 feet long by 90 feet broad, is a collection of about 70 paintings by the first masters.

POOLE, Dorsetshire, a sea-port, a market-town, a municipal and parliamentary borough, a county in itself, and the seat of a Poor-Law Union, is situated on the south coast, in 50° 42' N. lat., 1° 59' W. long., distant 31 miles E. from Dorchester, 106 miles S.W. from London by road, and 123 miles by the South-Western railway. The population of the borough of Poole in 1851 was 9255. The borough is governed by 6 aldermen and 18 councillors, one of whom is mayor, and returns two members to the Imperial Parliament. The living is a perpetual curacy in the archdeaconry of Dorset and diocese of Salisbury. Poole Poor-Law Union contains 8 parishes and townships, with an area of 27,023 acres, and a population in 1851 of 12,890.

Poole is supposed to have been a port in the time of the Romans, as traces of one of their roads appear between it and Winchester. Its earliest charter is of the time of Richard I. Edward III. made it a magazine for his wars in France. Elizabeth constituted the town a county in itself. During the civil war it was held for the Parliament. In the reign of Charles II. the fortifications were destroyed.

The town occupies a peninsula on the north side of Poole Harbour, which is noticed under DORSETSHIRE. The modern part of the town is well built. The streets are lighted with gas and paved, and the town is well supplied with water. It contains the parish church of St. James, which was rebuilt of Purbeck stone in 1812; a chapel of ease; places of worship for Independents, Baptists, Wesleyan and Primitive Methodists, Roman Catholics, Unitarians, and Quakers; a Free Grammar school; a British and a National school; a public library, erected in 1880 by the members for the borough; a savings bank; and two or three well-endowed almshouses. The other public buildings are the custom-house; the guildhall, which was built in the middle of the last century; the town-hall; the king's-hall, or wool-house, an edifice of some antiquity; the jail; and the Union work-house. The peninsula is lined with wide quays and extensive warehouses, close to which vessels of light burden lie afloat at low water. Ship-building is carried on, particularly the construction of sailing yachts. Sail-cloth, ropes, and twines are extensively manufactured. From a bank near the mouth of the harbour large quantities of oysters are taken to be fattened in the creeks of Essex and Kent. There is an important fishery of plaice and herrings. Corn is largely exported to London, and considerable quantities of Purbeck clay are shipped for use in the Staffordshire potteries. The number and tonnage of vessels registered as belonging to the port of Poole on December 31st 1853, were as follows:—Under 50 tons, 33 sailing vessels of 871 tons, and one steam-vessel of 22 tons; above 50 tons, 75 sailing vessels, of 13,429 tons. During 1853 there entered the port, in the coasting trade, 620 vessels of 48,388 tons, and there cleared 797, of 33,284 tons; in the colonial and foreign trade there entered 149 vessels of 15,418 tons, and cleared 123 vessels of 14,592 tons. Quarter-sessions and a county court are held in the town. Fairs, continuing eight days each, are held commencing May 1st and November 2nd. Monday and Thursday are the market-days. The neighbourhood of Poole is remarkable for earthworks, barrows, and other primeval or early antiquities.

POONA. [HINDUSTAN.]

POPAYAN. [NEW GRANADA.]

POPERINGEN. [FLANDERS, West.]

POPLAR. [LONDON.]

POPOLL. [ABRUZZO.]

PORCHESTER. [HAMPSHIRE.]

PORDENONE. [UDINE.]

PORENTRUI. [BERN.]

PORLOCK. [SOMERSETSHIRE.]

PORNIC. [LOIRE-INFÉRIEURE.]

PORT ADELAIDE. [ADELAIDE.]

PORT-AU-PRINCE. [HISPANIOLA.]

PORT CHALMERS. [ZEALAND, NEW.]

PORT ELIZABETH. [ALGOA BAY; CAPE OF GOOD HOPE.]

PORT GLASGOW. [RENFREWSHIRE.]

PORT HOPE. [CANADA.]

PORT LINCOLN. [SOUTH AUSTRALIA.]

PORT LOUIS. [MAURITIUS; MORBIHAN.]

PORT MAGEE. [KERRY.]

PORT MAHON. [MENORCA.]

PORT NATAL. [NATAL.]

PORT NICHOLSON. [ZEALAND, NEW.]

PORT-OF-SPAIN. [TRINIDAD.]

PORT PHILIP. [VICTORIA.]

PORT ROYAL. [JAMAICA.]

PORT STEWART. [LONDONDERRY.]

PORTADOWN, County Armagh, Ireland, a market-town, is situated on the Upper Bann River, in 54° 26' N. lat., 6° 27' W. long., distant 10 miles N.E. by E. from Armagh, 84 miles N. by W. from Dublin by road, and 89 miles by the Dublin and Drogheda and Dublin

and Belfast Junction railways. The population in 1851 was 3091. The town is well-built and paved. It contains the parish church, a handsome building in the early English style; a Presbyterian and two Methodist chapels; schools endowed by the Duke of Manchester, proprietor of the town; a loan-fund; a lending-library; a commodious market-house; and a dispensary. The manufacture of linen, lawn, cambric, and sheeting, and the weaving of linen for the Belfast merchants, give some employment. Large sales of cattle, pork, and agricultural produce are made at the weekly market. The river is navigable for vessels of 60 tons' burden. A new bridge, erected at a cost of about 10,000*l.*, has much improved the appearance of the place. Petty sessions are held monthly. Fairs are held on Easter Monday, Whit-Monday, November 3rd, and on the third Saturday of every month. Saturday is the market-day.

PORTALEGRE. [ALEMTEJO.]

PORTARLINGTON, Ireland, a market-town and parliamentary borough, chiefly in Queen's and partly in King's County, is situated in 53° 9' N. lat., 7° 12' W. long., 9½ miles N.N.E. from Maryborough, and 41¼ miles S.S.W. from Dublin by the Great Southern and Western railway. The population in 1851 was 2728. The borough returns one member to the Imperial Parliament. The town took the name of its founder Lord Arlington, and was called a port because built at a landing-place on the river. A number of French and Flemish families settled in the place. The possessions were subsequently bestowed by William III. on the Earl of Galway, who introduced other refugee families, built a church, endowed two schools, and otherwise improved the town. The town and estate were afterwards purchased by the Dawson family, who received the title of Earl of Portarlington. The town consists mainly of a long street extending in a northerly direction from the canal to a square near the river, where it turns westward at a right angle, and is continued by a bridge over the Barrow to a considerable length in King's County. The streets are paved, and the place is well supplied with water. The principal buildings are the English church, a handsome structure, with a spire; the French church; the Roman Catholic chapel, a spacious building with a tower and spire 140 feet high; a chapel for Methodists; two National schools; two Free schools; the market-house; a dispensary; and some superior schools, at one of which the Duke of Wellington and his brother the Marquis of Wellesley received part of their education. The town possesses a savings bank. Soap and candles are manufactured. Fairs are held eight times a year. Wednesday and Saturday are the market-days. Ems Park, the seat of the Earl of Portarlington, is 3 miles S.E. from the town.

PORTE-ST-MARIE. [LOT-ST-GARONNE.]

PORTGLENONE. [ANTRIM.]

PORTHAUL. [GLAMORGANSHIRE.]

PORTLAND, ISLE OF. [DORSETSHIRE.]

PORTLAND, U.S. [MAINE; OREGON.]

PORTO. [BEIRA; OPORTO.]

PORTO ALEGRE. [BRAZIL.]

PORTO BELLO, or PUERTO BELLO. [PANAMA.]

PORTO D'ANZO. [ANTIUM.]

PORTO FERRAJO. [ELBA.]

PORTO MAURIZIO. [NICE.]

PORTO PRAYA. [CAPE VERD ISLANDS.]

PORTO SANTO. [MADEIRA.]

PORTO VECCHIO. [CORSIKA.]

PORTO VENERE. [GENOA.]

PORTOBELLO. [EDINBURGHSHIRE.]

PORTPATRICK. [WIGTONSHIRE.]

PORTREE. [INVERNESSHIRE.]

PORTRUSH. [COLERAINE.]

PORTSEA. [PORTSMOUTH.]

PORTSEA ISLAND, Hampshire, the peninsula on which are situated the towns of Portsmouth and Portsea, and which gives name to a Poor-Law Union. The island is described under PORTSMOUTH. Portsea Island Poor-Law Union contains the parishes of Portsmouth and Portsea, with an area of 7063 acres, and a population in 1851 of 72,096.

PORTSMOUTH, Hampshire, a municipal and parliamentary borough, sea-port and market-town, is situated on the west side of Portsea Island, in 50° 48' N. lat., 1° 6' W. long., distant 28 miles S.S.E. from Winchester, 70 miles S.S.W. from London by road, and 94 miles by the South-Western railway. The population of the borough, which includes the parishes of Portsmouth and Portsea, was 72,096 in 1851. The borough is governed by 14 aldermen and 42 councillors, one of whom is mayor; and returns two members to the Imperial Parliament. The livings are in the archdeaconry and diocese of Winchester.

Portsea Island lies in an inlet of the British Channel, which extends about 4 miles inland, and stretches nearly 16 miles eastward from the town of Fareham in Hampshire to the village of Fishbourne, near Chichester in Sussex. On the west side of Portsea Island is Portsmouth harbour, and on the east side Langston harbour, bounded by Hayling Island, beyond which are Emsworth channel and Chichester harbour, separated by the small island of Thorney. The approach to Portsmouth harbour is defended by Monckton Fort on the west, and Southsea Castle, situated at the southern extremity of Portsea Island, on the east. Within these points, which are two miles apart, the

entrance narrows to about 220 yards at Portsmouth point, where there are also strong defences on each side. The harbour then widens into a basin about a mile long, and from half a mile to three-quarters of a mile broad, beyond which it expands till it attains a breadth of about three miles on the northern shore of the inlet. It contains three small low islands, Whale, Pewit, and Horsea islands; and about a mile and a half from the entrance the main channel divides into three branches, leading respectively to Fareham, Porchester, and the north end of Portsea Island. First-rate men of war can enter the harbour and lie at anchor inside at all times of the tide. From the approach to the harbour, on the west side, a sand-bank, called the Spit, extends three miles south-eastward. Beyond it, within a range of buoys, and under shelter of the Isle of Wight, is the admirable roadstead of Spithead, where 1000 ships of the line may ride without inconvenience. On the coast of the Isle of Wight, near its eastern extremity, is St. Helen's Bay, a place of rendezvous for the navy. These roadsteads, with Emsworth channel, and Langston and Portsmouth harbours, are within the jurisdiction of the port of Portsmouth, which extends from the town of Emsworth at the head of Emsworth channel on the east, to the opening of Southampton water on the west.

The town of Portsmouth is situated at the entrance of the harbour, on the south-west point of the island. It is inclosed by bastioned ramparts with batteries of heavy ordnance, and surrounded by a deep moat, with extensive outworks. The walls are entered by four handsome gates, with drawbridges. The ramparts, which are planted with rows of elms, form an agreeable promenade nearly a mile in length. Three or four streets of a better class extend from north-east to south-west, crossing the others at right angles. On the north side of Portsmouth, and divided from it by the mill-dam creek, is its principal suburb Portsea. The town of Portsea and its dockyard, the grand naval arsenal of England, occupy a space called Portsmouth Common, on which at the commencement of last century there was only a single hovel. The town, which is now much more extensive than Portsmouth, is similarly fortified, and the defences of both towns unite, so as to inclose them within one complete fortress. Portsea contains some handsome terraces and crescents, and a well-built open space called St. George's-square. Both towns are lighted with gas, well-paved, and supplied with water by pipes from the neighbourhood of Portsdown-hill. On the east-side of Portsea is a suburb called Landport, consisting of a belt of houses, some of which are handsome; south from Landport is Somerstown, and between Somerstown and the sea is Southsea, a fashionable watering-place, which spreads eastward from Portsmouth, with some good villas and well-built terraces and squares. On this part of the beach a fine esplanade has been formed, and embellished with statues of Nelson and Wellington. The suburb of Kington lies towards the centre of the island, and that of Mile End at some distance north from Portsea.

The borough of Portsmouth contains twelve churches and chapels of the establishment. The church of St. Thomas, Portsmouth, is a spacious cruciform structure, built in the early English style, but corrupted by successive additions. At the west end is a tower 120 feet high, surmounted by a cupola and lantern. St. Mary's, the parish church of Portsea, is an ancient structure in the suburb of Kington, surrounded by one of the largest burial-grounds in the kingdom. The garrison chapel, on the Grand Parade, is a part of the ancient hospital of Domus Dei, fitted up for its present purpose. St. Paul's, Southsea, and All Saints, Mile End, are in the perpendicular style. The Baptists have eleven places of worship, the Independents six, the Wesleyan Methodists six, the Bible Christians two, and the Primitive Methodists, Plymouth Brethren, Roman Catholics, Unitarians, Mormons, and Jews have one each. The public schools are, two Grammar schools, four National, four British, an Infant and a Bethel school. There is a philosophical society in Portsmouth, with a hall and a museum of considerable extent; Portsea has an atheneum and mechanics institute with a library of 1500 volumes; and the Watt institute at Landport has a library of 550 volumes.

The other principal buildings in Portsmouth are, the governor's house, on the Grand Parade, originally part of Domus Dei hospital, the residence of the lieutenant-governor; the town-hall, the new county court, the new market-house, the theatre, the custom-house, the United Service club-house, the Four House barracks, and the Marine barracks on the south-west margin of the town, the Cambridge barracks on the east, the Colewort barracks on the north, the new barracks at the end of High-street, the almshouses, the jail, and house of correction. In Portsea are St. Paul's academy, the Beneficial Society's hall, a general hospital, a savings bank, and on Mile End road the Union workhouse, a female penitentiary, and the Portsmouth and Farlington water-works. At Landport are the Tipner and Hilses barracks, and near Southsea Castle is the laboratory of the Royal Marine Artillery. About two miles north from Portsmouth, between the London road and the harbour, is an extensive cemetery.

The Naval Dockyard at Portsea, the largest in the kingdom, covers an area of nearly 120 acres. It is separated from the town by a wall 14 feet high, and along the harbour it has a wharf-wall of nearly three-quarters of a mile in length. It includes the residences of the port-admiral, the admiral-superintendent, and other officers, the guard-house and pay office, a school for naval architecture, and a

chapel. Besides extensive storehouses for hemp, cordage, canvass, sails, blocks, masts, rigging, and other requisites for naval architecture and outfit, it contains a rope-work and sail-lofts, a smithery, an iron-mill, a copper-sheathing foundry, an anchor forge, with Nasmyth's huge steam-hammer, and the remarkable block-machinery invented by the late Sir Mark Brunel. Forty-four block-making machines, impelled by a steam-engine, are arranged in three sets for blocks of different sizes. Receiving the rough timber, they cut it up, shape, and bore it, and continue the process till the block is complete. In the centre of the wharf-wall is the entrance to the great basin, which has an area of 2½ acres, and four dry docks attached, with an additional dry dock on each side, all capable of receiving the largest vessels. There is besides a double-dock for frigates. For the building of vessels there are six slips, two for ships of the first class. The Victoria steam-basin, lately formed at the north end of the dockyard, is 3000 feet in length. A range of engineers' shops, provided with every mechanical aid, occupies the western side of the basin. Close to the dockyard on the south is the Gun-wharf, with various ranges of building for ordnance stores. Guns of every calibre, with immense pyramids of shot adapted to them, occupy a spacious area of 14 acres. An ornamental building, called the Small Arms Armoury, contains upwards of 20,000 stand of arms for sea service. The Royal Victualling Yard at Weovil, and Haslar Hospital for sick and wounded seamen, are noticed under Gosport. The harbour is crossed every half-hour by a floating steam-bridge, which plies between Gosport and a suburb called the Point on the west side of Portsmouth. A small bay called the Camber, extending between the Point and the Gun-wharf, forms the harbour for merchant shipping. It is lined by an excellent quay, at which large vessels load and unload. The Victoria and Albert piers, two handsome erections, afford additional accommodation. An inland navigation proceeding by the channel at the north end of Portsea Island to the Portsmouth and Arundel Canal, and continued by the Arun and Wey Junction Canal and the river Wey to the Thames, connects Portsmouth with London. The South Western railway, which has its terminus at Gosport, and the Brighton and South Coast railway, which has its terminus at Portsea, connect Portsmouth by land with the metropolis. A short line running along the northern margin of the harbour unites the two railways. Steam-packets ply several times a day between Portsmouth and the Isle of Wight, and there is a regular communication by steamers with London, Southampton, Plymouth, Liverpool, Dublin, and Havre. The trade of Portsmouth depends on the dockyard and other public establishments. Great numbers of persons, especially females, are employed in Portsea and Landport, in the manufacture of articles of outfit for seamen. There are extensive market-gardens in the neighbourhood.

In the town and suburbs are several large breweries. The coasting trade of the port is extensive. Coals are largely imported. Cattle and sheep are brought from the Isle of Wight and the west of England. Large quantities of corn and provisions are brought from Ireland. Eggs are imported from France. Timber and wine are the chief articles of foreign trade. The ships registered as belonging to the port in 1853 were:—Under 50 tons, 170 sailing-vessels of 4221 tons, and 4 steam-vessels of 142 tons; above 50 tons, 74 sailing-vessels of 8335 tons, and 3 steam-vessels of 180 tons. During 1853 there entered the port, in the coasting trade 1553 sailing-vessels of 116,019 tons, and 38 steam-vessels of 12,235 tons; there cleared 866 sailing-vessels of 29,253 tons, and 75 steam-vessels of 15,781 tons. In the colonial trade there entered 37 sailing-vessels of 6902 tons, and cleared 19 vessels of 3001 tons. In the foreign trade there entered 74 British vessels of 4140 tons, and 85 foreign vessels of 8285 tons; and there cleared 27 British vessels of 1848 tons, and 76 foreign vessels of 6305 tons. A three days' fair is held on Portsdown Hill in the month of July. The market-days are Tuesday, Thursday, and Saturday.

Besides the fortifications of the towns of Portsmouth and Portsea, the island of Portsea has strong defences. Southsea Castle, built by Henry VIII., and greatly strengthened in 1850, is mounted with heavy cannon. Beyond the castle are two forts named Lumps and Eastney, and on the extreme point of the island, commanding the entrance to Langston harbour, is Fort Cumberland, a very strong defence, commenced in 1746, but only brought into an efficient state in 1820. It receives 3000 men, and mounts 100 heavy guns. The approach to Portsmouth on the land side is defended by a strong line of fortification on Portsdown Hill, a long ridge lying north of the island; by lines carried along the bank of the channel which separates the island from the mainland; and by other works at Hilsa, four miles from the town.

The excellence of the harbour seems to have attracted the notice of the Romans, who had a station at Porchester, on the northern shore, where there are still Roman remains. [HAMPSHIRE.] Portsmouth was a naval station in the reign of John. In the time of Richard II. it was burned by the French. Fortifications begun by Edward IV. were completed by Henry VIII., in whose reign Portsmouth was the principal station of the English navy. In the reigns of Charles II., William III., and George III., the defences were very much extended. They have been of late largely added to and considerably strengthened, and are believed to be impregnable. The moats, which are deep and wide, can be filled from the sea.

PORTSMOUTH, U.S. [NEW HAMPSHIRE; OHIO.]
GEOG. DIV. VOL. IV.

PORTSOY. [BANFFSHIRE.]

PORTUGAL, KINGDOM OF, is the most westerly kingdom of Europe. It forms part of the Spanish Peninsula, and is not divided from Spain by any well-defined natural boundaries. Most of the great rivers of Portugal—the Minho, the Douro, the Tejo (Tagus), and the Guadiana—have their sources in Spain, and belong to Portugal only in the lower part of their basins. The Mondego, the Zezere, and the Sado are the only considerable rivers which have their sources and their whole courses within the limits of Portugal. Portugal is bounded N. by the Spanish province of Galicia; E. by the Spanish provinces of Leon, Estremadura, and Sevilla; and S. and W. by the Atlantic Ocean. The greatest length from north to south is about 350 miles; the average width from west to east is about 100 miles. The area is 35,189 square miles. The population in 1851 was 3,487,025. The political divisions, with the area and population of each, are as follows:—

Provinces.	Districts.	Area in Square Miles.	Population in 1851.	
Alemtejo . . .	{ Portalegre . . .	2,382	86,175	
	{ Evora . . .	2,609	88,617	
	{ Beja . . .	4,991	123,107	
		9,982	297,899	
Algarve . . .	Faro . . .	2,140	143,851	
Beira {	Beira Alta . . .	Viseu . . .	1,291	302,070
	Beira Baixa {	Guarda . . .	2,128	206,738
		Castello Branco . . .	2,474	139,042
	Douro . . .	Porto . . .	1,087	869,583
		Aveiro . . .	1,458	247,103
Coimbra . . .		1,327	261,656	
		9,765	1,526,390	
Entre Douro e Minho	{ Viana . . .	954	184,359	
	{ Braga . . .	1,086	297,969	
		2,040	482,328	
Estremadura . . .	{ Leiria . . .	1,312	140,114	
	{ Santarem . . .	2,315	161,342	
	{ Lisbon . . .	3,615	423,705	
		7,242	725,161	
Tras os Montes . . .	{ Bragança . . .	2,374	126,617	
	{ Villa Real . . .	1,646	184,779	
		4,020	311,396	
Total . . .		35,189	3,487,025	

In addition to the above political divisions, each of the sub-provinces, or districts, is subdivided into comarcas (or judiciary divisions), cancelhos (or communal divisions), and parishes, all of which are enumerated under the names of the respective provinces. The total number of comarcas is 111; of cancelhos, 379; of parishes, 3774.

Colonial Possessions.—The separation of Brazil from its connection with the mother-country deprived Portugal of its most important colony. The dependencies which it still retains are as follows:—The AZORES: area, 1145 square miles; population (1851), 234,044. MADEIRA, with Porto Santo: area, 334 square miles; population (1851), 108,439. CAPE VERD ISLANDS: area, 1642 square miles; population (1851), 86,640. The islands of *Santo Thome* and *Do Principe*, in the Gulf of Guinea: area, 453 square miles; population (1851), 14,580. MACAO: area, 12 square miles; population (1851), 29,587. The other dependencies comprise establishments on the continent of Africa, namely, on the coasts of Guinea, Angola, Benguela, and Mozambique; in Hindustan, at Goa, Diu, and Damaun; on the islands of Timor, Solor, &c.

Coast.—The length of the coast-line of Portugal is about 500 miles, of which about 400 miles face the west, and 100 miles the south. The lofty precipice of Cape St. Vincent forms the south-western angle, and the coasts for some distance both to the east and north are rocky, high, and steep. Farther to the east the shores become low, and are bordered with small sandy islands, one of which forms Cape Santa Maria, the most southern point of Portugal. Cape St. Vincent is the chief termination of the Serra de Monchique, and as the coast extends northward other portions of that mountain range advance to the sea, and render the shores bold and rugged, though they are not high; they become low and level as they approach the great lagune of Setubal. This lagune is overlooked on the north-west by the Serra da Arrabida, which has an elevation of 1760 feet, and terminates at Cape Espichel, which is 660 feet high. The shores again sink down as they approach the south side of the estuary of the Tagus; but on the other side, north and west of Lisbon, the mountain ridges of Cintra, Mafra, Torres Vedras, and others, with their intervening valleys, fill

up the whole space between the Tagus and the sea, and have their chief termination at the Cabo da Roca, which is nearly 2000 feet high, and is the most western point of Portugal. The peninsula of Peniche is the northern termination of this mountain mass, and the coast thence to the mouth of the Mondego is generally rugged, though it is low; but on the north side of the Mondego the termination of the Serra de Alcoba at Cape Mondego has an elevation of 464 feet. Thence to the mouth of the Douro the shores are flat, sandy, and swampy. They afterwards become higher and rugged, but again sink down as they approach the mouth of the Minho. The whole coast of Portugal, with the exception of the estuary of the Tagus and a few other inlets, presents a rugged and dangerous shore. Nearly all the harbours have bars, which render most of them difficult of access even for boats, and with a breeze from the sea a terrible surf breaks along the whole line of coast, and forbids all approach. With a south wind, which generally prevails from August to the winter months, the whole of the line of coast is exceedingly dangerous.

Surface.—The surface of Portugal is for the most part mountainous. Numerous irregular offsets from the great Pyrenean chain enter the two northern provinces of *Tras os Montes* and *Entre Douro e Minho* from the Spanish provinces of *Asturias* and *Galicia*. One of these offsets extends into the province of *Beira*, and forming a continuous range takes a southern and western direction, and terminates at Cape Mondego: this is named the *Serra de Alcoba*. Another mountain range of much greater elevation and extent passes through the central provinces of *Beira* and *Estremadura* in a direction from north-northeast to south-south-west, and terminates near Lisbon at the *Cabo da Roca*. This range as it crosses *Beira* is named the *Serra de Estrella*; in *Estremadura* it has several local names, but the main ridge is called the *Serra do Junto*. As it approaches its termination it forms a series of ridges running east and west, which occupy the whole space between the Tagus and the sea for a distance of about 30 miles north of Lisbon. Another mountain range crosses the southern end of the kingdom from east to west, separating *Algarve* from *Alemtejo*. This range has the names of *Serra de Calderão* and *Serra de Monchique*. It is obviously the continuation of the *Sierra Morena* of Spain, interrupted only by the narrow valley of the *Guadiana*, and terminates abruptly in the great promontory of *Cape St. Vincent*.

There are only two plains of great extent in the whole of Portugal, the *Campo de Ourique* in *Alemtejo*, and another great plain, partly in *Alemtejo* and partly in *Estremadura*, extending south-west and west from the mountains of *Portalegre* to the eastern bank of the Tagus, along which it is continued northward as far as *Abrantes*. Another tract of flat land, but of less extent, in the province of *Beira*, stretches inland from the estuary of the river *Vouga*. The valleys are very numerous. One of the largest of these forms the river-basin of the *Mondego*, lying between the *Serra de Alcoba* and the *Serra de Estrella*. This valley is exceedingly beautiful and fertile. There are several other fine valleys of less extent, such as those of the *Lima* and *Cavado* in *Entre Douro e Minho*, the upper course of the *Vouga* in *Beira*, and the *Lis* in *Estremadura*.

Rivers.—The largest of the rivers of Portugal enter it from Spain. The *Douro* has a western course, and forms the boundary between the two northern provinces and the province of *Beira*. [*DOURO.*] The *Tagus* (*Tejo*) has a course in Portugal at first west, but afterwards south-south-west, and enters the sea below Lisbon. [*TAGUS.*] The *Guadiana* enters from Spain, near *Badajoz*, and has a southern course partly in Portugal and partly as a boundary-river between the two kingdoms. The *Mondego* is the largest of the rivers which belong entirely to Portugal. It has numerous affluents, and waters a wide and fertile valley. The *Zezeira*, a deep and rapid river, also entirely within Portugal, rises in the *Serra de Estrella*, flows along the base of its eastern side, and enters the Tagus below *Abrantes*. The *Sado*, or *Sadão*, is another large river, with a great number of tributaries, most of which rise on the northern flank of the *Serra de Monchique*, and traverse the great plain of *Ourique*; but others flow from the mountains south of *Evora*. The *Sado* enters the sea at *Setubal*. The smaller rivers of Portugal are numerous. The larger rivers, such as the *Tagus*, the *Douro*, and others, offer an important inland navigation, which might be extended by canals, of which however none have been formed. There are no lakes in the lower lands of Portugal, but there are a few small mountain-lakes. There are salt-marshes in the vicinity of *Setubal*, and also near *Aveiro*.

Geology.—Granite and other eruptive rocks constitute the base of the principal chains and groups of mountains in Portugal. Granite forms the axis of the great mountain range of the *Serra de Estrella* and *Serra do Junto*, and shows itself in the lofty peaks of the *Serras* of *Monchique* and *Calderão*. The town of *Oporto* stands on a mass of granite four or five miles wide, and this rock also forms the base of the neighbouring rocks, but farther to the east sienite takes the place of the granite. These crystalline rocks are very generally flanked and overlaid by clay-slates and micaceous schists, which form the upper strata of the greater part of the provinces of *Entre Douro e Minho* and *Tras os Montes*, cover both flanks of the granitic chain of the *Serra de Estrella*, and extend from the banks of the *Zezeira* to the frontier of Spain. Clay-slates cover the whole of the wine-districts of the Upper *Douro*, in which all the fine port-wines are produced upon the slates, the line of junction with the granite being the limit of the cultivation of the

finer qualities of wine. In the neighbourhood of *Valongo*, about twelve miles E. from *Oporto*, a dark-coloured hard roofing slate of the finest quality is extensively quarried for slabs and flags, but not for roofing, tiles being used for that purpose throughout the whole of Portugal. In the same locality are several beds of anthracite coal, which have been long wrought at three or four places, and are much used in the town of *Oporto*. Primitive limestone shows itself abundantly on the flanks and lower summits of the *Serras* of *Junto*, *Arrabida*, *Monchique*, and *Calderão*.

Climate, Soil, and Products.—The climate of Portugal is very warm, but no part of the country is subject to the dry and oppressive heats of central Spain. The mean temperature of the year at *Coimbra* is 62° Fahr., at *Lisbon* it is 61° 3' Fahr. The inequality of the surface and the extent of coast fronting the Atlantic Ocean occasion great diversities of climate. The more elevated districts are comparatively cool in winter, and snow falls heavily on the mountains of the two northern provinces. In the southern provinces the winters are very short, snow seldom falls, and the summers are very hot. Rain is abundant on the western coast, especially from October to April. The climate is very healthy in the more elevated districts, but is less so in the flat lowlands and the vicinity of the salt-marshes.

The soil is generally rich, but the husbandry is slovenly in the extreme. Wheat, barley, oats, maize, flax, and hemp, are cultivated in the more elevated tracts, and rice in the lowlands. Oranges, lemons, figs, and almonds, are produced in abundance in the central and southern provinces. The cultivation of the vine is the most important branch of industry, and the vineyards of the Upper *Douro* furnish the finest qualities of port-wine, which is so-called in consequence of being exported from *Oporto* ('o porto,' the port). The olive is cultivated, but the oil is not of the finest quality. The date-tree and the American aloe grow in the south. There are forests of oak in the northern provinces, of chestnuts in the central districts, and of cork-trees in the south. Cattle, sheep, goats, and hogs are in considerable numbers. Mules and asses are the chief beasts of burden. Fish abound in the rivers and on the coasts. Slates, marble, iron, and anthracite coal are obtained. Salt is made in large quantities by evaporation in the marshes on the coast.

Inhabitants.—The peasantry in the northern and mountainous regions are active and spirited; in the lower districts they are indolent and dejected, dirty in their persons and habitations, and ill-fed with coarse bread, dried fish, goat-milk-cheese, chestnuts, garlic, oil, and other cheap articles. The educated classes are polished in their manners, and courteous to strangers. The provincial nobility, called *fidalgo*s, are very numerous, but mostly poor.

Commerce and Manufactures.—The exports from Portugal during the year 1851 amounted to 1,974,000*l.*, of which 955,000*l.* were sent to Great Britain or British possessions. The imports into Portugal during the same year amounted to 3,298,000*l.*, of which 2,500,000*l.* came from Great Britain or British possessions. Of the imports 590,000*l.* were re-exported. The exports consist almost entirely of wine (which is the staple), fruits, and cork. The manufactures consist of coarse woollens, common cottons and linens, silks, jewellery, and a few other articles. Iron-work, wood-work, and earthenware are almost everywhere of the rudest kind.

Revenue, Army, and Navy.—The revenue for 1854 was somewhat less than 3,000,000*l.* The public debt amounted to 9,890,439*l.* The army of Portugal in 1854 numbered about 30,000 men, exclusive of about 9000 who protect the colonial possessions. The navy in the same year consisted of 1 ship of the line (80 guns), 1 frigate (50 guns), 6 corvettes of 18 guns each, 10 brigs mounting altogether 103 guns, 22 schooners and other small vessels mounting altogether 55 guns, and 7 steamers mounting altogether 32 guns.

Religion and Education.—The established religion is Roman Catholic, and the church is governed by the patriarch of Lisbon, the archbishops of *Braga*, *Evora*, and *Goa*, and 16 bishops. Though Catholicism is the religion of the state, and the constitution contains no clause allowing any other form of worship, other creeds are tolerated, and foreigners, not Roman Catholic, residing in the country, are not interfered with. The convents were suppressed by *Don Pedro* in 1834, and the revenues and buildings have been applied to secular purposes. The educational establishments are in a very low state, and the scientific and literary institutions, and even common libraries and printing offices, are almost exclusively confined to *Lisbon*, *Coimbra*, and *Oporto*.

Government.—The present government of Portugal is a constitutional monarchy established in 1836, and the parliament consists of a chamber of peers and a chamber of deputies. The present chamber of peers is composed of 3 archbishops, 6 bishops, 3 dukes, 8 marquises, 39 counts, 23 viscounts, 10 barons, and 26 untitled persons. The chamber of deputies is composed of 131 members elected by 36 districts of Portugal, 11 members elected by the inhabitants of the *Azores* and *Madeira*, and 14 sent from the other colonial possessions: total 156. The president is named annually by the crown.

History.—The Iberians and the Celts were the oldest inhabitants of the Peninsula. When the Carthaginians invaded it, their general *Hamilcar* overran and subdued the western provinces. The Romans, who succeeded the Carthaginians as masters of the Peninsula, governed by their praetors the province of *Lusitania*, the ancient limits of which

have been variously defined by different authors. Strabo (iii. p. 152) intimates that it extended from the Tagus to the Ocean on the north and on the west, and was bounded on the east by the Carpetani, Vettones, Vaccii, and Callaici. But when Augustus had divided the Peninsula into three provinces, Bœtica, Tarraconensis, and Lusitania, the last comprised the greater part of the modern kingdom of Portugal, besides a considerable portion of Leon and Spanish Estremadura. When Spain was inundated by the Visigoths, Portugal shared in the general devastation; and when, at the beginning of the 8th century, the torrent of Arabian conquest spread over the Peninsula, the territories and towns of Portugal were as easily subdued as the rest of the country. In the 9th century however the greater part of northern Portugal had been wrested from the Mohammedans, and had become subject to local governors dependent on the Counts of Galicia. The south still remained in the hands of the Mohammedans until towards the close of the 12th century, when Santarem, Lisbon, and Cintra were reduced by Alfonso Henriques, the first king of Portugal. About the year 1095 Alfonso VI., king of Castilla and Leon, conferred upon his son-in-law Henry of Besançon, who was descended in a direct line from the Duke of Burgundy, the government of the subdued territories from the Minho to the Tagus, with the title of Count. At the same time Henry, who took up his residence at Guimaraens, was permitted to hold in his own right whatever conquests he might make from the Moors beyond the Tagus. In this manner he reduced most of the Mohammedan governors of fortresses south and east of the Tagus to the condition of tributaries. On his death in 1112, his son Alfonso succeeded to the dignity of count, which the Castilian king had previously rendered hereditary in his family. The new count proved a more formidable enemy to the Mohammedans than even his father. In 1139, having resolved to reduce the Moorish fortresses west of the Guadiana, he assembled a powerful army at Coimbra, and advanced towards Badajoz, the governor of which place, having received considerable reinforcements from Africa, hastened to meet him. The armies met in the great plain of Ourique, in Alemtejo, where the Moors were defeated with great loss in 1139. After the victory Alfonso was proclaimed king by his soldiers, and his title was confirmed by the cortes and by the Pope.

Portugal continued to be governed by the kings of the House of Burgundy from 1139 till 1557. In 1147 Alfonso took Lisbon from the Moors, with the assistance of a fleet of crusaders under the command of William Longsword. The remainder of his reign was spent either in war with the Moors, or in defending his dominions against the kings of Castilla and Leon, who disputed his right to the title of king. He died at the close of the year 1185, and was succeeded by Sancho I., his eldest surviving son, whose reign was by no means so glorious. Though he took the town of Silves in Algarve, he lost Coimbra and other important fortresses, some of which he did not recover for a long time. Sancho died in 1211. His successor, Alfonso II., prosecuted the war against the Mohammedans with considerable success. His son Sancho II., who succeeded him in 1223, was animated by the same military ardour, and he took several places in Alemtejo and Algarve; but in consequence of disputes with his clergy, he was dethroned by a papal decree, after which he retired to Toledo, where he died early in 1248. Alfonso III., his brother, who succeeded him, completed the conquest of Algarve, which his predecessor had begun, and was thence called the Restorer. Alfonso died in 1279, and was succeeded by his son Dinis, who, like his father and most of his predecessors, was long at war with the church. Dinis was the first who turned to account the favourable position of the country for commerce, and who, by awaking the enterprise of his subjects, laid the foundation of the greatness of Portugal in the succeeding century. He was a generous patron of science, and in 1284 laid the foundation of a university in Lisbon, which he afterwards (1308) transferred to Coimbra.

Dinis was succeeded in 1325 by his son Alfonso IV., surnamed the Brave, whose reign was almost entirely spent in war with Alfonso of Castilla. Peace being at last concluded between them by the interference of the Pope, he joined his arms to those of his rival, and assisted him in humbling the power of the Mohammedans. His son Pedro I., who succeeded him in 1357, is chiefly known by his secret marriage with the celebrated Ines de Castro, and the tissue of crimes caused by that union. He was succeeded in 1367 by his son Fernando I., who, on the death of Pedro the Cruel of Castilla without male heirs, assumed the regal title and arms of that kingdom, as the grandson of the Princess Beatrix, daughter of Sancho the Brave of Castilla. His entire reign was spent in war with the bastard Enrique, who had usurped the throne of Castilla; but though he wasted his resources, he gained no advantages. With the death of this monarch, in 1383, the male line of the Burgundian princes became extinct in Portugal. His daughter Beatrix, who had married Juan I. of Castilla, was the true heir to the throne, but the Portuguese were so averse to a connection with Castilla, that on the marriage of the princess with the Castilian king, it had been expressly stipulated that in case of Fernando's death the government should be vested in a regency until Beatrix had a son capable of assuming the sovereignty. Accordingly Dom Joam, grand-master of the order of Avis, an illegitimate son of King Pedro I., was appointed regent, and two years afterwards was proclaimed king by the states assembled at Coimbra in 1385, to the

prejudice of Enrique, son of Beatrix, the lawful heir to the Portuguese throne. Joam I. maintained the possession of his usurped throne with great ability and courage. With this king begins the native line of Portuguese kings, as well as the foreign conquests and voyages of discovery which established the greatness of Portugal. Henry, surnamed the Navigator, one of the king's sons, first set on foot those enterprises of discovery and commerce which raised Portugal so much above contemporary states. The reign of Joam I. is justly considered one of the most glorious which Portugal ever had. He improved the administration of the kingdom, and introduced many salutary reforms into the courts of justice. He transferred the royal residence from Coimbra to Lisbon. At his death in 1433, Joam I. was succeeded by Duarte, who died of the plague at Tomar, and was succeeded by his eldest son Alfonso V.; but as he was only six years of age on his father's death, the regency devolved, according to his will, upon the queen-mother, a very able princess. Under the reign of this king the career of African conquest was ardently prosecuted. Alfonso died of the plague in 1481. He was a great patron of literature, and the first Portuguese king who collected a library. His reign was likewise signalised by the progress of maritime discovery; and the Azores, with the Madeiras, the Canaries, Cape Verd, and other islands west of the African continent, were either discovered or colonised through the persevering efforts of the Infante Dom Enrique. Joam II., who succeeded Alfonso V., was justly considered one of the ablest monarchs that ever sat on the throne of Portugal. In this reign the spirit of maritime discovery was carried to the highest pitch. In 1487 Bartholomew Diaz discovered and doubled the southern cape of Africa, which, from the good expectations which it encouraged, was called O Cabo de Boa Esperanza (Cape of Good Hope). Joam II. died universally regretted in 1495. He was succeeded by his cousin Manoel, who steadily pursued the career of maritime discovery. About the close of 1497 the passage to India by sea was effected by a squadron of five vessels, under the orders of Vasco de Gama, who returned to Lisbon in September 1499, after an absence of little more than two years. In this reign Brazil was discovered, and establishments were formed in that country and also on the west coast of Hindustan. During the reign of this king Lisbon became the most important commercial city of Europe; and Portugal, the most insignificant of the European states in extent of territory and population, grew into a powerful monarchy.

In the reign of Joam III., who succeeded his father Manoel in 1521, Indian discoveries and commerce were still further extended. But the introduction of the Inquisition, in 1536, which, as in Spain, was at first intended only against the Jews, greatly contributed to increase the misery caused by bad administration and a vicious course of policy pursued with regard to the colonies. The Jews were exterminated, or fled from Portugal: but although the object for which that tribunal was instituted no longer existed, it still continued a powerful political weapon in the hands of the absolute kings of Portugal. As injurious in its consequences as the Inquisition was the admission of the Jesuits into Portugal, under Joam, the first European monarch who permitted them to enter his dominions. The education of his grandson Sebastian, the heir-apparent to the throne, was likewise entrusted to the Jesuits, who inspired the young prince with that spirit of bigotry and that fanatical ambition which led to his death. Scarcely however had the young prince reached his fourteenth year—the period of his majority—when he began to turn all his thoughts towards the prosecution of the African war; and he sailed in 1574, in opposition to the remonstrances of his wiser counsellors. Four years afterwards, in August, 1578, the memorable battle was fought by which Portugal lost her king, and began rapidly to sink from her former prosperous condition.

After the short reign of Cardinal Enrique, Sebastian's uncle, who was proclaimed in 1578 and died in 1580, Philip II. of Spain, the most powerful candidate for the throne, obtained possession of it, and Portugal continued subject to the kings of Spain till the reign of the minister of Philip IV., when the Portuguese entered into a conspiracy, and on the 1st of December, 1640, Joam de Bragança, a descendant of the old royal family, was placed on the throne. The war with Spain, which was the result of this measure, and lasted during the reign of Joam, as well as that of his son Alfonso VI., was terminated in 1668, by a treaty of peace, and a cession on the part of Spain of all her claims on Portugal.

Joam IV., the first Portuguese king of the house of Bragança, died in 1656. He was succeeded by his son Alfonso VI. A treaty of peace was also concluded with Holland, by which Brazil, which had been seized by the Dutch, was restored to Portugal. Pedro II., who succeeded his brother Alfonso VI. in 1683, took part with the allies against Philip V. of Spain. From this time date the relations and alliance of England with Portugal. A commercial treaty with that kingdom had already been made, under the first sovereign of the house of Bragança. A new one was concluded in 1703 by the English ambassador Mr. Methuen, which secured to England the advantages of the newly discovered mines in Brazil. During the long reign of Joam V., which lasted from 1707 to 1750, some vigour was displayed in regard to the foreign relations, and several attempts were made for the promotion of the national welfare at home. Under his son and successor José I., who ascended the throne of Portugal in 1750, the

spirit of reform and improvement was still farther extended. In 1757 the Jesuits were deprived of the post of confessors to the royal family, and forbidden the court; two years afterwards they were banished from the kingdom and their estates were confiscated.

Maria Francisca Isabel, eldest daughter of José, succeeded him in 1777. During the reign of Maria, the power remained almost entirely in the hands of an ignorant nobility and of a still more ignorant and ambitious clergy. In 1789, on account of a serious indisposition of the queen, her eldest son, Joam Maria José, Prince of Brazil (the title of the prince royal until 1816), was declared regent, and soon after, her malady having terminated in mental alienation, the prince was declared regent with full regal powers. Portugal for some years preserved a mere shadow of independence by the greatest sacrifices, till at last General Junot entered that country, and the house of Bragança was declared by Napoleon Bonaparte to have forfeited the throne, owing to the refusal of Joam VI. to seize the British merchandise in his dominions. The regent now put himself entirely under the protection of the English, and in November, 1807, embarked for Brazil. Junot entered the capital on the next day, and Portugal was in every respect treated as a conquered country. This led to the Peninsular War, in which the Portuguese now took an active part. On the death of Maria Isabella in 1810, Joam VI. was called to the throne of Portugal, which he occupied conjointly with that of Brazil, where he continued to reside. In August, 1820, the cry for liberty which was raised in Spain, was responded to in Portugal, and a revolution commenced, in which the army and the citizens acted in concert. On the 15th of September, 1820, all the troops and the citizens of Lisbon unaniously proclaimed the constitution, and the cessation of the absolute government which had hitherto prevailed in Portugal. A provisional government was immediately established, which acted in union with the junta at Oporto. In the meantime Count Palmella, the head of the regency, was dispatched to Rio Janeiro with an account of what had passed, and a petition that the king Joam VI. or the prince royal Dom Pedro would return to Lisbon. The revolution was unattended either by violence or bloodshed. The Cortes having assembled in 1821, under the presidency of the archbishop of Braga, various laws were passed, among which freedom of person and property, the liberty of the press, legal equality and the abolition of privileges, the admission of citizens to all offices, and the sovereignty of the people, were passed almost unanimously.

After some disturbances in Brazil, Joam VI. sailed for Portugal, where he was not allowed to land until he had given his consent to several acts of the Cortes, which imposed restrictions on his power, and had sworn to observe the new constitution. The ambassadors of Russia and Austria left the court; Brazil separated itself from Portugal; and the country was disturbed by various attempts in favour of the old system of government. In the meanwhile the constitution was completed by the legislative assembly, and publicly sworn to by the king on the 1st of October, 1822, but the Infante Dom Miguel, assisted by the Count of Amarante and other noblemen, resolved to overthrow it. After many disturbances and insurrectionary movements Dom Miguel obtained possession of supreme power, the ambassadors of the foreign states were not allowed to enter the presence of the king, and he was closely watched; but Joam succeeded in escaping on board an English man-of-war at anchor in the Tagus, where, having sent for the diplomatic body, he deprived his son of command, and summoned him to his presence. Dom Miguel obeyed, confessed that he had been deceived and misguided, and received the royal pardon, with permission to travel. On the 14th of May the king returned ashore, and early in June proclaimed a sort of amnesty for the adherents of the Cortes of 1820. In 1825, after many difficulties and protracted negotiations, the independence of Brazil was finally acknowledged by Joam VI., who merely retained the imperial title.

Early in March, 1826, Joam VI. died, after having named the Infanta Isabel regent. She administered the kingdom in the name of Dom Pedro, the emperor of Brazil, as king of Portugal. On the 23rd of April, Pedro IV. granted the latter kingdom a constitution, which established two chambers, and in other respects resembled the French charter. On the 2nd of May however he abdicated the Portuguese throne in favour of Dona Maria da Gloria (he remaining king during her minority) on condition of her marrying her uncle Dom Miguel. But a party secretly favoured by Spain aimed at the overthrow of the constitution granted by Dom Pedro. Dom Miguel having caused the Cortes to assemble in June, 1828, was declared by that body sovereign of Portugal, chiefly on the grounds that Dom Pedro had forfeited all right to the crown, as well as to the appointment of a successor, by becoming a Brazilian citizen, and not residing in Portugal. On the 4th of July, 1826, Dom Miguel assumed the royal title.

On the 24th of February, 1832, the naval forces of Dom Pedro arrived off Terceira, of which island they took possession in the name of Dona Maria, as lawful queen of Portugal. Three months after (June, 1832), an expedition 10,000 strong sailed from St. Michael's in the Azores, and on the 10th of July landed near Oporto, which city they took without opposition. The Miguelite forces laid siege to Oporto, but were defeated in several engagements by the troops of Dom Pedro, who were chiefly Englishmen. After a siege of several months, an expedition was fitted out by means of a loan raised in England, and Dom Pedro, encouraged by the recent victory won by

Admiral Napier over the naval forces of Dom Miguel, sailed with part of his forces for Lisbon, of which he took possession with comparatively little trouble. He then established a permanent government, and shortly after sent to England for the young queen, who was received by the Portuguese nation with every demonstration of joy.

In the meantime the army of Dom Pedro prosecuted its successful struggle. On the 26th of May, 1834, after the surrender of Santarem and other places, Dom Miguel was obliged to capitulate and sign the convention of Evora. He was permitted to leave Portugal, and to embark for Genoa. This event ended the struggle, and the young queen was firmly seated on the throne of Portugal, the regency being conferred upon her father. One of the first acts of his administration was the suppression of the monastic establishments; another was the partial abolition of paper money, and the formation of a metallic currency. On the 15th of August Dom Pedro was confirmed in the regency by the Cortes, but in the following month the declining state of his health having induced him to resign his office, the Cortes in consequence declared the young queen of age. She then assumed the full exercise of royal authority. Dom Pedro died on the 22nd of September, 1834. Soon after (January, 1835), Dona Maria married Duke Augustus of Leuchtenberg, who died shortly after (March, 1835), and in April, 1836, she married Prince Ferdinand of Saxe Coburg-Gotha. Dona Maria died November 15, 1853, and was succeeded by her eldest son Dom Pedro V., who was born September 16, 1837. The king-consort is regent of the kingdom during the minority of his son.

Language.—The language of Portugal, like those of other kingdoms in the Peninsula, originated in a mixture of the Latin, Teutonic, and Arabic. Some writers have called it a dialect of the Castilian; but, besides the striking difference in its structure and pronunciation, there can be no doubt that the Portuguese was formed earlier than the Castilian. It might more properly be called a dialect of the Galician, to which it had at first great affinity, and which it still much resembles. The separation of Portugal from Spain, their wars, and the little commercial intercourse which existed between them during the middle ages, combined in course of time to make the Portuguese a different language. When Henry of Burgundy fixed his court at Guimaraens, the French knights who came with him introduced a considerable number of French words into the language of the country. The great efforts too of the Portuguese poets and prose writers in the 15th and 16th centuries to improve their native language by resisting the introduction of Castilian words, and anathematizing all those who adopted the Spanish language in their writings may be mentioned as one of the means which mainly contributed to render the tongues of Spain and Portugal still more dissimilar. The Spanish, like the Portuguese, has many words borrowed from the Arabic. Their wars with the Moors of Africa and the Mohammedans of India in the 15th century introduced into it many others from the languages spoken in those countries. The pronunciation is difficult for a foreigner, more particularly the nasal sounds, in which it abounds. The gutturals are neither so strong nor so common as in the Spanish, and many consonants have been omitted, so that it is softer than the Spanish, but not so harmonious.

PORTUGALETE. [BASQUE PROVINCES.]

PORTUMNA, Galway, Ireland, a market-town and the seat of a Poor-Law Union, is situated at the head of Lough Derg, in 53° 6' N. lat., 8° 12' W. long., 41 miles E.S.E. from Galway, and 94 miles W.S.W. from Dublin. The population in 1851 was 1542, besides 147 in the Union workhouse. Portumna Poor-Law Union comprises 15 electoral divisions, with an area of 77,046 acres, and a population in 1841 of 30,714; in 1851 of 19,731. The town has been much improved by the increased trade of the Shannon. It contains the parish church, a handsome structure in the perpendicular style; a large Roman Catholic chapel; a dispensary; Union workhouse; and bride-well. The Shannon is here crossed by a causeway and wooden bridge 820 feet in length. Quarter and petty sessions are held in the town. Saturday is the market-day; fairs are held six times a year. Portumna Castle, a fine baronial mansion, the seat of the Marquis of Clanricarde, was destroyed by fire in 1826.

POSEN (*Poznanie*), a government of Prussia, was formerly a part of the kingdom of Poland. On the first partition of Poland in 1772, the part of Posen to the north of the Netze, and on the second partition in 1793, the remaining part, fell to the share of Prussia; this, together with the part of the kingdom south of the Vistula, as far as Warsaw, acquired by Prussia on the third partition, received the name of South Prussia. In 1807 all South Prussia was taken from Prussia by Napoleon I., to form part of the duchy of Warsaw. In 1815 the congress of Vienna restored the original province of Posen to Prussia by the name of the grand-duchy of Posen. During the insurrectionary troubles in Prussia in 1848 this government was violently agitated. The Poles were in open insurrection against Prussia in the months of April and May of 1848. The principal action took place at Xion, in the province of Posen, and Exin, in the province of Bromberg, in both of which the Poles suffered very severely. At last the leaders were arrested and the insurgents dispersed. On the 3rd of April of that year, the districts chiefly inhabited by Germans demanded incorporation with the territory of the German confederation; the question was referred by Prussia to

the German Diet, which admitted the districts to form a part of Germany, and their admission was recognised and confirmed by a decree of the German National Assembly, sitting at Frankfurt, on the 27th of July of the same year. A bill incorporating the whole of the duchy of Posen with Germany passed the Berlin chambers in 1850; but after the insurrectionary wave subsided in Germany we believe the territory of Posen was restored to its former condition. The government of Posen lies between 51° 10' and 53° 32' N. lat., 15° 7' and 18° 38' E. long. It is bounded N. by the province of Prussia, E. by Poland, S. by Silesia, and W. by Brandenburg. The area is 11,352 square miles, divided into the two provinces of Bromberg and Posen. The population in 1852 numbered 1,381,745; of whom 869,433 were Catholics; 437,861 Protestants of various sects; 30 of the Greek Church; and 74,331 Jews. The Catholics are in spiritual matters subject to the archbishop of Gnesen and Posen; the Protestants are guided by a superintendent-general assisted by the council of the government. The great bulk of the population are Poles, and Polish is the general language of the country. There are however many inhabitants of German descent, who inhabit the towns on the frontiers of Silesia and Brandenburg.

The surface is level, except the banks of the Wartha in the circle of Obernik, which are rather more elevated, and there is here and there a hill on the frontiers of Silesia. The soil is partly marsh, which is very fertile, and partly sandy, but even here the sand is so mixed with more solid elements, especially loam, that the soil may be considered as tolerably good. The most fertile parts are the country on both sides of the Wartha, and the Netzbruch, a low tract on the river Netze, about 90 miles in length, and not above 3 miles in breadth, which, having been completely secured by dikes, is now converted into fine corn-land and meadows, with farmhouses and villages. The Wartha or Warta, which traverses the province in its whole breadth, and the Netze, are navigable. The Netze is connected by the Bromberg Canal (20 miles in length) with the Brahe, which has been made navigable, and falls into the Vistula, which only touches the frontier for a short distance below Thorn, and opens a communication with the Baltic. There are several lakes, the largest of which is that of Gopplo. The air is pure and healthy.

The chief products are corn, pulse, culinary vegetables, flax, and hemp; tobacco, hops, fruit, and timber; the common domestic animals, game, poultry (especially geese), fish, and bees. There are limestone, freestone, saltpetre, and bog-iron. The exports consist chiefly of corn, especially wheat, a large quantity of wool, timber, cattle, tallow, hides, wax, honey, hogs' bristles, and feathers. Broad-cloth of good quality is manufactured in most of the towns. The railway that connects Berlin with Stettin, Danzig, and Königsberg traverses the government of Posen, and passes through the town of Bromberg. A branch line from the Woldenberg station runs up to Posen.

The government of Posen occupies the southern part of the province, and has an area of 6807 square miles, with a population of 900,430 in 1846. *Posen* (in Polish *Poznan*), the capital of the province and of the government, situated in 52° 24' N. lat., 16° 52' E. long., in a sandy tract on the left bank of the Wartha, is a strongly-fortified town, with a population of 40,209. The town, which has three suburbs and four gates, is pretty regularly built. The chief public buildings are—the castle, situated on an eminence; twenty-four Roman Catholic churches, the most remarkable of which are the cathedral and the church of St. Stanislas, the latter being a masterpiece of Italian architecture; two Protestant churches, a Greek chapel, a synagogue, the archiepiscopal palace, the theatre, the chief-guard-house, the town-hall, &c. Posen is the residence of the Catholic archbishop of Posen and Gnesen, and of the governor of the province. It has two gymnasiums, one called Frederick Wilhelm, for Protestants, which has 19 teachers and 350 pupils, the other, the Mary gymnasium with 22 teachers and 640 pupils. The manufactures consist of chintzes, calico, tobacco, leather, woollen cloth, ticking, sealing-wax, and carriages. There are likewise breweries, distilleries, several printing-offices and lithographic presses. The city has some trade, and three annual fairs. Posen is 160 miles E. from Berlin in a straight line, but 206 miles by railway through Stettin. *Lissa*, 38 miles S. from Posen, has 9000 inhabitants. This town has a palace, a handsome market-place, a Protestant gymnasium, five churches, a synagogue, and extensive manufactures of woollen-cloth, linen, snuff, chicory, and carriages. *Rawitsch*, situated in a marshy spot near the frontiers of Silesia, has 8500 inhabitants. It is pretty well built, has a gymnasium, a town-hall, and manufactures of woollen-cloth, linen, leather, tobacco, and earthenware. *Meseritz*, situated in a beautiful and fertile country on the river Odra, 56 miles W. from Posen, has 4500 inhabitants. The manufacture of woollen-cloth is very considerable. *Krotoszin*, close to the Silesian frontier, has 7000 inhabitants, who manufacture woollen-cloths, linen, tobacco, and chicory. There are also tanneries, dye-houses, and distilleries. *Fraustadt*, in Polish *Wschowa*, situated on the frontiers of Silesia, consists of an old and new town; it has four churches, a gymnasium, an orphan asylum, and 6257 inhabitants, who manufacture woollen and linen cloths, beer, and spirits, and carry on a considerable trade in corn, cattle, wool, &c. *Kempen*, also on the Silesian frontier, has 6154 inhabitants, who carry on some traffic in horses with Silesia, and manufacture cloth, linen, tobacco, and

soap. *Ostrowo*, 70 miles S.S.E. from Posen, has several Lutheran and Catholic churches, woollen manufactures, a Catholic gymnasium, and about 5000 inhabitants.

The north of the government forms the province of Bromberg, which has an area of 4545 square miles, with a population of 463,969 in 1846. The chief town *Bromberg*, in Polish *Bydgoszcz*, is situated on a hill above the Brahe, about 5 miles W. from the Vistula, 67 miles in a straight line, 166 miles by railway through Woldenberg, N.N.E. from Posen, and has about 10,000 inhabitants. The canal which completes the navigation between the Oder and the Vistula enters the Brahe at this place. The town is well built; it has a Lutheran gymnasium, a training school, manufactures of chicory, tobacco, linen and woollen cloth, sugar, &c.; and a briak trade in corn, cattle, &c. *Gnesen*, an old town, with 7000 inhabitants, 44 miles S.S.W. from Bromberg; it gives title in conjunction with Posen to a Catholic archbishop, who was primate of Poland. Besides the cathedral, there are seven Roman Catholic churches, and a seminary for the clergy. The inhabitants manufacture woollen cloth and linen, and there are breweries and distilleries. Gnesen is one of the oldest towns in Poland. It was the earliest capital of that country. [POLAND.] *Inowratzlaw*, also called *Jung-Breslau*, an ill-built town, in a fertile plain, 24 miles S. by E. from Bromberg, has 5600 inhabitants, who have distilleries, breweries, and saltpetre works. There are five Roman Catholic churches, a Franciscan convent, and a synagogue. *Schtulanke*, is a well-built town, 62 miles W. from Bromberg, with 4000 inhabitants, who manufacture woollen cloths.

POSILIPPO. [NAPLES, Province and City of.]

POTENZA. [BASILICATA.]

POTIDÆA. [MACEDONIA.]

POTOMAC. [MARYLAND; VIRGINIA.]

POTOSI, a town in South America, in the republic of Bolivia and in the department of Potosi, is built on the south-western declivity of the Cerro de Potosi, in 19° 36' S. lat., 65° 20' W. long., at an elevation of 13,265 feet above the level of the sea. The population, which a hundred years ago it is said amounted to 100,000, does not now exceed 30,000, about half of whom are Peruvian Indians. It is built on an uneven site, and the streets are consequently irregular, but they are tolerably wide and clean. The houses are generally low, not more than one story high, timber being scarce and dear; most of them however are substantial. On one side of the principal square stands the government-house, a long low range of buildings, including the courts of justice, the jail, and the guard-house. Opposite to it is the cathedral, an immense granite edifice. The mint also is very large, but far from being a fine building. The great square contains a monument erected in honour of Bolivar. There are several other churches besides the cathedral. A college is established in the Bethlehem convent. The town is supplied with water from reservoirs formed at some eight or ten miles distance by making dams across the heads of several ravines in the Cerro de Potosi; from these the waters are conducted to the houses and fountains of the town in conduits, and to the mining establishments in streams to turn the machinery used in washing and purifying the silver-ore from the celebrated mines of Potosi. [BOLIVIA.] The town is well supplied with meat, fruits, and vegetables, though the surrounding country is barren and exhibits few signs of vegetation. The climate of Potosi presents the changes of the four seasons of the year every day. It is a healthy place, but the extreme rarity of the air, in consequence of the great elevation above the sea-level (13,000 feet) produces a difficulty of respiration, to which even the natives and animals are at times subject.

The Cerro de Potosi rises to the elevation of 15,981 feet above the sea. It is of a reddish-brown colour, and has the shape of a perfect cone, but is not volcanic, as has been supposed. It does not produce a blade of grass; the whole mountain seems to consist of silver-ore of different degrees of richness. It was discovered that this mountain contained silver-ore by an Indian, in 1545, who being in pursuit of a llama upon the steep declivity, in order to save himself from falling caught hold of a shrub, which being torn from the soil exposed a mass of solid silver at the roots. From that time to the present day the mines have been worked. The produce of these mines from 1556 to 1800 amounted to the enormous sum of 823,950,508 Spanish dollars, or 185,388,864*l*.

(Humboldt, *Essai sur la Nouvelle Espagne*; Temple, *Travels in various Parts of Peru*.)

POTOSI, U.S. [MISSOURI, State of.]

POTOSI, SAN LOUIS DE. [MEXICO.]

POTSDAM, the capital of the circle of Potsdam, in the government of Brandenburg, in Prussia, is situated on an island in the Havel, at the point where that river is joined by the Nuthe, 16 miles by railway S.W. from Berlin, and has about 40,000 inhabitants. It is, next to Berlin, the handsomest and best built town in Prussia, a distinction for which it is indebted to being the occasional residence of the court. The streets are regular and broad, and there are some good squares. The town is surrounded by ramparts and has nine gates, of which the Brandenburg gate is a handsome triumphal arch copied from the arch of Trajan at Rome. Of the seven bridges over the Havel and the canal, the finest is the Teltow Bridge, which is 600 feet long and 30 feet wide; it consists of eight iron arches resting on massive stone pillars. Of the numerous buildings the most worthy of notice is the Royal Palace,

which is an oblong parallelogram, three stories high, adorned with colonnades of the Corinthian order. The main entrance is towards the old market-place, a handsome square, in the middle of which there is an obelisk of red and white marble 75 feet high adorned with busts. The palace has extensive gardens along the river. The town-hall was built in 1754, on the model of that of Amsterdam. Among the other buildings the most notable are the theatre; the poor-house and infirmary; the military orphan asylum; the garrison church, which contains the tombs of Frederick William I. and Frederick II.; the church of the Holy Ghost, with a fine steeple 280 feet high; the French Protestant church, built on the plan of the Pantheon at Rome; the barracks; and a large building, 660 feet in length and 75 feet in breadth, for exercising the troops in bad weather. The gymnasium (which has 18 teachers), the seminary, and the military school are the chief educational establishments. The principal manufactures are silk, cotton, linen, woollens, leather, muskets and small arms, sugar, hats, hosiery, musical instruments, and carriages.

In the vicinity of Potsdam are the Pfaueninsel (Peacocks' Island), in the Havel, 2000 paces long and 500 paces broad, prettily laid out, and containing many foreign animals; the palace of Sanssouci, the favourite residence of Frederick II., which stands amidst beautiful gardens on the slope of an eminence and commands a fine prospect; the Marble Palace; and the New Palace, a magnificent building founded by Frederick II., and situated in a fine park.

The circle of Potsdam and the chief towns in it are noticed under BRANDENBURG.

POTTERS PURY, Northamptonshire, a village and the seat of a Poor-Law Union, in the parish of Potterspury, is situated in 52° 5' N. lat., 0° 53' W. long., distant 10 miles S. from Northampton, and 56 miles N.W. from London. The population of the parish in 1851 was 1734. The living is a vicarage in the archdeaconry of Northampton and diocese of Peterborough. Potterspury Poor-Law Union contains 15 parishes and townships, with an area of 22,401 acres, and a population in 1851 of 10,651. The parish church is in the decorated style, with a very handsome tower; there are also a chapel for Independents, and a Free school. The lace manufacture gives employment to some of the population.

POTTON, Bedfordshire, a market-town in the parish of Potton, is situated in 52° 8' N. lat., 0° 13' W. long., distant about 12 miles E. from Bedford, and 50 miles N. by W. from London by road. The population of the parish in 1851 was 1922. The living is a vicarage in the archdeaconry of Bedford and diocese of Ely. The town of Potton was almost entirely destroyed by a conflagration in 1783, so that the houses are now nearly all modern. A good corn-market is held on Saturday; fairs are held four times in the year. Besides the parish church there are chapels for Independents and Baptists, and a National school.

POTTSVILLE. [PENNSYLVANIA.]

POUANCE. [MAINE-ET-LOIRE.]

POUGHKEEPSIE. [NEW YORK.]

POUGUES. [NIÈVRE.]

POUILLY. [NIÈVRE.]

POULLAOUEN. [FINISTÈRE.]

POULTON. [LANCASHIRE.]

POURCAIN, ST. [ALLIER.]

POZZUOLI. [NAPLES, Province of.]

POZZUOLO. [GENOA.]

PRÆNESTE. [PALESTRINA.]

PRAGUE, properly PRAGA, the capital of Bohemia, is situated in 50° 5' 19" N. lat., 14° 25' E. long., 250 miles N.N.W. from Vienna by railway through Brünn, but only 158 miles in a straight line. The town is built on the banks of the Moldau, in a valley and on the slopes of the hills that inclose it. In size and beauty Prague is the third city in Germany, and produces a very striking effect when viewed at a distance, by its commanding situation, the lofty steeples of its numerous churches, and its fine palaces and public buildings. The city consists of four quarters—the Old Town, which is gloomy and closely built, with very high old-fashioned houses, and which includes the Jewish quarter; the New Town, which surrounds the Old Town, and has finer and broader streets, spacious squares, lower houses, and a healthy site; the Kleinseite, which stands in a semicircular valley on the left bank of the Moldau, between two hills called the Laurenzberg and the Schlossberg; this quarter is smaller than the old town, but contains many gardens, fine palaces, and lofty houses; and the Hradschin, which is built on the Schlossberg, is the smallest but the finest part of the city, and contains a great number of magnificent palaces. The town of Wissehrad, which joins the new town, and the village of Smichow, on the left bank of the Moldau, are reckoned as parts of Prague; there is likewise a new suburb called the Karolinenthal. The city is surrounded with fortifications, and has eight gates. Additional fortifications were erected on the Hradschin in 1850, so that its guns commanded every point in the city. The Old Town and the Kleinseite are connected by a chain bridge recently erected, and by an ancient stone bridge of 16 arches. This last, which was commenced by Charles IV. in 1358, is 619 yards long, 35 feet broad, and 42 feet high; it is adorned with 29 statues and groups of saints, and has an ancient tower at each end. There are in the city 46 Catholic and 2 Protestant churches, 9 synagogues, 15 monasteries,

and 68 palaces. The metropolitan church of St. Veit, in the Hradschin quarter, which was commenced in the 10th century, but not completed till 1500, has a steeple 314 feet high, from the top of which there is a magnificent view of the city. This cathedral, in which are the sepulchres of several emperors and kings, of Bohemian princes, and remarkable men, has twelve richly-adorned chapels, and contains paintings of the 14th century, besides numerous antiquities and relics. The greatest ornament of the cathedral is the monument of St. John Nepomuk, the patron saint of Bohemia. Another remarkable old church is the Theinkirche, which dates from the 9th century, and contains the tomb of the astronomer Tycho Brahe. Many of the more modern churches, which are chiefly in the Italian style, are worthy of attention. Among the palaces, the Imperial Palace in the Hradschin is the most remarkable building in the whole city, both for its immense extent and its fine and commanding situation. King Charles X. of France and his family resided for some years in this palace after their expulsion from France. This palace was greatly injured by fire in the winter of 1854-5. Other remarkable public buildings are, in the Old Town, the Collegium Clementinum, built by the Jesuits, in which Joseph II. placed the archiepiscopal seminary, which has about 400 pupils; the theatre; the mint; and several palaces, among which is one which belonged to the famous Wallenstein: in the New Town, the senate-house, the custom-house, and the military hospital: in the Kleinseite, the arsenal and the government-house: and in the Hradschin, the archbishop's palace.

The Carolinum of Prague, the oldest university in Germany, was founded in 1348 by Charles IV., on the model of that of Paris, with faculties of Catholic theology, law, medicine, and philosophy; it had 63 professors and teachers and above 2400 students in 1850. Connected with the university are a veterinary school, a school for midwifery, five clinical institutions, zoological and anatomical collections, a botanic garden, a chemical laboratory, and an observatory. Prague has three gymnasia—one in the Kleinseite, with 17 professors and 570 pupils; one in the New Town (Neustädtisches), with 18 professors and 562 pupils; and one in the Old Town (Altstädtisches), with 20 professors and 850 pupils. There are also several other schools, a Polytechnic Institution, an Academy of the Fine Arts, a Musical Conservatory, an Academy of Sciences, and a Bohemian National Museum, founded by Count Kolowrat, with important collections and libraries. The university library, which consists of 130,000 volumes and 4000 rare manuscripts of classical and Slavonian literature, is kept in the Collegium Clementinum; there are besides, eight public libraries and several private ones. The Imperial Cabinet of Natural History has been greatly increased of late years. The hospitals and charitable institutions for the reception and relief of the poor are numerous and admirably conducted. There are asylums for the blind, for deaf-mutes, and for lunatics.

The manufactures consist of cotton tissues, hosiery, silk, leather, hats, gloves, earthenware, jewellery, and plated goods, mathematical and musical instruments, glass, buttons, snuff and tobacco, paper and paper-hangings. There are also breweries, saltpetre-works, and many other industrial establishments. Prag has a very flourishing commerce: the transit trade facilitated by the Moldau, which is navigable, and by railways which connect the city with Vienna, Berlin, Dresden, and the principal towns of Germany, is considerable; there are three great annual fairs.

Prag is an ancient city, but the time of its foundation is uncertain. It has suffered frequently and severely by the calamities of war, especially in the religious troubles of the 15th century. In 1620, in the contest between the elector palatine and the emperor for the crown of Bohemia, a battle was fought on the White Hill, two miles from the city, in which the Imperial troops were victorious, and the elector Frederick V., son-in-law of James I. of England, lost the crown. In 1741 Prag was taken by the French, who were blockaded in it by the Austrians and after a vigorous defence were compelled by famine to evacuate the city. In 1744, the Prussian Frederick II., got possession of the city with an army of 100,000 men, but in ten weeks afterwards was obliged to evacuate it with the loss of 2000 prisoners, 132 cannons, and 12 mortars, which fell into the hands of the Austrians. In 1757 Frederick again besieged Prag, but the victory of the Austrians at Collin obliged him to retire. On the 29th of May, 1848, the Czechs, or native Bohemian party, revolted against Austria, and appointed a provisional government. From the 12th to the 17th of June there was desperate fighting between the Czechs and Germans; on the latter day the military under Prince Windischgrätz retired to the Hradschin, from which they commenced to bombard the rest of the town. On the 19th the insurrection was quelled and the ringleaders in custody. The population of Prag is 143,000, of whom 12,000 are Jews, and the great majority of the rest Catholics.

PRATO. [FIRENZE.]

PRAVIA. [ASTURIAS.]

PRAYA. [AZORES, *Terceira*.]

PREETZ. [HOLSTEIN.]

PRÉMERY. [NIÈVRE.]

PRENZLAU. [BRANDENBURG.]

PRERAU. [MORAVIA.]

PRESBURG, a town in Hungary, is situated on the north bank of the Danube, 33 miles in a straight line, 41 miles by railway E. from

Vienna, in 48° 8' N. lat., 17° 10' 45" E. long., and has 38,000 inhabitants. It is built on a hill of moderate height, commanding a fine view over an extensive plain watered by the Danube, which is here crossed by a bridge of boats 365 paces in length. The town is said to have existed in the time of the Romans. In 1446, Ofen having fallen into the hands of the Turks, Presburg was declared the capital of Hungary, and the diets were long held here. In 1784, Joseph II. decided that the vicerey and palatine, with the high officers of government, should reside at Ofen, as a more central situation. The emperor is however still crowned in Presburg as king of Hungary. The trade of the city is considerable in consequence of its vicinity to Vienna (with which it is connected by railroad), and of the navigation of the Danube by steamers. The town is handsomely built. The principal buildings are—the cathedral, in which the kings of Hungary are crowned; the county-hall, the ancient senate-house, the archiepiscopal palace, and the theatre. Among the public institutions are several academies, a royal model school, an hospital, and a public library of 50,000 volumes. On a hill outside the city, 439 feet above the level of the Danube, are the remains of the royal palace, which was burnt down in 1811, and has not been restored. It was in this palace that the Hungarians uttered the famous outburst of loyalty towards their 'King, Maria Theresa. The manufactures comprise woollens, silks, tobacco, snuff, oil, rosoglio, and leather. The transit trade in corn, linen, and Hungarian wines is important. A treaty was signed at Presburg in 1805, after the battle of Austerlitz, by which Venice was ceded to France, and the Tyrol to Bavaria. The defences of the town were greatly strengthened in 1850.

PRESCOT, Lancashire, a market-town and the seat of a Poor-Law Union, in the parish of Prescott, is situated in 53° 25' N. lat., 2° 48' W. long., distant 8 miles E. from Liverpool, and 198 miles N.W. from London. The population of the town of Prescott in 1851 was 7393. The living is a vicarage in the archdeaconry of Liverpool and diocese of Chester. Prescott Poor-Law Union contains 20 parishes and townships, with an area of 56,859 acres, and a population in 1851 of 56,074.

The town is lighted with gas, and paved. The chief business of the town is the manufacture of watch-movements. Small files are manufactured to a considerable extent. Coarse earthenware, sugar moulds, &c. are manufactured. The market-days are Tuesday and Saturday; fairs are held in June and November, and fortnightly cattle-fairs in the spring months. The parish church has a lofty tower, surmounted with a spire 156 feet high. The Wesleyan Methodists, Independents, and Baptists have places of worship, and there are a Grammar school, founded in 1782, which had 90 scholars in 1852; a school for girls, an infant school, a news-room, and a savings bank. A county court is held in the town.

PRESCOTT. [CANADA.]

PRESSIGNY-LE-GRAND. [INDRE-ET-LOIRE.]

PRESTEIGNE, Radnorshire, the county town, a market-town, parliamentary borough, and the seat of a Poor-Law Union, in the parish of Presteigne, is situated in 52° 14' N. lat., 2° 59' W. long., distant 151 miles W.N.W. from London. The population of the borough of Presteigne was 1617 in 1851. The living is a rectory in the archdeaconry and diocese of Hereford. The borough is contributory to Radnor in returning a member to the Imperial Parliament. Presteigne Poor-Law Union contains 16 townships, with an area of 25,534 acres, and a population in 1851 of 3493.

Presteigne stands at the extreme eastern verge of the county, in a fertile valley watered by the river Lug. The church is a spacious edifice, partly of decorated and partly of perpendicular style; it has a square tower at the west end. Wesleyan and Primitive Methodists, and Baptists have chapels. The Free Grammar school, which has an income from endowment of 180*l.* a year, had 50 scholars in 1852. The assizes, quarter sessions, and a county court are held in Presteigne. The shire hall and county jail are modern buildings. The market-day is Saturday. Three fairs are held in the course of the year.

PRESTON, Lancashire, a market and manufacturing town, municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parish of Preston, is situated on the right bank and near the head of the estuary of the river Ribble, where it receives the Darwen and the Lostock, in 53° 46' N. lat., 2° 42' W. long., distant 22 miles S. by W. from Lancaster, 217 miles N.W. by N. from London by road, and 210 miles by the North-Western railway. The population of the borough in 1851 was 69,542. The borough is governed by 12 aldermen and 36 councillors, one of whom is mayor; and returns two members to the Imperial Parliament. The living is a vicarage in the archdeaconry of Lancaster and diocese of Manchester. Preston Poor-Law Union contains 23 townships, with an area of 68,035 acres, and a population in 1851 of 95,754.

Preston is a place of high antiquity, and is supposed to have been named Priest's town from its religious houses, of which vestiges still appear. Its origin is traced to the decay of Ribchester, the Roman station Rigodunum, 11 miles up the river. The town was held by Tostig, brother of Harold II., and became a borough by prescription. It received 13 royal charters, from the time of Henry II. to that of Charles II. The place was partly destroyed by Robert Bruce in 1322. In the parliamentary war it declared for the king, and was besieged and taken by General Fairfax. In 1715 the Jacobite insurgents, under

Foster, entered the town, and erected barricades for its defence, but after a brave resistance were forced to surrender.

The town is built on an eminence rising 120 feet from the Ribble. It occupies an area about a mile and a half square. There are some good terraces and squares, and the houses are in general well built. The town is lighted with gas, and for the most part well-paved and supplied with water. The river is crossed by Walton bridge, on the London road, a structure of three arches, erected in 1782; and about a mile and a half below it, Penwortham bridge, on the Liverpool road, consisting of five arches, and about a century old. A viaduct of the North Union railway has five arches, and rises 68 feet above the stream.

Preston contains 10 Established places of worship. The parish church, originally dedicated to St. Wilfred, was rebuilt in 1770, and dedicated to St. John. St. George's church is a brick building, erected in 1723. The church of the Holy Trinity was built in 1814. St. Peter's, erected in 1824, and St. Paul's in 1825, both in the modern gothic style, were built by grants from the parliamentary commissioners. The Roman Catholics have four chapels, one of which is a very elegant building; the Wesleyan Methodists three; the Baptists three; the Independents two; the Primitive, Episcopalian-Primitive, and Association Methodists, Lady Huntingdon's Connexion, Unitarians, Quakers, Swedenborgians, and Mormons one each. The Free Grammar school, founded in 1663, of which the mayor and corporation are patrons, has an income from endowment of about 150*l.* a year, and had about 130 scholars in 1852. There are eleven National and five Infant schools, a Blue-Coat school, and a school for the deaf and dumb. The Institution for the Diffusion of Useful Knowledge has one of the finest structures in the town, with a library of 5000 volumes, and an excellent museum. There are a literary and philosophical institution, an agricultural society, and three public libraries, the Palatine, Dr. Shepherd's, and the Law library, which are accessible to all classes of readers. The other principal buildings are—the guildhall, a handsome brick building in the centre of the town; a fine court-house, erected in 1826; assembly rooms; a neat theatre; the custom-house, corn-exchange, cloth-hall, and market-house; the dispensary and house of recovery; public baths and wash-houses, built by the corporation, and opened in 1851; an extensive range of barracks, at Fulwood, about a mile from the town; the union work-house; the borough prison; and a large county penitentiary. There are nine almshouses in the place, a savings bank, and several benefit and provident societies.

Preston is now one of the great seats of the cotton manufacture in England. The manufacture of linen, which was formerly the staple trade of the place, is still of considerable extent. There are several flax-mills. Hand-loom weavers are numerous. There are several iron and brass-foundries and machine factories. Malting and brewing, tanning, and rope-making are carried on. The borough has an ancient fishery on the Ribble, which abounds with salmon, smelt, plaice, and eels. The river is navigable at spring-tides to within a quarter of a mile of the lower bridge for vessels drawing 12 feet of water. Preston is a free port, and there are bonding warehouses on the quay. Coal is brought in by the navigation of the Douglas River, which joins the Ribble eight miles below the town. The number and tonnage of vessels registered at the port of Preston on December 31st 1853 were as follows:—Under 50 tons, 79 sailing-vessels of 3007 tons, and 5 steam-vessels of 145 tons; above 50 tons, 42 sailing-vessels of 3929 tons, and 4 steam-vessels of 768 tons. During 1853 the entries at the port were:—Inwards, sailing-vessels 510, tonnage 29,066; steam-vessels 72, tonnage 9270; outwards, sailing-vessels 595, tonnage 31,247; steam-vessels 8, tonnage 870. By the Lancaster Canal, Preston communicates northward with Lancaster and Kendal, and southward with Chorley, where the Leeds and Liverpool Canal connects the town with the great canal system of the manufacturing districts. By railways Preston has communication with all parts of the kingdom. Annual, general, and quarter sessions, a county court, and a court of chancery for Lancashire (alternately with Liverpool) are held in the town. Races are held annually in the Holme, on the left bank of the river. A horse-fair, called Great Saturday, is held during the week ending the first Sunday after Epiphany; a fair of three days begins March 27th, one of eight days May 26th, and one of five days November 7th. A festival called a Guild Merchant is held by the corporation every twentieth year for a week at the end of August or beginning of September. The markets are held in a spacious and well-paved square in the centre of the town. The Saturday market, which is the largest, is principally for corn; those of Wednesday and Friday are for butter, vegetables, and fish.

PRESTON, GREAT, West Riding of Yorkshire, a village, and the seat of a Gilbert's Poor-Law Incorporation, in the parish of Kippax, is situated in 53° 46' N. lat., 1° 23' W. long., distant 8 miles E.S.E. from Leeds, and 184 miles N.N.W. from London. The population of the joint township of Great and Little Preston in 1851 was 464. Great Preston Poor-Law Incorporation comprises 43 parishes and townships, with an area of 69,626 acres, and a population in 1851 of 22,316.

PRESTON PANS. [HADDINGTONSHIRE.]

PRESTWICH, Lancashire, a village, and the seat of a Poor-Law Union, in the parish of Prestwich-cum-Oldham, is situated in 53° 39'

N. lat., 2° 17' W. long., distant 4 miles N. by W. from Manchester, and 187 miles N.W. by N. from London. The population of the township of Prestwich in 1851 was 4096. The living is a rectory in the archdeaconry and diocese of Manchester. Prestwich Poor-Law Union contains 11 townships, with an area of 11,088 acres, and a population in 1851 of 41,043. The parish church is ancient. The Wesleyan Methodists have a chapel, and there is a National school. The population, as in all the district around Manchester, is chiefly employed in calico printing, gingham making, and other branches of the cotton manufacture.

PREUILLY. [INDRE-ET-LOIRE.]

PREVESA, a fortified town in European Turkey, is situated on the north side of the entrance of the Gulf of Arta, in 38° 57' N. lat., 20° 49' E. long., about 3 miles distant from the ruins of the ancient Nijopolis founded by Augustus Cæsar in commemoration of his naval victory of Actium. The Venetians obtained possession of it in 1684. It came with the Ionian Islands into the hands of the French by virtue of the treaty of Campo Formio in 1798. War having broken out between France and the Porte, a force of 5000 Albanians, headed by the son of Ali Pasha, of Jannina, took and plundered Prevesa, the population of which is said at this time to have amounted to 10,000 or 12,000. Ali made Prevesa his chief naval station, fortified the town with new works, and adorned it by building here a very handsome seraglio, which is situated at the entrance of the bay. Some new and handsome houses were built by the Turks and Albanians who settled here, but Prevesa has never recovered its prosperity under the Turkish yoke. The population is now estimated at about 4000.

Prevesa exports wheat and maize, timber, oil, tobacco, cotton, wool, and capotes, or Albanian cloaks, to the Ionian Islands, to Malta, and to Italy. The imports are coffee, sugar, common cloth, velvet, iron goods, fire-arms, &c.

PREZ-EN-PAILL. [MAYENNE.]

PRINCE EDWARD ISLAND, a British colony, is situated on the south side of the Gulf of St. Lawrence, between 45° 53' and 47° 7' N. lat., 62° and 64° 27' W. long. Its length from east to west is about 140 miles, and it varies in width from 10 to 30 miles. The area is 2134 square miles. The population in 1848 was 62,678; in 1852 it was about 90,000.

Prince Edward Island is separated from Nova Scotia and New Brunswick by Northumberland Strait, which varies in width from 9 to 30 miles. The island is almost entirely surrounded with red cliffs, varying from 20 to 100 feet in height. The coast is so intersected by bays and creeks that no part of the island is at a greater distance than eight miles from the ebbing and flowing of the tide. Hillsborough Bay enters the island from the south with a wide opening, but afterwards becomes so narrow that it appears like a river, and is called Hillsborough River. The tide ascends nearly to its extremity, which is only about a mile distant from Savage Harbour on the northern coast. Farther west are Halifax Bay and Richmond Bay, the former intersecting the island from the south, and the latter from the north, till there remains between them only an isthmus about a mile and a half wide.

The surface of the island consists of gentle ascents and descents. A series of heights intersect the island about the middle, running from north to south. Streams and springs of fresh water are abundant. The spring and autumn are both of short duration. In the beginning of June summer bursts forth, and continues till the end of September, when the evenings get cool, and the autumn commences. During January and February the weather is generally steady, with the thermometer occasionally from 10° to 20° below zero of Fahrenheit; but the air is dry and clear. In summer the heat is tempered by the sea-breezes.

The soil is generally fertile, and consists for the most part of a thin layer of decayed vegetable substances surmounting a light loam a foot or more in depth; below, a stiff clay resting on sandstone predominates. The island was formerly covered with large forest-trees, especially pine, the timber of which has been so largely exported to England that little more now remains than is required for ship-building, house-building, and other local purposes.

The soil and climate of this island are particularly suited for agriculture. All kinds of grain and vegetables cultivated in England grow well; and well-cultivated farms produce wheat, barley, oats, green crops, and grasses in abundance and of excellent quality. The horses are small, but strong and hardy. The breed of cattle has been improved by the introduction of Durham and Ayrshire bulls, and that of sheep by the introduction of Leicester and Southdown stock from England. Swine are plentiful. The fur-bearing animals have become scarce. Seals are found in the bays and along the coasts in summer and autumn, and vast numbers sometimes come down on the ice when it breaks up in the Polar Seas. As a fishing station the island is one of the best in the Gulf of St. Lawrence; and the harbours on the north side are most conveniently situated for carrying on this pursuit. Cod and mackerel are abundant in their respective seasons. The inhabitants however do not prosecute fishing as a branch of commerce, only taking what is required for their own consumption; while from 200 to 300 fishing-vessels from the United States are engaged during the summer in fishing round the shores of the island.

Prince Edward Island is divided into three counties; Queen's County includes the central part of the island, King's County the eastern part, and Prince's County the western part. The settlements are dispersed all over the island, except the western end, which is still to a great extent overgrown with forest. *Charlotte Town*, the capital and seat of government, is situated in Queen's County, at the junction of the Hillsborough River with the York River, on an angular piece of ground which rises gradually to the north-west. These two rivers, together with the Elliot River, form the Inner Harbour, which is a well-sheltered basin about three miles wide, whence the united streams discharge their waters by a single channel about half a mile wide into Hillsborough Bay, which is called the Outer Harbour, and is capacious and safe for vessels of any burden. The town is regularly built, with broad streets intersecting each other at right angles. The public buildings consist of the Colonial Building, a handsome stone edifice, containing accommodation for the legislature, public officers, and supreme courts of law and chancery; the old court-house; an asylum for lunatics and indigent persons; an Episcopalian church, Roman Catholic church, Scotch church, Methodist chapel, and Baptist chapel. There is an academy established by the colonial legislature, and endowed with 200*l.* a year, and also a National school, partly supported by the colonial government. The population of the town is nearly 5000. *George Town*, the capital of King's County, is situated on the eastern coast, on a point of land in the Bay of Three Rivers, or Cardigan Bay, which is formed by the junction of the rivers Cardigan, Montague, and Brudenell. The town is regularly built, and contains about 700 inhabitants. The harbour is excellent, and is very conveniently situated either for fishing or trading. *Prince Town*, at the entrance of Richmond Bay, has been regularly laid down as the capital of Prince's County, but has very few inhabitants; but the village of *St. Eleanor's*, at the head of Richmond Bay, is a thriving place, and contains the county jail, the court-house, and an Episcopalian church.

The population of the island is composed of mixed races, about three-fourths of the whole number being natives of the island, chiefly descendants of the French Acadians, who remained after the colony was ceded to the British in 1763; of settlers from the Highlands of Scotland, who were introduced by the proprietors of townships subsequently to 1770; and of American loyalists, to whom lands were granted at the close of the revolutionary war. There are also about 300 Indians remaining on the island of the once numerous Micmac tribe. The remaining fourth of the population are immigrants from England, Scotland, and Ireland. Of the entire population nearly one-half are Roman Catholics, about one-third are Presbyterians, and about one-ninth are Episcopalian. Free schools have been established throughout the island, and a visitor appointed; there are also district schools with a visitor for each county.

The commerce of the island consists in the exchange of its agricultural produce, timber and deals, and a small quantity of dried and pickled fish, for British and American manufactures and other articles of consumption. The manufactures of the island are of small amount, consisting of linen and flannel for domestic use, coarse woollen cloth, and leather.

The civil establishment consists of a lieutenant-governor, whose salary is paid by the British government, a chief-justice, an attorney-general, an assistant-judge, and a master of the rolls, and other officers whose salaries are paid by the colonial government. The revenue of the island in 1852 was 20,856*l.*; the expenditure was 14,857*l.* By means of the sub-marine telegraph Prince Edward Island has communication with the neighbouring provinces and with the United States.

PRINCE OF WALES ISLAND, or PULO PENANG, is the seat of government of the British possessions in the Strait of Malacca. These possessions consist of Prince of Wales Island, Province Wellesley and the provinces of MALACCA and SINGAPORE. The two latter are noticed under separate heads. These possessions, under the title of the *Eastern Straits' Settlements*, were in 1851 by an order of the Court of the East India Directors, formed into a separate government.

Prince of Wales Island lies between 5° 18' and 5° 30' N. lat., 100° and 100° 9' E. long., and extends from south to north about 16 miles, with an average breadth of 8 miles, which gives a surface of nearly 130 square miles. This island consists of a mass of rocks, and of two tracts of alluvial soil, which extend on the eastern and western sides of the rocks. The western plain is mostly a swamp, and nearly uninhabited; but the eastern, which on an average is two miles wide, and opposite George Town more than four miles, is well cultivated and populous. The highest portion of the mountains occupies the middle of the island, where Mount Elveira, or Mount Macalister, rises to the elevation of about 2500 feet. The hills which lie between this highest range and the eastern plain rise to the height of 600 to 800 feet. The mountains are covered with lofty trees, except their summits, which are naked for about 200 or 300 feet from the highest point downwards.

Province Wellesley lies opposite Prince of Wales Island, on the Malay Peninsula, and is separated from the island by a strait, which at its southern extremity is nearly 10 miles wide, but grows narrower farther northward; opposite Fort Cornwallis it is hardly two miles wide. Province Wellesley extends from 5° 10' to 5° 35' N. lat., and lies between 100° 11' and 100° 18' E. long. It extends along the coast

about 80 miles, and from 6 to 10 miles inland. On the east it borders on the kingdom of Keddah, or Queda, which is dependant on Siam. The northern boundary-line is formed by the river Muda, which separates it from Keddah, and on the south it is separated by the river Kream from the state of Perak. The area is estimated at 160 square miles. The mountain ranges in this part do not approach so near the sea as to enter the province, except near the river Juru ($5^{\circ} 20' N. lat.$), where one of their offsets terminates in the Moratajam, a hill 1800 feet high, the western slope of which lies within the British territory. The coast-line exhibits a narrow sandy belt of low land in the northern districts, and in the southern a broad mud flat covered with mangrove-trees and flooded at high-water. Behind the sandy belt and mangroves there are extensive alluvial tracts under rice cultivation, alternating with gentle swells of light soil running parallel to the coast. About four or five miles from the coast are dry alluvial plains which stretch south and north. The soil of the alluvial plains and rice-grounds is superior in fertility to lands of the same classes on Prince of Wales Island.

There are no permanent streams in the Island, but several rivers traverse Province Wellesley from east to west, rising in the elevated mountains in the state of Keddah. All these rivers have bars at their mouths, generally with seven to nine feet of water on them, and they are navigable for moderate-sized vessels nearly the whole length of their course within the province. Between the rivers Muda and Pry is the mouth of a creek called Qualla Tulloh, which forms a good harbour for boats; and near it is an extensive village of the same name.

The dry and wet seasons in these countries are not so distinctly marked as in other parts of the East Indies. What is properly called the rainy season occurs from September to November, but showers, frequently heavy, fall in all the other months. The heat is not oppressive, and is greatest in June and July. The highest temperature in George Town is 90° Fahr., and the lowest $70\frac{1}{2}^{\circ}$. The northern half of Province Wellesley has the more healthy climate, as it enjoys the advantages of a regular change of sea and land breezes. The rainy season is considered the spring, and January, February, and March the autumn; in the former period the rice is sown, and in the latter it is harvested.

Prince of Wales Island derives its importance partly from the cultivation of spices. Pepper has long been the object of an extensive cultivation, but of late it has been to a considerable extent replaced by clove and nutmeg trees. The mace and cloves grown in the island are considered the finest in the world. The sugar-cane is partially cultivated on Prince of Wales Island, and extensively in Province Wellesley, especially in the central and southern districts; the cultivation in both places is in the hands of the Chinese settlers. Tobacco, coffee, and cotton are only raised for consumption. A considerable quantity of betel is exported to the neighbouring state of Keddah. The areca raised on the east coast of Sumatra is brought to this island, and thence exported to other parts of Asia. Rice and Indian corn are the only kinds of grain cultivated. The plantains and bananas are, next to rice, the principal objects of agriculture, and in times of scarcity supply in some measure the place of grain. A great variety of fruit-trees are cultivated; and many different kinds of trees are met with in the forests of the country which are applicable to building and other domestic uses. Besides the native vegetables, which are numerous, the Chinese cultivate cabbages, celery, and lettuce. There are many varieties of sweet potato, one of which is much esteemed. Yams, both red and white, and French beans, are extensively grown.

Buffaloes and cattle are numerous. The cattle are reared for the dairy, cattle for slaughter being chiefly imported from Keddah and Patani. The black buffalo is most prized, both for draught and slaughter. Goats and sheep do not abound, but a great number of hogs are reared by the Chinese. Poultry are reared in large numbers in Province Wellesley. The elephant, rhinoceros, and tiger are found in that province. The elephants are sometimes exported to Madras, and used in the neighbouring states to carry the tin from the mines to the coast. They are also killed by the Malays for the sake of the ivory. The rhinoceros is killed for its horn and hide. There are two species of wild ox, and abundance of wild hogs and deer. Birds are found in great variety, and of great beauty. Fish is abundant, and the fishing-stakes afford nearly exclusive employment to numbers of Chinese and Malays. A species of sea-turtle abounds in some places, and another smaller kind in the rivers: the eggs of both species are eagerly sought after.

When the English in 1786 took possession of Pulo Penang (the original name of Prince of Wales Island), they found only a few Malay families, mostly fishermen; but natives from the neighbouring countries, as well as Chinese and natives from Hindustan, soon flocked to it, and the population in 1835 consisted of ten different nations, amounting altogether to 40,207.

When the British acquired the coast-line called Province Wellesley, it was very thinly inhabited; and though the population gradually increased, it did not exceed 5000 in 1821. But in this year the Raja of Ligor invaded the neighbouring state of Keddah, and took possession of it for the king of Siam. Upon this a great part of the Malay population abandoned Keddah, put themselves under the protection of the British, and settled in Province Wellesley. In 1835 the population amounted to 46,880, chiefly Malays and Chinese.

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George Town is built on the eastern side of Prince of Wales Island, where it projects into the strait, and contains a population of 20,000, mostly Chinese. It is the seat of the Governor of the British Possessions on the Strait of Malacca, and carries on a considerable commerce. The harbour, which lies on the south-east of the town, is well sheltered. It is visited by most of the vessels sailing from Hindustan to China, and likewise by vessels from China, Arabia, and Siam. There are sometimes 300 vessels in the harbour. The establishment of the free port of Singapore took away some of the commerce of George Town. The articles brought to the port include pepper, benzoin, camphor, gold-dust, areca-nuts, rice, ratans, sago, brimstone, tin, arrack, sugar, oil, tobacco, birds'-nests, trepang, and ivory. It exports to the eastern coast of Sumatra and the Malay countries north of Malacca various kinds of piece-goods from England, Bengal, and Comandul; cotton, opium, iron, steel; European coarse blue, red, and green cloth, and coarse cutlery. James Town is a small but thriving place, about a mile from the sea, on the eastern plain of Prince of Wales Island, in a very fertile district. There are no towns in Province Wellesley; but in the northern more fertile and better cultivated districts, the higher parts of the low ridges are in some places covered by continuous rows of houses for several miles. The most extensive of these villages is Pinaga.

Before 1786 the island and province belonged to the small kingdom of Keddah. In the war between the English and French, which terminated in 1783, the want of a good harbour in the southern part of the Gulf of Bengal was much felt by the British. The island of Penang was found fit for that purpose, and it was accordingly purchased by the East India Company from the then proprietor, an Englishman, Captain Francis Light, who had received it from the king of Keddah as a marriage-portion with his daughter. Captain Light was appointed first governor, and the sovereignty first of the island and afterwards of the coast, was ceded by the king of Keddah in consideration of an annual payment. The British flag was hoisted on the 7th of July, 1786. The country, which at the time of its cession, contained only 1500 inhabitants, including a very few Chinese, was then termed Point Wellesley; but this not being a very correct designation for a line of coast, was subsequently changed to Province Wellesley. The estimated revenue of the government of Prince of Wales Island for 1851-52 was about 19,500*l.*; the estimated charge was about 40,000*l.*

PRINCE-TOWN. [DEVONSHIRE; PRINCE EDWARD ISLAND.]

PRINCE WILLIAM'S SOUND is a wide bay on the north-west coast of North America, extending, with several branches, between 60° and $61^{\circ} N. lat.$, 146° and $148^{\circ} 30' W. long.$ It is called by the Russians Tshongathkaia. It opens to the south, and the entrance contains two large islands, of which the eastern is called Rose Island, and the western Montague Island. In both islands there are good harbours, and the largest vessels may enter the bay on both sides of Montague Island. Rose Island contains Port Etches, where the Russians have a factory, and a wooden fort, called Fort Constantine. The islands are rocky and mountainous. The country abounds in pine-trees, alder, and hazel-trees. Wild berries are plentiful. Sea-otters and foxes are frequently met with, and other fur-bearing animals are abundant in the forests. The natives, who are few in number, and called Oogaliakhmutes, live mostly on the produce of their fishing.

PRINCE'S RISBOROUGH, Buckinghamshire, a market-town, in the parish of Prince's Risborough, is situated near the Oxfordshire border, in $51^{\circ} 43' N. lat.$, $0^{\circ} 50' W. long.$, distant 8 miles S. from Aylesbury, and 37 miles N.W. by W. from London. The population of the parish in 1851 was 2317. The living is a perpetual curacy in the archdeaconry of Buckingham and diocese of Oxford. According to the local tradition, Edward the Black Prince had a house in the place, from which circumstance the town had its name. Besides the parish church, an ancient edifice, which has been recently repaired and considerably enlarged, there are chapels for Baptists and Wesleyan Methodists; and National, British, and Infant schools. The market-house, rebuilt in 1824, is a small brick edifice. The market is on Thursday, and fairs are held on May 6th and October 21st. Petty sessions are held in the town monthly.

PRINCIPATO CITRA, a continental province of the kingdom of the Two Sicilies, is bounded N. by the province of Principato Ultra, W. by the Gulf of Salerno and the province of Naples, S. by the Gulf of Policastro, and E. by the province of Basilicata. It lies west of the central ridge of the Apennines, and between that and the coast of the Mediterranean, except a small portion which spreads along the eastern slope of the Apennines, about the sources of the river Agri. The length of the province is about 80 miles from north-west to south-east, and its average breadth is about 80 miles. The area is 2261 square miles; the population in 1851 amounted to 553,809. The central and larger part of the province consists of the basin of the Sele and its affluents. The Sele (Silarus) rises in the central Apennines near Conza, and flows in a southern direction to its junction with the Tanagro, or Rio Negro, a larger stream, which flows from the south-east through the beautiful and fertile Val-di-Diano; the united stream then runs south-west to the sea, which it reaches a few miles north of the ruins of Pastum. The Tanagro is joined, before its confluence with the Sele, by the Rio Bianco, which descends from the Apennines of Muro in Basilicata. At the mouth of the Sele was

the ancient Portus Alburnus, near which the Argonauts erected a famous temple to Juno. The plain of Paestum southward from the Sele, is marshy and unhealthy; it is overrun with buffaloes, wild horses, pigs, and sheep. In this plain Crassus defeated the rebel army of Spartacus, and in the 15th century the Duke of Anjou defeated the Aragonese. Between the Calore and the Sele is the royal chase and forest of Persano, 35 miles in circumference, and backed by the range of the Monte Alburno. The plain north of the Sele to the Tusciano is also unhealthy. Above this plain, to the eastward, is the pretty town of *Eboli* (near the ruins of the ancient *Eburi*), with 5000 inhabitants.

The valley of the Tanagro is bounded on the west by a detached ridge called Monte-Alburno, which runs about 20 miles from north-west to south-east. West of the Alburno is the valley of the Pietra or Calore, which enters the Sele a few miles above its mouth. The valley of the Calore is bounded to the south-west by another ridge, which rises east of Paestum, and on which stands the town of Capaccio, with 2000 inhabitants. [PAESTUM.] South of this ridge is a fine region of hills and valleys sloping towards the coast, and extending to the south as far as the Gulf of Policastro. This tract of country, which was known to the ancients by the name of 'Paestanæ Valles,' is now called 'Il Cilento;' the small river Alento flows through it. The region of the Cilento is favourable to the growth of all sorts of fruit, and it contains good pasture: the inhabitants are noted for their industry. They have numerous coasting vessels, in which they trade with Salerno and Naples. A good road leads from Salerno to *Il Vallo*, which is the principal town of the district: population 7500. The town of *Policastro* was formerly of some importance, but being sacked and half destroyed by the Turks in the 16th century, it has never recovered, and is now an insignificant place of only about 700 inhabitants. *Sopri*, which is farther east in the innermost recess of the Gulf of Policastro, is a place of some trade, and has a natural harbour. It is said to mark the Scydros of Herodotus. About two miles above the mouth of the Alento on a lofty hill (Castellamare della Bruca) is the supposed site of the ancient *Velia* or *Elea*, founded by the Phœacians, B.C. 540, and famous for the Eleatic school of philosophy established here by Zeno. Farther down the coast is the Punta di Palinuro, a promontory named from Palinurus, the pilot of the Trojan fleet. The little rivers Molpa and Mingardo enter the sea on the eastern side of the promontory. The Alento is the ancient Heles. The hill of Monte della Stella, which stands between the Alento and Il Vallo, is covered with ruins supposed to mark the site of *Petilia*, the ancient capital of Lucania.

The southern coast of the peninsula of Sorrento, as far as Cape Campanella, belongs also to the province of Principato Citra. The Gulf of Salerno extends nearly in a semicircle from Cape Campanella to Point Licosa, a promontory opposite the island of Licosa, the ancient Leucosia. The towns of Vietri (3000 inhabitants), La-Scala, AMALFI, and SALERNO, the capital, are in this district, which is remarkably populous and healthy. The inhabitants are mostly engaged in the coasting trade and the fisheries.

A long offset of the central Apennines, called Monte San Angelo, runs in a westward direction, dividing the province from Principato Ultra, and then running along the whole length of the peninsula of Sorrento. This ridge forms a natural boundary between the plain of Campania and the basin of the Sele. The province however includes also a district north of this ridge, extending to the banks of the Sarno.

Among other towns of the province, besides those already mentioned, are the following:—*La-Cava*, a town of 5000 inhabitants, and a bishop's see, delightfully situated in a valley of the Apennines, on the high road from Naples to Salerno. The population is chiefly employed in manufacturing linen, silk and cotton stuffs, and pottery. The neighbouring Benedictine monastery of La-Trinità, founded in 1025, is famous for its vast collection of historical, judicial, and religious manuscripts, amounting to about 40,000 parchment rolls, and above 60,000 paper manuscripts. The library is still more famous for its rare manuscripts and early printed books; among the former is the manuscript Latin Vulgate, written on vellum, between the 5th and the 7th century. The abbey church contains tombs of Sibilla (queen of Roger II., king of Naples and Sicily), and of several antipopes. A fine grotto beneath the abbey has originated the name of the town. The railway along the coast from Naples penetrates into the province as far as NOCERA, a short distance north-west of La-Cava. Near Nocera is *Pagani*, a village situated on a hill of tufa; its church of San Michele is of some note, as containing the remains of St. Alfonso de Liguori. The district between La-Cava and Nocera is studded with hamlets, churches, villas, and ruined castles, embosomed among trees or surrounded by vineyards and cornfields. The great Calabrian road after passing through Salerno and Eboli, runs east to the lower part of the Negro, near Auletta, whence it runs up the whole length of the Val di Diano, along the right bank of the Negro. This beautiful and fertile valley, 20 miles long and 8 miles broad, is situated between the main ridge of the Apennines and the Monte-Alburno, which is scored by deep ravines and clothed with extensive forests of oak and beech. In the Val di Diano are *La-Polla* (population 7000), situated on a hill, at the base of which the Negro disappears and runs underground for two miles, emerging again at Pertosa; *La-Sala*, a thriving town of 8200 inhabitants; *Diano* (population 7000), which

is the Lucanian *Tegianum*, and gives name to the valley; and *Padula* (population 9000), near which are the remains of the monastery of San Lorenzo, ruined by the French. *Sarno*, a considerable town in the plain of Campania, near the river of the same name, 5 miles N. from Nocera, has several convents and churches, and about 10,000 inhabitants. Between the Sarno and the Monte San Angelo, Narzes defeated the Goths under Teias, A.D. 533.

PRINCIPATO ULTRA, a province in the kingdom of the Two Sicilies, is bounded N. by the provinces of Sannio and Capitanata, from which it is divided by the central ridge of the Apennines; E. by Capitanata; S. by Basilicata and Principato Citra; and W. by Terra di Lavoro. The province of Principato Ultra lies almost entirely in the Apennines, and between the western lower ridge of these mountains, including Monte Taburno, Tifata, and Monteforte, which divides the basin of the river Calore, an affluent of the Volturno, from the plains of Campania, and the central ridge, which forms the watershed between the streams that flow into the Mediterranean and into the Adriatic. The Calore and its affluents the Tamaro and Sabato are the principal rivers of the province. A small part of Principato Ultra however extends along the eastern slope of the central ridge, where the river Ofanto (Aufidius) has its source in the neighbourhood of Conza and Nusca. The area of the province is 1407 square miles. The population in 1851 amounted to 383,414. The province is divided into 3 districts and 132 communes.

The temperature is considerably lower than that of Campania; in some of the valleys however the summer heats are occasionally very great. Some places in the valley of the Calore are subject to the malaria in consequence of stagnant waters. The country produces corn, fruits in abundance, silk, some wine, and has excellent pasturage for cattle. There are iron-foundries and paper-mills at Atripaldi, on the Sabato, near Avellino. Some woollen manufactures are carried on in the principal towns. There are beds of lignite near Montefusco. Benevento and its territory, although geographically included within the boundaries of Principato Ultra, is a dependency of the Holy See. [BENEVENTO.] The principal towns of the province are—AVELLINO; ARIANO; Montesarchio, a walled town with 6000 inhabitants; Montefusco, an episcopal town, with a population of 3000; and Sant' Angelo dei Lombardi, population about 6000.

The province of Principato Ultra occupies the country of the ancient Hirpini, one of the nations of the Samnite confederation. The celebrated pass called Furculæ Caudinæ, where the Samnites compelled the Roman army to pass under the yoke; and the lakes of Amsanctus, still called Amsanto and Le-Mofete, and still emitting destructive gases as in the days of Virgil, are in this province. The lakes are about four miles from the village of Frigento.

PRITTLEWELL. [ESSEX.]

PRIVAS. [ARDRECH.]

PROVIDA, the ancient *Prochyta*, is an island at the north-west entrance of the Bay of Naples, situated between the island of Ischia and Cape Misenum. It is about eight miles in circumference, generally level, with some gently-rising grounds, and is fertile and well cultivated. The vineyards produce good common wine. The population exceeds 10,000; many of them are engaged in the tunny and coral fisheries. The island contains several villages, a small fort, and a royal country-seat.

PROME. [BURMA.]

PROPONTIS. [MARMARA, SEA OF.]

PROSNTZ. [MORAVIA.]

PROVENCE, an old province of France, including a portion of the territory of the Roman *Provincia*, from which the name is derived, was bounded E. by Italy, N. by Dauphiné, N.W. by the Comtat-Venaissin and the Comtat-d'Avignon, W. by Languedoc, and S. by the Mediterranean. It now forms the departments of BOUCHES-DU-RHÔNE, VAR, Basses-Alpes [ALPES-BASSES], and part of VAUCLUSE. It was divided into Upper and Lower Provence, which had Digne and Aix for their respective capitals. In Roman times the country was inhabited by various tribes, and formed part of Gallia Narbonensis. About A.D. 416 the Romans were dispossessed by the Visigoths and Burgundians, but recovered a portion along the coast from the former in 450. The next invaders were the Franks, who in 534, under the sons of Clovis, by conquest or cession became masters of the whole territory, which was included also in the empire of Charlemagne. Under Charlemagne's descendants Provence formed part of the kingdom of Arles; it then passed to hereditary counts descended from the counts of Barcelona. Raimond Bérenger V., the last count of Provence, left four daughters, with the youngest of whom, Béatrix, in 1245, the county of Provence passed to Charles of France, count of Anjou. The Angevine family held it till 1481, when Charles, count of Anjou, and king of Sicily, made it over to Louis XI. and his successors; and in 1487 it was re-united to the crown by Charles VIII. A sketch of the Provençal language is given in the article FRANCE, vol. ii., col. 1036.

PROVIDENCE. [RHODE ISLAND.]

PROVIDENCE, NEW. [BAHAMAS.]

PROVIDENCE, OLD, is an island in the Caribbean Sea, about 125 miles from the Mosquito Coast, and between 13° 19' and 13° 32' N. lat., 81° 20' and 81° 28' W. long. This island is nearly 4½ miles long, and 2¼ miles in its greatest breadth. The centre of the island

rises to 1190 feet above the level of the sea, so that it can be seen at a distance of from 33 to 86 miles. Separated from its northern end by a cut or channel of from 40 to 60 yards wide, is the island of Santa Catalina, 1800 yards long by 1300 yards in its greatest breadth, forming the northern boundary of a harbour in Old Providence which affords secure anchorage in 2 to 3½ fathoms. The soil is very productive, and affords rich crops with very little cultivation. The island belongs to the state of New Granada, and the population amounts to only a few hundred persons.

PROVINCS. [SEINE-ET-MARNE.]

PRUSSIA, a kingdom in the north of Europe, consists of two great divisions, which are unconnected with one another. The western and smaller portion, comprising Rhenish Prussia and Westphalia, is situated on both sides of the lower Rhine between 49° and 52° 15' N. lat., 6° and 9° 30' E. long. It is bounded S. by the French department of Moselle, W. by Belgium and Holland, N. by Holland and Hanover, and E. by Hanover, Lippe, Waldeck, Electoral Hesse, Nassau, Hesse-Darmstadt, and the Bavarian Palatinata. The eastern and larger portion of the kingdom extends from 49° 50' to 55° 50' N. lat., 9° 50' to 22° 50' E. long. On the north-west of it lies Mecklenburg; on the west Hanover, Brunswick, and the electorate of Hesse. Along the southern boundary are the duchies of Saxe, the kingdom of Saxony, and several portions of the Austrian monarchy, and along the east is Russia. The area and population of Prussia and its provinces are given in the following table:—

Provinces.	Area in Square Miles.	Population in 1852.	Number of population to the square mile.
East Prussia . . .	14,946	1,531,273	102,453
West Prussia . . .	9,981	1,073,476	107,552
Posen . . .	11,353	1,331,745	121,707
Pomerania . . .	12,153	1,253,904	103,176
Silesia . . .	15,695	3,173,171	202,177
Brandenburg . . .	15,534	2,205,040	141,949
Prussian Saxony . . .	9,747	1,828,732	187,620
Westphalia . . .	7,786	1,504,251	193,199
Rhenish Prussia (Rhein-Provinz, and Hohenzollern)	10,759	2,972,130	276,246
Total . . .	107,954	16,923,721	156,797

The provinces, the 25 governments into which they are divided, and all the chief towns of Prussia are noticed in this work for the most part in separate articles.

Surface and Soil.—Rhenish Prussia is divided into two portions by the Rhine, and each of these divisions consists of an elevated table-land and a low plain. The table-land on the west bank of the Rhine is connected on its south-eastern border with the Hardt Mountains, as the northern extremity of the Vosges is called. The Hardt Mountains attain a general elevation, varying between 1100 and 1600 feet; their highest summit however is above 2000 feet. From this mountain region the table-land extends northward to the parallel of the towns of Bonn and Aix-la-Chapelle. Along the right bank of the Moselle is the highest part of the table-land, which appears in the shape of a range elevated on a very high base. Part of this range is called the Hochwald, and another part the Soonwald: its mean elevation is more than 2000 feet above the sea-level, while the highest summit, called the Walderbeenkopf, attains nearly 2690 feet. The larger part of the table-land lies to the north of the Moselle, and is called the Eifel, and in its northern districts the Hohe Veen. The mean elevation of this part is about 1600 feet, and it may be called a plain; neither the eminences nor the depressions are great. A few hills rise from 500 to 700 feet above it. [EIFEL.] The level country which extends from the northern border of the Eifel between the Rhine and the Maas, is nearly flat. Its fertility is considerable, and it produces rich crops of all kinds of grain.

Opposite the table-land of the Eifel, on the right bank of the Rhine, is a similar table-land, which extends southward through Nassau, where it rises along the banks of the Main and Rhine to a more elevated ridge known under the name of *Taunus* which, like the Hochwald and Soonwald, attains a mean elevation of 2000 feet; and its highest summit, the Feldberg, is 2850 feet. From the Taunus the table-land extends northward, and terminates on the northern bank of the river Ruhr, an affluent of the Rhine. It extends about 40 miles farther north than the table-land west of the Rhine, and, between the Lahn and Sieg rivers, is called *Westerwald*; and, between the Sieg and Ruhr, *Sauerland*. The mean elevation of this district does not differ from that of the Eifel, being also about 1600 feet above the sea-level. But the surface is more uneven, especially that of the *Westerwald*, which contains several high summits, among which the *Salzburgerkopf* is 2172 feet high. Lava, trachyte, and basalt are also frequently met with in the *Westerwald*, but not north of the Sieg river. The soil of the whole region is poor; and it is unsuited for the production of any grain except oats, which supply the inhabitants with bread. The population is considerable, especially on the *Sauerland*, which is, without exception, the most manufacturing district in Germany, a

circumstance owing to the abundance of iron and coals which this part of the table-land contains. Agriculture is also in an advanced state in parts of the region, especially in the valleys of the Ruhr, the Senne, and the Lippe, where it is stimulated by the presence of a large mining and manufacturing population. [ARNSBERG.]

The Rhine separates the two table-lands just mentioned, and runs in a narrow valley which is noted for its picturesque beauties. It begins to run between the mountains at Bingen, where its surface is a little more than 200 feet above the sea-level. It leaves the mountain region at Bonn, where it is not more than 120 feet above the sea. Between Bonn and Düsseldorf, a distance of nearly 50 miles, the fall is only 26 feet.

That portion of Rhenish Prussia which lies to the north of the *Sauerland*, and extends to the northern limits of this part of Prussia, has a soil which varies greatly in fertility. The western portion of it, from the Rhine to the banks of the Ems, is nearly a desert: the cultivable ground, which only occurs in isolated places, is but a small portion of the whole. On the east of the Ems the soil is much better, especially as we approach the hilly country, which extends along the western side of the river Weser, where wheat is raised; some good tracts occur also along the northern declivity of the *Sauerland*, but they are not extensive.

The Eastern and larger portion of Prussia is a part of the great plain of Eastern Europe, which extends from the Strait of Dover to the foot of the Uralian Mountains. Mountains occur only along the southern boundary. On the boundary of Prussia and Bohemia are the Sudetic Mountains, whose northern portion is called *Riesengebirge*, or *Giant Mountains*. There are mountains also on the line which separates Prussia from Saxony. Where the south-western angle of Prussia is intersected by the duchies of Saxe and the territories of the prince of Reuss, and partly also by Hanover, it comprehends parts of the *Thüringerwald* and of the *Harz* mountains.

The *Sudetic Mountains* are not connected with the *Carpathian Mountains*. At the north-western extremity of the last-mentioned range there is a nearly level plain, between 45 and 50 miles wide, on which the *Oder* rises. This plain is only 600 or 700 feet above the sea-level; and it descends on the north along the course of the river *Oder* with a gentle slope, but rapidly towards the south. On the north-western edge of this plain the southern extremity of the *Sudetic Mountains* commences with the mountain plain of *Glatz*, which is surrounded by elevated ranges. It rises with a steep ascent, and extends in a north-western direction for about 70 miles, when it again descends with a similar slope. Its interior, the mountain plain of *Glatz*, is between 1200 and 1300 feet above the sea; but the ranges which surround it rise to 3500 and 4300 feet. The highest summit, which lies at the south-eastern corner of the mountain mass, is called the *Altvater*, and is 4281 feet above the sea. The whole region occupies a width of about 27 miles, and is called the *Mountains of Glatz*. Between the northern extremity of this range and the *Giant Mountains* is a tract, the surface of which is chiefly occupied by high hills; but its mean level above the sea does not exceed 1500 feet. It is followed in the same north-western direction by the *Giant Mountains*. [BOHEMIA.]

The *Thüringerwald*, which is at the south-western extremity of this part of Prussia, is a mountain-range nearly 50 miles long, but only from 8 to 12 miles wide. The mean elevation may be 2000 feet above the sea, and the highest summit, the *Great Beerberg*, is 3258 feet. A very small part of this range lies within the boundary of Prussia. The *Harz* is about 50 miles distant from the *Thüringerwald* on the north. The greater part of the country which lies between the *Thüringerwald* and the *Harz* belongs to Prussia; its general level may be about 900 feet above the sea, but some hills rise several hundred feet higher. The soil of the valleys, most of which are wide, is generally of excellent quality.

The great plain is not a dead level; the surface is diversified by several moderate elevations. Two of these traverse this portion of Prussia from east to west in its whole extent. The northern elevation runs generally parallel to the Baltic, and the southern in its eastern portion parallel to the *Sudetic Mountains*. The northern elevation is a portion of that high ground which extends eastward from the mouth of the *Elbe*, at a varying distance from the Baltic, to the sources of the *Volga*, through a space of more than 1000 miles. It is remarkable for the number of lakes dispersed over its broad surface and on the upper part of its slopes, and for the quantity of erratic blocks of granite which are imbedded in it. In the east of Prussia it occurs near 54° N. lat. The mean height of this part of the elevated ground may be about 450 feet above the sea-level; the lakes are more numerous than in any other part of it, and some are of considerable extent. The lake of *Spiriding* occupies an area of more than twenty square miles, and is nearly 400 feet above the sea-level; the lake of *Mauer* is nearly as large, and about 410 feet above the sea. The larger lakes taken together occupy a surface of 812 square miles, and the smaller lakes are very numerous. The soil is sterile, chiefly consisting of loose sand, covered in many places with heath, and in others with stunted pines. The portion of cultivable land is very small; that which supplies indifferent pasture for cattle and sheep is not much larger.

From this elevation the country slopes to the shores of the Baltic with an undulating surface, which is seldom varied by a hill. The

soil improves to the northward; along the Frisches Haff and the banks of the Pregel and the Niemen there are extensive tracts of great fertility. The most productive parts occur along the banks of the Niemen and Vistula, where the low river-bottoms are of great extent, and are protected against inundations by embankments. The embankments were erected along the Vistula, more than 600 years ago, by the Teutonic knights: they are above 150 miles long. The country which is thus secured from inundations is by far the most fertile tract in Prussia.

The elevation is interrupted by the wide valley of the Vistula, and on the west side of the river it does not rise opposite to the termination of the eastern portion, but much farther to the north. It begins about 25 miles south-west of Danzig, with a rather steep ascent, and attains its greatest elevation in the Thurmberg near Schönberg, which is nearly 1070 feet above the sea, and the highest hill between the Harz and the Ural mountains. From this place it extends in a south-western direction towards Behrendt, and thence to Märkiach Friedland, which is on the boundary-line between Prussia proper and Pomerania. So far it resembles in all its features a mountain system of a diminutive size. It continues with a less elevation and more extended slopes along the boundary-line between the provinces of Pomerania and Brandenburg, and terminates in abrupt hills not far from the banks of the Oder opposite Schwedt and Oderberg. The soil of this elevation is much better in this part than it is farther east, but it is only of very moderate fertility. To the south-east of the higher portion of the elevation extends the greatest waste in the Prussian monarchy, called the Tuchler Heide (Heath of Tuchel), which is 50 miles in length and from 20 to 25 miles in width. The soil is sandy, and, with the exception of shrubs and stunted pines, it produces scarcely anything that is useful to man. The spots of cultivable ground are few and of small extent. Towards the south, where it approaches the river Netze, an affluent of the Warta, the soil improves, and it is still better between the two last-mentioned rivers, but even here the fertility is not great. Between the Warta, where that river runs north, and the Vistula, there is a large tract of country which yields abundant crops of wheat and other grain. The tract which extends along the lower course of the Warta to the Oder, is much less fertile. On the northern side of the elevation the country is of moderate fertility, but it improves towards the shores of the Baltic. A few miles from the sea there is a tract several miles wide, which may be called fertile, but the shores consist of sand-hills which extend 2 or 3 miles inland, and occupy the whole coast from the eastern mouth of the Oder to the fertile delta of the Vistula near Danzig.

The Western portion of the elevation begins on the west of the Oder, between Schwedt and Oderberg, and runs west-north-west until it enters the duchy of Mecklenburg, through which it extends to Holstein and the banks of the Elbe. Its mean height is here probably less than 300 feet above the sea-level, and the surface is rather uneven, several hills rising from 100 to 200 feet above it. The soil of that part which is within Prussia is of moderate fertility; but along its northern declivity, and as far as the shores of the Baltic, including the island of Rügen, it consists of very good land, which yields large crops of grain.

The Southern elevation of the Prussian plain is connected at its eastern extremity with the highlands of Sandomir in Poland. It runs in a west-north-west direction along the eastern boundary of Silesia, where it rises to about 1000 feet above the sea-level north of the town of Breslau. In this part it is called the Heights of Trebnitz. The elevation is interrupted by the valley of the Oder between Leubus and Great Glogau, and farther on by the Bober, Neisse, and Spree; but it appears south of Berlin, where it is called the Fleming, and is 400 feet above the sea, or 300 feet above the site of the Prussian capital. It terminates not far from the banks of the Elbe, between Magdeburg and Burg; but a continuation of it appears on the western side of the Elbe, and after leaving the Prussian dominions it continues between the Elbe and the Weser to the vicinity of the North Sea between the mouths of these two rivers. In these parts it is very wide and comprehends the Heath of Lüneburg, which belongs to the kingdom of Hanover.

The country which lies between the two elevations, west of the meridian of 19°, is not distinguished by fertility, except in some of the river bottoms. Berlin lies in a sandy desert, which contains only small isolated tracts of fertile ground; and this sterile country, in some parts overgrown with fine forests, extends northward to the boundary of Mecklenburg, and southward to the Fleming. To the east and west of this waste, on both sides of the Oder, and towards the banks of the Elbe, the country is much better, but still not very fertile.

The country to the south of the southern elevation is more favoured by nature than the other parts of the Prussian monarchy. Completely sterile tracts are rare, and of small extent, with the exception of one which forms the southern district of Silesia, and is contiguous to the boundary-line of the Austrian dominions and of Poland. The remainder of Silesia is fertile, especially the plain, which extends on the left bank of the Oder from Oppeln to Liegnitz. The same observation applies to the provinces of Saxony, as far as it lies south of the southern elevation; the country about the town of Magdeburg is noted for its fertility, and is considered the granary of Berlin.

Climate.—The difference of temperature in the provinces is considerable. The following approximations are given by Berghaus:—

Divisions.	Mean Annual Temperature.	Mean of Summer.	Mean of Winter.
Western Prussia . .	49½ Fahr.	63°	35°
Central Prussia . .	48° "	64°	33°
Eastern Prussia . .	45° "	61°	26°

Berghaus observes, that the mean annual quantity of rain in the western division amounts to 20 inches, and only to 15 inches in the eastern division, but it is nearly impossible to determine this point, as the latter division annually experiences very heavy falls of snow, which it is nearly impossible to estimate, on account of the drift-storms, which accumulate the snow in some places to a great depth, whilst other places, which are exposed to their whole force, are quite bare. The prevailing winds in Prussia, as all over the west of Europe, blow from the west, and frequently with great force.

Rivers.—In Rhenish Prussia is the Rhine, which traverses this division of the monarchy from south to north, and is navigable for large vessels and steamers as far as it flows through the Prussian dominions. Its course above Bonn is rapid, and in some places eddies occur, but they are not dangerous. Several rivers join the Rhine from the east and west. From the east it receives the Sieg, on which timber is floated, and which is also navigable for 4 or 5 miles from its mouth; the Wipper, farther north, which is only navigable for a short distance from its mouth; and the Ruhr and the Lippe, both of which are navigable for 30 or 40 miles from their junction with the Rhine. On the left the Moselle falls into the Rhine at Cologne, and is navigable in the whole of its course through the Prussian dominions, an extent of more than 150 miles. Steamers ply on this river between Cologne and Trèves, and even up to Metz; the stream is rapid, and the up-navigation tedious.

In the eastern parts of Prussia four large navigable rivers, the ELBE, ODER, VISTULA, and the NIEMEN traverse the elevations which run through them from east to west. Between the two elevations however the affluents of these rivers run east and west, and as many of them are navigable for barges, they facilitate the intercourse between the countries on their banks. The navigable affluents of the Elbe from the west are the Saale, which begins to be navigable where it enters Prussia, the Unstrut, and the Elster; and from the east the Havel, which is joined by the Spree: the course of the Havel is nearly 250 miles, measured along the windings, and it is navigable for about two-thirds of that distance. The navigable affluents of the Oder from the east are the Klodnitz, in southern Silesia; the Bartsch, which is navigable from Militch downwards; the Warta, which is navigable before it leaves Poland and enters Prussia, with its navigable tributary the Netze; and from the west the Bober, the Neisse, and the Finow. The lake into which the Oder discharges its waters before it enters the Baltic, receives the two navigable rivers, the Ucker and the Peene; by the latter sea-vessels of moderate size can ascend to the town of Demmin. The Vistula receives from the west the Braha, which becomes navigable at the town of Bromberg. Between the Oder and the Vistula is the Persante, which runs more than 100 miles, and is navigable more than 20 miles from its mouth in the Baltic. The Elbing River rises in the lake of Drausen, and though its course is not long, it is navigable, and of great importance to the town of Elbing: it falls into the Frisches Haff. Farther east the same lake receives the Passarge, which is navigable for small sea-vessels to the town of Braunsberg, four miles from its mouth. The Pregel, which also falls into the Frisches Haff, is navigable as far as Insterburg for large river vessels, and to the town of Königsberg for vessels of 300 tons burden. The Deime, which is united with the Pregel by a canal, runs to the Kurisches Haff, and is navigable for large river boats. The Niemen or Memel is navigable in the whole of its course through Prussia; it receives from the north the Yura, which about 10 miles from its mouth is navigable for small river boats; and from the south the Scheschuppe, which is navigable about 25 miles upwards. The last river which requires mention is the Dange, which comes from Russia, and enters the Kurisches Haff at its most northern extremity, where it forms a part of the harbour of the town of Memel. Vessels of more than 500 tons burden can enter the river and unload in the middle of the town.

Productions.—Of domestic animals the numbers stated a few years ago were—horses, 1,500,000; horned-cattle (bulls, cows, oxen, and calves), 4,003,912; sheep, 16,844,018, namely, 4,119,950 merinos, 7,846,752 of an improved breed, and 4,877,316 common sheep; swine, 2,000,000, bred in Pomerania, Saxony, the provinces of the Rhine, and above all in Westphalia, the hams of which country have long been celebrated. Goats are bred only in the mountainous parts of Silesia, Saxony, and Westphalia. There are likewise asses and mules. Of wild four-footed animals there are stags, fallow-deer, wild boars, hares and rabbits, wolves, foxes, bears rarely, lynxes, beavers, badgers, pole-cats, otters, weasels, and martens; the ermine is very rare. Domestic poultry of all kinds abounds; and of wild-fowl, besides pheasants and partridges, there are such immense numbers of wild geese as frequently to do great injury to the farmers. Smoked geese

are an important article of exportation from Pomerania. Of birds of prey, there are the eagle, the sparrow-hawk, the kite, and some others. Fish of various kinds are extremely abundant, as well in the numerous rivers as in the Baltic. In all the provinces where there are heaths, buckwheat, and lime-trees, great quantities of bees are bred.

Agriculture is carried on with great care in most of the provinces. Wheat, rye, oats, and barley are raised both for home consumption and exportation; there are likewise peas, beans, vetches, millet, maize, rapeseed, and linseed. Potatoes are cultivated in all the provinces. Flax, hemp, hops, tobacco, chicory, beet-root, and garden vegetables of all kinds are raised. Fruit is grown extensively in Pomerania, Saxony, and Rhenish Prussia: the chief, indeed almost the only wine-growing province is Rhenish Prussia. The principal forests are in Prussia proper and Silesia; but some provinces, for instance part of Saxony, have not sufficient. The mineral products are salt from salt springs, of excellent quality and in great abundance, amber, and coals in large quantities; alum, vitriol, saltpetre, alabaster, basalt, granite, porphyry, marble, slate, freestone, chalk, lime, porcelain-clay, pipe-clay, &c. The metallic products are silver, copper, lead, iron, zinc, cobalt, arsenic, and calamine. The precious stones are the onyx, agate, jasper, and carnelian.

Manufactures.—The principal manufactures are:—linen in all the provinces, but chiefly in Silesia; woollen cloths and cotton goods, especially in the province of the Rhine, at Elberfeld, Barmen, Crefeld, &c.; silk, leather, iron- and copper-ware, cutlery, articles of gold and silver, chicory, paper, china, glass, earthenware, snuff and tobacco, beet-root sugar, gunpowder, &c.; breweries and spirit distilleries are very numerous. Cotton factories with steam machinery have risen in considerable numbers in recent years in Rhenish Prussia, Westphalia, and Silesia.

Commerce.—The commerce of Prussia is facilitated by the Baltic, which including the windings of its coast extends along the north of Prussia for more than 850 miles; by the great navigable rivers before mentioned, and their navigable tributary streams; by numerous canals; and by the system of railroads which traverses the country in all directions. The commerce of Prussia extends to almost all the states of Europe, to America, and China; but its chief commerce is with Austria and the other states of Germany, with England, Russia, Sweden, Denmark, and the Netherlands. The principal articles of export are the chief natural and industrial products already enumerated. The principal articles imported are:—raw and refined sugar, coffee, tea, spices, cotton, silk, tobacco, hops, tin, saltpetre, dye-stuff, wine, glass, and various manufactures, chiefly printed calicoes, silks, and fine hardware. In 1831 the celebrated German commercial league commenced, under the auspices of Prussia, and has been since gradually joined by almost all the German states except Austria. The object of this league (or, as it is called in German, *Zollverein*, 'customs union') is to establish an entire freedom of trade among the German states, and to subject foreign trade to such restrictions only as the protection of national manufactures or the financial circumstances of the state may render necessary. The chief harbours of Prussia are:—Memel, Pillau, Danzig, Kammin, Schweinmünde, Peenemünde, Greifswald, Stralsund, and Barth. The foreign trade of Prussia out of the Baltic is greatly hampered by the Sound dues. Danzig and Memel export large quantities of Russian corn and other heavy produce. The most considerable commercial towns are:—Berlin, Königsberg, Danzig, Breslau, Stettin, Magdeburg, Cologne, Elberfeld, Barmen, and Aix-la-Chapelle. The great fairs are those of Breslau, Frankfurt-on-the-Oder, and Magdeburg.

The transit trade of Prussia with Russia including Poland and central and southern Germany is of great importance, and is greatly facilitated by internal navigation and by railroads. From Berlin a railway 488 miles in length, including its branches from Kreuz to Posen and from Dirschau to Danzig, runs north-eastward through Stettin and Bromberg to Königsberg. Another line runs south-eastward through Frankfurt-an-der-Oder to Breslau (220 miles), and is continued southward through Brieg and Oppeln to meet the Vienna-Cracow railway, which is also joined by the Russian line to Warsaw: this south-eastern line is met at Kohlfurt by the Saxo-Silesian line to Dresden; and from Breslau and Brieg respectively there are branches to Schweidnitz and Neisse. Southward from Berlin runs the Berlin-Köthen line, connecting the capital with Halle, and by means of the Thuringian, Saxon, and other railways, with Frankfurt-am-Main, Leipzig, Dresden, and Munich. Westward from the capital through Potsdam and Magdeburg a line runs to Brunswick, Hanover, and Bremen near the mouth of the Weser; and north-westward a line runs to Hamburg, thus connecting Berlin with the ports on the Elbe. The western part of the Prussian states is traversed by the Cologne-Minden line, which runs from Deutz opposite Cologne on the right bank of the Rhine through Düsseldorf, Hamm, and Minden to Hanover; from Cologne it is continued westward through Aix-la-Chapelle, between which and Verviers it joins the Belgian railway system. There are numerous short branches from these western lines, as from Cologne to Bonn; Aix-la-Chapelle to Maastricht and Krefeld; Düsseldorf through Elberfeld to Dortmund, a station on the Cologne-Minden line; Hamm to Münster; and the Westphalia line from Hamm to Paderborn, Warburg, and Cassel. The railway from Paris to Mayence traverses the extreme southern angle of Rhenish Prussia,

passing through Saarbrück and Neunkirchen. Along all the lines mentioned electro-telegraphic wires are laid.

Religion.—There is, properly speaking, no state religion. That of the royal family and of the majority of the people is Calvinism; but Christians of all denominations are equally admissible to all public employments. In 1817, the three hundredth anniversary of the Reformation, the Calvinists, Lutherans, and other Protestant sects in Prussia, and in some other parts of Germany, united themselves into one religious body, under the name of Evangelical Christians. These amounted in Prussia in 1852 to 10,359,994; the Roman Catholics to 6,392,293; the Mennonites to about 14,780; Greeks to 1485; and Jews to 226,863. The Protestants are governed in spiritual matters by a general consistory (Ober Kirchenrath), and by a consistory for each of the provinces. The Catholics are under the archbishops of Breslau, Cologne, and Gnesen and Posen, and the bishops of Culm, Ermeland, Münster, Paderborn, and Trèves.

Education.—For the education of the people, there are in all the towns elementary, Sunday, and infant schools, schools for mechanics, &c. Parents are compelled by law to send their children to school. In 1850 there were 24,201 elementary schools, with 80,865 teachers and 2,452,062 pupils in the kingdom. For the higher branches of education, there were in the same year 117 gymnasia, with 1664 professors and 29,474 scholars. There are universities at Berlin, Bonn, Breslau, Greifswald, Halle, Münster, and Königsberg, to the support of which the government applies large sums. Literary and learned societies are very numerous.

Revenue.—According to the budget of 1854 the total revenue was estimated at 107,990,069 thalers (about 16,198,500*l.*). The expenditure for the same year was estimated at an equal sum. The debt amounted to about 82,670,674*l.* sterling, bearing interest at 4 per cent.

Army.—All subjects of the Prussian monarchy are bound to military service, which they perform successively in the standing army, the landwehr (militia) of the first and second ban, and in the landsturm (which answers to the French 'levée-en-masse'). All men able to bear arms from 20 to 25 years of age belong to the standing army; they serve three years, and are then discharged for two years, during which they are liable to be called out as the reserve. All those who have served in the standing army belong to the landwehr of the first ban, from the age of 28 to 32, both inclusive. In the time of war this ban is on the same footing as the standing army, and equally liable to serve both at home and abroad. It is called out every year to exercise, in one year for a fortnight, in the next for a month, and is equipped and clothed while it serves. The second ban, which is called out only in time of war, and is then chiefly employed in reinforcing the garrisons, includes all men capable of bearing arms till the age of 39. All older men fit for service belong to the landsturm. The standing army consists of a corps of guards and eight army-corps. In the field each army-corps consists of 25 battalions (25,000 men), 32 squadrons of cavalry (4800), and 11 batteries with 88 guns. The total force of the army on a war footing, and including the landwehr of the first ban, numbers 410,000 men; the landwehr of the second ban numbers 115,000 men; giving a total available force of 525,000 men.

Prussia has lately aspired to become a maritime power, and now maintains a small fleet of sailing and steam vessels. The sailing vessels consist of 1 frigate, 48 guns; 1 corvette, 12 guns; 1 schooner, 8 guns; one transport ship with 6 guns; 36 gunboats with 2 guns apiece; and 6 yawls carrying 1 gun each. The steam fleet consists of 2 corvettes, 10 and 12 guns; and 2 dispatch boats carrying 8 guns apiece. Two frigates (40 guns each), 1 corvette (20 guns), and 1 schooner (8 guns) were on the stocks in 1854. For the purpose of forming a naval arsenal and station for the fleet Prussia has recently purchased the bay of Jahde from OLDENBURG. The commercial navy of Prussia consisted of 973 ships carrying 131,046 lasts (of 4000 lbs. each); and 379 coasting vessels of an aggregate burden of 6005 lasts in 1853. The total number of vessels that entered Prussian harbours in 1851 amounted to 6893, of which 1205 were Prussian; 3954 had cargoes amounting to 310,189 lasts, and 2939 were in ballast. The total number of departures in the same year amounted to 6799, of which 1197 were Prussian; 5884 carried freights measuring 476,949 lasts, and 916 left in ballast. The principal foreign trade is carried on with Great Britain, Denmark, the Hanse towns, Norway, Holland, Sweden, Hanover and Oldenburg, Russia, Mecklenburg, Belgium, and France.

The *Constitution* was until lately an unlimited monarchy, hereditary in the male and female line. Prussia had formerly a representative body called the Estates, which however, as the power of the crown increased, soon fell into disuse. In July 1823 a law was promulgated by Frederick William III. for the institution of provincial estates, which were thenceforward convoked in all the provinces; but no steps were taken towards the institution of a general national representation. On the accession of the present king, Frederick William IV., in 1840, provincial and district assemblies were established in all parts of the monarchy. Subsequently (February 3rd, 1847), the king granted a kind of representative constitution to his subjects, according to which there was a diet consisting of two chambers—one of the Nobles, who sat separately, except on financial votes, when they sat with the other orders; the other called

the United Diet, consisting of the provincial diets conjoined into one legislative body, which was to be convened at least once in every four years. The king bound himself to contract no new loan and to impose no new tax (except in certain cases) without the consent of the diet. The United Diet was excluded from legislating on all subjects of foreign policy, frontier dues, and war taxes; its positive rights were limited to questions of internal taxation. Finally, the right of petition with respect to internal affairs was conceded.

On this foundation, small and slender though it was, an ample share of liberty might in time have been secured by a patient practical people; but circumstances were unfavourable. The French revolution of February 1848 established a republic in France, and the king, dreading the spread of this contagious example, tried to pre-occupy the minds of his subjects with fears of French invasion, and with a desire to secure an impracticable object, the unity of Germany—both in some measure subjects of foreign policy, and excluded by the new constitution from the legislative functions of the diet. The revolutionary wave however which had originated in France reached Berlin in less than a month. On the night of March 18 barricades were thrown up in the streets, and many bloody encounters took place between the people and the royal troops, which on the next morning withdrew from the capital. The king then, bending to the storm, granted all sorts of liberal *measures*—abolition of the censorship and perfect freedom of the press; a political amnesty; a truly constitutional form of government for Prussia, with an electoral law for regulating the election of a National Assembly to discuss a new constitution; independence of judges; right of public meeting; exercise of political rights without reference to religious belief; the submission of all new laws to the deliberation of the representatives, &c. The National Assembly met on May 22nd: it discussed and passed several laws forming the bases of a new constitution; but frequently its debates were boisterous and intemperate, and its discussions were criticised or continued in clubs and even in the streets, where members who opposed the popular demands were frequently ill treated. The menacing attitude of the populace became more aggravating after the opening of the Democratic Congress in Berlin (October 26). The National Assembly was kept almost in a state of siege, and it was said that its resolutions were influenced by the democratic mobs that thronged about its place of meeting. On October 31 the Assembly adopted an article declaring all Prussians equal before the law, denying any difference or privilege of rank or any special nobility, and forbidding the use of titles of nobility or other qualifications in public documents; and voted to urge the government to take prompt and energetic steps to secure the liberty of the people in the German portion of the Austrian states. On its rising the Assembly found that the populace had nailed up the outer doors of the Hall of Session. To deliver the capital from a state of long-continued ferment and commotion, and to get rid of the National Assembly, which was every day becoming more impracticable and more democratic, on the accession of Count Brandenburg to the ministry, the Assembly was prorogued (November 8) and ordered to transfer its sitting to Brandenburg. The president (Unruh) refused to close the session; the National Guard of Berlin was ordered to keep the members who persisted to meet from reaching the hall of the Assembly; but instead of obeying the government the National Guard took the Assembly under its protection, and enabled it to continue its deliberations. The National Guard was then disarmed, the city declared in a state of siege, and occupied by the royal troops under General Wrangel, who closed all the clubs, prohibited all meetings in the streets and the sale of all political papers without the authority of the police. A portion of the Assembly met (November 16) in a coffee-house, passed a resolution to withhold payment of the taxes, and was then dispersed by the troops.

On November 27 (to which date it was prorogued by royal ordinance) the National Assembly met in Brandenburg, and continued its sittings for a few days, during which it exhibited undignified helplessness by its squabbles and dissensions. On December 5 the king issued a proclamation dissolving the Assembly, and containing the heads of the present constitution of Prussia. This state paper guarantees the freedom of the press, subject to prosecution for offences by existing laws; freedom of meeting in inclosed places, and also in public on 24 hours' notice and permission of the police; a responsible ministry; two chambers, the upper consisting of 180 members elected by the wealthier inhabitants of the state, who are themselves chosen by the general body of the electors—the lower of 350 members, elected by universal suffrage—the members of either house requiring no other qualifications than being of a certain age and proof of naturalisation; complete liberty for all religions; abolition of aristocratic privileges; and the adoption of the principle of the British Habeas Corpus Act. It is true that some of these principles have been modified, narrowed, or violated (as in the case of the press, and in the composition of the upper house, of which the king nominates the majority if not all the members for life) since the subsidence of the revolutionary period of 1848-9, but the leading features of constitutional liberty on the basis of representation are there.

Prussia, as a member of the German Confederation, is the second in rank; its contingent to the army in 1815 was 79,484 men, including infantry, cavalry, and artillery and train with 100 pieces of cannon;

but in recent times Prussia has placed her whole army at the service of the Confederation. It contributes 301,083 florins per annum to the expenses of the Diet; and in the full council has, like the other kings, four votes.

Historical Sketch.—The name of Prussia is derived from the Borusses, a Slavonic people, who inhabited the territory that now forms the provinces of East and West Prussia. These people were subjugated and converted to Christianity in the 13th century by the Teutonic knights. In the 15th century West Prussia became subject to Poland, and the Teutonic knights, who still held East Prussia with Königsberg for their capital, became vassals of Poland. Albert of Brandenburg, a descendant of Frederick von Hohenzollern, burgrave of Nürnberg and 35th grand master of the order, renounced his vows, became a Protestant, and erected East Prussia into a hereditary duchy, which he left with the march of Brandenburg to his descendants. The estates of the electors of Brandenburg increased by slow degrees till 1648, when the elector Frederick Wilhelm obtained by the treaty of Westphalia the bishoprics of Halberstadt and Minden. In 1653 he delivered Prussia from the suzerainty of Poland, and in 1680 he added to his possessions the archdiocese of Magdeburg. His son the elector Frederick III. obtained the title of King (Frederick I.) from the emperor in 1701, and made several acquisitions of territory, the most important of which was the principality of Neuchâtel. He also took an active part in the Thirty Years' War. His successor, Wilhelm I., who mounted the throne in 1713, wrested a large part of Pomerania from Sweden, and obtained at the peace of Utrecht a part of Guelderland and the duchy of Limburg. Frederick II. (the Great), who reigned from 1740 to 1786, made Prussia famous by his military genius and his successes against Austria, Saxony, and Sweden. Soon after his accession he wrested Silesia from Austria; in 1744 he overran Saxony. In the Seven Years' War he took a leading part, and fought fourteen battles, of which he gained nine. At the close of the Seven Years' War, in 1763, he applied himself to the improvement of his kingdom, which he did not fail to enlarge on the first partition of Poland, by seizing for his share the greater part of West Prussia. His successor, Wilhelm II., joined the first coalition against the French republic, from which he gathered little glory; but added to his states considerable territories on the second and third partitions of Poland (1793 and 1795). His son, Frederick Wilhelm III., who ascended the throne November 16, 1797, joined the coalition against France November 8, 1805, upon certain conditions. After the battle of Austerlitz peace was concluded between Austria and France. A few days before, on December 15, 1805, the Prussian ambassador, Count Haugwitz, concluded a preliminary convention between Prussia and France, by which Prussia ceded Anspach to Bavaria and Cleves and Neuchâtel to France, which made over the electorate of Hanover to Prussia, and Prussia in fact took possession of that country. This led to a declaration of war by England against Prussia. Various negotiations followed, which ended in a war between Prussia and France. The battle of Jena (October 14, 1806) decided the fate of the Prussian army. The most important fortresses between the Weser and the Elbe surrendered in rapid succession, and Napoleon I. entered Berlin on October 27th. Frederick William retired to Memel, collected a new army, and, together with his ally the Emperor of Russia, marched to oppose the advance of the enemy in East Prussia. The battles of Eylau and Friedland led to the peace of Tilsit (July 9, 1807), by which the king lost his dominions between the Rhine and the Elbe, and the greater part of Prussian Poland, which went to form part of the grand-duchy of Warsaw. The king did not return to his capital till the end of 1809. On February 24, 1812, he concluded an offensive alliance with France, and when war broke out between Russia and France, in June 1812, he sent 30,000 men to join the 10th French corps under Marshal Macdonald, which was employed in the siege of Riga. On the rapid retreat of the French from Russia the Prussian corps was likewise obliged to retire, but General York, who commanded it, concluded a convention with the Russian general Diebitzsch, by which the Prussian corps was declared neutral and separated from the French army. The campaign of 1813, the advance of the allies to Paris, the capture of that city in March 1814, the deposition of Napoleon I., his removal to the island of Elba, and the restoration of the Bourbons, followed in rapid succession. The return of Napoleon from Elba in 1815 led to a new alliance between Prussia, Austria, Russia, and England, who declared war against him. The battle of Waterloo led to the general peace of Europe, when the Congress of Vienna restored to Prussia her lost territories, with the exception of a part of Poland, in lieu of which she obtained a part of Saxony and the territories on the lower Rhine, distinguished above as Rhenish Prussia. During the reign of the present king, Frederick William IV., the most important events that have occurred in Prussia are the constitutional reforms above noticed; the suppression of the insurrection of the Poles of Posen in 1848; delivering Baden from insurgent bands of democratic socialists in 1849 [BADEN]; and the open assistance given to the Schleswig-Holsteiners in insurrection against their sovereign the King of Denmark. [HOLSTEIN.]

PRUSSIA, properly so called, formerly designated by the name of the Kingdom of Prussia, and afterwards divided into the two provinces of East and West Prussia, is situated between 52° 54' and 55° 53' N. lat., 16° 42' and 22° 45' E. long. It is bounded N. by the Baltic,

E. by Russia, S. by Poland and the province of Posen, and W. by Brandenburg and Pomerania. The area and population of East and West Prussia are given in the statistical table in the preceding article. Of the area 800 square miles are covered with waters. The climate is temperate in summer, very cold in winter, very changeable on the coast, and generally rather damp. The face of the country is level, broken here and there by low ranges of hills. The forests which cover the sandy plains are estimated at 2,000,000 of acres. The principal rivers are the Vistula, the Pregel, and the Memel, or Niemen. There are several hundreds of small lakes, namely, 300 in East and 150 in West Prussia; but no large ones, unless we reckon as such the two Haffs, which communicate with the sea only by canals, and have fresh water. [KURISCHES HAFF; FRISCHES HAFF.] The two largest are the Mauer Lake, 40 square miles, and the Spindling Lake, 70 square miles in extent. With regard to the natural productions, the province produces corn, pulse, flax of excellent quality, hemp, tobacco, hops, madder, potatoes, and timber. There are good breeds of the usual domestic animals, abundance both of fresh-water and sea fish, and bees. The mineral kingdom is very poor; iron however in various forms is abundant, and amber is more plentiful in this province than in any other part of the world. It is thrown up chiefly on the Baltic coast between Memel and the western extremity of the Gulf of Danzig. Its collection was formerly under the direction of persons appointed by the government, and the cause of much annoyance to the coast population who could not enjoy an aquatic excursion without subjecting themselves to a strict search on their return; and they could put to sea from certain places only. The collection of the amber has been farmed by the government since, we believe, 1809. The manufactures of the province are confined to the towns, of which the principal are Danzig, Memel, Elbing, and Königsberg. From Danzig and Memel large quantities of Russian produce, corn, tallow, hides, flax, hemp, timber, &c. are shipped. The province of East Prussia is divided into two governments, Königsberg and Gumbinnen; and West Prussia also into two governments, Danzig and Marienwerder. Under the heads DANZIG, GUMBINNEN, KÖNIGSBERG, and MARIENWERDER, further particulars are given respecting the provinces in question, including notices of the less important towns. The chief towns, DANZIG, ELBING, and KÖNIGSBERG are noticed separately.

PRUTH, RIVER. [AUSTRIA; Bessarabia.]

PRZEMYSL. [GALICIA, Austrian.]

PSKOW, a government of Russia, situated between 56° and 58° N. lat., 27° 20' and 32° 5' E. long., is bounded N. by lake Pskow, and the government of St. Petersburg, E. by Novgorod and Twer, S. by Smolensk, and W. by Witepsk and Livonia. The area is 17,126 square miles. The population in 1846 was 775,800.

The surface is level, and in some places slightly undulating: there are no mountains, though the whole country is rather elevated. The soil is partly clayey, partly sandy, and in many parts covered with a tolerably thick layer of mould. The only large lake is Lake Pskow, which is noticed under LIVONIA. The Polista, Podso, Khwat, and Woiskoe lakes are much smaller. There are also numerous meres and many marshes, principally in the south-east part of the government. There is no large river in the province. The Düna rises in it, but soon turns into Witepsk; the Loweth, or Lovat, which also rises in it, runs into Novgorod, is joined by the Polista and the Pola, and has below Velikie-Luki several rocks and whirlpools, which are called cataracts. Most of the rivers, though not deep enough for large vessels, are navigable by flat river boats called struses, and facilitate communication with St. Petersburg, Narva, and Riga.

The climate is cold. Agriculture is the chief occupation of the inhabitants. The soil is in general tolerably fertile, but requires careful cultivation and manure; it produces however not only sufficient for the consumption of the inhabitants, but also a surplus for exportation. The chief products are rye, barley, oats, and buckwheat; pulse, peas, beans, and lentils. Culinary vegetables, such as cabbages, turnips, onions, garlic, and cucumbers are cultivated. On the estates of the nobility small orchards are here and there to be seen. Flax and hemp, both of excellent quality, are staple productions. The extensive forests furnish abundance of timber, chiefly pines, fir, birches, and alders. The breeding of cattle is merely subservient to agriculture. Swine are kept in great numbers, but only few goats and little poultry. Beasts of prey and fur-bearing animals abound, such as bears, wolves, lynxes, foxes, martens, squirrels, and badgers. The lakes and rivers produce abundance of fish. The only mineral products are bog-iron, limestone, sandstone, and clay. There are salt-springs near the Szelon.

The inhabitants excel in dressing skins and manufacturing leather; but, unlike the Russians in general, they have not a turn for mechanics, and do not willingly apply to any kind of handicraft. The country-women hardly spin wool and flax sufficient to manufacture linen, stockings, &c. for their own use. Some struses and barks are built, there are many saw-mills, and a few spirit distilleries and glass-furnaces. Rye, oats, barley, squared timber, masts, spars, planks, hemp, flax, hempseed and linseed, wool, hides, and a few other articles are sent to Perna, St. Petersburg, and Narva, whence the inhabitants import colonial products and other necessary articles.

The great majority of the inhabitants are Russians of the Greek church. There are also many Germans in the towns.

Pskow, the capital of the government, is in 57° 40' N. lat., 28° 10' E. long., on the left bank of the Wellikaja, nearly 5 miles from its mouth in Lake Pskow. It is said to have been founded in the 10th century by the grand-duchess Olga. The interior of the city has some resemblance to that of Moscow. In the centre of the town is the Kremlin (on the steep left bank of the river), which was erected by Prince Dowmont, who reigned from 1266 to 1299. The citadel is surrounded by a wall. The middle town, extending in the form of a semicircle about the citadel, is also surrounded with a wall; a third very high and strong wall, 5 miles in extent, defends the great town, which envelops the middle town. There is a large suburb. Pskow has sustained several memorable sieges, among others, in 1614, when it was attacked without success by Gustavus Adolphus, king of Sweden. Pskow has declined from its ancient power and greatness, but is still a large town; it has one cathedral, richly adorned with gilding and carved-work, about 60 other Greek churches, a Lutheran church, three monasteries, an ecclesiastical seminary, a gymnasium, a district and other schools, an orphan asylum, and a handsome building for the government offices. It is the see of the Greek archbishop, and the residence of the military governor. The present population is 12,000, who manufacture Russia leather, linen, sail-cloth, and glass.

Toropes, an ancient town, with about 12,000 inhabitants, is extremely well situated for carrying on an extensive trade; it communicates with Riga by means of the river Toropa, on which it is situated, and which joins the Düna. There are thirteen churches and two convents in the town. Most of the houses are of wood. *Wellikaja-Luki*, on the Lovat, a tributary of Lake Ilmen, has about 4000 inhabitants.

PTOLEMETA. [CYRENAICA.]

PUCKLECHURCH. [GLOUCESTERSHIRE.]

PUEBLA. [MEXICO.]

PUEBLO NUEVO DE TAMAULIPAS. [MEXICO.]

PUERTO BELLO or VELO. [PANAMA.]

PUERTO CABELLO. [VENEZUELA.]

PUERTO DE SANTA MARIA. [SEVILLA.]

PUERTO REAL. [SEVILLA.]

PUERTO RICO, or PORTO RICO, an island of the West Indies, belonging to Spain, is the smallest of the Greater Antilles [ANTILLES], and the most western of the LEEWARD ISLANDS. It lies between 17° 55' and 18° 30' N. lat., 65° 39' and 67° 11' W. long.; and is bounded N. by the Atlantic, W. by the Mona Passage about 75 miles wide, which separates it from San Domingo, S. by the Caribbean Sea, and E. by the Virgin Islands. The island is in the form of a parallelogram, 100 miles long and 40 miles broad, and it contains about 3800 square miles. The population in 1849 was 288,000.

A range of mountains of considerable height runs through the centre of the island; the highest summit is that of Languillo in the north-east, which is 3678 feet above the level of the sea. Towards the south and east the mountains descend with rather a steep slope to the sea. On the north and west the descent is much less rapid, and there is a plain from five to ten miles wide between the sea and the base of the mountains. From the central chain many inferior ridges run north and south, containing between them valleys of great fertility. The valleys on the north side produce the best pasturage; those of the south grow most sugar. The coast abounds with harbours: those on the north coast are generally unsafe during the prevalence of the northerly winds, in consequence of the heavy surf which then rolls in upon the shore. The same cause creates bars at the mouths of the rivers on the north coast. The port of San Juan is however perfectly sheltered by the narrow island on which the town and fortress stand. Aguadilla is an open roadstead at the north-west extremity of the island and much exposed, but from its position and the abundant supply of provisions and water which it affords, it is much visited. It was here that Columbus effected his first landing on Puerto Rico. The ports of Guanica and Hovas, on the south coast are very large, afford excellent anchorage, and are easily defended. In the port of Guanica vessels drawing 21 feet of water may enter with perfect safety, and anchor close to the shore.

Few countries are so well watered by rivers as Puerto Rico. Seventeen rivers rising in the central chain run into the sea on the north coast. Of these Manati, Loisa, Trabajo, and Arecibo are deep and broad; and though there are bars at their mouths, small vessels with cargoes can safely cross them at high water. Some of the rivers on the north-west, unable from the accumulation of sand at their mouths to discharge rapidly the great quantity of water which they bring down from the mountains, have formed a series of lagoons along the coast, some of which are 8 or 10 miles long. These lagoons have been connected by artificial canals, and form a very convenient means of communication along this part of the coast. Nine rivers fall into the sea on the east coast, sixteen on the south, and three on the west. These rivers are well stocked with fish. During the last thirty years many good roads have been constructed and bridges built. The principal roads are from San Juan to Aguadilla and Mayaguez, from Ponce to Guayama, and from Faxardo to the capital. The greater number of bridges are of wood, but several are of stone.

The climate of Puerto Rico seems to be more favourable to Europeans than that of most of the other islands of the West India. The maximum height of the thermometer is stated to be 92° Fahr. in the

month of August, and the minimum 80° in December, taken at noon. There are two rainy seasons: the first commences in May and lasts about twenty days. The second is in September, when the rain pours down in such torrents, that in a few hours from the commencement of the rain the rivers have overflowed, and the low lands are completely inundated. August is the hottest month, and the most sickly for Europeans. The heat is then suffocating, the sea-breeze has died away into a calm, only occasionally broken by a faint breeze, and the night brings no relief, for there is no land-wind. In October the weather becomes much cooler. In November the north and north-east winds set in, and blow till January, during which months the weather is occasionally cool.

The soil of Puerto Rico is of the richest and most varied description: there is the deep rich soil required for the cultivation of the sugar-cane, the cool mountain valley for the coffee plantation, the most luxuriant pasture, the moist spot favourable for the cocoa-nut and the irrigated rice fields. The pasture-lands are principally on the north and east coasts; the cane-fields on the south and west. About one-fifteenth of the land is under cultivation, and upwards of 400,000 cwts. of sugar are annually produced; also very large quantities of coffee, maize, tobacco, rice, and some cotton. The proportion of sugar obtained from an acre is much greater than in either of the other West India islands. A large number of head of horned cattle are reared for exportation as well as for home consumption.

The island possesses no indigenous quadrupeds, scarcely any birds except a few species of water-fowl and some parrots, and no monkeys. The cane-fields are infested by rats of a large size, which at times commit great ravages.

There are no manufactures in Puerto Rico beyond those of the ruder articles of daily use. Nor have mining operations engaged much attention, though gold, iron, copper, lead, and coal are said to have been met with.

The commerce of Puerto Rico is very considerable, the exports having an average annual value of upwards of 5,000,000 dollars, the imports about 4,500,000 dollars. The principal exports are of sugar, molasses, and rum; coffee; cattle, and hides; cotton; tobacco, and cigars; timber and dye-wood; and indigo. The larger part of the commerce is carried on with Spain and the United States; but England, France, Denmark, and Germany share in it to a considerable extent. A heavy ad valorem duty is imposed on the importation of foreign goods; the consequence of which is an extensive contraband trade with St. Thomas's and other islands. The trade with America consists in salt-fish, grain, flour, butter, and lumber; with France, in linens, cambrics, ornaments, toys, and jewellery; with England, cotton goods, hardware, and earthenware: England takes a great quantity of cattle for the supply of her colonies; with Spain, olives, brandies, wines, dried fruits, anchovies, &c.; with the German States, in glass, sword-blades, linens, hams, &c.

Puerto Rico was discovered by Columbus in 1493. The natives submitted quietly to the Spaniards for some time, but at length rose and slaughtered many of them. On this the Spaniards exterminated the greater part of the natives, and the remainder have become so intermixed with the conquerors, that there is no mark of distinction between the races. The present inhabitants are composed of whites, who are somewhat more than half; and free mulattoes, who are somewhat more than one-fourth of the entire population; the remainder are negroes, about two-thirds of whom are slaves. It is remarkable that in Puerto Rico white and black persons work together in the fields at the same labour without any feeling of degradation on the part of the former; and there is said to be none of the antipathy manifested here between the races which is so common in the United States and elsewhere.

The government of Puerto Rico is administered by a captain-general, who has the supreme military command, but his civil authority is in some degree controlled by an officer who is called his legal adviser. A court of royal audience is invested with the superintendence of all other authorities, and is consulted by the governor on all important occasions. Two courts of cabildo superintend the police and municipal affairs. In each of the seven towns and villages which form the head of a department, a magistrate resides called the *alcalde mayor*. In the smaller towns there are inferior magistrates, who are annually appointed by the captain-general. The ecclesiastical tribunal is composed of the bishop and provisor. A naval tribunal is presided over by the commandant of the marine; and a consulado is established for the decision of all mercantile disputes.

The island contains 58 towns and villages. *San Juan de Puerto Rico*, the capital, is situated on the north side of the island, in 18° 29' N. lat., 66° 10' W. long.; population about 20,000. *San Juan* is built on a narrow island about 2 miles in length, which is connected at one end with the mainland by a bridge. The town is placed on the slope of a hill, and has regularly-built streets, which cross each other at right angles. It is inclosed by strong fortifications, and on the summit of the hill is a fortress called *Moro castle*. The harbour lies between the town and the mainland. *San Juan* is the seat of government. The chief public buildings are the cathedral, a theatre, a military hospital for 350 patients, another for females, a jail, a house of correction, a handsome town-house, an arsenal, a custom-house, four churches and two chapels. The town has been thrice unsuccessfully attacked by

British forces: in 1594 under Sir Francis Drake; in 1791 under Sir Ralph Abercromby; and in 1799 under Sir Henry Harvey; and once successfully in 1597 under the Earl of Cumberland.

The more important of the smaller towns in Puerto Rico are *Maya-gues* and *Aguadilla* on the west coast, *Ponce* on the south coast, *Humacao* on the east coast, and *Pepino* and *Cayey* in the interior. The rest are very small, consisting generally of a large square with a church and a few straggling houses.

PUGHAN, or PAGHAN MEW. [BURMA.]

PUGHMAN MOUNTAINS. [AFGHANISTAN.]

PU'GLIA, the ancient *Apulia*, is the general name given to a large division of the kingdom of Naples, which, lying between the Apennines and the Adriatic Sea, comprises the provinces of *Capitanata*, *Terra di Bari*, and *Terra d'Otranto*. It is naturally divided into two regions, namely, the great plain of *Capitanata*, called *Puglia Piana*, or 'Flat Apulia,' and the hilly region of *Bari* and *Otranto*, called *Puglia Pietrosa*, or 'Stony Apulia.' These regions are noticed under *CAPITANATA*, *BARI (TERRA DI)*, and *OTRANTO (TERRA DI)*. The whole of *Puglia* is one of the most productive countries of the kingdom; its chief wealth consists in corn, oil, wool, and cattle. [APULIA.]

PULAWY. [POLAND.]

PULBOROUGH. [SUSSEX.]

PULICAT. [CARNATIO.]

PULO NIES and PULO BATU. [SUMATRA.]

PULTAWA. [POLTAWA.]

PULTUSK. [POLAND.]

PUNHETE. [ESTREMADURA, Portuguese.]

PUNJAB. [HINDUSTAN.]

PUNTA-DE-ARENAS. [COSTA RICA.]

PURBECK. [DORSETSHIRE.]

PURFLEET. [ESSEX.]

PURIFICACION. [MEXICO.]

PURLEIGH. [ESSEX.]

PURNEAH, the capital of *Purneah* district, in the province and presidency of *Bengal*, is situated in 25° 50' N. lat., 87° 34' E. long., about 230 miles N.W. from *Calcutta*. The population of the city and suburbs is estimated at 40,000. *Indigo* is raised to a considerable extent in the district.

PUTEOLL [NAPLES, Province of.]

PUTNEY. [SURREY.]

PUTWL. [KURSK.]

PUY, LE. [LOIRE, HAUTE.]

PUY-DE-DÔME, a department in France, lies between 45° 18' and 46° 16' N. lat., 2° 27' and 3° 57' E. long.; and is bounded N. by the department of *Allier*, E. by that of *Loire*, S. by those of *Haute-Loire* and *Cantal*, and W. by those of *Creuse* and *Corrèze*. Its greatest length from north-west to south-east is 85 miles, and the average width is about 50 miles. The area is 307285 square miles; the population in 1841 was 591,458; in 1851 it amounted to 596,897; which gives 194.248 to the square mile, being 19.664 above the average per square mile for the whole of France. The department is formed out of *Lower Auvergne*, part of *Bourbonnais*, and a small portion of *Fores*; and is named from a lofty peak in the *Dômes* Mountains.

The surface presents an extensive undulating basin inclining generally towards the north, drained by the *Allier*, and shut in on the east and west by two chains of volcanic mountains resting on a granitic base. This basin, which is distinguished by the name of *La-Limagne*, consists of the valley of the *Allier*, into which a great number of other valleys open on either side, each watered by a stream that descends from the neighbouring mountains, and separated from the adjacent one by gently-sloping hills. The *Limagne* has a soil which consists of decomposed volcanic matter mixed with alluvial deposits; it is exceedingly fertile and well cultivated; the hill sides are covered with vineyards and orchards; the rows of walnut-trees that bound the fields, and the chestnut plantations, with their masses of foliage, add richness and variety to the landscape, which presents at every turn some new beauty. The chief products of this basin are wheat, hemp, wine, oil, and fruits; there is some fine pasture-land, and a great breadth of rich meadow, especially near *Riom*, which is flooded every year and yields three crops of hay.

The mountains of *Fores*, which bound the *Limagne* on the east, are an offshoot of the *Cévennes*; they form the watershed between the *Allier* and the *Loire*, and are covered with pine forests interspersed here and there with some hungry pastures, and a few cultivated patches that yield only oats and rye.

The western boundary of the *Limagne* is formed by that portion of the *Auvergne* Mountains which runs northward out of the department of *Cantal*, and forms part of the watershed between the *Garonne* and the *Loire*, including the two remarkable volcanic groups of the *Monts-Dômes* and the *Monts-Dores*. The common base of these mountain groups is 1968 feet above the mean level of the *Limagne*. The *Monts-Dores*, or *Monts-D'Or* (as the name is commonly but incorrectly written), are in the south of the department, and consist of a great number of high peaks, the loftiest among which, called *De-Sancy*, has an elevation of 6196 feet above the level of the sea. The peak *De-Sancy*, although it has no crater, is covered on all sides with bare rocks, lava streams, and other volcanic products—a circumstance

which favours the opinion that this elevated mass once had near it a still more elevated crater, whence the materials that form it were thrown out. Indeed but few of the peaks of the Monts-Dores have craters, yet they are all of unquestionably volcanic origin. This mountain mass is visible from Montauban, in the department of Tarn, a distance of 127 miles; and the view from the accessible summits is said to be of a most extensive range, reaching even to the Alps. On the north-western flank of the Monts-Dores rise the two streams that give origin to the Dordogne, which river drains the south-western angle of the department: the slopes of the Monts-Dores are rich in pasture and medicinal plants. The *Monts-Dômes* group lies more to the northward, a few miles west of the city of Clermont-Ferrand. It is famous for its picturesque beauty, and presents above 40 conical peaks with extinct craters, locally called 'Puy,' lava-streams that seem but just arrested in their course, basaltic columns in every variety of position, and frightful ravines, the sides of which give evidence of the agency that reared these stupendous masses. Far above all the other peaks rises the majestic cone of the Puy-de-Dôme, which gives name to the department, and forms an object of grand and striking beauty, being covered with brilliant verdure in all its vast dimensions, from base to summit, except in a few places where some rude protuberances and hideous chasms display the volcanic origin of the mountain. Although its summit is 4805 feet above the sea-level it is easily accessible, and presents in clear weather a view perhaps unequalled for extent and variety. Standing on its lofty summit the spectator beholds countless numbers of cattle and sheep feeding all round the grassy slopes of the Puy; a little further a vast number of conical peaks yawning with craters, some of which contain water; further south and west, the Auvergne ranges, extending into the departments of Corrèze and Cantal, and inclosing between them the valley of the upper Dordogne; away to eastward and northward the whole basin of the Limagne with its towns, villages, and hills, its fields of every hue, its vineyards, isolated homesteads, rivers, and highways, all spread out before him as in a map or picture. The Puy-de-Dôme is connected with the history of the barometer, Pascal's test of the Torricellian theory having been satisfied by carrying the instrument to the top of this mountain. The basement and lower slopes of all these mountains abound in excellent pasture, and in medicinal and aromatic plants. Hot and cold mineral springs exist at several points, the most famous being the hot springs of Mont-Dore-les-Bains, near the source of the Dordogne. The mountains above described present the finest ancient volcanic mountain scenery in Europe.

The climate of the department is not uniform. In the Limagne the summer is very hot, and the winter of short duration; the thermometer reaches 86° Fahr. in the shade in summer, and sometimes as low as 5° in winter. On the mountain slopes, above the region of vines, where only oats and hardy grains are grown, the winter and spring are cold; the high mountains, which are adapted solely for summer pasture, have a long winter, the intense cold lasting from December to the end of February. The western range of mountains is subject to terrible hurricanes. The prevailing winds are the south-west and the north-west.

The principal rivers are the ALLIER and its feeders, the Dore and the Sioule, which drain the eastern and north-western districts respectively; the DORDOGNE; and the Ance, a small feeder of the Loire which flows south, draining a small strip on the extreme south-east of the department. Highway accommodation is afforded by seven national and departmental roads. In the west of the department there are several small lakes, and also many beautiful waterfalls.

The corn products of the department exceed the consumption; chestnuts, hemp, apples, pears, apricots, and other fruits, are grown in great abundance. About 12,892,000 gallons of wine are made annually, of which a third part goes to the home consumption. The principal forests are in the arrondissements of Thiers and Ambert; they contain pine, oak, and beech, and afford a considerable quantity of timber and firewood, which are floated to the Allier, and thence conveyed northward along the latter river. Horses are small. Cows are very numerous, a good deal of cheese and butter is made; and many cattle are fattened. There are immense numbers of sheep, but of inferior breed. Among the wild animals are boars, roebucks, wolves, foxes, hares, eagles, vultures, &c.

A lead-mine near Pont-Gibaud and one of antimony near Rochefort are worked. The country is rich in minerals. Iron, zinc, copper, alum, and manganese, are found. Coal-mines are worked in the north-west of the department near Montaut; and also at several points on the left bank of the Allier, by which river the coals are forwarded to Paris and Orleans. Almost all the towns of the department are built of volcanic substances; and for building purposes there are numerous quarries of lava, trachytic rock, basalt, pumice, besides granite, limestone, and bitumen. The lava quarries of Volvic, near Riom, are especially to be noted.

The manufactures of the department, which are unimportant, are noticed under the several towns. The commerce is composed of the various agricultural products before named, confectionary, hides, paper, hampseed, nut-oil, deal planks, cattle, wool, coal, &c. Above 460 fairs and markets are held chiefly for the sale of stock and farm produce.

The department contains 1,966,624 acres. Of this area 905,276

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acres are under plough culture; 222,726 acres are meadow and grass land; 72,088 acres are under vines; 208,486 acres are covered with woods and forests; 474,756 acres consist of heath and mountain pasture; 14,646 acres are laid out in orchards, nurseries, and gardens; 15,756 acres are occupied with rivers, waters, irrigating rills, &c.; and 54,246 acres with roads, streets, and buildings.

The department is divided into 5 arrondissements, which, with their subdivisions and population, are as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Clermont-Ferrand	14	108	174,126
2. Ambert	6	53	90,048
3. Issoire	9	116	100,671
4. Riom	13	128	158,035
5. Thiers	6	39	78,017
Total	50	443	596,897

1. The first arrondissement takes its name from its chief town CLERMONT-FERRAND already described, which is also the capital of the whole department. *Billom*, formerly the capital of the Limagne, is situated on a high hill, 18 miles E.S.E. from Clermont, and has a tribunal of commerce, a college, a clerical seminary, and 3993 inhabitants, who manufacture linen, pottery, bricks, tiles, and lime; and trade largely in hemp, wool, corn, cattle, timber, &c. *Pont-du-Château*, 9 miles E. from Clermont, and on the left bank of the Allier, which is here crossed by a basaltic bridge of 8 arches, is built on the slope and crown of a hill, and has 3562 inhabitants. It takes its name from the bridge and a castle near the river. A large portion of the articles exported from the department are sent down the Allier from this place, consisting of wine, hemp, ivory-black, coal, apples, wood, corn, hay, mill-stones, asphalt, &c. *Vic-sur-Allier*, the birthplace of Le Sage, 12 miles S.E. from Clermont, has 3185 inhabitants, and is celebrated for the mineral springs near it.

2. The second arrondissement takes its name from *Ambert*, which is situated at the foot of a ridge of hills in the fertile valley of the Dore, a feeder of the Allier, 35 miles S.E. from Clermont, in 45° 33' 4" N. lat., 3° 44' 35" E. long., 1742 feet above the level of the sea, and has tribunals of first instance and of commerce, a college, and 8044 inhabitants in the commune. The houses of the town are in general well built; but the streets are narrow and crooked. The granite church of St.-Jean, surmounted by its lofty spire, is the most remarkable structure. Woollen cloth, blankets, laces, garters, serge, linen, pins, tape, woollen yarn, and a large quantity of printing and engraving paper are manufactured. *St.-Amand-Roches-Savine*, 6 miles from Ambert, has silver-lead mines, and 2294 inhabitants. *St.-Anthème*, a large village 8 miles E. from Ambert, has a population of 3425. *Arianc*, 10 miles S. from Ambert, prettily situated on the slope of a hill above the Dore, has a mineral spring, and a population of 4390, who manufacture blond lace, linen, and small wares.

3. In the third arrondissement the chief town, *Issoire* (the ancient *Isiodorum*), is situated near the confluence of the Couze and the Allier, in 45° 32' 37" N. lat., 3° 15' 13" E. long., 1309 feet above the sea, 20 miles S.S.E. from Clermont, and has tribunals of first instance and of commerce, a college, and 5785 inhabitants in the commune. It is in general a well-built, clean, and regularly laid out town, all the principal streets abutting on a great central square in which markets are held. The parish church, which has a curiously-decorated exterior, and has been numbered among the historical monuments of France, is the principal structure. Copper ware and nut-oil are the chief industrial products. The mineral springs of *Liens*, and the numerous volcanic rocks in the neighbourhood of the town, deserve mention. *Ardes*, 12 miles S.W. from Issoire, in a country bristling with volcanic rocks, stands on the Grande-Couze, and has about 2000 inhabitants. *Besse*, 16 miles W. from Issoire, built on an enormous mass of black basalt, of which substance the houses are constructed, stands on the Couze, and has 2096 inhabitants. In this town is a curious circular structure, which some think to be a temple of the sun, others an ancient baptistry. Two miles N.W. from Besse is the Lake Pavin, which occupies the crater of an extinct volcano, on a high mountain-peak of the Mont-Dores. *St.-Germain-Lembron*, 6 miles S. from Issoire, has a population of 2135. *Saux-Manges*, 5 miles E. from Issoire, is a small place of 2049 inhabitants, who manufacture camlet, scythes, saw-blades, reaping-hooks, and leather.

4. Of the fourth arrondissement, the chief town, *Riom*, is built on a hill above the Ambone, a feeder of the Allier, in 45° 53' 39" N. lat., 3° 6' 54" E. long., 1173 feet above the level of the sea, 9 miles N. from Clermont, and has 10,269 inhabitants in the commune. The town is the seat of a High Court for the departments of Allier, Cantal, Haute-Loire, and Puy-de-Dôme; it has tribunals of first instance and of commerce, and a college. The streets are wide; the houses are constructed with lava, and have an ancient look; the courts of justice, the hospitals, and the residence of the prefect, are built in a good style. The whole town is surrounded by shady walks, one of which is adorned with a column in honour of Desaix, the hero of Marengo. The chapel built by Jean de Berry, first duke of Auvergne, in 1352, for the service of the ducal palace (now the court-house), still remains

entire, and contains magnificent windows of the best period of glass-painting. The other structures worthy of note are the cathedral, the corn-market, and the reservoir, which is fed by an aqueduct. Linen, leather, and brandy are the chief manufactures; these articles, together with wine, corn, hemp, fruits, nut-oil, and preserves, form the items of a considerable commerce. *Aigue-Perse*, the birthplace of the chancellor De l'Hopital and the poet Delille, is a well-built little town, situated in a fertile wheat district, 9 miles N.E. from Riom, and has 3053 inhabitants. Near it there is a mineral-spring gushing out from the foot of a hill called *Butte-de-Montpensier*, the summit of which commands a magnificent view, and is covered with the ruins of an ancient castle, demolished in 1637, by order of Cardinal Richelieu. The other towns are small: among them is *Randans*, 15 miles N.E. from Riom, population 2149. Madame Adélaïde, sister of King Louis Philippe, who was owner of the fine estate and splendid mansion that formerly belonged to the Polignacs near Randans, was a great benefactress to this town. The mansion commands fine views over a level country, with the mountains of Forez, the Puy-de-Dôme, and the Mont-Dores in the distance.

5. The fifth *arrondissement* takes its name from *Thiers*, which stands on the crown and slope of a high hill, above the *Durolle* (a feeder of the Dore), 24 miles E.N.E. from Clermont, in 45° 51' 15" N. lat., 3° 33' 5" E. long., 1312 feet above the level of the sea; and has tribunals of first instance and of commerce, a consultative chamber of manufactures, a council of prud'hommes, a college, and 9984 inhabitants. The town is very irregularly built, though some of the houses are good; and the streets are narrow, steep, and crooked. The summit of the hill presents a splendid view of the whole of the fertile district of Limagne and of the majestic mountains of Auvergne. The vicinity abounds in wild and picturesque sites, in juxtaposition with vine-clad hills and rich meadows. On the hill slopes, and among the rocks along the left bank of the *Durolle*, are numerous small habitations, all resounding with the noise of the hammer or the file. The *Durolle*, which runs through a narrow gorge called *Trou-d'Enfer*, close to the town, forms several small cascades, and drives the machinery of numerous iron-forges and paper-mills. The church of St. Jean is the most remarkable building in this town. The leading manufactures are cutlery, hardware, and paper; broadcloth, sewing thread, ribbons, playing-cards, chessmen, and leather are also made. *Courrière*, 8 miles E. from Thiers, on the left bank of the Dore, has a population of 3592, and manufactures of woollens, small wares, and pottery. *Loux*, situated in a fertile plain, 8 miles W. by S. from Thiers, is a pretty well-built town, with 8601 inhabitants, who manufacture pottery and leather. *Maringues*, situated 12 miles W. by N. from Thiers, near the confluence of the *Morge* with the *Allier*, is a well-built town, with numerous tan-yards for the manufacture of shoe- and glove-leather: population, 4109. *St. Remy*, 8 miles N.E. from Thiers, has 4081 inhabitants, who manufacture superior cutlery.

The department forms the see of the bishop of Clermont; is included in the jurisdiction of the High Court of Riom, and within the limits of the University-Academy of Clermont-Ferrand; and belongs to the 20th Military Division, of which Clermont-Ferrand is headquarters. It returns five members to the Legislative Chamber of the French empire. [AUVERGNE; CLERMONT-FERRAND.]

(*Dictionnaire de la France; Annuaire pour l'An 1858; Annuaire du Commerce; Official Papers.*)

PUY-LEVEQUE. [LOT.]

PUY-LAURENS. [TARN.]

PWLLHELLI, Caernarvonshire, a market-town, sea-port, municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parishes of Denio and Llannor, is situated on the shore of Cardigan Bay, in 52° 54' N. lat., 4° 24' W. long., distant 21 miles S. by W. from Caernarvon, and 284 miles N.W. by W. from London. The population of the borough of Pwllheli in 1851 was 2709. The borough is governed by four aldermen and 12 councillors, of whom one is mayor, and is contributory to Caernarvon in returning one member to the Imperial Parliament. Pwllheli Poor-Law Union contains 32 parishes and townships, with an area of 92,889 acres, and a population in 1851 of 21,896.

Pwllheli consists of one long well-built street. In the town are a parochial chapel, chapels for Independents and Baptists, National and Infant schools, and a savings bank. A county court is held. The harbour has at its entrance a round rock, called *Careg yr Imbill*, about a mile from the town, to which it is joined by a range of sand-hills; vessels of about 60 tons find accommodation in the harbour. Ship-building employs some of the population. Wednesday and Saturday are the market-days. Six fairs are held in the year. Lobsters, oysters, crabs, and mussels are abundant, and salmon of good quality are taken. The sands on the beach are well adapted for bathing.

PYDNA. [MACEDONIA.]

PYRAMUS, RIVER. [ANATOLIA.]

PYRENEES (the *Pyrenæi Montes* of Julius Cæsar and the *Pyrenæ* of Strabo and Lucan), a range of mountains extending from the Mediterranean Sea to the Bay of Biscay, and constituting a natural barrier between France and Spain. The etymology of the name is uncertain. An offset which runs in a northerly direction between the Aude and the Lers, and forms in this part the watershed between the Bay of Biscay and the Mediterranean, is usually said to connect

the Pyrenees with the Cévennes Mountains; on the west, the prolongation of the Pyrenees forms the mountains of Guipuzcoa, Biscay, Asturias, and Galicia, which terminate in the capes Ortegal and Finisterre, and the other headlands of the northwest of Spain. The present article however is a notice of that part only of the system to which the name of Pyrenees is usually applied.

The area occupied by these mountains is comprehended between 42° 10' and 43° 20' N. lat., 3° 20' E. and 2° 0' W. long. The length of the chain from Cape Creux, near the town of Rosas, in Catalonia, on the coast of the Mediterranean, to the 'port' of Passages in Guipuzcoa, is about 370 miles in a straight line from east-by-south to west-by-north. The breadth varies from about 20 miles near the eastern extremity, to about 60 miles near the centre, and to 40 miles near the western extremity of the chain. The Pyrenees pass along the border of the following departments of France, enumerated in order from east to west:—*Pyrénées-Orientales*; *Ariège*; *Haute-Garonne*; *Hautes-Pyrénées*; and *Basses-Pyrénées*. In Spain the Pyrenees pass through Catalonia, the valleys of Andorre and Arran, Aragon, and Navarre.

The range of the Pyrenees may be regarded as consisting of two parts, both having the same general direction, but not forming one continuous line: the point of dislocation is near the head of the Garonne; thence to the Mediterranean the principal ridge is more advanced toward the north than between the head of the Garonne and the Bay of Biscay. The point at which the two parts of the chain approach each other is occupied by a group of mountains which unite them to one another. The southern slope of the Pyrenees is steeper than the northern: the ascents on the Spanish side are invariably more rugged and difficult. The French valleys generally ascend toward the main ridge by a succession of steps and terraces. As in most other great mountain systems the loftiest summits are not found in the line of direction of the main ridge, but at short distances from it, in some of the numerous spurs thrown out on both sides of it. Lateral branches inclosing valleys are thrown off at points where the main ridge rises into lofty summits; while the heads of the valleys are marked by depressions, which constitute the natural passes between one side and the other of the mountains. Towards the eastern extremity of the Pyrenees these depressions are called 'cols,' as in the Alps: in the central and western parts they are more commonly designated 'ports.' The principal branches thrown off on the northern side are the *Corbières Mountains*, which cover a considerable portion of the department of Aude, on the right bank of the river Aude; the ridge already alluded to as forming part of the watershed between the Mediterranean and the Atlantic, and by a certain latitude of expression said to connect the Cévennes with the Pyrenees; and the range that separates the basins of the Adour and the Garonne.

At their eastern extremity in Cape Cerbère the Pyrenees are about 1470 feet high above the sea; they rise rapidly as they proceed westward, reaching 1920 feet near Bellegarde; after a slight depression here, which forms the Pass of Pertus, they swell to the lofty mass of Costabona, whence springs to northward the spur crowned by the Canigou, 9135 feet high. The principal ridge attains the height of several thousand feet not far from Mont-Louis, and instead of the hitherto rounded summit terminating in plateaus covered with forests or pastures, it begins to assume bolder and more imposing forms; a crest bristling with peaked summits and scarped rocks, frowning chasms, and precipices become the leading features. Sinking to 5113 feet to form the pass of La-Perche, it soon rises to 6394 feet, and increases to 7673 feet near the valley of Vic-Dessos; here again there is a swell to above 9000 feet, which sends out northward the spur that contains Montolm, whose summit is 10,513 feet high. From this part to the source of the Garonne in the Val-d'Arran the height of the chain is almost uniformly about 7673 feet. After bending round the Val-d'Arran, another massive swell takes place in the main ridge, whence projects to the southward the gigantic spur containing the *Maladetta*, which reaches the height of 10,563 feet, and is one of several peaks that are gathered nearly in a semicircle round the Peak of Néhou, or Malahite, the loftiest summit in the Pyrenees, which has an elevation of 11,168 feet above the sea. Between the *Maladetta* and the Val d'Ossau, the principal chain reaches its greatest height, the crest maintaining an elevation of 8320 feet, while the spurs thrown out north and south contain several very lofty peaks, among which are—the *Punta-de-Lardana*, 11,000 feet; the *Tours-de-Marboré*, the highest of which has an elevation of 10,660 feet; *Mont-Perdu*, 10,991 feet; the *Vignemale*, 10,817 feet; the *Pic-du-Midi*, 9486 feet. In this part also are numerous lakes, glaciers, cascades, and inclosed between the lateral ranges, transverse valleys of great length abounding in magnificent scenery. West of the Val d'Ossau the summit of the main ridge, as well as of the branches, again assumes the generally rounded form, and in many places is covered with pastures; here and there however are still seen peaks exceeding 7500 feet in height. The range at its western, as at its eastern extremity, is crossed by several practicable passes, called 'ports,' or 'cols,' the most important of which are noticed in the account of the French departments named above. The Pyrenees, as considered in this article, terminate near Fuenterrabia, in the masses which inclose the valley of the *Bidasoa*, while the main ridge continues its western course under various names across the north of Spain.

All the great valleys of the Pyrenees are transverse. The val-

head is usually at a 'col' or a 'port,' and the valley extends for many miles towards the north or south, bounded by lateral branches of the mountains. The longest valleys, as that of the Garonne, and the valley of Lavedan, which is watered by the Gave-de-Pau, are near the centre of the great range. Many of the valleys present a succession of basins, or circular hollows, locally called 'oules,' through which the stream which waters the valley winds slowly, assuming a character in keeping with the scenery of these secluded spots. These basins are usually elevated one above the other, and they communicate by narrow and deep ravines, or by a slope or descent more or less steep. In the upper part of the valleys, where these basins are more frequent and more perfect in their form, they often contain lakes or tarns. Tarns are numerous on the French side of the mountains; on the Spanish side they are rare. Some of them are in very elevated sites from 6000 to nearly 8000 feet above the sea. The most elevated lake seems to be that of the Pic-du-Midi. Some of them, as the Lake of Oo, are frozen for the greater part of the year. At the head of some of the valleys is found an 'oule,' 'olla,' or hollow, surrounded by walls of almost perpendicular rock, and forming a cirque or amphitheatre. The most famous of these circular vale-heads is the Cirque of Gavarnie, celebrated for its romantic scenery. [PYRÉNÉES, HAUTES.]

The line of perpetual congelation in the Pyrenees, according to Malte-Brun, occurs at the height of 9269 feet on the northern slopes, and 8311 feet on the southern. The climate in the neighbourhood of the Pyrenees varies considerably. It is warmer at the extremities, because of the inferior height of the mountains and the proximity of the sea; this is especially the case at the eastern extremity, where the olive grows luxuriantly. The winters are short, and in the lower valleys snow rarely lies more than a day or two. In the upper valleys the climate is more rigorous. The lower slopes are in many parts covered with forests of oak and beech; the pine, the fir, the box, the rhododendron, the Alpine rose, the dwarf willow, and a variety of other trees and shrubs grow higher up the sides. The summers are very warm, and vegetation in all the valleys is very luxuriant. Thunder-storms are frequent.

Many rivers rise in the Pyrenees. Those on the southern side, except a few near the eastern extremity, flow into the Ebro. The waters of the northern slope, with the exception of the Bidasoa, which flows directly into the ocean, are carried into the Bay of Biscay by the Adour, the Ariège, and the Garonne; or into the Mediterranean by the Aude, the Tech, the Tet, and the Gly. There are numerous mineral springs in the neighbourhood of the Pyrenees. Those of Bagnères-de-Bigorre, Bagnères-de-Luchon, Barrèges, St-Sauveur, in the valley of Lavedan; Cauterets; Eaux-Bonnes, in the valley of Ossau; Eaux-Chaudes, in an adjacent valley; Ax, in the valley of the Ariège; Alet, in that of the Aude; and some others, are of considerable note.

In the higher Pyrenees small glaciers are of frequent occurrence; they are found adjacent to the loftiest peaks. Avalanches also occur, as in the Alps. The glaciers of the Pyrenees are found on the slopes of the loftier mountains, not occupying deep gorges or valleys, as in the Alps; neither are they as in the latter mountains contiguous, but separated frequently by considerable intervals. They are frequently traversed by deep fractures or chasms. Glaciers are found only between the valleys of Arran and Ossau, and for the most part on the northern slope of the mountains.

The recesses of the Pyrenees are the haunts of the isard, a variety of the chamois, of smaller size and brighter colour. The bear and the wolf are also found. The slopes of the mountains afford pasturage in summer to numerous flocks, which are driven thither from the plains or lower slopes where they pass the winter. Medicinal plants abound. The mountaineers are a fine intelligent race of men. An unhappy and despised race of men, commonly but falsely said to be disfigured by goltre, are found in the western Pyrenees, where they are called Cagots. They were formerly held in the utmost abhorrence and kept in a state of the greatest degradation: in the churches they had a distinct place which they reached, not by the same entrance as other Christians, but by a side-door made purposely for them. The condition of the Cagots has been ameliorated by advancing civilisation, and they are now nearly absorbed by intermarriage with the mass of the population. Goltre and cretinism are not unfrequent in the Pyrenean valleys, but they have never been confined to the Cagots alone. The prevailing opinion is that the Cagots are descended from a tribe of Saracens.

Although hot-springs exist in most of the valleys of the Pyrenees yet there is no appearance of volcanic action in the structure of the mountains, the mass of which is composed of primitive, transition, and secondary formations. The primitive rocks, which form the least part of the mass, comprise granite and gneiss; these rocks in the eastern part of the Pyrenees are found on the north slope considerably below the crest of the chain, but towards the west they form the crest itself and part of the southern slope. Towards the middle of the range micaceous schist is found and primitive limestone extends between the Garonne and the Ariège. Sienite, porphyry, serpentine, and trap are occasionally met with among the varieties of the primitive formations. The transition rocks, which form the larger part of these mountains, are clay-slate and grauwacke-slate, which extend in two

beds from one end of the chain to the other, resting in a very inclined position upon the primitive formations. Bands of red-sandstone and alpine limestone occur along the chain chiefly on the southern slope, and also nearly uninterruptedly on the northern slope, but not in such great masses. Ophite is found, not in strata, but in isolated masses, generally at the entrance of the valleys. The Pyrenees are rich in iron-ore; copper also, lead, and silver exist in the mountains that flank the valley of Baigorri; some gold is washed down by the Salat, the Ariège, and the Garonne. Fine statuary and beautiful coloured marble are quarried.

The most important, because most practicable, passes of the Pyrenees are, proceeding from east to west, the Col-de-Pertus commanded by the fortress of Bellegarde, through which runs the road from Perpignan to Barcelona, practicable at all seasons, and for vehicles of every kind; the Col-de-la-Perche, commanded by the fortress of Mont-Louis, communicating between French and Spanish Cerdagne: the Port-de-Salo, through which runs the road from Toulouse and St-Girons to Lerida; the Port-de-Viella, by which communication is kept up between the valley of Arran and the rest of Spain: the Port-de-Canfranc, through which runs the road from Oléron by the valley of Aspe to Jaca: the Port of Orisson and the Port of Roncevaux, or Roncesvalles, through which runs the road from St-Jean-Pied-de-Port to Monreal: and the Port-de-Maya, communicating between Bayonne and Pampeluna. The main road from Paris, Bordeaux, and Bayonne to Madrid crosses the Bidasoa near the sea, at the western extremity of the chain. It was by the Pass of Pertus that the armies of Hannibal and Julius Cæsar crossed the Pyrenees. Charlemagne advanced into Spain, A. D. 778, by the pass of Roncesvalles, where his rear-guard suffered great loss from the hardy mountaineers. Among the slain was the renowned Roland, whose name still lives in the traditions of the country, besides being given to the famous Brèche-de-Roland, the highest pass of the Pyrenees (about 9000 feet), which he is said to have formed by a blow of his sword. There are above 50 passes in the Pyrenees, but except those mentioned (not including the Brèche-de-Roland) few are traversed unless it be by smugglers or adventurous tourists.

PYRÉNÉES, BASSES, a department in the south-west of France, lies between 42° 47' and 43° 35' N. lat., 0° 2' E. and 1° 45' W. long., and is bounded N. by the departments of Landes and Gers, E. by that of Hautes-Pyrénées, S. by the Pyrenees and Spain, and W. by the Bay of Biscay. Its greatest length from east to west is 88 miles; the breadth varies from 13 to 55 miles. The area is 2943·3 square miles. The population in 1841 was 451,683; in 1851 it amounted to 446,997, which gives 151·869 to the square mile, being 22·715 below the average per square mile for the whole of France.

The department is formed out of the old principality of BERN, Basse-Navarre, the Basque districts of Soule and Labour [BASQUES, PAYS DES], and a portion of Chalosse. It takes its name from its position on the slopes and at the foot of the Western Pyrenees, which send out numerous offshoots to the north-west, dividing the surface of the department into a great number of valleys, each watered by a clear rapid stream that ultimately falls into the ADOUR on the northern boundary. From the Basque word for running water these mountain rivers are called 'gaves.' The principal of them are the Gave-de-Pau, which drains the north-east, and the Gave-d'Oloron (formed by the gaves that drain the valleys of Aspe and Ossau), which runs through the central districts. More to westward are the Bidouze and the Nive (this enters the Adour at Bayonne), the Nivelle, which rises in Spain and enters the Gulf of Gasconne at St-Jean-de-Luz, and the Bidasoa, which marks the boundary between France and Spain for a short distance before its entrance into the Bay of Biscay below Fuenterrabia. Timber and other articles are floated down all these rivers almost from their sources; such of them as fall directly into the sea have a tide navigation a few miles from their mouths.

The lower valleys of the department, the principal of which are those of Baigorri, Soule, Aspe, and Ossau, are fertile. The vale-heads in many instances have the form of an amphitheatre (locally called 'oule' from the Spanish 'olla,' pot), inclosed by high mountains, and connected with the valleys by narrow gorges; some of them also present beautiful cascades. The high valleys and lower slopes of the Pyrenees afford excellent pasture, on which great numbers of cattle, swine, sheep, mules, and light Navarrese horses are fed. The hill-sides are in general covered with vineyards, which yield very good wine, and with plantations of fruit and chestnut-trees. The annual produce of wine is about 7,150,000 gallons, the best kinds being those of Jurançon and Gan. The high mountains are to a great extent covered with forests of pine, fir, and oak, which afford good ship timber. Along the Adour there is some marsh land, and in the north-west, and near the sea, there are some naked barren wastes. Of wheat the produce is not enough for the consumption; other crops are rye, barley, oats, millet, chestnuts, and maize, which last forms the principal article of food of the peasantry. The growing of flax and hemp, the trade in hams chiefly carried on in Pau and Bayonne, and the traffic in mules and cattle with Spain, are the most important sources of wealth to the agriculturist.

The Pyrenees consist of primitive rocks (especially granite mingled with gneiss), which occupy however but a small space in this department. The transition rocks (grauwacke, grauwacke-slate, clay-slate, and transition limestone) form the principal component of the

mountains, skirting the nucleus of primitive rocks by which they are supported. The secondary formations, especially the new red-sandstone, and the Alpine limestone which overlies it, form the predominant rocks; the former is observed in the higher part of the mountains, where it usually exceeds the transition rocks in elevation; the latter appears in the lower slopes and at the base of the mountains, extending northward in several parts to the banks of the Adour and the Gave-de-Pau. The immediate vicinity of these rivers, and the north-eastern part of the department, which extends across the Gave-de-Pau, are occupied by the tertiary formations. Masses of secondary trap rocks are found in the lower part of the valleys watered by feeders of the Nive; the Gave-d'Oloron, and the Gave-de-Pau. The formations of the cretaceous group are found on the flanks of the Pyrenees, but considerably altered in their mineralogical character by their vicinity to the granite.

The mineral wealth of the department comprises silver, copper, iron, lead, coal, salt, cobalt, and sulphur; slate, marble of all colours, granite, alabaster, rotten-stone, and marl. Of the numerous mineral springs the most famous are those of Eaux-Bonnes and Eaux-Chaudes, in the upper part of the Val-d'Ossau. Game abounds in the highlands, and includes roebucks, bears, chamois, ortolans, &c.

The height of the Pyrenees, and the snow that lies on them several months in the year, the proximity of the ocean, and the great number of springs, streams, marshes, and rivers, which, presenting a considerable surface, absorb a large quantity of heat, modify the temperature of the department very considerably, and render it much less genial and more cold than one would expect from the latitude. From the end of February to the end of April the south wind blows regularly, changing winter into spring; west winds succeed for the next two months; and during the summer and autumn the north and north-west winds prevail. In some valleys men and women, the latter especially, are very subject to goitre, the diseased gland in some exceeding the size of the head.

The manufactures include linen, calico, coloured handkerchiefs, flannel, drugget, hosiery, Bearnese caps, carpets, chocolate, liqueur and common brandy, paper, leather, pottery, and iron. Ships are built on the Adour and on the coast. The commerce is composed of the various products already named, and of wine, liquorice, rosin, prepared skins, wool, hides, deal planks, colonial produce, salt, &c. Highway accommodation is afforded by 5 national and 20 departmental roads: two of the former lead across the Pyrenees from Bayonne to Spain, one through St. Jean-Pied-de-Port by the 'ports' or passes of Orisson and Roncevaux; the other to Pamplona by the pass of Maya. A railway, opened in 1854 from Bordeaux to Bayonne, gives the department rapid means of intercourse with Paris, and connects it with the general railway system of France.

The department was comprised in the Roman Novempopulana. It is inhabited chiefly by two distinct races, the Bearnese and the Basques, who differ from each other in character and language. There are also several of that once degraded race, the Cagots, who it is believed are descended from the Saracens.

The surface measures 1,888,713 acres. Of this area, 386,049 acres are under tillage; 163,723 acres are natural pasture; 57,269 acres are laid out in vineyards; 323,183 acres are covered with woods and forests; 15,385 acres are occupied with orchards, nurseries, and gardens; 841,997 acres consist of unproductive mountain and barren moor; 37,106 acres are covered with streets, roads, and buildings; and 24,820 acres with rivers, waters, and lakes.

The department is divided into five arrondissements, which, with their sub-divisions and population, are as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Pau	11	185	126,578
2. Oloron	8	80	75,476
3. Orthes	7	135	82,579
4. Bayonne	8	52	88,185
5. Mauléon	6	109	74,180
Total	40	561	446,997

1. Of the first arrondissement, and of the whole department, the capital is PAU. *Lescar*, 3 miles N.W. from Pau, is built on the slope of a hill on the right bank of the Gave-de-Pau, and has a population of 2096; before the revolution of 1789 it was the residence of a bishop, and had a college of Barnabites. The church of *Lescar* is reckoned among the historical monuments of France. *Morlaas*, once the capital of Béarn, and the residence of its viscounts, is situated 5 miles N.E. from Pau, and has 1886 inhabitants. For several centuries there was a mint in this town, at which the livres morlaises were coined. Horse-races were established here by Gaston IV. *Nay*, situated on the Gave-de-Pau at the extremity of a fertile plain 10 miles S. by E. from Pau, is a well-built town with 3227 inhabitants, who manufacture woollen-cloths, drugget, blankets, calico, hosiery, caps, and leather. *Pontac*, 15 miles S.E. from Pau, on the Lousse, a feeder of the Gave-de-Pau, has a population of 2123.

2. In the second arrondissement the chief town *Oloron*, or *Oloron*, situated on the summit and slope of a hill at the confluence of the

Aspe and the *Ossau*, which here unite to form the Gave-d'Oloron, is an ancient town, with 6272 inhabitants in the commune. The town, which occupies the site of the ancient *Nuro*, or *Blorensium Civitas*, has a tribunal of first instance, manufactures of cloth, woollen caps, hosiery, woollen-yarn, horn and boxwood combs, leather, and paper. There is a good trade with Navarre and Aragon in wool, sheep-skins, hams, and cattle. A high bridge over the *Aspe*, under which there are several mills, joins the town to *Sainte-Marie-d'Oloron*, a well-built little town of 3629 inhabitants. In this town, there is a street called *Rue-des-Cagots* from its having been the residence of that unfortunate race; in the ancient parish church there is still to be seen the separate door and holy water basin of the Cagots. *Arudy*, prettily situated in a fertile territory watered by the *Ossau*, is 10 miles S. from Oloron, and has about 2000 inhabitants, several of whom are Cagots. The church of *Arudy*, like that of *Sainte-Marie*, gives evidence of the loathing with which this race was formerly looked upon. *Arudy* is a place of considerable trade in wool, cattle, sheep, corn and agricultural produce, as the shepherds and graziers on the slopes of the Pyrenees dispose of their stock and buy provisions in the town. *Laruns*, a small place of 1814 inhabitants, 8 miles S. from Arudy, is a dépôt for the mast and ship-timber from the Pyrenees for the French marine. It has also iron-forges. Not far from this town is the valley, village, and baths of *Eaux-Chaudes*, and a little further south is the *Pic-du-Midi-de-Pau*, a granite mountain, the summit of which is 9700 feet high, being the highest point within the department. *Lasseube*, a large village with a population of 3040, stands on the *Buze*, 8 miles N.E. from Oloron. *Monein*, a well-built town, consisting of several good streets abutting on a central square, is situated 8 miles N. from Oloron, on the left bank of the *Baise*, in a country productive of excellent wine, and has 5373 inhabitants. There are iron, copper, and lead-mines in the neighbourhood. The chief trade is in wine and ship-timber.

3. The third arrondissement takes its name from its chief town *Orthes*. *Salies*, 8 miles W. from Orthes, takes its name from its abundant salt-springs; it stands on a small feeder of the Gave-d'Oloron, and has a considerable trade in salt and hams. The population of *Salies* is 7852.

4. In the fourth arrondissement the chief town is *BAYONNE*. *Le-Bastide-de-Clairence*, 14 miles E. from Bayonne, has 2097 inhabitants, who manufacture hosiery, caps, and leather. There are copper- and iron-mines near it. *Bidache*, 19 miles E. from Bayonne, on the *Bidouze*, which is here navigable, is a pretty town with 2869 inhabitants. *Happarrea*, 11 miles S.E. from Bayonne, situated in a fertile and well cultivated country, has 5870 inhabitants in the commune, and a great number of tanneries for shoe and white leather, and a large trade in cattle. *St. Jean-de-Lus*, a small sea-port at the mouth and on the right bank of the *Nivelle*, over which a bridge leads to the suburb of *Sibourre*, has a population of 3208. The town is pretty well built, and is defended by two forts, near one of which there is a lighthouse. *Ustaritz*, 7 miles S. from Bayonne, is a collection of hamlets on the left bank of the *Nive*, and has a population of 2348. Before the revolution of 1789 it was the seat of a court of justice for the Basque territory of Labour. The administrative council of Labour called 'bilcar,' and consisting of the heads of families, met in a rocky wood near *Ustaritz* for the decision of questions affecting all the communes of the territory. Except the president and secretary, who sat on stones by a large block which served for a table, the members of the bilcar stood leaning on their blackthorn sticks, or against the old oaks that grew in a circle round the place. The privilege of managing their own affairs was taken away from this people by the revolution of 1789.

5. The fifth arrondissement takes its name from *Mauléon*, a small town, with a college and 1167 inhabitants, situated on the Gave-de-Gaison, which divides it into two parts—one built on a hill surmounted by an ancient castle, and the other in a level plain. *Mauléon* was the capital of the Basque district of Soule. The tribunal of first instance is at *St. Palais*, a little walled town with 1619 inhabitants, situated in a fertile country, on the left bank of the *Bidouze*. *St. Etienne-de-Baigorry*, situated in a valley of the same name, has a population of about 3300. The valley commences on the frontier of Spain, from which it extends about 11 miles in a northern direction, with a breadth of about 8 miles. It is traversed by a small stream, the *Hourepeteca*, which falls into the *Nive*, a tributary of the *Adour*. There are rich copper- and iron-mines in the valley, and large copper- and iron-works for smelting and refining the ores. *St. Jean-Pied-de-Port*, a small fortified town, with a population of 2332, is situated on the *Nive*, 18 miles W. by S. from *Mauléon*; it takes the latter part of its name from its position at the foot of the port or pass across the Pyrenees into Spain. The town is of some importance in a military point of view; the citadel stands on a hill, and commands three passes by which France may here be entered from Spain. Not far from this town, is *Roncevaux*, or *Roncevalles*, famous for the defeat of Charlemagne in 778, and for the death of Roland: in the Augustinian abbey of *Roncevalles*, as the place is properly called, the monks display some memorials of the illustrious paladin, whose memory is still glorious in the neighbourhood.

The department forms the see of the Bishop of Bayonne; it is included in the jurisdiction of the High Court of Pau, and within the limits of the University-Academy of Bordeaux; and belongs to

the 13th Military Division, of which Bayonne is head-quarters. It returns three members to the Legislative Chamber of the French empire.

(*Dictionnaire de la France; Annuaire pour l'An 1853; Annuaire du Commerce; Official Papers.*)

PYRÉNÉES, HAUTES, a department in the south of France, lies between 42° 39' and 43° 34' N. lat., 0° 30' E. and 0° 20' W. long., and is bounded N. by the department of Gers, E. by Haute-Garonne, S. by Spain, and W. by Basses-Pyrénées. Its greatest length is about 70 miles, and its greatest breadth about 45 miles. The area is 1748·4 square miles; the population in 1841 was 244,196; in 1851 it amounted to 250,934, which gives 143·522 to the square mile, being 31·062 below the average per square mile for all France.

The department is formed out of the districts of BIGORRE and Quatre-Vallées, and a portion of Nébouzan. The *Quatre-Vallées*, or Four Valleys of Aure, Barousse, Magnac, and Veste formed part of the county of Armagnac, a subdivision of Gasconne. Castelnau-de-Magnac was the chief place of the Quatre-Vallées, which now form the south-east of the department of Hautes-Pyrénées and the south-west of Haute-Garonne.

The department takes its name from the Pyrenees, which attain their greatest height on the southern boundary, where Monte-Maladetta, Mont-Perdu, and the highest peak of the Vignemale group, reach respectively 10,863, 10,991, and 10,817 feet above the sea-level. Stretching northward from this great mountain barrier, the department presents a surface diversified by plains, hills, forests, valleys, gorges, high mountains, torrents, and waterfalls. Two lateral offsets of the Pyrenees extend northward and terminate in the two ranges of hills that inclose between them the fine plain of Bigorre. Between this plain and the main range of the Pyrenees occur a great number of picturesque valleys, where the scenery comprises within little compass the quiet well-sheltered village, the snow-clad mountain, with rocky precipitous sides, or with slopes shaded by dark forests, and the whole echoing with the noise of waterfalls, or animated by the cheerful babble of the furiously-running 'gave.' Among the most noted of these valleys is that of Caunteretz, celebrated for its hot springs. In most instances, the valleys, which in their higher parts contract at intervals to mere gorges wide enough to afford a passage for the troubled waters of the gave, terminate in vale-heads that take the form of an amphitheatre. Of these vale-heads that called the *Cirque-de-Gavarnie* must be specified. The road or path to this vale-head from the village of Gèdres passes some savage mountain scenery, and among a chaos of massive blocks of stone, many of them large enough to afford singly sufficient material for building a cathedral. On reaching the vale-head one sees a vast semicircle of precipitous rocks, about 1640 feet high, broken into three stages or steps, on one of which a glacier rests, forming part of the ice-field of the Mont-Perdu group. From a lake among the glaciers on this lofty mountain, the Gave-de-Gavarnie, the head-water of the Gave-de-Pau leaps down the savage side of the Cirque 328 feet at a single bound, and striking against one of the steps or ledges above mentioned is dashed into spray, which, struck by the rays of the sun, forms an infinite number of rainbows, some of a completely circular form. The broken waters from this point form several cascades (these again divide into a greater number on striking the next ledge), and at length, uniting at the bottom, after a total fall of above 1600 feet, roar in a torrent stream through a hollow vault worn out under the rock strewn floor of the Cirque of Gavarnie. Excursions are made over rocks, snow, and glaciers, from Gavarnie to the Tours-du-Marboré, and to the pass called *Brèche-de-Roland*, a colossal gap in the mountain-wall 330 feet wide, and nearly 9000 feet above the sea, which Roland, of the famous sword, is fabled to have made for his followers, and which is now frequented only by smugglers and adventurous tourists. There are many more practicable passes however than the *Brèche-de-Roland*, at a height of 6000 to 7000 feet, but all of them are subject to tremendous hurricanes, and such is the danger in threading them, that it is a received axiom that among these stormy heights "the son must not wait for the father, nor the father for the son."

The *Pic-du-Midi-de-Bigorre*, which stands in front of the main mass of the Pyrenees, at the south of the plain of Bigorre, rises to the height of 9436 feet above the sea-level. It is ascended not without difficulty by the valley of Barèges and the gorge of Grip. In clear weather the view from its summit is truly magnificent: to the southward the Pyrenean range extends in a vast crescent mass, surmounted at different distances by tremendous peaked or rounded heights, whose slopes are covered with snow heaps or with ice-fields that contrast strongly with the sombre hue of the dark brown rocks near them. To the northward, all inequalities of surface seem annihilated, and a vast plain spreads itself out before the eye, comprising the departments of Basses-Pyrénées, Gers, and Haute-Garonne.

The hilly region which extends over a great portion of the department north of the *Pic-du-Midi-de-Bigorre*, is furrowed by numerous streams flowing through lateral valleys of great beauty, and emptying themselves into the Adour or the Garonne. The fine plain of Bigorre, in the centre of which stands the town of Tarbes, inclines gradually towards the north. The ranges that inclose it on the east and west are covered with woods throughout their entire length; the Adour and its feeders drain it; good high roads, diverging from Tarbes, and

several other branch roads, traverse its surface, which is strewn with towns, villages, and hamlets in all directions.

The principal rivers are the ADOUR, which runs through the department from south to north: the GARONNE and its feeder the Neste, which drain the south-eastern districts; the Gave-de-Pau, which flows through the beautiful valleys of Caunteretz and Argelès in the south-west, on its way to join the Adour; the GERS and the Baise, feeders of the Garonne; and the Larros, a tributary of the Adour, which drain the north-east of the department. The Alaric Canal serves for the irrigation of the plain on the right bank of the Adour; it is about 30 miles in length, and turns above 60 mills. It commences below Bagnères, passes a little east of Tarbes, through Rabastens, and enters the Adour below Maubourguet. This canal was opened in A.D. 507.

The climate is in general good and healthy, the temperature in the plains of Bigorre is mild; but, as may be expected from the nature of the surface of the department, different temperatures may be obtained by varying the elevation. All the atmospheric phenomena succeed each other in the highlands with remarkable rapidity and inconstancy. The prevailing wind blows from the south-west, and it is attended very frequently with violent rains. The spring is mild, but sometimes late frosts are destructive to the young vegetation; summer is dry and windy; the autumn is invariably fine and clear; the winter foggy.

The common corn products of the department are insufficient for the consumption; buck-wheat, maize, potatoes, figs, mulberries, &c., are also grown. About 6,000,000 gallons of good white and red wines are made annually. Horned cattle and sheep are very numerous; good butter and cheese are made; mules, asses, and horses are reared, and also pigs and large numbers of poultry, especially geese, the legs of which are salted for export. Bees are carefully tended, and honey and wax are abundant.

The loftiest parts of the Pyrenees in this department are composed of granitic rocks, which are also found in the upper part of the valley of Lavedan, between Gèdre and Gavarnie, in the valley of Héas, in the upper part of the valley of Aure, near the village of Plan, and in detached portions in one or two other places. The *Pic-du-Midi-de-Bigorre*, and the surrounding district between Arreau in the valley of the Neste, and Caunteretz, are occupied by mica-slate. The great mass of the Pyrenees however is composed of transition rocks, namely, clay-slate and grauwacke, in the neighbourhood of the primitive formations, and limestone toward the foot of the chain and the plains at its base. The red-sandstone, or red-marl formation, is found in one or two places, chiefly on the east side of the department. A narrow district extending eastward from Bagnères-de-Bigorre to Haute-Garonne, is occupied by Alpine limestone. The north of the department is occupied by the tertiary formations. Iron, copper, zinc, lead, manganese, nickel, and cobalt, are found, but no mines are worked; marble of different colours, building-stone, slate, granite, amianth, kaolin, marl, fullers'-earth, and potters'-clay are raised. Mineral and hot-springs abound.

The commerce of the department is limited to cattle, corn, mules and horses for Spain, timber, oak-staves, hoops, the agricultural products before named, some linen, cotton- and woollen-stuffs, outlery, nails, hides, &c. About 80 fairs are held.

The department contains 1,118,983 acres. Of the whole area about 236,000 acres are under the plough; 110,000 acres consist of grass-land; 33,000 acres are planted with vines; 256,000 acres are covered with woods and forests; 430,000 acres consist of heath, moor, or mountain pasture; and about 20,000 acres are occupied as orchards, gardens, nurseries, &c.

The department is divided into three arrondissements, which, with their subdivisions and population, are as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Tarbes . . .	11	197	112,963
2. Argelès . . .	5	102	42,558
3. Bagnères . . .	10	202	95,413
Total . . .	26	501	250,934

1. Of the first arrondissement, and of the whole department, the chief town is *Tarbes*, which is prettily situated on the left bank of the Adour, in 43° 13' 58" N. lat., 0° 4' 41" E. long., 1022 feet above the level of the sea, at a distance of 24 miles E. by S. from Pau, and has 12,663 inhabitants in the commune. The streets are wide, regular, and clean, the waters of the Adour being distributed by canals through all parts of the town; the houses are low, built of marble, boulders, and bricks, and covered in with slates. There are three handsome squares, and outside the town a beautiful walk called the *Prado*. Of the old ramparts there is no longer a trace; but the ancient castle of the counts of Bigorre still stands, and is now used as a prison. The other remarkable buildings are the prefect's residence, formerly the bishop's palace; the hospital; the theological and communal colleges; the Ursuline barracks, once a convent; the normal school; the baths; the bridge over the Adour; and the theatre. There are also a handsome cathedral and two churches in the town, which has manufactures of paper and leather, and a good trade in wine, iron, hides, cattle, agricultural produce, &c. The view of the Pyrenees from this place

is much admired. Edward the Black Prince kept his court in Tarbes-*Maubourquet*, N. of Tarbes, on the Adour, has a remarkable church, built by the Templars, and 2202 inhabitants. *Ossun*, S.W. of Tarbes, has a population of 8016. On a hill near it there is an ancient Roman camp, which, local tradition says, was laid out by Caesar's lieutenant, Crassus. *Vic-en-Bigorre*, a small town surrounded by larger suburbs, is situated 12 miles N. from Tarbes, and has a college, brandy distilleries, tan-yards, and 4644 inhabitants. It was formerly defended by a strong castle, built in 1151, and of which there are still some remains. The places that give name to the other cantons are mere villages.

2. The second arrondissement takes its name from *Argelès*, or *Argeles*, a small town with a college and 1589 inhabitants, situated at the northern entrance of the beautiful valley of Lavedan, on the left bank of the Gave-d'Azan, a feeder of the Gave-de-Pau, 18 miles S.S.W. from Tarbes. *St.-Pé*, situated in a country rich in copper- and lead-mines, on the right bank of the Gave-de-Pau, 7 miles N.W. from Argelès, has a population of 2972, who manufacture nails and box-wood combs, and export roofing-lates. *Lourdes*, 5 miles E. from St.-Pé, stands on the Gave-de-Pau, and is built at the meeting of five high roads round a rock, surmounted by an old castle of the counts of Bigorre, and on the slopes of a ravine which is traversed by a torrent. The houses are pretty well built, but from the nature of the ground the streets are irregular. The town has a tribunal of first instance, and 4146 inhabitants. It is a very ancient place; remains of ancient towers, said to be of Roman construction, are seen here. By the treaty of Bretigny, this town, with the rest of Bigorre, was ceded to the English as part of the ransom of the French king, John. The history of Lourdes forms an admirable story in Froissart. A few miles S. from Argelès, at the small village of Pierrefitte, the road diverges into two branches, which lead, through narrow gorges separated by a mountain mass above 7000 feet in height, to the famous hot springs of *Cauterets* and *St.-Sauveur*. Cauterets is about 7 miles from Pierrefitte. The road which leads to it is cut with great engineering skill, and presents some of the finest mountain scenery in this part of the Pyrenees. The baths are very numerous frequented in July and August. About 6 miles from Cauterets is the famous *Pont-d'Espagne*, a bridge consisting of a number of pine-trees thrown across a narrow chasm in the rocks, into which two mountain streams leap and unite, while the sides of the ravine are covered with dark pine-forests, diversified here and there by granite cliffs that shoot up into spires and pinnacles. Not far from the Pont-d'Espagne are the *Lac-de-Gaube*, the largest tarn among the Pyrenees, and near it the *Vignemale*, one of the highest mountains in France. [PYRÉNÉES.] The road to the baths of St.-Sauveur passes through *Luz*, 9 miles S.E. from Pierrefitte, the narrow gorge presenting scenery similar to that already noticed. Luz is a clean village, situated at the foot of the Pic-de-Bergoms, a high mountain of easy approach, commanding a magnificent view, and on a crystal stream that flows with great rapidity through the ravine in which the town stands. The population of Luz is 2640. The church, which was built by the Templars, is a remarkable structure, a good deal resembling a fortress. Half a mile S.W. from Luz are the hot baths of St.-Sauveur, and about 2 miles N.E. are the still more famous baths of *Barèges*. Barèges is inhabited only during the summer and autumn, at which time it is visited by about 1800 invalids. The springs are the highest in the Pyrenees; the winters consequently are long and cold, so that no population remains, except a few people who take care of the houses in the village.

3. The third arrondissement is named from its chief town, *Bagnères-de-Bigorre* (the *Aquensis Vicus* of the Romans), 461 miles S.S.W. from Paris. It stands in 43° 3' N. lat., 0° 8' E. long., on the left bank of the Adour, and has a resident population of 8335 in the commune. The town is celebrated for its medicinal baths, which are much frequented from May to the end of October, during which time the population is increased to about 15,000. The town stands at the foot of a limestone hill, from the sides of which the medicinal waters flow which supply the public and private baths. There are about 70 baths, which vary in temperature from 90° to 135° Fahr. The waters of all the baths differ only in temperature; they are clear and without any peculiar taste, aperient, and tonic. Bagnères is perhaps the neatest and best-built town in the south of France: the streets are wide, well laid out, well paved, and watered by streams from the Adour. The environs are very beautiful and extremely fertile: there are delightful walks in the valley of Campan and along the banks of the Adour. The town contains a library and reading-rooms, and an establishment with accommodations for dancing, reading, bathing, gaming, theatrical performances, &c. There are also a college and an hospital for the poor. Some manufactures of woollen-stuffs of good quality, serges, crapes, and other fabrics are carried on here; paper is also manufactured. Quarries of fine marble are worked near the town. *Campan* is a well-built town, situated on the Adour, about 4 miles S.S.E. from Bagnères, in a very rich and fertile valley, and has a population of 4058, who manufacture woollen-cloth and paper, and export marble from the quarries in the neighbourhood. There is a large grotto near the town filled with beautiful crystallisations. The valley of Campan is at the source of the Adour, and comprehends in reality two valleys, one of them watered by the Adour, and the other by its

feeder, the *Trasports*. The delightful scenery of the valley of Campan forms one of the attractions of the neighbouring watering-place, Bagnères-de-Bigorre, the most frequented of this part of France. The mineral riches of the valley constitute however its chief claim to notice. It is celebrated for its fine-grained marble of different colours, some of purple and white with veins of green, and some of deep red veined with green and white. The marble quarries of Campan have been long worked by the government for the embellishment of the royal residences of France. The valley of Campan is one of the most fertile in the department; and the flocks, orchards, and gardens, which its inhabitants generally possess, enable them to live in comfort. The Pic-du-Midi-de-Bigorre, which overlooks the valley, rises to the height of 9544 feet.

The department forms the see of the Bishop of Tarbes; is included in the jurisdiction of the High Court of Pau, and within the limits of the University-Academy of Toulouse; and belongs to the 13th Military Division, of which Bayonne is head-quarter. It returns two members to the Legislative Chamber of the French empire.

(*Dictionnaire de la France; Annaire pour l'An 1853; Annaire du Commerce; Official Papers.*)

PYRÉNÉES-ORIENTALES, a department in the south of France, lies between 42° 20' and 42° 55' N. lat., 1° 44' and 3° 10' E. long. From east to west its greatest length is 75 miles; from north to south, 85 miles. The area is 1591.4 square miles. The population in 1841 was 173,592; in 1851 it was 181,955, which gives 114,336 to the square mile, being 60,248 below the average per square mile for all France.

The department is formed out of the former district of Rousillon and portions of Cerdagne and Languedoc, and named from its position at the eastern extremity of the Pyrenees. It is bounded S. by the main ridge of the Pyrenees, except at one or two points, where it encroaches on their southern slopes; W. by the Val-d'Andorre and Ariège, from which last it is separated by an offshoot of the Pyrenees on the left bank of the Aube; N.W. and N. by the department of Aube, from which the Corbières Mountains on the right bank of the Aube divide it; and E. by the Mediterranean and the southern part of the shore-lake of Leucate. A plain of considerable width, and in general of great fertility, extends along the coast, which, reckoning all its indentations, measures about 45 miles. The interior is traversed by two ranges of mountains, one of which springs from Mont-Caiguon, the highest point in the department (9185 feet), and, curving from south to east, divides the basin of the Tech from that of the Tet; the other range runs from west to east, between the Tet and the Gly, into which last the Verdoules runs from the south-eastern slopes of the Corbières. All these mountains are furrowed by numerous valleys and by streams that enter the principal rivers already named, which fall into the Mediterranean. A small portion in the west of the department is drained by the Aube, which flows out of the Pyrénées-Orientales by the defile between the Roc-Blanc and the Corbières Mountains. On the southern slope of the Pyrenees, and not far from the sources of the Tech and the Aube, the Segre, a Spanish river, takes its rise. None of these rivers are navigable, but the waters of most of them are turned to good account for fertilising the land by means of an excellent and extensive system of irrigation, whereby, in the plain of Perpignan, the valleys of the Tet, the Tech, and the Gly, not less than 70,000 acres of land, are rendered exceedingly productive. Two canals, namely, those of Millas and Perpignan, date respectively from the years 1163 and 1172: the latter is nearly 20 miles long, with a mean breadth of 10 feet and a total fall of 800 feet.

The soil in the plains of the arrondissement of Perpignan consists of a layer of vegetable earth about a foot deep, resting on sand or gravel. By careful husbandry and by an extensive system of irrigation it is made to produce fine crops of wheat, rye, black and white oats, maize, millet, barley, broad and haricot beans, flax, hemp, fruits, &c. The olive and the vine are extensively cultivated. The arrondissement of Ceret, drained by the Tech, is with little exception a cold mountainous country, cut up by narrow arid valleys; placed above the region of the vine, it produces only rye, oats, maize, chestnuts, and pulse. The arrondissement of Prades, also very mountainous, is diversified by several ranges of vine-clad hills, and by valleys inferior neither in soil nor cultivation to the plain of Perpignan, which it also resembles in its products. The corn produce of the department exceeds the consumption. Of wine about 7,000,000 gallons are made annually. The red wines of Rousillon are in general of excellent quality, agreeable taste, strong body, and well adapted for transport; they are used for giving colour and body to the lighter growths of Cahors and Auvergne. The wines of Collioure and Port-Vendres have the highest repute; they become of a golden hue with age; in this state they take the name of Rancio de Rousillon. The sweet wines of Rivesaltes hold the first rank among the dessert wines of France.

The mountains of the department are in many parts clothed with fine forests of oak, beech, pine, and fir, and abound with aromatic and medicinal plants. The cork tree grows naturally, and is also an object of careful cultivation. There is but little grass land, but the breadth of heath, moor, and mountain pasture is very considerable. Good farm- and saddle-horses, a great number of mules for the Spanish markets, few horned-cattle, but a large number of sheep

common and Thibet goats, are bred. Bees and silkworms are carefully tended; honey and bees'-wax are important exports. Poultry, game, and fish are abundant.

The Pyrenees in this department are composed almost entirely of granitic rocks, as also is that part of the Corbières which lies nearest to the Pyrenees. Not only the peaks, but the intervening valleys are in great part occupied by these formations. The mountains which bound the valley of the Aude on the western side, and occupy the extremity of the department towards the west, are composed of mica-slate, which is not found anywhere else in this department. The transition rocks are found near the base of the granitic mountains, except where their continuity is interrupted by the tertiary or alluvial beds. In the valley of the Tech above Céret, and extending northward across the extremity of that short spur of the Pyrenees to which Le Canigou belongs, these transition rocks consist of clay-slate and transition limestone. About Villefranche, in the valley of the Tet, is found a mass of compact gray limestone, inclosing beds of gray marble veined with red and green. The localities occupied by these two masses of transition rocks are isolated in the district of the granitic formations. The valley of the Gly from Estagel upwards, and that part of the Corbières which lies at the head of the valley, are formed of transition rocks (chiefly compact gray limestone) which skirt the granitic district on the north, and extend into the department of Aude. The valleys watered by the tributaries of the Sègre are, in this department, occupied by the transition rocks. A small portion of the department to the north of Estagel is occupied by the Alpine and Jura limestone, which formations extend northward into the department of Aude, where they overspread a large district. All the eastern side of the department, comprehending the sea-coast, the plain which extends for some miles inland from the coast, and the valleys of the Gly, the Tet, and the Tech, are occupied by tertiary formations. A great number of iron-mines are worked, and the ore is smelted, and converted into malleable iron at 175 forges and furnaces, by means of charcoal prepared on the spot. Copper, lead, bismuth, and alum are found. A coal-mine is worked near Estavar; marble, alabaster, granite, and steatite are quarried. There is a great number of hot and mineral springs, the most frequented of which are those of *Amélie-les-Bains*, formerly called *Arles-les-Bains*.

Besides wine and iron, the industrial products include coarse woollen cloths, leather, corks, knit stockings and caps, brandy, whip-handles, common pottery, tiles, and bricks. The fisheries on the coast are actively plied, and large quantities of sardines and anchovies are preserved. The coasting trade in the leading articles named, and in wool, oil, honey, &c. is active. About 80 fairs are held in the year.

High roads lead from Narbonne and Carcassone to Perpignan, whence southward there are three others—one leading to Port Vendres; another to Spain, by the port or col of Pertus, commanded by the fortress of Bellegarde; and a third which crosses by the port of La-Perche to Puycerda in Spain, where it is joined by the road from Toulouse, up the valley of the Ariège through the port of Puymorens. Another road through Céret enters Spain near Prats-de-Mollo.

The climate is good: the heats of summer in the plains are moderated by sea-breezes; in winter the cold is not intense; snow rests only on the mountains of the Canigou and about Mont-Louis; if it falls elsewhere, it disappears in three days at most. The south-west and north-west are the prevailing winds.

The language of the inhabitants is a mixture of the langue d'oc [FRANCE], the Catalanian, and the Castilian.

The department contains 1,018,526 acres. Of the whole area 228,714 acres are under cultivation; 28,907 acres are grass-land; 94,995 acres are vineyards; 141,658 acres are covered with woods and forests; 465,580 acres consist of barren heath and moor; 22,512 acres are occupied with orchards, gardens, nurseries, and various culture; and 28,354 acres are covered with rivers, canals, lakes, and marshes.

The department is divided into three arrondissemens, which, with their subdivisions and population, are as follows:—

Arrondissemens.	Cantons.	Communes.	Population in 1851.
1. Perpignan	7	85	87,759
2. Céret	4	50	42,125
3. Prades	6	113	52,051
Total	17	248	181,935

1. Of the first arrondissement, and of the whole department, the chief town is PERPIGNAN. *Elne*, the ancient *Illiberis*, under the walls of which Hannibal encamped on his way to Italy, formerly the seat of a bishop, and one of the strongest towns in Roussillon, stands on the slope and at the foot of a hill near the left bank of the Tech, 8 miles S.E. from Perpignan, and has 2268 inhabitants. The emperor Constantius was murdered in this town, and his tomb existed till about eighty years ago in the church cloisters. *Elne* presents a wide ruin: its decay was caused by the continual sieges it stood from the French and Spaniards. The church, which was opened December 10, 1058, and consists of a nave, choir, and aisles, the whole surmounted by a lofty roof supported on square stone pillars, is a very remarkable

structure. *Millas*, 10 miles W. from Perpignan, on the right bank of the Tet, has a population of 2095, who trade in corn, brandy, beans, and cattle. *St.-Paul-de-Fenouilles*, a small place on the left bank of the Gly, or Agly, and near its confluence with the Boulsons, is built on a height surrounded by arid hills which are crowned with the ruins of many an ancient castle, 23 miles N.W. from Perpignan, and has 2000 inhabitants. *Rivesaltes*, prettily situated on the Agly, in a fertile plain environed by vine-clad slopes that yield muscatel wine of superior quality, has 3446 inhabitants, who trade in wine, brandy, flour, wool, &c. The town is 5 miles N. from Perpignan, and still has remains of the turreted walls erected for its defence by the kings of Aragon. *Thuir*, a walled town 8 miles S.W. from Perpignan, situated on a small stream, has potteries, tanyards, paper-mills, silk-throwing factories, and 2490 inhabitants. The Spaniards seized this town on June 6, 1793, and held it till September 25 of the same year, when the French drove them out of it.

2. In the second arrondissement the chief town, *Céret*, is situated at the foot of the Pyrenees, 17 miles S.S.W. from Perpignan, and has a tribunal of first instance, a college, and 3575 inhabitants. The town, which is surrounded by high tower-flanked walls, stands near the right bank of the Tech, which is passed by a very high bridge of a single arch. It is ill built, with narrow badly-paved streets. Corks, leather, and copper-ware are the chief industrial products. *Argelès-sur-Mer*, 16 miles E. from Céret, and about 2 miles from the Mediterranean, has a population of 2136. South of Argelès is the small village of *Ecluse*, and near this the strong fortress of *Bellegarde*, built on a high hill, and commanding the cols of Pertus and Punissas, by which communication is kept up between France and Spain. *Arles-sur-Tech*, situated W. of Céret on the left bank of the Tech, is a well-frequented market-town with 2384 inhabitants, who manufacture oak-staves, hoops, leather, and iron, and trade in wine and corn. Near Arles are the hot springs and baths of *Amélie-les-Bains*. *Collioure*, an ill-built town with a small harbour and 3476 inhabitants, is situated on a hill above the sea, 22 miles E. from Céret. The harbour, which admits small craft only, is defended by several forts. Cork-cutting and tunny and sardine fishing are the chief employment of the inhabitants, who also trade in wine, salt-fish, &c. Near Collioure is *Port-Vendres*, the ancient *Portus Veneris*, a small fortified town with a tolerably good natural harbour, a lighthouse, and 1805 inhabitants, who trade in corn, wine, and brandy. *Prats-de-Mollo*, an irregularly-built fortified town of 3710 inhabitants, is situated 20 miles S.W. from Céret, on the left bank of the Tech, in a wild country surrounded by savage mountains. It is built on the slope of a hill which is surmounted by the principal church. The defences are old, and consist of a wall strengthened by gothic round towers and several bastions. Broadcloth, swan-skin, woollen hosiery, and whip-handles, are the chief industrial products. Near this town are the sulphurous hot springs of *Prats*.

3. Of the third arrondissement the chief town, *Prades*, is situated 25 miles S. by W. from Perpignan on the right bank of the Tet, and has a tribunal of first instance, a college, an ecclesiastical school, and 3192 inhabitants. The town stands in a vast plain surrounded by high hills, at the foot and on the slopes of which are several villages; it has a handsome church and a well-built hospital. Woollen cloth, brown paper, and leather are manufactured; and there is considerable commerce in corn, excellent fruits, wine, flax, hemp, hides, fine wool, and cattle. *Mont-Louis*, a small regularly-built fortified town, was erected under Louis XIV., on a rugged rock, commanding the bridge over the Tet on the road into Spain by the Col-de-la-Perche. The situation is bleak and cold in the extreme. The town consists of eight straight streets of symmetrically-built houses; there are two squares, and good barracks; the whole is defended by parapets, bastions, glacis, &c. and by a citadel. The population is only 1084. Lichen abounds in the neighbourhood: the savage wildness, the waterfalls, and the frightful chasms of the gorge through which the Tet hurries in its noisy course near this place, deserve to be mentioned. *Olette*, 10 miles from Prades, situated in a gorge on the left bank of the Tet, where that river is joined by two torrents, has 1209 inhabitants. *Vings*, 5 miles E.N.E. from Prades, is situated in a fertile plain near the right bank of the Tet, and is a spot abounding with springs of the purest water. It retains still some remains of its old fortifications, consisting of walls and towers. The town, which is ill built, has two pretty suburbs, a college, and 2040 inhabitants, who trade in hides, corn, fruits, flax, hemp, and cattle.

The department forms the see of the Bishop of Perpignan; it is comprised in the jurisdiction of the High Court and within the limits of the University-Academy of Montpellier; and belongs to the 11th Military Division, of which Perpignan is head-quarter. It returns one member to the Legislative Assembly of the French empire.

(*Dictionnaire de la France; Annuaire pour l'An 1853; Annuaire du Commerce; Official Papers.*)

PYRMONT, a county belonging to the Prince of Waldeck, about 32 square miles in extent, with 6623 inhabitants (in 1852), whose chief occupations are agriculture and the breeding of cattle, lies between Lippe-Deimold, Prussia, and Hanover. It yields the prince a revenue of about 8500*l.*, of which the mineral springs alone produce nearly 2000*l.* *Pyrmont*, the capital, is a well-built town, of about 2900 inhabitants, at the northern extremity of a romantic valley on the Emmer, a feeder of the Weser. The principal street, shaded on both sides by

lofty lime-trees, leads to a great avenue and to the celebrated chalybeate springs, of which there are four. The great bathing-house, which contains 140 apartments tastefully fitted up, and handsome spacious baths, is the most important structure in the place. There is likewise

a salt-spring at which other baths have been fitted up. A few hundred paces from the great avenue stands the palace of Fyrmont, the residence of the Prince of Waldeck. Above 300,000 bottles of the water from the principal chalybeate spring are exported annually.

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QUADRA ISLAND. [VANCOUVER ISLAND.]

QUAINTON. [BUCKINGHAMSHIRE.]

QUATHLAMBA MOUNTAINS, or **DRACHENBERG MOUNTAINS.** [NATAL.]

QUATRE BRAS. [PRABANT, SOUTH.]

QUATRE VALLÉES. [PYRÉNÉES, HAUTES.]

QUEBEC, the capital city of Canada East, is situated on the river St. Lawrence, about 400 miles from its mouth, in 46° 49' N. lat., 71° 12' W. long. The population in 1851 was 42,052. Quebec is alternately with Toronto the seat of government and of the legislature for the province of Canada.

Quebec stands on a promontory formed by the confluence of the river St. Charles with the St. Lawrence, at the north-eastern extremity of an elevated but narrow table-land, which for about 8 miles forms the left bank of the St. Lawrence. Cape Diamond presents a nearly precipitous face to the St. Lawrence; the descent to the St. Charles is more gradual. The height of the platform of the citadel of Quebec, which stands on Cape Diamond, is 333 feet 3 inches above the St. Lawrence. The distance across the ridge between the two rivers is rather more than a mile. The St. Lawrence abreast of the town is only 1314 yards wide; below the point, the basin formed by the junction of the two rivers is above a mile and a half in width, and the tide rises 25 feet. Quebec is situated at that part of the river where the St. Lawrence suddenly contracts in breadth, and is said to take its name from the Indian word 'kebec,' which signifies narrow.

Quebec is divided into the Upper Town and Lower Town, and the suburbs of St. Roche, St. John, and St. Lewis. The Lower Town, which is the seat of commerce, is built round the base of the promontory. The custom-house and exchange reading-room are in the Lower Town. There are two modes of ascent to the Upper Town, one by a narrow and steep winding street, the other by a flight of steps. The Upper Town has a northerly aspect, and is well ventilated; some of the streets are rather narrow, but they are generally well paved. All public buildings and many private houses are roofed with tin-plates, which produce a very striking effect. The citadel, which crowns the summit of Cape Diamond, is strongly fortified, and covers about 40 acres of ground. Surrounding the Upper Town is a wall mounted with heavy ordnance, and pierced by five gates strongly defended. The citadel contains a very extensive armoury. The parliament house, governor's residence, post-office, and other edifices appropriated to government departments, are among the public buildings. Quebec is the seat of a Protestant bishop and a Roman Catholic bishop. The Protestant cathedral is a plain modern edifice with a spire. The Roman Catholic cathedral is a large building with a heavy dome and spire. The Established Church of Scotland and the Free Scotch Church have each a place of worship; and there are several other churches and chapels belonging to the various religious bodies. In the market-place is a barrack, a spacious building, formerly the Jesuits' college. There are several large conventual establishments. Among the chief public institutions are, the French college, the Royal Grammar school, the Royal Institution, the Literary society, the Historical society, the Medical school, the mechanics' institute, the city library, and several benevolent associations. A monument in honour of Wolfe and Montcalm stands on the plains of Abraham, a short way west from the citadel.

The harbour of Quebec admits ships of the line to the lower part of the basin; merchant ships lie close to the wharfs at the head of the basin, and in the St. Lawrence abreast of the city. On the banks of the St. Lawrence, above the city, are extensive timber basins. Quebec is the great entrepôt for the trade of Canada with Great Britain, the United States, the West Indies, and elsewhere. The total number of ships, inwards, during the year 1852 was 1231, of 505,024 tons aggregate burden; outwards, 1228 of 518,580 tons.

Quebec contains distilleries, breweries, and soap, candle, and tobacco manufactories; but the most important branch of industry is ship-building. The ships built at Quebec during the year 1852 were 65, of 41,505 tons; and in 1851 they were 42, of 27,856 tons. Steamers ply daily in summer between Quebec and Montreal, and between Quebec and places down the river. The city is connected by electric telegraph with Montreal, Canada West, the United States, St. John's in New Brunswick, and Halifax in Nova Scotia.

Quebec was founded by the French in 1608. It 1759 it was taken by assault by the British troops under General Wolfe. The French garrison was commanded by the Marquis de Montcalm. Both Wolfe and Montcalm were slain in the action. Quebec was ceded to Great Britain by the treaty of Paris in 1763. A large part of the town outside the fortifications was destroyed by fire in 1845.

QUEDLINBURG. [MAGDEBURG.]

QUEEN CHARLOTTE'S ISLAND and SOUND. [VANCOUVER ISLAND.]

QUEEN CHARLOTTE'S ISLANDS, also called the **ARCHIPELAGO OF SANTA CRUZ,** are a group of islands in the Pacific, north of the New Hebrides, between 10° and 12° S. lat., 165° and 168° E. long. They were discovered in 1595 by Mandana. The archipelago consists of five or six islands of moderate extent, and a great number of smaller ones. Some of them are surrounded by extensive coral-reefs. The largest is the island of Santa Cruz, called by the natives Nitandi, which is above 20 miles long from east to west, and about half a mile wide. On the north-western shore of it is Travenion Lagoon, a fine round harbour, though small. The other islands are Guerta, Tubus, Lord Howe, Mallicolo, and Volcano: the last has an active volcano. The larger islands and some of the smaller are elevated, and apparently of volcanic origin, but most of the latter are low. They are well wooded, and very populous. They produce the coconut, the bread-fruit, and all the products of the Friendly Islands and New Hebrides. The inhabitants belong to the race of the Austral negroes; they have large canoes, and go almost entirely naked. It was on the island of Mallicolo, called by the French Wanicoro, that La Perouse was wrecked and lost with his crew.

QUEEN CHARLOTTE'S TOWN. [PRINCE EDWARD ISLAND.]

QUEENBOROUGH. [KENT, *Sheppey, Isle of.*]

QUEEN'S COUNTY, province of Leinster, Ireland, is bounded N. by King's County; E. by the county of Kildare, a detached portion of King's County, and the county of Carlow; S. by the county of Kilkenny; and W. by Tipperary and King's County. It lies between 52° 45' and 53° 13' N. lat., 6° 54' and 7° 47' W. long. Its greatest length from east to west is 37 miles, and from north to south 33 miles. The area is 664 square miles, or 424,854 acres, of which 342,422 acres are arable, 69,289 acres uncultivated, 11,630 acres in plantations, 1117 acres in towns, and 396 acres under water. The population in 1841 was 153,930; in 1851 it was 111,623.

Surface, Hydrography, and Communications.—The county is for the most part comprehended in the basin of the Barrow, but a small portion on the north and a yet smaller portion on the west side slope towards the Shannon. The Slieve Bloom Mountains occupy the north-western part of the county, and for some miles separate it from King's County. These mountains are traversed on the border of the county by a narrow defile, the Gap of Glendine, which forms the only communication in this part with King's County. The Dysart Hills occupy the south-eastern part of the county, and separate the valley of the Barrow from that of its tributary the Nore. The rest of the county is flat, or varied only by gentle undulations. Bogs are numerous in the central portions of the county, between the Slieve Bloom and the Dysart Hills.

The principal rivers are the Barrow and the Nore. The Barrow rises in the Slieve Bloom Mountains, and has a winding course to the border of the county, a little above Portarlinton; it continues its course eastward along the boundary, except just about the towns of Monasteravan and Athy in Kildare, till it quits the county a little below the town of Carlow. The Barrow is navigable for barges from Athy, about 40 miles from its source. The Nore rises in the adjacent county of Tipperary, enters Queen's County on the south-western side, not far from Borris-in-Ossory, and flows first north-eastward, then eastward to Castletown. Below Castletown it turns on the south-east and flows to the border of the county, which, before finally quitting, it separates for a short distance from Kilkenny county. The Lower or Little Brosna, or Brusna, which joins the Shannon below Banagher, rises within the western boundary of the county; and the Clodagh, whose waters fall into the Brosna, which joins the Shannon above Banagher, rises within the northern boundary. The only lake is Lough Annagh, on the northern border of the county; it does not exceed a mile in length.

A branch of the Grand Canal from Monasteravan enters the county at its north-eastern corner, and there divides into two branches, one of which runs westward about 12 miles to Mountmellick; the other, known as the Athy Canal, runs 12 miles southward, entering Kildare county near Athy, just below which town it joins the Barrow.

The Great Southern and Western railway crosses the county from north-east to south-west, connecting it with Dublin on the one side and with Limerick and Cork on the other. The road from Dublin to Limerick passes through Ballybrittas, Maryborough, Mountrath, and Borris-in-Ossory. The road from Dublin, by Athy and Cashel, to Cork passes through Stradbally and Abbeyleix. A road from Dublin to Birr passes through Portarlinton and Mountmellick. Other roads are numerous, and those to the market-towns are generally well laid out, and in good condition.

Geology, Mineralogy, &c.—The greater part of Queen's County is included in the limestone district which overspreads a large part of Ireland. The Slieve Bloom Mountains are composed chiefly of sandstone, with thin beds of limestone and coal. Mica-slate occurs on the summits and higher acclivities. A portion of the Dysart Hills is formed by the coal-measures. An esker or gravel ridge, called the Ridge of Maryborough, extends about eight miles northward from that town, continuing with intermissions to King's County. Potters' clay is found, and is employed in making tiles, garden-pots, and other coarse earthenware. Sandstone of a soft texture, suited for hearthstones and chimney-pieces, is quarried; as are also slates, and, in a few places, marble.

Climate, Soil, and Produce.—The general surface being high and open, the climate is generally dry and free from fogs. It is decidedly salubrious, notwithstanding the exhalations from extensive tracts of bog. The soil is generally fertile. There are some large tracts of bog, resting on clay or gravel, which are capable of being converted into fine productive land. On the east side of the Slieve Bloom Mountains, a yellow clay lying on gritty gravel, and on the west side a strong red clay good for oats and potatoes, are very much interspersed with wet spongy ground, and broken by protruding rocks. There is good limestone for manure in every part of the county. Dairies are numerous. There is a small manufacture of woollen fabrics, and some families are employed in the weaving of linen and cotton. A factory for extracting sugar from beetroot has been formed at Mountmellick. In 1853 the number of acres under crop was 151,656, of which 18,874 acres grew wheat, 85,397 acres oats, 11,222 acres barley, bere, rye, peas, and beans; 19,619 acres potatoes, 14,606 acres turnips, 2259 acres mangel-wurzel, carrots, parsnips, vetches, and other green crops; 14 acres flax, 49,665 acres meadow and clover. In 1841, including an equivalent of 2331 acres for detached trees, there were 13,961 acres growing oak, ash, elm, beech, fir, mixed timber, and fruit. In 1852 on 11,294 holdings, there were 11,923 horses, 5347 mules and asses, 56,624 cattle, 75,745 sheep, 28,292 pigs, 5794 goats, and 191,643 head of poultry. The value of the live stock here enumerated was estimated at 598,845*l.*

Divisions and Towns.—Queen's County lies chiefly in the diocese of Leighlin and Ossory, with small portions in the dioceses of Kildare, Killaloe, and Dublin. It contains 53 parishes, and is divided into 11 baronies—Ballyadams, Clandonagh, Clarmallagh, Cullenagh, Maryborough East and West, Portnahinch, Slievemarigue, Stradbally, Tinneshinoh, and Upperwoods. The principal towns are MARYBOROUGH, MOUNTMELICK, and part of PORTARLINGTON, which, with ABBEYLEIX, are noticed under their respective titles. The following towns and villages we notice here, with the population of each in 1851:—

Ballinakill, population 1109, a market and post-town, 13 miles S.S.E. from Maryborough, contains a handsome parish church, with a tower and spire; a large Roman Catholic chapel; two National schools; a market-house, and a district dispensary. Fairs are held every month, and on the Thursday after Whit-Sunday. Tuesday is the market-day. The castle is now in ruins. Ballinakill was incorporated by James I., and returned two members to the Irish Parliament.

Borris-in-Ossory, population 804, a market- and post-town, situated near the right bank of the river Nore, 16 miles S.S.W. from Maryborough, consists of a single street, and contains a neat court-house, which is used as a chapel of ease; a Roman Catholic chapel; a National school; a bridewell; and a dispensary. Quarter and petty sessions are held in the place. Fairs are held seven times a year. Borris was anciently defended by a castle, which is now in ruins.

Durrow, population 1085, a small market-town, 16 miles S. from Maryborough, is watered by the Erkin, a feeder of the Nore, and is agreeably environed by the demesne of Castle-Durrow, a seat of Lord Ashbrooke. It consists of a few regular streets, opening into a square; the houses are generally well built, and roofed with slate. It contains a church, a Roman Catholic chapel, a dispensary, and an infantry barrack. Petty sessions are held monthly, and fairs nine times a year.

Graigu, population 1527, a suburb of the town of CARLOW, with which it is connected by a fine bridge of five arches over the Barrow. It consists principally of one street, extending nearly half a mile along the right bank of the river, and contains a parish church, a Roman Catholic chapel, a public school, built by voluntary contributions; a National school, two tan-yards, and a flour-mill. Fairs are held four times a year.

Mountrath, population 2101, a market- and post-town, 8 miles W.S.W. from Maryborough, contains a neat parish church, a Roman Catholic chapel, a Methodist and a Quakers meeting-house, a monastery of the order of St. Patrick, with a classical school attached; a nunnery, dedicated to St. Bridget, with schools attached; and two National schools. There are also a new court-house, a neat market-house, a dispensary, and fever hospital. Cotton and woollen fabrics are manufactured. Mountrath possesses an oil-mill, malt-house, and a brewery. There is a large weekly market. Fairs are held seven times a year. Petty sessions are held weekly.

Rathdowney, population 1192, is situated on a feeder of the Nore, 19 miles S.W. from Maryborough. The town contains the parish church, a Roman Catholic chapel, a Methodist meeting-house, two National schools, a constabulary barrack, and a dispensary. Petty sessions are held monthly. Fairs are held seven times a year.

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Stradbally, population 1326, a town 7 miles E. from Maryborough, pleasantly situated on the Straid, a feeder of the Barrow. The principal street is spacious, and contains some well-built houses, a handsome parish church, a large Roman Catholic chapel, a National school, a neat court-house with a small bridewell attached, a dispensary, and a savings bank. Quarter and petty sessions are held, and fairs six times a year. Saturday is the market-day.

The following are the chief villages:—*Ballyroan*, population 430, a post-village, 7 miles S. from Maryborough, contains a neat parish church, a spacious Roman Catholic chapel, a National school, and a classical and English school. *Castletown*, population 339, a village on the river Nore, 9 miles S.S.W. from Maryborough by the Great Southern and Western railway. It is well built and has a clean and neat appearance. It contains a Roman Catholic chapel. On the precipitous bank of the river are the ruins of the castle from which the village derives its name. *Clonaslee*, population 428, is situated on the Clodagh Rivulet, which is here crossed by a good bridge, 16 miles N.W. from Maryborough. It contains a district church, a Roman Catholic chapel, two National schools, a school on Erasmus Smith's foundation, and a dispensary. Near the village are the ruins of Castle Cuffa.

Queen's County returns three members to the Imperial Parliament, two for the county and one for the borough of Portarlinton. The county jail is at Maryborough, where the assizes are held. The county infirmary is at Maryborough, as also the district lunatic asylum, to which the county is entitled to send 50 patients. There are fever hospitals at Mountrath, Mountmellick, Abbeyleix, and Maryborough; and dispensaries in 21 places. Savings banks are established at Abbeyleix, Portarlinton, and Stradbally; and loan funds at Abbeyleix, Aghaboe, Crettyard, Durrow, Mountrath, Portarlinton, and Timahoe. In September 1852 there were 82 National schools in operation, attended by 3935 male and 4407 female children.

History and Antiquities.—The county was anciently comprehended in the districts of Leix and Ossory. The King of Ossory, after the invasion, made peace with the English, and managed to retain his independence. In the reign of Edward II., O'More, an Irish chieftain, to whom Mortimer had intrusted the administration of his domain, the ancient district of Leix, became so powerful as to hold it for himself, and the district was the seat of almost incessant war between the O'Mores and the English. In Edward VI.'s reign the O'Mores were defeated by Sir Edward Bellingham, the lord deputy, who re-annexed their territories to the English pale. A new rebellion in the reign of Mary was quelled with a severity which threatened to extirpate the inhabitants; and two shires were formed, one being named after the queen, and the other after her consort, Philip of Spain. In the latter part of the reign of Elizabeth the O'Mores were again in rebellion, and the county was invaded by the lord deputy, the Earl of Essex (1599), who broke the power of the rebellious clan: their ruin was completed by Lord Mountjoy, the successor of Essex. In 1641 Roger More, head of the now reduced sept of the O'Mores, was the mainspring of the rebellion. Several castles fell into the hands of the insurgents. In 1646 the insurgent force from Ulster, under Owen Roe O'Neale, occupied Maryborough and several other strongholds; but the Parliamentarians maintained a strong garrison in the castle of Borris-in-Ossory, by a party of which, in 1647, the neighbouring fort of Ballaghmore was taken. In 1649 Maryborough and some other places were taken from the insurgents under Owen Roe O'Neale, by the Royalists under Ormond, and shortly afterwards they were taken from the Royalists by the Parliamentarians under colonels Hewson and Reynolda. In the war of the revolution some fighting took place in the county, in which the Jacobites were defeated by William's army.

Danish raths and other ancient tumuli occur in the parishes of Lea, Killeshin, and Aghaboe, and other parts of the county. At Timahoe there is a round tower, nearly perfect; and at Killeshin and Rosnallis are the remains of two others. The principal ecclesiastical remains are the ruins of an abbey at Aghaboe, of a priory at Aghmacart, and of a monastery at Rathaspeck. Of numerous feudal antiquities, the most remarkable are the remains of the castles of the Fitzpatricks at Castletown and Borris-in-Ossory, of Lea Castle near Portarlinton, and those of a castle of Earl Strongbow, on the rock of Dunamase, a few miles east from Maryborough.

QUEENSFERRY. [LIMLITHGOWSHIRE.]

QUEENSTOWN, or COVE OF CORK, County Cork, Ireland, a sea-port town, is situated on the south side of Great Island, in Cork Harbour, in 51° 51' N. lat., 8° 18' W. long., distant by road 14 miles E.S.E. from Cork, and 167 miles S.W. by S. from Dublin. The population in 1851 was 11,423. Previous to the French war Cove was a small village consisting of fishermen's cabins; it then rose into importance by becoming an admiral's station. It was the port of embarkation for troops going on foreign service, and a place of rendezvous for merchant vessels about to sail under convoy. It now depends on the number of invalids who resort to it, especially in summer, when it is much frequented as a favourite bathing-place. The name was changed from Cove to Queenstown on the occasion of her Majesty's visit to Cork in 1850. The town, which occupies a steep acclivity overlooking the harbour, consists of several streets rising one above another in lines parallel to the beach. It contains a

handsome parish church, erected in 1812; a Roman Catholic chapel, which serves as the cathedral of the diocese of Cloyne and Ross; a Wesleyan Methodist chapel; National schools; a club-room; a literary society; a public library; and reading-rooms. It has also a market-house, a fever hospital, dispensary, and bridewell. The pier, erected in 1805, forms a fine promenade, commanding a view of the magnificent harbour. The harbour of Cove is 3 miles long by 2 miles broad, with an entrance 2 miles long and 1 mile wide. It contains Spike Island, on which are artillery barracks and a dépôt for convicts; the small island of Hawbowlin, with the ordnance dépôt, and near it Rocky Island, with two powder-magazines cut out of the rock. Steamers ply daily in summer between Queenstown and Cork. The Royal Yacht Club of Cork holds its annual regatta in the harbour. Petty sessions are held weekly. A market is held on Saturday.

QUENTIN, ST. [AISNE.]

QUERCY, LE, a district in France, which formed part of Guienne, was bounded N. by Limousin, E. by Auvergne and Rouergue, S. by Languedoc, and W. by Agenais and Perigord. It was divided into Upper Quercy, which comprehended the chief town Cahors, Gourdon, Figeac, and other places; and Lower Quercy, in which were Montauban, Moissac, and other towns.

Le Quercy took its name from the Caduroi, a Celtic tribe, who inhabited it. It belonged successively to the Visigoths and the Franks. It was erected into a county by Charlemagne; subsequently it was held by the counts of Toulouse and by the English, from whom it was taken by Charles V. It is now included in the departments of Lot and of Tarn-et-Garonne.

QUERETARO. [MEXICO.]

QUERIMBA ISLANDS. [MOZAMBIQUE COAST.]

QUESALTENANGO. [GUATEMALA.]

QUESNOY, LE. [NORD.]

QUESTEMBERG. [MORBIHAN.]

QUETTAH. [AFGHANISTAN.]

QUIBERON. [MORBIHAN.]

QUILIMANE. [MOZAMBIQUE COAST.]

QUILLAN. [AUDE.]

QUILLEBOEUF. [EURE; SEINE-INFÉRIEURE.]

QUILOA (pronounced Keel-wa) is a town built on an island of the same name on the east coast of Africa, in 8° 41' S. lat., 39° 47' E. long. This island is about six miles long from north to south, and the strait between it and the main forms a secure harbour capable of receiving the largest vessels. Quiloa was a large town when the Portuguese first visited these countries, and the king held the sovereignty of Sofala, Mozambique, and the intervening ports. In 1505 it was taken by Francisco de Almeida, after a desperate resistance on the part of the inhabitants, which induced him to burn the town. At a later period the Portuguese erected a fort, but the bad climate soon obliged them to abandon it. Quiloa is now subject to the Imam of Muscat, under whom the town seems to have recovered a certain degree of prosperity, and to have been rebuilt. Mr. M'Gregor, in his 'Com-

mercial Statistics,' says that the town is represented to be large and well built; the houses are of stone, two or three stories high, and have terraced roofs; the streets are narrow. The trade of Quiloa is of little importance. It is carried on by the Arabs of Muscat, who import piece goods, sugar, arrack, spices, &c., and receive in return slaves and elephants' teeth. (M'Gregor, 'Commercial Statistics.') Part of the walls of the city still remain in a tolerably perfect state. The fort, which still exists, and is garrisoned by the Arabs, is a substantial building of stone, and is capable of containing a numerous garrison. The harbour, one of the finest on the coast, consists of a wide basin, from which several arms run a considerable distance inland.

QUILON. [HINDUSTAN.]

QUIMPER and QUIMPERLE. [FINISTÈRE.]

QUINCY. [ILLINOIS; MASSACHUSETTS; PENNSYLVANIA.]

QUINTÉ, BAY OF. [CANADA.]

QUINTIN. [CÔTES-DU-NORD.]

QUISSAC. [GARD.]

QUITO, the capital of the republic of Ecuador, South America, is situated in 13° 27' S. lat., 78° 48' W. long., at an elevation of 9534 feet above the level of the sea: population, about 40,000.

A small portion of the city is built on level ground, and the remainder on the declivity of a hill. The plain contains the great square, on opposite sides of which are the cathedral and the episcopal palace, and on the other two sides the palace of the government and the town-hall. Four wide and straight but short streets branch off from the angles of the square. The remainder of the town is very irregular, being built on the lower declivities, which are furrowed by numerous ravines, some of which are of considerable depth. The smaller streets are unpaved, and after rain, which is very frequent, are almost impassable. The greater part of the houses are built of sun-dried bricks; and in order that they may suffer less from the frequent earthquakes, they are only one story high. The roofs are flat, and are covered with the leaves of the maguey (*Agave Americana*). The great elevation of Quito, and its position near the equator, render the climate very mild all the year round; much like our finest spring weather. The mean annual temperature is 59°; the maximum 79°, the minimum 45° Fahr. The surrounding country wants trees, but the scenery is very grand, as eleven snow-capped summits are visible from the town. Quito is the seat of the legislature and general government of the republic, as well as of the provincial government of the department of Ecuador. It has a university and two colleges for the instruction of the clergy; a large establishment for the maintenance of orphans and poor people; and several convents, that of the Franciscans being a large and very fine edifice. There are some manufactures of cotton, coarse woollens, flannels, silk, and leather; silver and gold are worked rather extensively, and a large quantity of confectionary is made. The town exports a considerable amount of grain and other agricultural produce to central America.

QUORNDON. [LEICESTERSHIRE.]

QUORRA. [JOLIBA.]

R

RAAB. [AUSTRIA; HUNGARY.]

RABATT. [MAROCCO.]

RABBATO. [MALTA.]

RACCONIGL. [CONE.]

RADCLIFFE. [LANCASHIRE; NOTTINGHAMSHIRE.]

RADFORD, Nottinghamshire, a suburb of Nottingham, and the seat of a Poor-Law Union, in the parish of Radford. The population of the parish of Radford in 1851 was 12,687. The living is a vicarage in the archdeaconry of Nottingham and diocese of Lincoln. Radford Poor-Law Union contains four parishes, with an area of 7110 acres, and a population in 1851 of 26,776. The village is noticed under NOTTINGHAMSHIRE.

RADICK and RALICK are two parallel chains or groups of coral islands, situated in the Pacific between 5° 30' and 12° N. lat., 167° and 173° E. long. The chains extend nearly due north and south, and are not much more than 100 miles from one another. Radick, which is the eastern, consists of groups of small islands, inclosed and connected with one another by coral reefs rising several feet above the sea-level. The sea which separates the single groups is of great depth. The chain of the Ralick Islands is of the same character. The islands are of small extent, low, but well wooded. The inhabitants seem to belong to the Malay race, and have made some progress in civilisation, having commodiously-built houses, and boats more than 30 feet long, the sails of which are made of finely braided mats, and managed with considerable art. Both groups, with the Pescaderes and Marshall's Islands, are sometimes included in one group as the Mulgrave Islands.

RADICOFANI. [SIENA, Province of.]

RADIPOLE. [DORSETSHIRE.]

RADNOR, NEW, Radnorshire, a market-town and a municipal and parliamentary borough, is situated on the Somergill, at the southern base of Radnor Forest, in 52° 12' N. lat., 3° 8' W. long.,

distant 8 miles W.S.W. from Presteigne, and 159 miles W.N.W. from London. The population of the borough of New Radnor in 1851 was 2345. The borough, in conjunction with Presteigne, Knighton, Rhayader, Knucklas, and Cefnlllys, returns one member to the Imperial Parliament. The living is a rectory in the archdeaconry and diocese of Hereford. New Radnor was formerly the capital of the county. On a lofty eminence to the north-east of the town stood the strong castle of the Mortimers, destroyed by Owen Glyndwr in 1401; on which occasion also he burned the town. The town was formerly surrounded by walls pierced with four gates. The market has been long discontinued, but several yearly fairs are held in *Old Radnor*, now a small village, called also Pen-y-Craig, or 'the summit of a rock.' *Old Radnor* stands on an elevated situation, about two miles S.E. from New Radnor. It was burned in 1216 by King John, in revenge for an insurrection of Llewellyn, Prince of North Wales, and his son-in-law Reginald de Breos.

RADNORSHIRE, a county of South Wales, lying between 52° 2' and 52° 33' N. lat., 2° 57' and 3° 45' W. long., is bounded N. by Montgomeryshire, E. by Shropshire and Herefordshire, S. by Brecknockshire, and W. by Brecknockshire and Cardiganshire. Its greatest length from east to west is 33 miles, from north to south 30 miles. The area is 425 square miles, or 272,128 statute acres. The population in 1841 was 25,458; in 1851 it was 24,716.

Surface, Hydrography, &c.—Radnorshire is a mountainous county. The mountains form massive groups of hills, rarely forming a continuous chain. The highest and most connected range, that of Radnor Forest, runs nearly east and west from the Herefordshire border to the Ithon, and attains its greatest height, 2163 feet, between New Radnor and Llanvihangel Rhydithon. This wild tract is supposed to have been formerly covered with wood, although it now produces nothing but moss and heath. It is the property of the crown. The hills in the

west and north of the county are also of considerable height. The southern end of Rhydd Hywel, on the right of the road leading from Rhayader to Llanidloes, is 1750 feet high; Bryn Maen, in the parish of Llanvihangel Nantmelan, 1700 feet high; Camlo Hill, near Abbey Cwm Hir, east of Rhayader, 1650 feet high; and Craig-y-Foel, near Nant-Gwylt and the romantic valley of the Elan, is 1650 feet. The south-eastern part of the county is generally level.

The *Wye* enters Radnorshire on the north-west, between Llangerrig and Rhayader, at a distance of about 18 miles from its source on Plynlimmon. From two miles below Rhayader to the town of Hay it forms the boundary between Radnorshire and Brecknockshire. Below Hay the *Wye* separates Radnorshire from Herefordshire, and continues to run in the same direction till it enters Herefordshire below Clifford Castle. The *Elan* enters the *Wye* on the right bank a short distance below the town of Rhayader. The scenery of the Elan is extremely romantic.

The *Ithon* rises in the Kerry Hills on the northern side of the county, and drains the central portion of the county; before its junction with the *Wye*, seven miles above the town of Builth, it becomes a stream of considerable size, having a course of 30 miles. The *Lug* rises in the hilly country, seven miles W. from Knighton, and runs east-by-south to the town of Presteigne, two miles below which it enters Herefordshire, and traversing the most fertile parts of that county, falls into the *Wye* four miles below Hereford. The *Teme* rises on the southern slope of the Kerry Hills, and after running about four miles it turns south-east along the Shropshire border to Knighton, whence it runs eastward and still along the border to its entrance into Herefordshire, a short distance north of Brompton Park. The *Teme* is a feeder of the Severn.

Of the smaller rivers of the county the more important are the Somergill, the Edw, the Bach-wy, the Claer-wen, the Clywedog, the Aran, and the Dernel. The scenery on the Edw and Bach-wy, near their respective junctions with the *Wye*, is very beautiful. The *Wye* and *Ithon* abound with salmon. The fish of the other streams are principally trout and grayling.

The lakes are four in number and of small extent:—Llanbychllyn, a mile and a half round, between Llanbadarn-y-garreg and Llandewi-fach; Llyn Gwyn, about two miles west of Rhayader; Llynallyn, about a mile round, close to the turnpike-road leading from New Radnor to Builth; and Llyn-Hindwell, near Old Radnor.

The principal roads are the mail-road to Aberystwith, which traverses the centre of the county through New Radnor and Rhayader; the road from New Radnor to Presteigne and Knighton; the road from Rhayader to Builth; and the road from Builth to Newtown in Montgomeryshire, which runs nearly north and south up the valley of the *Ithon*.

Geology, Mineralogy, &c.—The principal portion of the county is composed of the strata forming the Silurian system; but on the west and north-west side of the county, the upper beds of the older rocks, composing the Cambrian system, make their appearance. These rocks comprise perhaps one-fourth of the whole county, having in their extreme western and north-western limits a slaty character, which towards the interior or east is gradually changed to quartzose grit. The river *Ithon* forms with tolerable exactness the line of junction of the Cambrian with the Silurian rocks; the Silurian however crosses to the west of the *Ithon* as that river approaches the *Wye*. The upper Silurian rocks compose (with the exception of the trap rocks of Llandegly, &c., and the strata interlaced with them) the whole of the middle portion of the county. The strata vary in direction from north-east and south-west to north-west and south-east. Radnor Forest is included in this district, and is chiefly composed of the upper Ludlow rock. The summit is a gritty sandstone.

On the eastern side of the county, at Old Radnor, and in the neighbourhood of Presteigne, the strata are more varied and interesting. The trap rocks at Old Radnor have brought to light the rocks both of the upper and lower Silurian system. "There is not," says Sir R. I. Murchison, "perhaps in Great Britain a finer mass of altered and crystalline limestone than that exhibited at Nash Scar, the principal cliff of which rises to the height of 200 or 300 feet above the adjoining valley of Knill and Presteigne." This limestone is well developed at Old Radnor, where also traces of the lower Silurian rocks may be observed. The old red-sandstone occupies a considerable portion of the south-eastern part of the county. The chief mass of trap rocks in Radnorshire is situated near the centre of the county, having a direction from north-west to south-east, and extending from Llandegly and Llanbadarnfawr, to the neighbourhood of Builth. Parallel to the main ridge, on the eastern side, are a number of smaller elongated mounds of trap running in the same direction, and besides these there are numerous stratified traps, alternating with beds of marine deposit. The mass of Old Radnor Hill is a dark greenstone, but there is a peculiar conglomerate thrown off on the western flanks, having a base of gray and green felspar, inclosing pebbles of quartz. Minute veins of copper-ore and crystals of copper and iron pyrites occur in the altered bedded rocks, as well as nests and coatings of anthracite. There are various proofs that the volcanic rocks penetrated the limestone subsequently to its consolidation.

The medicinal springs of Llandrindod, Llandegly, and Blaen Edw all issue from the altered strata in junction with the trap rocks of the

district, and, like the mineral springs in Brecknockshire, are supposed to owe their origin to the decomposition of iron pyrites and other mineral ingredients. There are three springs at Llandrindod, namely—saline, chalybeate, and sulphur. The Llandegly and Blaen Edw waters are sulphurous. Llandrindod lies on the Builth and Newtown road, about seven miles from the former town, and is much frequented in the summer months.

Soil and Agriculture.—A great portion of the county consists of common bog and moor land, and is therefore comparatively useless for agricultural purposes. It is supposed that only about one-fourth of the inclosed land is under the plough. Inclosures are gradually being made, as well as considerable plantations of larch and fir. The waste lands are still of great value as sheepwalks. Notwithstanding the thin population, the quantity of wheat grown in the county is considerably less than the consumption. The best wheat is grown on the eastern and south-eastern districts. Barley, oats, and potatoes are grown in considerable quantities on nearly all the farms. Flax is grown in small patches for home use.

The main dependence of the Radnorshire farmer is on the stock reared on the pasture and common land; the latter support large quantities of sheep, and in the most sheltered parts cattle of all sorts. The cows are principally of the Herefordshire breed. Numbers of Welsh ponies are also reared on the commons. Salt-butter for winter use is an article of export. Some cider is made in the districts adjoining Herefordshire.

Divisions, Towns, &c.—Radnorshire is divided into six hundreds, exclusive of the borough of Radnor, and contains 53 parishes and 3 market-towns. The hundreds are Colwyn, south and central; Kevenleece, central; Knighton, north-east; Paincastle, south; Radnor, east and central; and Rhayader, west and north. PRESTEIGNE, the county town, KNIGHTON, RADNOR, and RHAYADER, the only market-towns, are noticed in separate articles. The only villages of any importance are given here, with the population of the respective parishes in 1851.

Boughrood, population 314, is pleasantly situated among woods, near the left bank of the *Wye*, at the southern extremity of the county, 22 miles S.S.W. from Presteigne. The neighbouring country is hilly. Besides the parish church there is a Primitive Methodist meeting-house. Some remains of Boughrood Castle are still left. *Cefnllys*, or *Kevenleece*, population 386, about 9 miles S.E. from Rhayader, situated on a bend of the *Ithon*, is a contributory borough to New Radnor: the population of the borough in 1851 was 45. *Olyro*, population 883, on the left bank of the *Wye*, near the junction of the counties of Radnor, Brecknock, and Hereford. There was formerly a monastery at this place; also a castle, of which there are still some remains. The chancel of the church was rebuilt in 1823. The Wesleyan Methodists have a chapel, and there are National schools. *Disserth*, population 564, on the left bank of the *Wye*, has a commodious old church with a lofty turreted tower. *Glisbury*, population 1375, about 20 miles S.S.W. from Presteigne, is on the left bank of the *Wye*, over which there is a high wooden bridge, built in 1800. The church has a tower at the west end. There are National schools and some small charities. Woolstapling is carried on. Westward of the village, standing in an extensive park, is Maeslough Castle, the seat of the De Winton family. *St. Harmon*, population 853, on the *Wye*, 4 miles N. by E. from Rhayader, has a neat church, rebuilt in 1823, and chapels for Wesleyan and Calvinistic Methodists and Baptists. *Knucklas*, population of the borough 251 in 1851, is situated near the right bank of the river *Teme*, 13 miles N. by E. from New Radnor, to which borough it is contributory in returning a member to the Imperial Parliament. *Norton*, population 294, about 3 miles N. by W. from Presteigne, is sometimes called by the inhabitants a borough. The church is ancient. A school is supported by Lady Brydges. There are remains of an ancient castle.

Divisions for Ecclesiastical and Legal Purposes.—The eastern side of Radnorshire is in the diocese of Hereford, and the western in that of St. David's. The county is in the South Wales circuit. The assizes are held at Presteigne; county courts at Presteigne and Rhayader. One member of parliament is returned for the county, and one for New Radnor and its contributory boroughs. By the Poor-Law Commissioners the county is divided into three unions, Knighton, Presteigne, and Rhayader. These unions comprise 46 parishes and townships, with an area of 228,558 acres, and a population in 1851 of 19,769.

History, Antiquities, &c.—Radnorshire originally formed part of the territory inhabited by the Silures, and, after its subjugation and ultimate abandonment by the Romans, was included in one of the petty principalities into which Wales was divided. In the reign of Henry VIII. Radnor was formed into a county.

There is a Roman station at Cwm, on the right bank of the river *Ithon*, about two miles north-west from Llandrindod. The camp is square, and covers an area of about four acres. Radnorshire being a border county, the remains of British encampments are numerous. Offa's Dyke, the boundary formed by Offa between his kingdom of Mercia and the territories of the Welsh princes, enters Radnorshire on the north at Knighton; running south the dyke enters Herefordshire at Berva Bank, a steep hill on the right of the turnpike-road between Presteigne and New Radnor. There were several castles in

this county, but their remains are very imperfect. One tower of Aber Edw Castle remains. It is situated close to the romantic village of Aber Edw, near the junction of the Edw with the Wye, about three miles below the town of Builth. This castle belonged to Llewellyn ap Griffyth, and was that prince's last retreat. He was here killed. The dell of the Edw has ever since been called Cwm Llewellyn, or Llewellyn's Dingle.

The only monastic establishment in Radnorshire seems to have been that of Abbey Cwm Hir. It is romantically situated in a narrow valley surrounded by high hills, 5 miles east by north from Rhayader. It was founded about 1143. The only remains of the edifice are part of the exterior walls and the foundation of the pillars which supported the arches. Some of the columns and arches of the abbey were removed to Llanidloes, and are now in the church of that place. The ancient font and screen at Newtown were also taken from Abbey Cwm Hir.

Statistics: Religious Worship and Instruction.—According to the Returns of the Census of 1851, it appears that in the Registration County of Radnor, including a population of 31,425, there were then 139 places of worship, of which 59 belonged to the Church of England, 50 to three bodies of Methodists, 17 to Baptists, and 11 to Independents. The total number of sittings provided was 22,802. The number of day-schools was 83, of which 34 were public schools, with 1731 scholars, and 49 were private schools, with 699 scholars. Of Sunday schools there were 51, with 2519 scholars. There was an evening school for adults, with 9 scholars.

RADOM. [POLAND.]

RADWINTER. [ESSEX.]

RAGGED ISLAND. [BAHAMAS.]

RAGUSA, or RAU'GIA (Rhaussa, in Latin; Dubrounik, in Slavonian), an episcopal and sea-port town of Austria, in the crown-land of Dalmatia, is situated on the eastern coast of a peninsula in the Adriatic, formed by the Gulf of Breno on the east and the Gulf of Santa Croce, or Ombla, on the west. The town stands about 40 miles W. by N. from Cattaro, in 42° 38' N. lat., 18° 8' E. long., and is built partly at the foot and partly on the steep declivity of two hills: it is fortified with walls and ditches, and has a castle on the east, at the entrance of the harbour, and another at the western end of the town. The streets are paved, but very narrow, except two: the houses, which are built of freestone, are generally large and commodious. The principal buildings are—the cathedral, which is a good structure; the palace of the government, which is extensive, and has some fine halls and galleries; the custom-house, the guard-house, and barracks. The town has a lyceum and several other institutions, a theatre, and a quarantine station. The town is well supplied with spring-water. Outside of the walls are numerous gardens and country-houses, with plantations of orange and other fruit-trees, and handsome fountains. From Ragusa along the western coast as far as the Creek of Ombla, a distance of about three miles, there is an almost continuous suburb. The surrounding country produces abundance of fruit and very good wine: the malmsey of Ragusa has a great reputation, and forms an article of export. The climate of Ragusa is temperate and healthy, and instances of great longevity are not uncommon. The population of Ragusa, which is said to have once amounted to 30,000 inhabitants, is now only about 6000. Its maritime trade, which during the period of its independence was very flourishing, was almost annihilated after the French occupation in 1806; but it has somewhat revived since the peace. Ship-building, manufactures of soap, rosoglio and other liqueurs, and tobacco are the chief branches of industry. The harbour, which lies immediately south of the town, admits only small vessels; but two miles west of Ragusa is the fine harbour of Gravosa, which admits ships of the line, and has docks for ship-building, and fine country-houses and gardens. Timber is carried thither from the opposite coast of Monte Gargano in Italy. A few miles east of Ragusa is Ragusa Vecchia, on or near the site of the ancient Epidaurus in Illyria, a Roman colony, which was destroyed by the Slavonians in the 6th century.

Ragusium, or Rausium, seems to owe its origin to the inhabitants of Epidaurus who escaped from the sack of the city by the Slavonians. In the 7th century the population was increased by emigrants from other towns of Dalmatia and Albania, and the town was then enlarged and fortified. The people organised a republican form of government, consisting of a general council, from which the senate, or executive, was elected, with an officer at their head, who was first styled Count, and afterwards Rector. Till the 10th century they lived under the protection of the Slavonian princes of Narenta. The Narentines were defeated at sea by Pietro Orseolo, doge of Venice; after which the Ragusans now applied themselves strenuously to agriculture, as well as to maritime trade: they built vessels, and became so powerful by sea, that in no very long time afterwards a Ragusan squadron joined the Imperial fleet and defeated the Saracens, who had attacked Ragusa and several other towns on the Dalmatian coast. The annals of Ragusa for several centuries after this event exhibit a succession of wars and treaties between the republic and the Slavonian powers of Croatia, Servia, Bosnia, and Bulgaria, as well as with the emperors of Constantinople and the Norman kings of Sicily, throughout which the small community of Ragusa preserved its independence and extended its maritime trade.

From about the year 1260 till 1368 Ragusa had Venetian rectors,

who held office for two years each, and were taken from among the first patrician families of Venice. Ragusa however still continued to govern itself as an independent state, and to be administered according to its own laws. In this interval it greatly extended its trade, obtained considerable accessions of territory, and built the strong fortress of Stagno to defend the isthmus of the peninsula of Sabioncello. About 1368, war having broken out between Venice and the king of Hungary, who had attacked Ragusa and several other towns on the Dalmatian coast, the Hungarians advanced as far as Maestre, and Venice was obliged to sue for peace, one of the conditions of which was that Ragusa should be restored to independence, and should choose its own rectors. It was also determined that the rector should be renewed every six months. In gratitude for this the Ragusans agreed to pay a tribute of 500 ducats yearly to the king of Hungary, and to hoist his flag on their ramparts by the side of that of the republic. In the war between Genoa and Venice (1378-80) the Ragusans sided with Genoa, and some of their galleys were at the battle of Chioggia. After the defeat of the Genoese, Venice sent a squadron against Ragusa, which applied to the king of Bosnia for assistance, by whose means they repulsed the Venetians, after which peace was made between Venice and Ragusa. About the year 1397 the Ottomans, under Sultan Bayazid, having defeated Sigismund of Hungary at the great battle of Nicopolis, overran part of Bosnia, and spread alarm as far as Ragusa. About 1414 the Ragusans purchased peace with the Ottomans by paying an annual tribute of 500 ducats, which was afterwards gradually raised as the Turks drew nearer to Ragusa. In 1433 the Ragusans introduced the manufacture of woollens from Florence, which became their principal branch of internal industry. They also constructed an aqueduct to carry the spring-water from the valley of Giuncheto to their town, at an expense of 12,000 ducats.

In 1440 George Despotos of Servia, being defeated by Amurath II., took refuge at Ragusa with his family and treasures, and was there protected against the threats of Amurath. About 1450 the Ragusans purchased from several Bosnian lords the district of Ragusa Vecchia and Canale, which constituted the eastern part of their territory, and distributed the land among the citizens. But in 1463-64 Mahomet II. conquered Bosnia also, and the Turks became immediate neighbours of Ragusa, and have been ever since. About 1471 they ravaged the district of Canale, but Ragusa obtained a respite by raising the tribute to 8000 ducats. From this time the Ragusans paid a yearly tribute to the Porte, which afforded them its powerful protection. During the long wars of the 16th century, between Sultan Solyman and his son Selim on one side, and Venice and Spain and other Christian powers on the other, the Ragusans found it a most arduous task to preserve their neutrality, as the fleets of the belligerents came repeatedly off their coasts, and landed and plundered the territory without scruple.

During the 17th and 18th centuries, after a better understanding had been established between the Porte and the Christian powers, Ragusa continued to enjoy her independence and neutral security, paying the accustomed tribute to the Sultan, who however did not interfere in her internal concerns, and no Turkish soldier was allowed to step within its boundaries. The Sultan's protection was of importance to Ragusa, by securing its flag from the attacks of the Barbary pirates. In this respect the Ragusan merchant ships had the advantage over those of most states in the Mediterranean, and they acted as carriers in that sea between the Levant and the ports of western Europe, and realised considerable profits, especially in times of war. Ragusan mercantile houses were established in many of the sea-port towns of the Mediterranean. The republic maintained a small fleet of galleys and other armed vessels for the protection of its coasts and its trade. In 1667 Ragusa was afflicted by a dreadful earthquake, which ruined the greater part of the town.

Ragusa had remained an independent state for more than a thousand years. Coeval with Venice, it fell soon after that republic. In 1806 France and Russia were quarrelling about the possession of the important district of Cattaro, which was ceded to France by the treaty of Presburg between Austria and France. The Russians however from Corfu had been beforehand, and had taken possession of Cattaro. The French troops from Dalmatia could not reach Cattaro without crossing the neutral territory of Ragusa. The soldiers of Napoleon, unable to occupy Cattaro, took military possession of Ragusa in May, 1806. The French occupation of Ragusa led the Montenegrins to overrun its territory. They besieged the French within the town. The unfortunate Ragusans, placed between the regular French troops within and the savage Montenegrins without, saw their country-houses and villages devastated, but the town was saved from the Montenegrins. The result was, that Napoleon by a stroke of the pen in 1808 abolished the republican government, and incorporated Ragusa with the province of Dalmatia, and he made Marmont titular duke of Ragusa and governor of the province. On the fall of Napoleon in 1814, when the Austrians again occupied Dalmatia, they found Ragusa included in that province, and they kept it.

RAINHAM. [ESSEX.]

RAJAMUNDY. [CIRCARS, NORTHERN.]

RAJASTHAN. [HINDUSTAN.]

RAJMAHAL, a town of Hindustan, in the presidency and province of Bengal, on the right bank of the Ganges, in 25° 2' N. lat., 87° 53'

E. long. It was formerly a large city, and at one time the capital of the province of Bengal, but is now little more than a long street of mud huts, some tombs and dilapidated mosques, and the ruins of a vast palace, which was built by the Sultan Sujah, brother of the emperor Aurengzebe, and completed in 1630. In the following year however a fire destroyed the greater part of the town, and a considerable portion of the palace; and not long afterwards a branch of the Ganges changed its course, and carried away nearly all the houses which remained. Rajmahal has ever since continued in a state of decay. The town contains several market-places, and has a considerable trade with the inhabitants of the mountainous district of the Rajmahal Hills. The population of the town is estimated at nearly 30,000.

RAJMAHAL HILLS, a group of mountains which derive their name from the town of Rajmahal, near which the southern part of them commences: they extend about sixty miles northward along the west bank of the Ganges. They form a detached mass, bounded on all sides by a level country, and rise from the flat surface of Bengal as if out of the sea. They are well wooded, and there is much thick jungle, so that they abound in wild animals of all kinds, from the jackal to the tiger, and from the deer to the elephant and rhinoceros.

The Rajmahal Hills, and indeed all the hilly country between Rajmahal and Burdwan, are inhabited by the Puharrees (or mountaineers), who appear to be an aboriginal race, differing from the inhabitants of the plain in features, language, manners, and religion. They are distinguishable from the Hindoos by their long narrow eyes, broadish faces, and flattish turned-up noses; in stature they are rather short, but strong and active. They live chiefly by the chase, in which they use bows and arrows, few of them having fire-arms, and they shoot the larger animals with poisoned arrows. In addition to hides and game they dispose of wax and honey, in which their hills abound, and they cultivate millet in considerable quantity.

A considerable improvement both in manners and morals took place among these mountain tribes about seventy years ago, chiefly resulting from the equitable administration of Mr. Cleveland, judge of Boglipoore, who died in 1784 in the 29th year of his age, and whose memory is held in grateful remembrance both by the lowland Zemindars and the mountain Puharrees. [BOGLIPOORE.]

RAJNAGHUR. [DACCA.]
RAJPOOTANA. [HINDUSTAN.]
RAKHAIN. [ARACAN.]
RALEIGH. [CAROLINA, NORTH.]
RAMBERT, ST. [AIN; LOIRE.]
RAMBERVILLERS. [VOSGES.]
RAMBLA. [CORDOVA.]
RAMBOUILLET. [SEINE-ET-OISE.]
RAMERUPT. [AUBE.]
RAMESERUM. [HINDUSTAN.]

RAMILLIES, or RAMELIES, a small village in Belgium, in the province of South Brabant, 13 miles N. from Namur, and 26 miles S.E. from Brussels, celebrated for the victory obtained in its vicinity May 23, 1706, by the allied army under the Duke of Marlborough over the French and Bavarians commanded by Marshal Villeroi and the Elector of Bavaria.

RAMPOOR. [BUSSAHER.]
RAMREE. [ARACAN.]
RAMSBOTTOM. [LANGASHIRE.]
RAMSBURY. [WILTSHIRE.]

RAMSEY, Huntingdonshire, a market-town in the parish of Ramsey, is situated on a feeder of the river Neve, in 52° 28' N. lat., 0° 6' W. long., distant 12 miles N.N.E. from Huntingdon, and 69 miles N. from London. The population of the town of Ramsey in 1851 was 2641. The living is a perpetual curacy in the archdeaconry of Huntingdon and diocese of Ely.

In the reign of Edgar, in the year 969, Ailwine, duke or earl of the East Angles, founded a Benedictine abbey on an island or dry spot in the marshes called Ram's 'ey,' or island; hence the name of the town. The abbey attained great wealth and repute, and had among its abbots and monks many able and learned men. A school was maintained here almost from the foundation of the abbey, and the library was celebrated for its collection of Hebrew books. The abbey of Ramsey were mitred.

Ramsey consists chiefly of one long street running east and west, and another street running northward along the Bury Brook. The church consists of a nave with clerestory, aisles, and chancel, with an embattled tower at the west end. Some of the piers and arches of the church are in the transition from the Norman to the early English style. The only remains of the abbey are the ruined gateway, a rich specimen of decorated English architecture, and a statue of Earl Ailwine, the founder, supposed to be one of the most ancient pieces of English sculpture extant. The Baptists have a chapel, and there are National and Infant schools. Wednesday is the market-day; a fair is held on July 22nd.

RAMSEY. [MAN, ISLE OF.]
RAMSEY ISLAND. [PEMBROKESHIRE.]

RAMSGATE, Kent, a market-town, sea-port, and watering-place in the parish of Ramsgate, is situated at the south-east corner of the Isle of Thanet, in 51° 21' N. lat., 1° 24' E. long., distant 17 miles E.N.E.

from Canterbury, 73 miles E. by S. from London by road, and 97 miles by the South Eastern railway. The town is governed by commissioners under a local act. The population of the town of Ramsgate in 1851 was 11,838. The living is a vicarage in the archdeaconry and diocese of Canterbury.

The ville, as it is legally termed, of Ramgate, is a member of the Cinque-Port of Sandwich. Ramgate was anciently a poor fishing town, consisting of a few meanly-built houses, with a small wooden pier. After the revolution of 1688 some of the inhabitants embarked in the Russian trade, by which they acquired wealth, and this led to the improvement of the town. Ramgate was one of the places earliest frequented by the inhabitants of the metropolis for sea-bathing, though for some time eclipsed by the superior attractions of Margate. Early in the present century a stone lighthouse was erected on the head of the west pier; a small battery is fixed at the head of the east pier. The east pier is one of the longest in the kingdom, extending nearly 3000 feet; the western pier extends about half that length: they are built of Portland and Purbeck stone and Cornish granite. The harbour includes an area of 48 acres, and furnishes a convenient shelter for vessels obliged by heavy gales to run from the Downs. A dry dock and a patent slip afford facilities for repairing vessels.

The old part of Ramsgate is situated in one of those natural depressions (called in the Isle of Thanet 'gates,' or 'stairs') in the chalk which open upon the sea. The newer part, which consists of well-built houses arranged in streets, terraces, and crescents, is well paved and lighted with gas. The chief public buildings are the town-hall and the custom-house. There are an assembly-room, several bathing-rooms, and numerous boarding- and lodging-houses for the accommodation of visitors during the summer. The places of worship are—the parish church, erected in 1827, a spacious and handsome gothic structure, with a tower 137 feet high; a chapel of ease; a district church; two chapels for Baptists; and one each for Wesleyan and Primitive Methodists, Independents, Roman Catholics, and Jews. There are several National, British, and Infant schools; a Church Union, with a library; a savings bank; a dispensary; and an hospital especially for seamen, but to which the neighbouring poor are under certain regulations admitted.

Ramsgate has a considerable coasting-trade; coal is largely imported, and ship-building and rope-making are carried on. Wednesday and Saturday are the market-days. A county court is held in the town. There is a considerable fishery. The number and tonnage of vessels registered as belonging to the port of Ramsgate on December 31st, 1853, were—under 50 tons 95, tonnage 2564; above 50 tons 37, tonnage 3485; with 1 steam-vessel of 10 tons. The custom-house entries at the port during 1853 present the following results:—Inwards, 619 vessels, tonnage 47,035; outwards, 252 vessels, tonnage 15,486.

RANDALSTOWN. [ARMAGH.]
RANDAZZO. [MESSINA, Province.]
RANDERS. [AARHUS.]
RANELAGH. [DUBLIN, County.]

RANGOON, formerly the most commercial port of the Birman empire, is situated in 16° 47' N. lat., 96° 18' E. long., on the left bank of the most eastern branch of the river Irrawaddy, about twenty-six miles from the sea. About two miles below the town the river divides into two arms, of which the eastern, running nearly due east, is called Syrian River; and the western, running nearly due south, Rangoon River. Both of these branches are navigable, but the Rangoon River is generally preferred. The town and suburbs extend about a mile along the bank of the river, but the houses are very unequally scattered over this area. The streets are narrow, but clean and well paved. The houses are raised on posts; the smaller supported by bamboos, and the larger by strong timbers. There are a few brick houses chiefly belonging to Europeans, and since its occupation by the British the town has been fortified. Two narrow roads paved with brick lead from the southern face of the stockade to the great pagoda, Shewi Dagong; and along the sides are built a number of Sidis, or monuments, in honour of Buddha. In form they may be compared to a speaking-trumpet standing on its base. The lower part is generally a polygon, and the shaft or upper part is round, the apex being ornamented with an iron net in form of an umbrella, called a 'ti.' The Shewi Dagong is in the same style as the rest, but richly gilt all over. It is said to be about 273 feet high, and is surrounded by an inclosure in which is an immense bell of very rude fabric.

Rangoon was built by Alompra, after the destruction of Pegu and Syrian in 1755, and the choice of the site shows the sagacity of the conqueror. It was well adapted for ship-building, as the tide rises from 18 to 24 feet. Timber can be procured from the teak-forests at Sarwa, not far from Rangoon, and floated down the whole way to the port; consequently many vessels of considerable burden have been built here. Besides its advantageous situation for commerce, the elevated ground on which it is built secures it from being inundated by the tropical rains to which all the lowlands of the delta of the Irrawaddy are subject. The climate is temperate, agreeable, and salubrious. The place at first rose slowly, but by 1826 its commerce was very large, and Crawford estimated the population at near 9000. On January 2, 1852, at the commencement of the war in the Birma, Rangoon was attacked by a British naval force, and the passage of the river forced; on April 14 of the same year it was stormed by the

British forces under General Godwin, and captured. It has ever since (with the rest of Pegu, of which it is the commercial capital) remained in possession of the British; but in February 1853 it suffered from a fire which destroyed a great part of the town. By the latest estimate the town and suburbs are computed to contain a population of nearly 20,000.

(Crawford, *Journal of an Embassy to the Court of Ava.*)

RAPALLO. [GENOA.]

RAPHOE, County Donegal, Ireland, a post- and market-town, and the seat of a diocese, is situated in 54° 53' N. lat., 7° 36' W. long., 6 miles W.N.W. from Lifford, and 186½ miles N.N.W. from Dublin by road. The population in 1851 was 1492. The town, which is finely situated in a fertile and cultivated district, is well built. It contains the parish church, which is the cathedral church of the diocese, a plain cruciform building with a square tower; a Presbyterian meeting-house; a Free school founded in the reign of Charles II., which has an income from endowment of about 350*l.* a year, and had 35 scholars in 1854; a school for clothing, teaching, and apprenticing 20 poor boys; a National school; a widows' house for four clergymen's widows; a public library; a neat market-house; and a dispensary. Near the town are the deanery and the late episcopal palace, a spacious and handsome building. Considerable quantities of produce are sold at the weekly market. Fairs are held four times a year. Petty sessions are held monthly.

The see of Raphoe is in the archiepiscopal province of Armagh. It comprehends above two-thirds of the county of Donegal, and contains 34 benefices. The dignitaries are a dean, archdeacon, and four prebendaries. The bishopric is said to have been founded in the 9th century by St. Eunan, but there are no distinct traces of its existence till the 12th century. By the Act 3 & 4 Will. IV. the see of Raphoe has been united with that of Derry. The cathedral church and bishop's palace of the united dioceses are in the city of Londonderry. The income of the bishop is 8000*l.* a year.

RAPPERTSWYL. [GALL, ST.]

RASSEIN, LAKE. [BULGARIA.]

RASSOVA, a small town in Bulgaria, situated on the right bank of the Lower Danube, at the point where the river makes its great bend to the northward, about 30 miles E.N.E. from Silistria. It is of importance from its position at the western end of the line of earthworks called Trajan's Wall, which extends across the isthmus of the Dobrudscha from near Rassova to Kustenje, on the Black Sea. Rassova is slightly fortified; it was occupied for a short time by the Russians in their invasion of Bulgaria in 1854.

RASTADT, a fortified town, with 6000 inhabitants, in the grand-duchy of Baden, is situated on the river Murg, near the right bank of the Rhine, at a distance by railway of 14 miles S. from Karlsruhe, and 26 miles N. by E. from Strasburg. It is regularly built. Among the public structures is a fine palace, built on the model of that of Versailles, and till 1771 the residence of the margrave of Baden. There are three churches, two chapels, a lyceum, and a training-school for Catholic school-masters. Starch, snuff, tobacco, chicory, papier-mâché articles, fire-arms, mathematical and philosophical instruments, and carriages are manufactured. Rastadt has been the scene of important negotiations. On March 6, 1714, Prince Eugene and Marshal Villars signed a treaty of peace in this town, which put an end to the war of the Spanish succession. On the 9th of December, 1797, a congress was assembled at Rastadt to negotiate a peace between France and the German empire. Roberjeot and Bonnier, the French ambassadors at this congress, which was dissolved by the emperor April 7, 1799, were murdered on their way home, at about 500 paces outside the town: no satisfactory evidence was ever obtained respecting the authors of the crime. During the late rebellion in Baden, the republican insurgents having suffered various defeats from the auxiliary Prussian troops, shut themselves up in Rastadt, which, after about a month's siege by the Prussians, surrendered unconditionally July 23, 1849.

RATBY. [LEICESTERSHIRE.]

RATHANGAN. [KILDARE.]

RATHCORMACK. [CORK.]

RATHDOWN, a Poor-Law Union in Ireland, extends over the barony of Rathdown in the county of Wicklow, and part of the baronies of Rathdown, Dublin, and Uppercross in the county of Dublin. It comprises 11 electoral divisions, with an area of 61,514 acres, and a population in 1851 of 48,140. The Union workhouse, erected in 1841 at a cost of 6000*l.*, and capable of receiving 1280 paupers, is a handsome building, finely situated on a rising ground overlooking the Dublin road, about 3 miles N. from the town of Bray. It contains a National school. Rathdown Castle, church, and village stood in a deep ravine on the coast of Wicklow, about 15 miles S.S.E. from Dublin. Of the castle there are some interesting remains; the church is quite gone; two or three mud cabins alone mark the site of the village.

RATHDRUM, County Wicklow, Ireland, a market-town and the seat of a Poor-Law Union, is situated on the right bank of the Avonmore River, and on the Dublin and Wexford road, in 52° 56' N. lat., 6° 14' W. long., 10 miles S.W. by W. from Wicklow, and 38 miles S. from Dublin. The population in 1851 was 947. Rathdrum Poor-Law Union comprises 30 electoral divisions, with an area of

227,540 acres, and a population in 1851 of 47,932. The town, the name of which signifies 'the hill fort,' occupies the sides and summit of a commanding eminence, on which was anciently the residence of the chieftain of the district. The houses are generally well built, and the place has a neat appearance. The parish church was erected in 1795. There are a Roman Catholic chapel, a Wesleyan Methodist meeting-house, a Royal Chartered school with an endowment of 153*l.* a year, and a National school. There are also a dispensary and Union workhouse. The flannel-hall, or market-house, which forms a spacious square on the summit of the hill, was built in 1793 by Earl Fitzwilliam, proprietor of the town. Petty sessions are held in the place. There are eleven yearly fairs.

RATHENAU. [BRANDENBURG.]

RATHFRILAND. [DOWNSHIRE.]

RATHKEALE, County Limerick, Ireland, a market-town and the seat of a Poor-Law Union, is situated on the river Deel, in 52° 32' N. lat., 8° 53' W. long., distant by road 17 miles S.W. by W. from Limerick, 186 miles S.W. by W. from Dublin. The population in 1851 was 3029. Rathkeale Poor-Law Union comprises 18 electoral divisions, with an area of 79,932 acres, and a population in 1851 of 28,587. The town contains the parish church, a Roman Catholic chapel, a Wesleyan Methodist meeting-house, and three National schools, the court-house, fever hospital, dispensary, Union workhouse, bridewell, and barrack. Quarter and petty sessions are held in the place. Thursday is the market-day. There are 12 yearly fairs. In the town are the remains of an ancient Augustinian priory. The town derived considerable advantage from the introduction of some Palatine families, a part of a colony of German Protestants that settled in the neighbourhood about the commencement of the 18th century.

RATHMELTON. [DONEGAL.]

RATHMINES. [DUBLIN, County of.]

RATHMULLEN. [DONEGAL.]

RATIBOR. [OPPELN.]

RATISBON (*Regensburg*), the capital of the Upper Palatinate, in Bavaria, is one of the most ancient towns in Germany, having been built by the Romans, by whom it was called *Reginum*, *Castra Regia*, and subsequently *Augusta Tiberii*. In the 2nd century it was already a place of trade. The Romans threw up a line of fortifications between Ratisbon and Cologne. Before the time of Charlemagne, and long subsequently, it was the chief town in Bavaria, and governed by counts of its own under the immediate protection of the German emperors. From 1663 to the dissolution of the German empire in 1806, it was the seat of the Imperial Diet.

Ratisbon is situated in 49° N. lat., 12° 22' E. long., in an extensive and fertile valley, on the right bank of the Danube, opposite to its confluence with the Regen. The Danube here forms two small islands, called Oberwörth and Niederwörth, which are connected with each other and with the banks of the Danube by a remarkable stone bridge, 1100 feet in length and 23 feet wide, which was built in the years 1135 to 1140, and connects Ratisbon with its suburb *Stadt-am-Hof*, on the left bank. The town is surrounded with ramparts, pierced with six gates; but the ditches have been filled up. Most of the houses are built of stone; they are very old-fashioned, and their great height adds to the gloominess of the streets, which are narrow and crooked, but clean and well paved. The most remarkable buildings are the ancient rath-house, in which the German Diet held its sittings; the gothic cathedral, one of the finest in Germany, within the large precincts of which are two older cathedrals, one now called the Baptistery and dating from the 10th century, the other in the form of a basilica and dating from Roman times; the Scotch Benedictine church of St. James, founded in 1165; the vast abbey of St. Emmeran, which now forms the palace of the Prince of Thurn-und-Taxis; and the churches of the ancient abbeys of Niedermünster and Obermünster. There are in all one cathedral and 27 other churches and chapels. Besides the library in the town-house, there are some other considerable libraries and collections of works of art; also a botanical garden, a Catholic gymnasium, an ecclesiastical seminary, a school for the blind, and a school of design. There are extensive bleach-grounds and breweries, and manufactories of leather, tobacco, wax-candles, soap, cutlery, earthenware, porcelain, fire-arms, and carriages. The inhabitants carry on a considerable trade in salt, timber, corn, and their own manufactures, and transact extensive business on commission. The population is about 22,000, exclusive of the military. Steamers ply regularly to Ulm and Vienna. In an alley near the city is a monument, erected in 1817, in honour of Kepler, who died here in November 1630, and was buried in St. Peter's churchyard. On a rock above the Danube, six miles below Ratisbon, stands the *Walhalla*, a marble temple of the Doric order, erected on the plan of the Parthenon of Athens, by the ex-king Ludwig of Bavaria, in honour of the great men of Germany. There were severe engagements between the French and Austrians near Ratisbon in 1809. Electro-telegraphic wires connect Ratisbon with Munich and Vienna.

RATOATH. [MEATH.]

RATZEBURG. [MECKLENBURG.]

RAUCHEWACKE. [LAUENBURG.]

RAUMO. [FINLAND.]

RAUNDS. [NORTHAMPTONSHIRE.]

RAVENGLASS. [CUMBERLAND.]

RAVENNA, a province of the Papal State, is bounded N. by the province of Ferrara, W. by that of Bologna and by Tuscany, S. by the province of Forlì, and E. by the Adriatic. The area is about 674 square miles, and the population in 1850 was 175,338. The eastern part of the province, which lies near the Adriatic, is low and marshy; but the western or inland part, which stretches to the foot of the Tuscan Apennines, in the neighbourhood of Imola and Faenza, is healthy, well cultivated, and thickly inhabited. The chief products of the country are corn, wine, silk, hemp, and cattle. A considerable quantity of sea-salt is derived from the Lagoon of Cervia. The principal towns of the province are RAVENNA and FAENZA. *Imola* is an episcopal city of 10,000 inhabitants on the Santerno, which is crossed by a handsome bridge. It has a fine cathedral, a college, and a manufactory of cream-of-tartar. Popes Pius VII. and Pius IX. were bishops of Imola before their election to the Holy See. *Cervia*, a small town, in an unhealthy situation near the sea-coast, has about 1200 inhabitants. *Castel Bolognese*, a bustling town, in a fertile district, has about 4000 inhabitants.

The province of Ravenna is crossed by numerous streams, which rise in the Tuscan Apennines, and flow in a north-east direction to the Adriatic. The principal are—the Santerno, which flows by Imola; the Senio; the Lamone, which flows near Faenza; the Montone, which enters the sea below Ravenna; and the Ronco, which joins the Montone above its mouth. A road leads from Faenza across the Apennines into the valley of the Sieve, north of Florence.

RAVENNA, situated in 44° 26' N. lat., 12° 12' E. long., is an ancient city of Italy, once a sea-port, but now 9 miles from the sea, which has receded all along this coast, owing to the accumulation of sand thrown up by the waves, and of the alluvial earth brought down by the rivers. Between Ravenna and the sea is the *Pineta*, or Forest of Pines, which extends about 15 miles in length along the sea-coast, and which has been noticed by Dante, Boccaccio, Dryden, and Byron. Ravenna is an archbishop's see, and the residence of the legate of the province. It has a college, and civil, criminal, and commercial courts. The population is about 18,000. The cathedral, built in the 4th century, but since that time almost completely rebuilt, retains several sculptures and other remains of its early age: the baptistery, detached from the church, is still in its original state. The church of Santa Vitale was built by an exarch in the time of Justinian, in imitation of the Holy Sepulchre at Jerusalem. It has some handsome pillars of granite, and a large mosaic, in good preservation, representing the emperor Justinian with his courtiers, and his empress Theodora attended by her ladies. The church of St. John the Baptist was built by Placidia, daughter of Theodosius, as well as that of St. John the Evangelist, with its altar, which is faced with porphyry and other valuable marbles. The mausoleum of Theodoric, which is outside of the town, has a monolithic dome, nearly 100 feet in circumference, which has been transformed into a church, called Santa Maria Rotonda. There are some remains of the splendid palace of Theodoric, which was inhabited by his successors the Exarchs. A fragment of a wall, with two or three pillars, and a semicircular recess above, are all that remain of the palace. A porphyry bath, which was found near the mausoleum, has been let into the wall of the palace. The church of St. Apollinaris in Classe, so called because it was built on the site of the old port, is a magnificent structure, raised also by Theodoric, with 24 large columns, each of a single piece of marble, which were brought from Constantinople; and a fine mosaic, representing a view of Ravenna in the 6th century, with numerous figures of saints. The great altar is made of porphyry, verde antico, and oriental alabaster; and the pulpit, which is of marble, is of curious workmanship. Ravenna, next to Rome, is the city of Italy which abounds most with valuable and rare ancient marbles. The church of St. Apollinaris contains the tombs of many of the old archbishops of Ravenna, and a series of their portraits.

The public library of Ravenna contains 40,000 volumes and 700 manuscripts. There is also a cabinet of ancient medals and inscriptions, and a gallery of paintings. The mausoleum of Dante, who died at Ravenna, was raised in the 15th century, by Bernardo Bembo, a Venetian podestà, and father of Cardinal Bembo: it has been repaired several times.

The ancient town of *Classis*, the port of Ravenna, which stood 2 or 3 miles S. from the city, was destroyed in the year 728 by Luitprand, king of the Longobards. It is now a marsh, 6 miles distant from the sea.

Ravenna is said to have been originally a town of the Umbri. It is not particularly noticed in Roman history till the time of the empire, when the port of Ravenna became one of the two great stations for the Roman fleet, Misenum being the other. After the fall of the empire Theodoric made Ravenna the capital of his kingdom, and he greatly embellished the town. When Narses, the general of Justinian, having overthrown the kingdom of the Goths, A.D. 553, was appointed by the emperor exarch or governor-general of Italy, he fixed his residence at Ravenna, which continued under his successors to be the centre of the imperial administration in Italy, till Astolphus, king of the Longobards, took Ravenna in 752. In 755 Pepin, having defeated Astolphus, obliged him to give up Ravenna and the district called the *Pentapolis* to the see of Rome.

RAWITSOH. [POEM.]

RAWTONSTALL. [LANCASHIRE.]

RAYLEIGH. [ESSEX.]

RÉ, ISLE OF. [CHARENTE-INFÉRIEURE.]

READING, Berkshire, the county town, a municipal and parliamentary borough and market-town, and the seat of a Poor-Law Union, is pleasantly situated on the banks of the river Kennet, just above its junction with the Thames, in 51° 27' N. lat., 0° 58' W. long., distant 39 miles W. by S. from London by road, and 36 miles by the Great Western railway. The population of the town of Reading in 1851 was 21,456. The borough is governed by 6 aldermen and 18 councillors, of whom one is mayor; and returns two members to the Imperial Parliament. The sanitary arrangements of the town are under the management of a Local Board of Health. The livings are in the archdeaconry of Berks and diocese of Oxford. Reading Poor-Law Union contains three parishes, with an area of 4699 acres, and a population in 1851 of 22,175.

Reading is first noticed in history in 871, when it was occupied by the Danes, who quitted the town towards the close of that year. In 1006 it was burnt by the Danes, who destroyed an abbey of nuns, on the site of which an abbey for Benedictine monks was erected in 1121 by Henry I., who was buried here. In the following reigns the kings frequently resided at Reading, where a grand tournament was held by Edward III., and four parliaments were held by Henry VI. and Edward IV. On the dissolution of the abbey, the buildings were appropriated as a royal palace. In the civil war of Charles I. the town was occupied successively by both parties, and suffered severely from being so long a garrison town.

The town is very irregularly laid out. Much improvement has however taken place in its general appearance of late years. The chief business part of the town stands on the point of land at the junction of the Kennet with the Thames. The town is well paved, lighted with gas, and tolerably supplied with water. The houses are in general substantial, and built of brick; but there are some old ones of lath and plaster, with high gables. As the river Kennet has a divided channel, there are several bridges in and near the town. St. Lawrence's church has some portions of the original structure of Norman character; it consists of a nave and north aisle, and a chancel. There is a fine tower at the west end, of perpendicular character, and of chequered flint-work; it has a peal of ten bells. St. Mary's church consists of a nave, south aisle, a small north aisle, and a chancel; it was rebuilt about 1551, chiefly from the materials of the abbey church, then pulled down; it has a tower similar to that of St. Lawrence. There are two district churches and a chapel of ease. The Baptists and Independents have each three chapels, the Primitive Methodists two, and the Wesleyan Methodists, Quakers, and Roman Catholics one each. The Roman Catholic chapel, erected in 1840, is a neat structure in the Norman style. It is built chiefly of flints from the abbey ruins. The Free Grammar school, founded in 1486, has an income from endowment of about 50*l.* a year, and had 26 scholars in 1854. Attached to the school are two fellowships at St. John's college, Oxford; and two recently-founded scholarships. There are National, British, and Infant schools; a Blue-Coat school, with an income of about 850*l.* a year, in which 40 boys are maintained and educated; a Green-Coat school for 21 girls; a Charity school of industry; and six sets of almshouses. The town-hall is a commodious modern building, the under part of which is appropriated to the use of the grammar school. A building, termed 'the Oracle,' was erected early in the 17th century by Mr. John Kendrick, a great benefactor to the town, for the employment of the poor; the principal gateway, which is the most striking portion of the building, is of mingled gothic and Grecian architecture. The Public Hall is a fine structure, containing apartments for the Literary Society and mechanics institute. A new assize-hall has lately been completed. The new county jail and house of correction, erected on the plan of the Pentonville model prison, stands on the site of the abbey. Among other buildings requiring notice are, the borough buildings, public baths, a new and spacious hospital, and a large union workhouse. A medical dispensary is supported by voluntary contributions. There is a savings bank.

The trade of the town is considerable. Coarse linen is now woven to a small extent. Silk for umbrellas and parasols is manufactured; silk ribands and galloons are woven, and some floor-cloth and sail-cloth is made. There are iron-foundries, breweries, and yards for building and repairing barges. Trade is carried on in corn, seeds, timber, bark, hops, wool, and cheese. There are flourishing biscuit-making establishments. Fish sauce, sometimes called Reading sauce, is extensively made. Large quantities of flour and of agricultural produce are sent by railway and by barges to London. The markets are held on Wednesday and Saturday. Fairs are held on February 2nd, May 1st, July 25th, and September 21st. The Kennet is navigable to Reading for vessels of about 120 tons burden. The Kennet and Avon Canal affords a water communication with most of the chief ports of the kingdom. The Great Western railway crosses the Kennet between the town and the river Thames. By the Reading, Guildford, and Reigate railway, the Great Western, South-Western, and South-Eastern main lines are connected; by the Basingstoke branch of the Great Western from Reading, another communication is obtained with the South-Western line; there is likewise a branch of the Great Western railway from Reading to Hungerford. The assizes, quarter

sessions, and a county court are held in the town. Of the abbey buildings there are some ruins, especially the gateway and part of the great hall; there are also some interesting remains of the abbey mill. Of the buildings of a convent of Grayfriars, the west window and part of the church remain. Races take place at Reading in August.

READING. [PENNSYLVANIA.]

REALEJO. [NICARAGUA.]

RECANATI. [MACERATA-E-CAMERINO.]

RECKLINGHAUSEN. [MÜNSTER.]

RECVLVER. [KENT.]

RED RIVER. [MISSISSIPPI, River.]

RED SEA, an inlet of the Indian Ocean, which extends from the strait of Bab-el-Mandeb, in 12° 40' N. lat., in a north by west direction, to 30° N. lat. It lies between 32° 20' and 43° 30' E. long., and is little short of 1400 miles long. From the strait of Bab-el-Mandeb, which is only 16 miles wide, the Red Sea gradually increases in breadth; at the distance of 160 miles from the strait it is 180 miles across; this breadth may be considered as the average width from Ras Essah or the island of Camaran to Jiddah, a distance of nearly 500 miles. Off Jiddah it is not much more than 120 miles wide; and this width continues to Ras Mohammed, south of 28° N. lat., where the sea divides into two arms; this interval considerably exceeds 500 miles in length. Of the two arms, into which the Red Sea branches off at Ras Mohammed, the eastern is called Bahr-el-Akaba, and the western Bahr-el-Suez, or Kolsun. Between these two gulfs is the mountain region of Mount Sinai, or Jibbel Musa (Mount of Moses). The Bahr-el-Akaba branches off in a north-eastern direction, and extends more than 100 miles, with an average width of less than 15 miles. Near its entrance is the island of *Tiran*, which is 800 feet above the level of the sea, and between it and the continent are two straits, of which only the western, called the strait of *Tiran*, is navigable for large vessels. The entrance of the Bahr-el-Suez is called the strait of Jubal, or Jublah, and is about 15 miles across. The gulf itself runs in a north by west direction to its extremity at the town of Suez, a distance exceeding 180 miles; its average width is 20 miles. The surface of the Red Sea is about 180,000 square miles.

The Red Sea is of great depth. The shallowest part is the Gulf of Suez, which in the middle, towards the Strait of Jublah, is from 40 to 50 fathoms deep; farther north its depth decreases to 30 fathoms; and approaching the harbour of Suez, it shoals to 20 fathoms, and by degrees to 8 fathoms, which is the depth of the harbour itself. The Gulf of Akaba varies in its middle part between 100 and 200 fathoms. The main body of the sea is still deeper, and in most parts a bottom cannot be found at the depth of 100 fathoms; in some places it is 230 fathoms deep. Towards the southern extremity, south of 16° N. lat., it grows much shallower, the depth in general not exceeding 40 or 50 fathoms.

The sea generally shoals near the shores; but the navigation is rendered difficult by islands, banks, and the prevailing winds. Small rocky islands are tolerably numerous, especially along the eastern shores, but as they usually contain small harbours they would be rather advantageous were it not for the adjacent reefs. The islands are generally isolated, except between 15° and 17° N. lat., where the group of the Farsan Islands occurs along the eastern shore, and on the western that of the Dhalak Islands, each of which consists of a larger island and a great number of smaller islands, between which there are numerous reefs. South of these groups there are some islands dispersed in the middle of the sea, as Jibbel Teer, the Zebayer Islands (Jezayer es Seba, or the Seven Islands), and others. Two of these islands are volcanic, and on Jibbel Teer there is an active volcano, 900 feet above the sea.

The Red Sea is the most northern portion of the ocean in which coral reefs occur, and they are more numerous than in any other part of the sea of equal extent. They almost always extend in a tolerably straight line, parallel to the coast; the interior is filled up, so that they never contain a lagoon, as is almost invariably the case with those in the Pacific. These coral-reefs are frequently united with the adjacent continents, and render the shores almost inaccessible, as the water near them is very deep, and the reefs themselves have only from 3 to 6 feet water, which gradually shoals on approaching the beach, so that even boats are stopped at the distance of a quarter of a mile from the dry land. The reefs which are unconnected with the shores are still more numerous, and frequently several miles from them. Their edges towards the open sea are very steep, and the sea itself is of great depth. But the edge which is opposite the mainland has usually a gradual and gentle slope, and affords good anchorage to vessels. The sea between this inner edge and the mainland is generally not very deep, and the small vessels of the country navigate these straits in preference to the open sea, as the water is less agitated by the winds, and they are always in the neighbourhood of some place which offers anchorage in case a gale should rise. The winds, which commonly are very strong in the open sea, can hardly be said to extend to these straits, so that small vessels can take advantage of the sea and land breezes, which set in at certain hours of the day during the greatest part of the year. These advantages however are lost by the necessity of putting into some harbour during the night.

The Red Sea occupies the lowest portion of a deep valley which

lies between the elevated table-land of Arabia on the east, and the high lands of Abyssinia, Nubia, and Egypt on the west. The outer edge of these table-lands is generally from 10 to 80 miles from the shores, and has the appearance of a continuous mountain range, varying in height between 3000 and 6000 feet. These mountains approach much nearer to the shores north of 24° N. lat. than south of that parallel. The space between them and the shores is partly occupied by hills, which skirt the edges of the table-land, and partly by a low and level tract along the sea, which is generally sandy, but sometimes swampy. This tract, as well as the hills between it and the mountains, is far from being sterile, and it has also the advantage of rains in November, December, and January; but it is nearly uncultivated, as the inhabitants, who consist of several tribes of Beduin Arabs, are averse to industry, and make no other use of these tracts than as pasture-grounds when the grass on the table-land is dried up.

During the warm season, from May to October, northern breezes prevail, and for the rest of the year southerly winds blow with great constancy. During the continuance of the northerly winds there is a current out of this sea into the Gulf of Aden, and the depth of water on the reefs is diminished two feet. During the season of southerly winds the current sets into the Red Sea from the Indian Ocean, and then the depth of water in the northern part of the Red Sea is considerably increased. Lieutenant Maury, in his 'Directions to accompany the Wind and Current Charts,' argues (without taking the action of the winds into account) that the waters of the Red Sea ought to be lower at the isthmus of Suez than at the Strait of Bab-el-Mandeb; and infers, with great probability, an under or outer current from the Red Sea as there is from the Mediterranean through the Strait of Gibraltar. The Red Sea lies in a rainless and riverless tract or nearly so; the loss by evaporation in the course of its great length is very considerable, making the surface of the sea an inclined plane; the loss by evaporation, together with the diminution of the temperature (between Bab-el-Mandeb and Suez), renders the water colder and saltier and therefore heavier at the isthmus; the lighter water at the strait of Bab-el-Mandeb cannot balance the heavier water at the isthmus, and therefore this must run out as an under current. According to a French survey made across the Isthmus of Suez in 1853, the surface of the Red Sea was one metre (3 feet 3 inches) higher than the surface of the Mediterranean.

The principal harbours on the Arabian shores are Mokha, Hodeidah, and Jiddah; and on the African, Suez, Cosseir or Cosaire, Suakin, and Massowah. There is a pretty active communication kept up between these places, especially by the numerous pilgrims who visit Mecca and Medina from the eastern countries of Africa. Grain and slaves constitute the chief exports from Africa to Arabia. As Arabia does not produce sufficient supplies for the pilgrims who visit Mecca, and annually amount to above 120,000, the transport of grain from Cosire to Jiddah employs a considerable number of vessels of 50 to 200 tons burden. The grain is brought from Upper Egypt by camels to Cosira.

As the countries along the shores of the Red Sea do not produce many articles of export, they are not much visited by foreign vessels. The few which navigate this sea go to Mokha and Jiddah. They come from the Persian Gulf, Hindustan, and the Indian Archipelago, with wheat, tobacco, dates, carpets, rice, sugar, and Dacca muslins: also coarse and fine blue cloths, cambric, and indigo; with teak-timber, palm-oil, cocoa-nuts, spices, and young females, who are sold to the Turks. The returns for the foreign goods imported into Jiddah are generally cash, which is brought by the pilgrims, to whom nearly all the goods are sold; but coffee, gum, myrrh, and frankincense are exported from Mokha. The Red Sea is now regularly navigated by British steamers, which convey passengers and the Indian mail over this sea and across the Indian Ocean between Suez and Bombay.

The first mention of the Red Sea occurs in the Bible, on the occasion of the Israelites passing through it. In the time of Solomon the advantages of its navigation were well understood; for after the conquest of Idumæa by David, and the acquisition of the country near the Bahr-el-Akaba, Solomon established at Elath and Ezion Geber, on the shores of that gulf, a colony of Phœnician navigators. It is probable that before the time of Alexander the Great some connection existed between the Red Sea and India. Subsequently to the death of Alexander the policy of the kings of Egypt favoured the navigation and commerce of the Red Sea, and it became soon the principal channel of commerce between Europe and India. In the 1st century of the Christian era this trade was so considerable, that, according to Strabo, 120 vessels annually departed from Myos Hormos to India. In the 9th century the Arabs extended their navigation from the Red Sea through the Indian Ocean to Canton in China. Soon after that time the Venetians established factories in Alexandria; and the goods of India passed by the Red Sea to that town, and thence to Europe, during the period between the 12th and 15th centuries, until the discovery of the route round the Cape of Good Hope directed the whole commerce of India into a different channel.

The name Red Sea is a translation of the Latin Rubrum Mare, and the Greek term (*Ἐρυθρὰ θάλασσα*) used by Strabo. Herodotus calls the Red Sea the Arabian Gulf, and also includes it in the general term of Erythraean Sea, which comprises the Indian Ocean and the Persian Gulf. In the Hebrew Scriptures it is always called Yam

Suph, or 'Weedy Sea,' from the vast quantities of marine weeds that grow in it. The Arabs still give it the name of Bahr Souf, which has the same meaning. The name Red given to this sea has not been explained; it is probably a translation of Edom, the land of Edom having extended to the Gulf of Akaba, where were its two ports Elath and Ezion Geber.

REDBOURN. [HERTFORDSHIRE; LINCOLNSHIRE.]

REDDITCH. [WORCESTERSHIRE.]

REDON. [ILLE-ET-VILAINE.]

REDRUTH, Cornwall, a market-town, and the seat of a Poor-Law Union, in the parish of Redruth, is situated in 50° 18' N. lat., 5° 13' W. long., distant 27 miles S.W. from Bodmin, and 261 miles W.S.W. from London. The population of the town of Redruth in 1851 was 7095. The living is a rectory in the archdeaconry of Cornwall and diocese of Exeter. Redruth Poor-Law Union contains eight parishes, with an area of 40,805 acres, and a population in 1851 of 53,628. Redruth did not possess any importance till the working of its valuable mines of copper and tin gave it wealth and population. The town stands on the brow of a hill, and consists chiefly of one long street. The church, dedicated to St. Uny, is about half a mile S.W. of the town; it was rebuilt in 1768, except the tower, which is a handsome gothic structure. A chapel of ease was consecrated in 1833. There are chapels for Baptists, and Primitive, Wesleyan, and Association Methodists; National schools; and a literary institution. The town possesses a town-hall and county court-house; a commodious market-house; shambles, a small theatre, and a savings bank. Near the entrance to the market-place is a clock-tower with an illuminated clock. There are several iron-foundries in operation. There are weekly sales of copper-ore. Markets are held on Tuesday and Friday; fairs, chiefly for cattle, are held on Easter Tuesday, May 1st, August 3rd, and October 1st. Several mineral railways connect Redruth and the adjacent mines with ports of shipment on both sides; the West Cornwall railway gives Redruth direct communication with Truro, Hayle, and Penzance.

REEPHAM. [NORFOLK.]

REETH, North-Riding of Yorkshire, a market-town, and the seat of a Poor-Law Union, in the parish of Grinton, is picturesquely situated on the left bank of the river Swale, in 54° 24' N. lat., 1° 56' W. long., distant 58 miles N.W. from York, and 242 miles N.N.W. from London. The population of the township of Reeth in 1851 was 1344. Reeth Poor-Law Union contains seven parishes and townships, with an area of 70,267 acres, and a population in 1851 of 6820. The town is irregularly built. It contains chapels for Wesleyan Methodists and Independents, an Endowed school, and a school supported by the Wesleyan Methodists. Some of the inhabitants find employment in knitting stockings. Friday is the market-day; six fairs are held in the year. In the vicinity are some lead-mines. Near the town are the remains of intrenchments which appear to be of Roman origin.

REGENSBURG. [RATIBON.]

REGGIO. [CALABRIA; MODENA, DUCHY; RHEGIUM.]

REICHENBACH. [SILESIA.]

REICHENBERG, a large and flourishing town in the north of Bohemia, on the river Neisse, 52 miles N.N.E. from Prague: population about 15,000. The principal buildings are—three churches, two palaces, a theatre, and a large and handsome school-house. There are four great manufactories of woollen-cloth, with fulling-mills and dye-houses. There are also manufactories of stockings, hats, linen, and calico. The annual value of the goods manufactured here is above half a million sterling. The trade of the town is very considerable, it being the staple place for all woollen, linen, and cotton manufactures of this part of Bohemia.

REICHENHALL, a town in Upper Bavaria, is situated in a romantic country on the left bank of the Saale, at an elevation of 1323 feet above the level of the sea. Though it has only about 3000 inhabitants, it is a place of great importance, as being the central point of the four great salt-works of Bavaria. The most ancient documents relative to the salt-springs at Reichenhall are of the 8th century. As the great consumption of wood for so many years made fuel too scarce to boil all the brine on the spot, pipes were laid down in 1618 from Reichenhall to Traunstein, over an elevation of 828 feet perpendicular height, and extending 8 leagues in length. A similar conduit 14 leagues in length, to Rosenheim on the Inn, where there is abundance of wood, was made in 1809; and in 1817 the salt-springs of Reichenhall, Traunstein, and Rosenheim were connected by conduits and pipes with the salt-mines of BERCHTESGADEN. The quantity of salt produced annually is 16,000 tons.

REIGATE, Surrey, a market-town, parliamentary borough, and the seat of a Poor-Law Union, in the parish of Reigate, is pleasantly situated in 51° 14' N. lat., 0° 11' W. long., distant 22 miles E. from Guildford, 21 miles S. by W. from London by road, and 23 miles by the London and South-Eastern railway. The population of the borough of Reigate in 1851 was 4927. The borough returns one member to the Imperial Parliament. The living is a vicarage in the archdeaconry of Surrey and diocese of Winchester. Reigate Poor-Law Union contains 16 parishes, with an area of 51,276 acres, and a population in 1851 of 14,329. This place was a royal demesne at the Conquest, and was afterwards granted to the Earl of Warrenne and Surrey. There was a castle here, which was taken from Earl

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Warrenne by Louis of France and the insurgent barons in 1216. Under the site of the castle court is a spacious cavern, called the Baron's Cave, from a tradition that it was a meeting-place of the barons when consulting on the measures for obtaining Magna Charta. The town contains many new houses, and is lighted with gas. The church is of different dates from the 12th to the 17th century, but is chiefly of perpendicular character; it has a lofty embattled tower of later date. In a vault under the chancel is buried Lord Howard of Effingham, afterwards Earl of Nottingham, who commanded the English fleet against the Spanish Armada. The Quakers and Independents have places of worship. The Free Grammar school, founded in 1675, has an income from endowment of 45*l.* a year; it had 31 scholars in 1854, of whom 7 were free. There are also National and Infant schools, a literary institute, and a savings bank. At Red-Hill, near Reigate, is the Agricultural school of the Philanthropic Society for the Reformation of Juvenile Offenders, which is under the direction of a chaplain-superintendent. There is a market on Tuesday for corn and provisions. Fairs are held on Whit-Tuesday, September 14th, and December 9th. Sessions for the county and a county court are held in Reigate.

REIKJAVIK. [ICELAND.]

REILLANNE. [ALPES, BASSES.]

REIMS, or RHEIMS, a city in the department of Marne in France, is situated on the right or north bank of the Vêle, a feeder of the Aisne, 80 miles in a straight line and 107 miles by railway through Epernay E. by N. from Paris, in 49° 15' 15" N. lat., 4° 2' 12" E. long., at an elevation of 232 feet above the level of the sea, and had 43,643 inhabitants in the commune at the census of 1851, exclusive of the floating population. It is mentioned under the name of Durocortorum by Julius Cæsar ('Bell. Gall.' vi. 44), in whose time it was the capital of the Remi. It stood at the convergence of several military roads. At a later period it took the name of the people to whom it belonged, whose name it retains with little alteration. In the time of the empire Durocortorum was the most important place in the provinces of Belgica Secunda, and was distinguished by its literary character. Christianity was introduced into Reims about A.D. 360, from which date it gave title to a bishop.

In 494 this city, then in the hands of the Franks, by whom it had been occupied after the defeat of Syagrius at Tolbiac, was the scene of the baptism of Clovis and the chief lords of his court by St. Remi, who was then bishop of Reims. Reims was made an archbishop's see in 744. In 1179 it was signalised by the consecration of Philippe Auguste: all the succeeding kings of France down to Charles X. inclusive were also consecrated here, with the exception of Henri IV., Napoleon I., and Louis XVIII. On the revolution of 1830 the ceremony was abolished. In the middle ages several councils were held here. Reims was also the capital of a county, afterwards of a duchy. In 1359 it was unsuccessfully besieged for seven months by the English under Edward III. It was taken in 1421 by the English, who however were driven from it by Joan of Arc. In 1814 it was taken, March 12, by a corps of Russians, but retaken next day by Napoleon I.

The town is situated in a vast basin surrounded by chalk-hills, on which good wines are produced. The site of the town is an oblong, extending from north-west to south-east. The ancient walls which surround it are between two and three miles in extent; they are strengthened with towers, and being planted with trees form in summer a very agreeable public walk. They inclose within their circumference many large gardens and several spaces entirely unoccupied. The entrance into the town is by six gates. A Roman triumphal arch, covered with bas-reliefs and adorned with eight fluted Corinthian columns, is built into the circuit of the walls.

The town is well built; the streets are wide, neatly laid out, and well paved, but present a dull appearance from the absence of bustle and the grass which grows plentifully in them. The houses are for the most part built of chalk, or of boards covered with slate; some of them still present their gables to the street; in others the upper stories project, and being supported on wooden columns form on the ground-floor a covered walk or gallery. The squares are generally small and of irregular shape, except La-Place-Royale, a regular square, surrounded by good houses and public buildings of mingled Doric and Italian architecture, and having in its centre a well-executed statue of Louis XV. The streets are adorned with fountains supplied with water from the Vêle by the water-works erected at his own cost by the Abbé Godinot, one of the canons of the cathedral. There is a pleasant public walk planted with trees on the west side of the town.

The most striking public building is the cathedral of Notre-Dame, one of the finest gothic edifices in Europe. It was commenced in 1210 on the site of a more ancient church, and was opened in 1241. The length of the nave and choir is about 466 feet; the breadth 99 feet; the length of the transept is 160 feet; the height is 144 feet. The west front, which is flanked by two square towers 267 feet high, is pierced by three magnificent arched portals, adorned with a vast number of statues, bas-reliefs, and other ornaments of exquisite workmanship. Over the principal doorway is a fine circular window of stained glass. The shafts of the flying buttresses surmounted with statues, the rose-windows over the side doorways, and the Angel

Tower (a remarkably light bell-tower rising 59 feet above the roof of the church at the eastern end, surmounted by a ball and by the statue of an angel from 7 to 8 feet high), are all worthy of attention. The interior of the church is also very striking from the vast extent of the nave, the splendid stained-glass windows; the pavement of the choir, inlaid with marble of various colours; the ancient baptismal fonts; the organ, reputed to be one of the best in France; and the painting of Christ Washing his Disciples' Feet, one of the finest works of Poussin; and the ancient Roman tomb of Jovinus, a citizen of Reims, who, in A.D. 366, attained to the honour of the consulship, and died in 406. This monument was removed in 1800 from the ruins of the ancient church of St.-Nicaise to the nave of the cathedral.

The church of St.-Remy, the most ancient in the town, is almost as large as the cathedral, but not so lofty; the principal front is of simple architecture, surmounted by two lofty spires. The interior is remarkable chiefly for the tomb of St. Remy, an elaborate piece of workmanship, erected in 1803, partly from the remains of the more ancient one destroyed in 1793. The church of St.-Nicaise, demolished during the revolutionary period, was by many considered the finest church in the town; it was superior in elegance to the cathedral, though inferior to it in the richness of its ornaments. There are three other churches, a town-hall, and other buildings. The town-hall, finished in 1825, presents a centre and two wings, adorned with Doric, Ionic, and Corinthian columns. Over the central building, the architecture of which is superior to that of the wings, rises a tower, having a clock, an equestrian statue of Louis XIII., and four pedestrian statues. The public library, which contains 25,000 volumes and above 1000 manuscripts, is deposited in the town-hall.

The manufactures of Reims are extensive: they include woollen-cloths, kerseymeres, light stuffs for summer coats and trowsers, swanskins, camlets, merinos, cashmere shawls, flannels, blankets, carpets, hosiery, bolting-cloth, cordage, candles, soft soap, and leather. The woollen manufactures of Reims were fostered by Colbert, who was a native of the city. The machinery of the woollen factories is driven partly by steam and partly by water power. Wax and wool bleaching, dyeing, wool-combing, brewing, and the making of machinery are carried on. The spiced bread and biscuits of the town are in great repute. The chief trade is in the above-named articles of manufacture, corn, flour, Champagne wines, brandy, spices, colonial produce, wool, cotton-yarn, flax, hemp, and raw hides. There are four yearly fairs. A branch railway 14 miles in length connects Reims with the Paris-Strasbourg line, which it joins a little east of Épernay.

Reims is the seat of an archbishop, whose province comprises the bishoprics of Soissons, Châlons, Beauvais, and Amiens, besides the arch-see, which extends over the department of Ardennes and the arrondissement of Reims in the department of Marne. It has an assize court, tribunals of first instance and of commerce, a chamber of commerce, several government offices, a college, a botanic garden, a theatre, baths, a savings bank, a loan-office, and other institutions. There are two seminaries for the priesthood, several nunneries, and four hospitals, the principal of which, the Hôtel-Dieu, occupies the buildings formerly belonging to the Benedictine abbey of St.-Remy.

REMBANG. [JAVA.]

REMIEMENT. [VOSGES.]

REMO, SAN. [NICÈ.]

REMY, ST. [BOUCHES-DU-RHÔNE.]

RENAIX. [FLANDERS, EAST.]

RENDESHAM. [SUFFOLK.]

RENDSBURG, a town of Denmark, in the duchy of Holstein, is situated in 54° 18' N. lat., 9° 40' E. long., partly on a heath, partly on an island in the Eyder at its junction with the Kiel Canal. It consists of three parts, the Altstadt, or Old Town, built on the above-mentioned island, the Neustadt, or New Town, on the Holstein bank of the river, and the Kron-werk, or Crown-work, on the Schleswig side. The town is well and regularly built, and has about 10,000 inhabitants, including the garrison. There are two churches, an arsenal, a hospital, a house of correction, a gymnasium, a military academy, a board of trade, and a custom-house. It is the residence of a Lutheran superintendent-general. The manufactures comprise stockings, pottery, tobacco, and vinegar; there is a brisk trade in timber. Rendsburg is connected by railway with Altona and Kiel, from which it is 39 miles and 26 miles distant respectively. A branch line runs up to Rendsburg from the Neumünster station on the Kiel-Altona railroad, and is in course of continuation to Husum, Tönning, and Flensburg in Schleswig. Rendsburg rose up round a castle erected on the island in the 13th century. The fortifications, which inclosed the Altstadt, the Neustadt, and the Kron-werk, were all constructed about 1671, when the stone with the inscription 'Eidora Romani terminus imperii' was placed over the Holstein gate. The stone was removed in 1806, but restored subsequently. Rendsburg was taken by the Imperialists in 1627, by the Swedes in 1643, and by the Prussians and insurgent Holsteiners in 1848. The fortifications were dismantled in 1852.

RENFREW. [RENFREWSHIRE.]

RENFREWSHIRE, a county in the west of Scotland, is bounded N. by the Clyde, by which it is separated from Dumbartonshire; N.E. and E. by Lanarkshire; S. and S.W. by Ayrshire; and W. by the

Frith of Clyde. A small portion lies on the right bank of the Clyde. The form of the county is an irregular oblong, having its greatest length from south-east to north-west, 32 miles; and its greatest breadth from the Kilbirnie Loch to Erskine on the Clyde, 13 miles. It lies between 55° 40' and 55° 58' N. lat., 4° 14' and 4° 54' W. long. Its area is 234 square miles, or 150,000 acres. The population of the county in 1841 was 155,072; in 1851 it was 161,091. The county returns one member to the Imperial Parliament.

Surface, Hydrography, and Communications.—The western part of the county, and the southern border which joins Ayrshire, are hilly; the eastern and northern part along the Clyde is flat. The hills on the border of Ayrshire are the loftiest. They attain their elevation in a gradually rising range which traverses the county, commencing on its northern and eastern boundary, a little way south of Glasgow, and running south of Paisley to the Loch of Kilbirnie; the valley of this lake and of Lochwinnoch separating this range from the western and hilly part of the county. The hills on the north border of Ayrshire and in the western part of the county attain an elevation varying from 1200 to 1400 feet; the Neilston Pad, in the centre of the range, is about 900 feet above the sea-level; the Ferenese and Eaglesham hills, farther east, are generally less elevated.

The whole county is included in the basin of the Clyde, the estuary of which washes a large portion of the border; but the tributaries which drain it are all small, and, with the exception of the Cart, useless for navigation. [PAISLEY.] A stream which bears, in different parts of its course, the names of Rotten Burn, Shaws Burn, and Kipp Water, drains the western part, and joins the estuary of the Clyde at the little village of Innerkip, on the west coast of the county. In one part of its course it expands into two lochs, which are used as reservoirs for the supply of Greenock with water. The central and eastern parts of the county are drained by the Gryfe, the Black Cart, and the White Cart, or the Cart, which passing through Paisley, joins the united stream of the Black Cart and the Gryfe just above its fall into the Clyde below Renfrew.

The only canal in the county is that between Glasgow and Johnstone. [PAISLEY.] The Kilmarnock and Ayr railway enters the county from Glasgow, and runs in a westerly direction by Paisley and Johnstone, and enters Ayrshire near Beith. A short branch connects Paisley with Renfrew. The Glasgow, Paisley, and Greenock railway traverses the county in a north-westerly direction. Turnpike-roads from Glasgow to Greenock run, one near the banks of the Clyde through Renfrew, another more inland through Paisley. Roads from Glasgow by Paisley run through the valley of Kilbirnie to Ayrshire. More direct roads cross the eastern side of the county.

Geology, Mineralogy, &c.—The eastern part of the county is included in the great coal district of the west of Scotland. The chief coal-works are at Quarrelton, near Johnstone, and at Hurllet and Househill, near Paisley; the mines here are very productive. In the coal-works at Hurllet a bed of shale over the coal has, by combination with sulphuric acid, been converted into alum-slate; and an alum-work on a very extensive scale is carried on. Limestone, sandstone, ironstone, granite, and secondary trap-rocks are found in considerable abundance. The hills in the west are mostly porphyry, capped with greenstone, which intersects the porphyry in innumerable dykes. Alluvial and diluvial beds are observed along the banks of the Clyde. Good freestone for building is quarried; limestone is also wrought for burning. The coal and ironstone mines give employment to many persons.

Climate, Soil, and Agriculture.—The hilly parts of the county on the west and south are chiefly devoted to pasture. Scarcely more than half the surface of the county is under cultivation, and this part is on the north and north-east, and in the centre, where the soil is most fertile. The best modes of cultivation are generally adopted. Owing to the demand for meat, vegetables, milk, butter, &c., by the large populations of Greenock, Paisley, and Glasgow, a large part of the cultivated land is meadow-land or garden-ground. Dairy farming is very extensively practised. Farms vary in size from 50 to 300 acres. The buildings are generally good.

Divisions, Towns, &c.—There are 16 parishes in the county, reckoning Paisley and Greenock each as one; and portions of three others, Beith, Dunlop, and Govan, which are partly in Lanarkshire or Ayrshire. There are six towns—Renfrew, GREENOCK, PAISLEY, Port Glasgow, BARRHEAD, and Pollockshaws.

Renfrew, a royal burgh, and the county town, though not so large as some of the villages in the county, lies on the left bank of the Clyde, about 6 miles W.N.W. from Glasgow: population of the royal burgh 2722 in 1851; of the parliamentary burgh, 2977. The Stuart family had their earliest known patrimonial inheritance in this parish. Renfrew became a royal burgh by grant from Robert III. in 1396. The town is governed by a provost, two bailies, and nine councillors; and unites with Dumbarton, Kilmarnock, Port Glasgow, and Rutherglen, in returning a member to the Imperial Parliament. A canal about half a mile long affords a communication from the town to the river Clyde. The church is a cruciform structure. There are a Free church, town-house, small jail, and an endowed burgh school. Muslin-weaving employs about 500 persons, half in weaving, the rest (either women or children) in winding or drawing. Many females are employed in clipping, tambouring, and flowering. There is a bleach-field. Several

collieries are in the parish; and on the left bank of the Clyde are a ship-building yard, and a work for the manufacture of iron knees for ships, boilers, &c. A weekly market is held on Saturday.

Port Glasgow, population 6986 in 1851, a parliamentary burgh and sea-port, is situated on the left bank of the Clyde, about 14 miles W.N.W. from Glasgow, and 4 miles E.S.E. from Greenock. The town is governed by a provost, two bailies, and six councillors; and unites with Dumbarton, Kilmarnock, Renfrew, and Rutherglen in the return of a member to the Imperial Parliament. The magistrates of Dumbarton refused to make that place a sea-port for the city of Glasgow; in consequence of which the magistrates of Glasgow in 1668 bought a piece of ground, and obtained a grant from the crown constituting Port Glasgow, the then intended harbour, a free port. Port Glasgow increased in importance for some years, until the rise of Greenock and the improvements on the river Clyde destroyed its prosperity. The town is well built and clean, is lighted with gas, and possesses a handsome parish church, a Free church, a chapel of ease, and a chapel for United Presbyterians. The harbour is almost entirely devoted to vessels trading between the Clyde and North America. The vessels belonging to the port on December 31st 1853 were—54 sailing-vessels of 6269 tons, and 13 steam-vessels of 2195 tons aggregate burden. During 1853 there entered the port 127 vessels of 44,281 tons, and cleared 48 vessels of 33,384 tons aggregate burden. There are a large canvass and rope manufactory, several large sugar-refineries, and an iron ship-building establishment. The town possesses two reading-rooms, a town library, two parochial schools, and an endowed school. Adjoining the town is Newark Castle, built in the 17th century, now half ruinous.

Pollockshaws, population 6086, on the White Cart Water, 3 miles S.W. from Glasgow, was erected in 1814 into a burgh of barony; it is governed by a provost, a bailie, and six councillors. There is a station of the Glasgow and Barrhead railway at Pollockshaws. The town, which consists of one long winding street, with some small branch streets, has been somewhat improved, and new houses have been built of late years. It has an old town-house with a tower and clock. There are the parish church, a chapel of ease, two Free churches, chapels for United Presbyterians, Original Seceders, and Roman Catholics, with several schools and benefit societies. The town depends on the cotton manufacture; spinning, weaving, bleaching, and printing are actively carried on. Coal and stone are procured in various parts of the parish.

The following places we notice here, with the population of each in 1851:—

Busby, a thriving village on the White Cart Water, is partly in LANARSHIRE, under which county it has been noticed. *Eaglesham*, population of the parish 2524, a burgh of regality, 9 miles S. from Glasgow, is a neat village, lighted with gas, and consisting of two rows of houses 200 yards apart; the intermediate space, through which a rivulet flows, is partly planted with trees, and partly occupied by a large cotton-mill and a public green. Many of the inhabitants are employed in the cotton-mill, and there are a number of handloom weavers. Besides the parish church there are a United Presbyterian and a Reformed Presbyterian church. *Elderslie* is a small village, between Paisley and Johnstone, inhabited chiefly by handloom weavers. It is interesting chiefly from its having been for centuries in the Wallace family. In it is a tree known as 'Wallace's Oak,' from a tradition that Sir William Wallace was concealed in it for some time. *Gowrock*, a small burgh of barony on the Frith of Clyde, 3 miles below Greenock, population of Innerkip parish 3018. Its inhabitants are chiefly fishermen. The town is much resorted to as a bathing-place. It has a chapel of ease and a United Presbyterian church. *Johnstone*, 3 miles W. from Paisley, population 5872, owes its existence to the cotton manufacture. It contains a chapel of ease, a Free church, and two chapels for United Presbyterians; a library, a news-room, and a mechanics institute. Several cotton-mills, brass-foundries, iron-foundries, machine-manufactories, and a gas-work are in the town and its vicinity. *Kilbarchan*, population 2467, about 2 miles W. from Johnstone, is inhabited chiefly by weavers. It contains the parish church and a chapel for United Presbyterians. There are two other thriving villages in Kilbarochan parish, called the *Bridge of Weir* and *Linwood*. *Langside*, a small village about 3 miles S. from Glasgow, is chiefly remarkable as having been the scene of the battle of Langside, from which Queen Mary after her defeat fled to England. *Lochwinnoch*, population 2271, on the western bank of Castle Semple Loch, is a large village. Cotton-spinning is the chief branch of industry, but muslin-weaving and the manufacture of Angola shawls and other fabrics are carried on. There are a large parish church, a Free church, and a chapel for United Presbyterians; parochial and other schools; and a library. *Mearns*, population of the parish 3704, a small village, 7 miles S. by W. from Glasgow, on the old Kilmarnock road, contains the small parish church and a well-attended parish school. About a mile N.W. from Mearns Kirk is the larger village of *Newtown Mearns*, on the new Glasgow and Kilmarnock road; it is a burgh of barony, and had a population of 800 in 1851. It consists of one winding street, with a new and neat United Presbyterian church. In the neighbourhood are a print-field and bleach-field. *Newtown Mearns* has the right to hold a weekly market and two annual fairs, but the market has long been discontinued. *Neilston*, population 2076, a village 9 miles S.W. from Glasgow,

possesses several cotton-mills, print-fields, and bleach-fields; freestone and whinstone are quarried, and coal is wrought in the parish. The church of Neilston contains some remains of ancient gothic architecture. *Thornliebank*, a village 4 miles S.S.W. from Glasgow, extends along the highway in detached lines of houses, some of which are new and well built. It is lighted with gas, and has a United Presbyterian place of worship, a large school, an extensive cotton-mill, a bleach-field and print-field, and a small iron-foundry.

History, Antiquities, &c.—The civil history of the county is that of Paisley and Renfrew, the only two places of any importance in the early period of national history. The rise of Paisley as a manufacturing town, and of Greenock as a sea-port, comprises the modern history of the shire. The church of Renfrew contains some curious monuments, and about eight miles west by north from Renfrew is Barochan Cross, a stone monument of mediæval times. There are a few ruinous towers of the feudal period, as Barr and Elliston castles, near Lochwinnoch; and Polnoon, near Eaglesham.

Statistics; Religious Worship and Education.—According to the Returns of the Census of 1851 there were then 133 places of worship in the county, of which 36 belonged to the Established Church, 30 to the Free Church, 21 to the United Presbyterian Church, 7 to Independents, 7 to Baptists, 7 to Roman Catholics, 6 to Methodists, and 4 to Mormons. The total number of sittings for 128 places of worship was 82,514. Of Sabbath schools there were 216, of which 62 were connected with the Free Church, 52 with the Established Church, 43 with the United Presbyterian Church, and 10 with the Roman Catholic Church. The total number of scholars was 20,830. Of day schools there were 208, of which 105 were public with 10,355 scholars, and 103 were private with 5948 scholars. There were 37 evening schools for adults with 1330 scholars. There were 25 literary and scientific institutes in the county, with 3788 members, and 39,433 volumes in the libraries belonging to them. In 1853 the county possessed one savings bank at Paisley. The amount owing to depositors on November 20th 1853 was 59,602*l.* 10*s.* 4*d.*

RENNES, a city in France, capital of the department of Ille-et-Vilaine, stands in 48° 6' 55" N. lat., 1° 40' 17" W. long., 190 miles in a straight line W. by S. from Paris, on the Ille-et-Rance Canal, at the confluence of the Ille and the Vilaine, 176 feet above the level of the sea, and had 33,066 inhabitants in the commune at the census of 1851. The town occupies the site of the ancient *Condate*, the chief city of the Celtic Redones, whose name it subsequently took, and still bears with slight alteration.

Rennes has an agreeable appearance, especially the part rebuilt since the fire of 1720, which destroyed the quarter on the right bank of the Vilaine. This part is distinguished by wide, regular, and straight streets, handsome squares, and good buildings. The town is surrounded by an ancient wall and towers. The upper or new town, and the lower town, which stands on the left bank of the Vilaine, are united by three bridges. The lower town has narrow and crooked streets, with houses mostly built of wood, curiously carved and highly picturesque. The suburbs, which are large, resemble the lower town in character. Rennes is noted for its fine public walks, the principal of which are—Le-Thabor, formed out of the gardens of the old Benedictine Abbey; the Mail, which is formed by a long jetty that runs between two canals to the junction of the Ille and the Vilaine, and the Champs-de-Mars, a space of 125 acres, inclosed by raised and shady walks.

The most remarkable of the public buildings are—the cathedral, a large heavy gothic structure; the church of St. Pierre, of which the two towers of the principal front form a conspicuous object in a distant view of the town; and the churches of Toussaint, and St. Sauveur. The town-house is an elegant modern structure in which are the mayor's offices, a public assembly-room, the public library, lecture-rooms, and schools of design and architecture. Among the other public structures are the court-house, which is appropriated to the administration of justice and to the study of the law, and is decorated with paintings; the episcopal palace; the abbey of St. Georges, now occupied as a barrack; the Kergus barracks, and the arsenal.

The manufactures comprehend linen, linen and cotton yarn, sail-cloth, flannels, hosiery, lace, cordage, nets, hats, gloves, starch, glue, earthenware, porcelain, candles, and liqueurs. There are tan-yards and wax-bleaching-works. A pretty considerable trade is carried on in these articles, and in the honey, wax, poultry, and butter of the surrounding district. The Vilaine is navigated by barges up to the town. [ILLE-ET-VILAINE.] The Ille-et-Rance Canal communicates with St. Malo. A railway in course of construction from Paris to Brest, and already completed as far as Le-Mans, passes through Rennes, from which city there will be branches to St. Malo and Redon.

Rennes gives title to a bishop. It is the seat of a High Court, which has jurisdiction over the departments of Ille-et-Vilaine, Côtes-du-Nord, Finistère, Morbihan, and Loire-Inférieure; and of a University-Academy whose limits extend over the departments just named, and those of Maine-et-Loire and Mayenne. Rennes is the head-quarters of the 16th Military Division. The other institutions of the town comprise tribunals of first instance and of commerce, a college, a school of law, a secondary school of medicine, an ecclesiastical college, a museum, four hospitals, a botanic garden, public

baths, a public library of above 30,000 volumes and some valuable manuscripts; a museum with collections of paintings, natural history, antiquities, &c.; a departmental prison, and a theatre.

RENO, RIVER. [Po.]

RENTON. [DUMBARTONSHIRE.]

REOLE, LA. [GIRONDE.]

REPTON. [DERBYSHIRE.]

REQUENA. [CASTILLA-LA-NUOVA.]

REQUISTA. [AVEYRON.]

RESHT. [PERSIA.]

RESINA. [NAPLES, Province of.]

RETFORD, EAST. [EAST RETFORD.]

RETHEL. [ARDENNES.]

RETZ, BOURGNEUF and ST.-PÈRE-EN. [LOIRE-INFÉRIEURE.]

REUILLY. [INDRE.]

RÉUNION. [BOURBON.]

REUS. [CATALUÑA.]

REUSS is a principality in the interior of Germany, consisting of a part of the ancient Voigtland, which was governed by the ancestors of the princes and counts of Reuss. It is situated between 50° 20' and 51° N. lat., and between 11° 40' and 12° 20' E. long. It is divided by the circle of Neustadt, which belongs to Saxe-Weimar, into two portions, of which the southern is much the largest; the lordships of Greitz, Burg, Schleitz, and Lobenstein, with the bailiwick of Saalburg, form the southern portion, bounded N. and E. by Saxony and Saxe-Weimar, S. by Bavaria, and W. by Saxe-Coburg and Schwarzburg Rudolstadt. The principality of Gera, which is the northern part, is bounded N. by Prussia, S. by Saxony, and E. and W. by the different parts of Altenburg. The area and the population in 1853 may be thus stated:—Reuss-Greitz, area 130 square miles, population 35,159; Reuss-Schleitz, area 460 square miles, population 79,824; total area 590 square miles; population 114,983.

The country is mountainous, being traversed by the Erzgebirge and the Thüringerwald, here called the Frankenwald, in which the Sieglitzberg is 2300 feet, and the Culm 2260 feet in height. There are many extensive well-cultivated valleys, of which the two great valleys watered by the Saale and the Elster are the most fruitful. There are fine forests of pine and other timber, and rich pastures. The natural productions are corn, garden vegetables, fruit, hops, flax, and timber; horned-cattle, sheep, game, and fish. The minerals are iron, copper, lead, alum, gypsum, vitriol, and salt. The inhabitants are industrious, and have manufactures of woollen, calico, stockings, hats, earthenware, china, tobacco, alum, and vitriol, besides breweries and iron-works. Cattle and timber are exported.

The capital, Gera, is noticed in a separate article. [GERA.] *Eberdorf*, which lies N. from Lobenstein, has a population of about 1200. *Greitz*, situated on the river Elster, is the residence of the sovereign prince, and contains about 7000 inhabitants. Besides the palace there are here a park, a gymnasium, a seminary for the education of schoolmasters, and another for the clergy. Woollen cloth, calico, and paper are manufactured. *Lobenstein*, on the Lemnitz, a feeder of the Saale, contains about 3000 inhabitants, and has a palace and a public library. In the vicinity are extensive iron-works. *Schleitz*, on the left bank of the Wiesenthal, a feeder of the Saale, has a population of about 5000. The town is neat, and contains a palace and a gymnasium. Broad-cloth, cotton, and leather are manufactured, and there are breweries in the town. *Zeulenroda*, W. from Greitz, has a handsome church, manufactures of hosiery, woollen cloths, and beer. The population is about 4500.

The family of the princes and counts of Reuss may be traced back as sovereign princes to the 11th century. This family now consists of two principal lines, the elder and the younger, and some collateral lines. The elder line, that of Reuss-Greitz, possesses the lordships of Greitz and Burg, and part of the district of Reichenfels. The possessions of the younger line, that of Reuss-Schleitz, are considerably more extensive than those of the elder, but this line being subdivided, the revenue and territory are also divided, though only the prince of Reuss-Schleitz is considered as sovereign. All the subjects of both lines are Lutherans, except a few Moravians and Jews. The government is monarchical, with estates on the ancient German model. In 1813 both lines joined the German Confederation; Reuss, conjointly with five other small states, has one vote (the 16th) in the diet of the Confederation; in the full council each line has one vote. The elder furnishes a contingent of 223 men, the younger of 523 men, to the army of the Confederation.

REUTLINGEN, the chief town of the circle of Schwarzwald, in Würtemberg, is situated in 48° 29' N. lat., 9° 12' E. long., 20 miles S. from Stuttgart, at the foot of Mount Achalm, on the river Echatz, in a beautiful and fertile country. The population is about 11,000. The town is surrounded with moats, lofty walls, and towers, and has four principal gates. Without the walls there are three small suburbs. The Marienkirche, or St. Mary's church, built in the Gothic style entirely of freestone, was founded in 1273, and finished in 1343. The steeple, which is very handsome, is 325 feet high. The town-house is a considerable edifice, and there is a large building called the Chancery, formerly a Franciscan convent, but now converted into government offices.

Reutlingen possesses considerable manufactures of woollen cloths,

cotton, leather, hats, outlery, &c. In the neighbouring country are raised some fruit and corn, in which, as well as in their own manufactures, the inhabitants carry on a considerable trade.

REVEL, the capital of the Russian government of Esthonia, is situated in 59° 26' 22" N. lat., 24° 39' 38" E. long., on the Gulf of Finland. It is very strongly fortified, and in 1824 the harbour, which is one of the best in the Gulf of Finland, was made capable of receiving the Russian Baltic fleet. It has narrow irregular streets, and dark old-fashioned houses. The best part of the city is the part called the Dom, which is in fact a distinct portion, being surrounded with walls and towers in the old style, and further defended by a strong castle. It is on an eminence called the Domberg, on the west side of the city, commanding an extensive view of the sea. Most of the houses of the nobility are in this part. There are likewise two extensive suburbs. The principal public buildings are the cathedral, which has a very lofty and handsome steeple, the arsenal, the town-house, the admiralty, a gymnasium founded by Gustavus Adolphus in 1631, and the naval and military hospital. The manufactures are cotton goods, hats, stockings, leather, powder, starch, pins, needles, earthenware, looking-glasses, &c. There is also a cannon and bell foundry.

The trade of Revel formerly of considerable importance has, it is said, greatly declined of late years. Since the outbreak of war between Russia and the western European powers its foreign trade has been annihilated. The exports usually shipped at Revel are corn, hemp, flax, timber, spirits, tallow, &c.; the imports are composed of colonial produce, fruits, wine, salt, tobacco, manufactured goods, cheese, herrings, &c. The town was founded about 1218 by Valdemar II. of Denmark. It soon became an important member of the Hanseatic League, and had an extensive commerce with Novgorod. The Swedes took Revel in 1561, when its trade began to languish. In 1710 it came into the hands of Peter the Great, who confirmed most of its commercial and municipal privileges. The population of Revel is about 20,000.

REVEL. [GARONNE, HAUTE.]

RHÆ'TIA appears properly to have comprehended the whole country between the north of Italy and the Danube, and consequently to have included Vindelicia. In the time of Augustus however these two countries formed two separate provinces (Vell. Pater., ii. 39; Aurel. Vict., 'Epit.' c. i.; comp. Suet., 'Aug.' 21), of which Rhetia was bounded W. by the Helvetii, E. by Noricum, S. by Gallia Cisalpina, and N. by Vindelicia, from which it was separated by the Brigantinus Lacus (Boden See, or Lake of Konstanz) and the river Cenus (Inn). It included the greater part of the Tyrol and the eastern cantons of Switzerland.

The Rhetia are said to have been a Tuscan people, who were expelled from Italy by the Gauls, and who settled in the country afterwards called Rhetia, under a leader named Rhetus. (Plin., iii. 24; Justin, xx. 5; Liv., v. 33.) They were a brave and enterprising race, and for a long time committed constant robberies in Gaul and the north of Italy. Augustus at length sent Drusus against them (B.C. 15), who subdued the southern part of the country, and delivered Italy from their depredations; but as they still continued to trouble the province of Gaul, Tiberius also was sent against them, who attacked them near the Boden See, and reduced the whole country.

The great chain of the Alps passes almost through the centre of this province, and was called the Alpes Rheticae. [ALPS, Rhetian.]

The Rhetii were divided, according to Pliny (iii. 24), into many states or tribes. The only town of any importance in Rhetia was Tridentum (Trent) on the Athesis (Adige), the capital of the Tridentini.

RHAGÆ. [PERSIA.]

RHAYADER, or RHAYADERGWY, Radnorshire, a market-town, parliamentary borough, and the seat of a Poor-Law Union, in the parish of Rhayader, is picturesquely situated on the banks of the river Wye, in 52° 19' N. lat., 3° 31' W. long., distant 27 miles W. by N. from Presteigne, and 181 miles W.N.W. from London. The population of the borough of Rhayader in 1851 was 1007. The borough is contributory to the Radnor boroughs in returning one member to the Imperial Parliament. The living is a perpetual curacy in the archdeaconry of Brecon and diocese of St. David's. Rhayader Poor-Law Union contains 10 parishes, with an area of 105,532 acres, and a population in 1851 of 6796.

Rhayader derived anciently its chief importance from its castle, erected about 1173, of which the only vestige remaining is the fosse, which was excavated out of the solid rock. A bridge of one arch crosses the Wye at this place. A plain town-hall stands in the centre of the town. The parish church, a spacious edifice, was rebuilt in 1733. The Wesleyan and Calvinistic Methodists, Independents, and Baptists have places of worship, and there are National and Free schools. The flannel manufacture is carried on. The market-day is Wednesday; five fairs are held in the year. A county court is held.

RHEGIUM, now Reggio, one of the oldest Greek towns in Italy, is situated on the Fretum Siculum, or Strait of Messina, and about 8 miles S.E. from the town of Messina. It received a colony of the Chalcidians, who were joined by a party of Messenian emigrants who left their country during the first quarrel between Messene and Sparta. Both the town and the name probably existed previous to the establishment of the Chalcidian colony, as Diodorus and other ancient writers place its foundation in the Heroic times. After the

taking of Ithome, and the end of the first Messenian war, a fresh colony of Messenians, led by Alcidas, settled at Rhegium about B.C. 723, and after the capture of Eira, a third party of Messenian emigrants, led by two sons of Aristomenes, joined their countrymen at Rhegium, which became a very populous and flourishing city, and extended its dominion over the neighbouring towns and districts. The government appears to have been a kind of open aristocracy, which, according to some accounts, was vested in one thousand of the citizens.

About B.C. 494, Anaxilaus, a citizen of Rhegium, of a Messenian family, usurped the supreme power. He took the town of Zancle on the opposite side of the strait, and colonised it with his Messenian countrymen, who gave it the name of Messana. Anaxilaus married a daughter of Therillus, tyrant of Himera, who, being afterwards defeated by Theron of Agrigentum, took refuge at Carthage. Anaxilaus and Therillus invited the Carthaginians to the first invasion of Sicily (B.C. 480), which was defeated by Gelon of Syracuse. Anaxilaus died shortly after, and his sons were subsequently driven away from both Messana and Rhegium. Rhegium joined the Athenians in their first expedition against Syracuse, but in the second Athenian expedition against Syracuse it remained neutral. Afterwards a long struggle began between Rhegium and Dionysius the elder, tyrant of Syracuse, which terminated with the ruin of Rhegium. Dionysius besieged the city B.C. 388 with a large force. The Rhegians made a brave resistance, but they were compelled to surrender through famine (B.C. 387). Many of the inhabitants were found dead; fifteen thousand of the remainder were sent to Syracuse as slaves; some of the wealthiest ransomed themselves. Python, their commander, was put to a cruel death with all his family by Dionysius, who razed the walls of Rhegium, and obliged the neighbouring towns of Magna Græcia to pay allegiance to him. Under his successor, Dionysius the Younger, Rhegium recovered its independence, and gradually some part of its former prosperity.

While Pyrrhus was waging war in South Italy and Sicily, Rhegium applied to Rome for assistance. The Romans sent a body of 4000 men, raised in the Latin colonies in Campania. These auxiliaries, finding themselves far from Rome, rose against the inhabitants, killed most of the men, took possession of their houses and property, and appropriated their wives and daughters to themselves. After the final retirement of Pyrrhus from Italy, the Romans severely punished the traitors, and the surviving citizens were restored to their houses and property, and to their municipal independence under the protection of Rome. The Aquilian road terminated at Rhegium. The town has often suffered from earthquakes. It retained the Greek language, manners, and customs to a late period of the empire.

After the fall of the Western empire, Rhegium remained subject to the Eastern emperors, and its archbishop was metropolitan of Bruttii. In A.D. 509 it was taken by Totila; in 918 by the Saracens; in 1005 by the Pisans; and in 1160 by Robert Guiscard, since which time it has always been a part of the kingdom of the Two Sicilies.

In the 16th century Reggio was sacked three times by the Turks, in 1543 by Barbarossa, again in 1558, and lastly in 1593. The great earthquake of Calabria, in 1783, completely ruined the town of Reggio; not a single building remained entire. Reggio has been since rebuilt on a regular plan; it spreads along the declivity of a hill down to the sea. A wide street, called La Marina, runs along the sea-shore, and another street, parallel to it, runs through the centre of the town, and is intersected at right angles by various streets. The view of the opposite coast of Messina and its verdant hills, backed by the huge mass of Ætna, is truly magnificent. The Apennines near Reggio are rugged and bare, but the plain around it is extremely fertile, and the ground is very valuable, most of it being laid out in orange and lemon plantations. Reggio is a great nursery of orange and lemon plants for all parts of the kingdom. The date-palm flourishes and produces fruit. The climate is temperate, and the atmosphere remarkably pure.



Coin of Rhegium. British Museum. Actual size. Silver.

Reggio is the capital of the province of Calabria Ultra (II). [CALABRIA.] It is fortified, well supplied with water, and situated in one of the most delightful spots in Europe. The population amounts to about 10,000. The most note-worthy buildings are the cathedral, several convents, the college, the hospital, the foundling asylum, and the theatre. The manufactures comprise silks, gloves, hosiery, cedrat and other essential oils. Articles, such as gloves, stockings, &c., are manufactured from the silky byssus of the *Pinna marina*. The export trade in wine, oil, citron, olives, and dried fruits is considerable. An annual fair is held in the town from the 1st to the 15th of Sept.

The ancient port of Reggio no longer exists. The small craft of modern Reggio anchor a little to the north of the town.

RHEIMS. [REIMS.]

RHEIN PROVINZ ('Province of the Rhine'), the most western province of Prussia, lies between 49° 10' and 51° 55' N. lat., 5° 55' and 8° E. long. It is situated on both sides of the Rhine, and comprises the grand-duchy of the Lower Rhine, and the duchies of Juliers, Cleves, and Berg. It contains the five governments of Cologne, Düsseldorf, Coblenz, Treves, and Aachen (Aix-la-Chapelle). Except the circle of Wetzlar, which is encompassed by Nassau, Hesse-Darmstadt, and Hesse-Cassel, it is bounded N. by Westphalia, E. by Nassau and Hesse-Darmstadt, S. by France, Bavaria, Saxe-Coburg, Hesse-Homburg, and W. by Luxemburg, Belgium, and the Netherlands. The area and the population of the five governments of the province in 1847 were as follows:—

Governments.	Area in Square Miles.	Population in 1847.
Cologne	1,532	484,593
Düsseldorf	2,080	887,614
Coblenz	2,320	499,557
Treves	2,775	488,699
Aachen	1,601	402,617
Total	10,308	2,768,090

In the return for 1852 the area and population of the province, with the addition of Hohen-Zollern, are given at 10,759 square miles, and 2,972,130 souls, of whom 2,247,396 were Catholics; 691,777 Protestants; 31,656 Jews; 1290 Mennonites; and 11 Greeks.

The northern part of the province is generally level, the eastern and southern parts mountainous and hilly. The Hundsrücken, which extends between the Moselle, the Rhine, and the Nahe, forms the west side of the valley of the Rhine and the east side of the valley of the Moselle, and is connected on the south with the Vosges. Its highest point within the province is in the Soonwald, which is 2015 feet above the level of the sea. The Eifel, which is a wild and partly very sterile region, is a continuation of the Ardennes, and extends between Luxemburg, the Moselle, and the Rhine. In the eastern part there are numerous extinct volcanoes. The Westerwald is a rude chain, which likewise shows many traces of volcanic action. The most interesting part of it is that called the Siebengebirge near Bonn; some parts of this chain are from 1200 to 1400 feet above the level of the sea.

The principal rivers are the Rhine, the Moselle, and the Lippe, which are navigable; the many smaller streams, most of which fall into the Rhine, are either not navigable or navigated by very small vessels. The climate is temperate; the air on the right bank of the Rhine is pure and healthy; on the left side damp fogs are more frequent, especially in the north-west part, where there are many marshes; on the mountains it is cold. The natural productions of this province are equally numerous and valuable. The higher parts of the mountains are crowned with noble forests, and the declivities are covered with vineyards. The minerals are silver, iron, copper, lead, calamine, marble, slate, freestone, millstones, basalt, porphyry, alum, manganese, sulphur, coals, and salt. Where the country slopes to the Rhine there are productive corn-fields and rich pastures; between the mountains there are fertile valleys, where flax, hemp, hops, and tobacco are grown, and fruit and garden produce of every kind are cultivated in great abundance. Game is plentiful, and all the domestic animals are bred in sufficient number.

But the great source of the prosperity of the province is the Rhine, which, from its junction with the Nahe to the village of Hochheim on its right bank, forms the natural boundary between the duchy of Nassau and the government of Coblenz; it then traverses the governments of Cologne and Düsseldorf, and leaves the Prussian territory at Schenkenschanz, opposite the Dutch village of Lobith, having passed through this province as one undivided stream for 180 miles. On the banks are many vestiges of Roman works and ruins of castles of the middle ages. The small rivers and streams are applied to turn mills and to work manufacturing machinery of every kind; for this, says Has-sell, is the most industrial province not only of the Prussian Monarchy but of all Germany. The duchy of Berg has been termed an England in miniature, and the comparison is more appropriate now than when it was first made. Cotton-factories with steam-machinery have been established in the most important towns of the province. Steam-boats ply on the Rhine and its navigable feeders, and railroads connect its chief towns with each other and with the great industrial and trading centres of Belgium, North Germany, and France. [PRUSSIA.] The manufactures comprise woollen, silk, and cotton textures of all descriptions; steam-engines and steam-machinery; plain and damask linen; yarn of all descriptions; lace, buttons, ribands, chemical products, sugar, tobacco, musical instruments, hardware, agricultural and mechanical tools, needles, pins, &c. Under the heads AIX-LA-CHAPELLE, COBLENZ, COLOGNE, DÜSSELDORF, TRÈVES, BERG, CLEVES, JÜLICH, BARMEN, DÜREN, EIFEL, ELBERFELD, EUPEN, CREFELD, &c., the surface of the country, its chief towns, and industrial products are noticed.

Gueldres, which has been referred to this article, is a small manufacturing town on the Neers, 26 miles N.W. from Düsseldorf, and has about 4000 inhabitants. It was formerly the residence of the dukes of Gueldres, and gave name to the Dutch province of Guelderland, from which it was detached with a small territory in 1713, and ceded to Prussia by the treaty of Utrecht. It was formerly fortified, but its defences were dismantled in 1764 by the French, to whom it had surrendered in 1757.

RHEIN, CIRCLES OF. [BADEN; BAVARIA.]

RHEIN-HESSEN. [HESSE-DARMSTADT.]

RHEINECK. [GALL, ST.]

RHEINGAU. [NASSAU.]

RHENEIA. [DILES.]

RHÉTIERS. [ILLE-ET-VILAINE.]

RHIN, BAS (Lower Rhine), a department of France on the eastern frontier, named from the river Rhine, on the left bank of which it lies, is bounded N. by the department of Moselle and Rhenish-Bavaria; E. by Baden, from which it is separated by the Rhine; S. by the department of Haut-Rhin; and W. by the departments of Vosges and Meurthe. The greatest length is from south-south-east to north-north-west, 68 miles; the greatest breadth is in the northern part, 60 miles; but its ordinary breadth does not exceed 30 miles. The area is 1756·9 square miles. The population in 1841 was 560,113; in 1851 it amounted to 587,434, giving 334·358 to the square mile, being 159·774 above the average per square mile for the whole of France.

Surface; Geological Character; Hydrography.—The western side of the department is occupied by the rugged wooded highlands, which form the eastern face of the Vosges Mountains. The projection at the north-western side of the department crosses the ridge in one part so as to include both the ridge itself and the western face down to the valley of the Sarre. The mountain sides are diversified with precipitous rocks, and picturesque valleys watered by small streams, which flow ultimately into the Rhine, except a few which join the Sarre. The mountains are composed of sandstones, limestones, and marls. Upon the limestone rest variegated marls, which are occasionally interstratified with gypsum. By convulsions subsequent to the deposition of the sandstone, a portion of that formation has been thrown up into bold craggy mountains, while the later formations rest upon the lower portions, several hundred feet below, at the foot of the escarpment. From the eastern foot of the Vosges a rich tract, forming part of the valley of the Rhine, extends to the bank of that river. This part is occupied by the tertiary formations. The immediate banks of the river are in many places marshy.

A small quantity of coal is procured. Iron-ore is abundant; about 30 mines are worked; and there are 27 forges and furnaces for the manufacture of the metal. Other mineral products are lead, asphalt, antimony, manganese, gypsum, slates, potters'-clay, building-stone, &c.

The department belongs entirely to the basin of the Rhine. The greater part is included in the valley watered by that river, and the remaining part, which extends across the Vosges, is drained by the Sarre, which falls into the Moselle, and so ultimately into the Rhine. The Rhine skirts the eastern boundary of the department; it is as broad as the Thames at London, and studded with a great number of small wooded islands. The Rhine yields abundance of trout, perch, salmon, carp, sturgeons, and eels. Some particles of gold are brought down by the current.

The principal feeder of the Rhine is the Ill, which rises in the department of Haut-Rhin and flows northward, nearly parallel to the Rhine and a few miles west of it, so that it receives the mountain streams that flow down the eastern slopes of the Vosges, and thus becomes a considerable river. Nearly forty miles of its course are in this department, and through the whole of that distance it is navigable. It receives the Liepvrelle, the Scheer, the Andlau, the Eger, the Bruche, into which flows the Mossig, all from the Vosges; passes Schelestadt, Benfeld, Erstein, and Strasbourg; and joins the Rhine a few miles below the last-named place. It is used for the conveyance of the timber of the Vosges and the other productions of the country. One or two arms of this river branch off from it above Strasbourg, and communicate with the Rhine.

The Zorn, which receives the Zintzel; the Moder, which receives another Zintzel; the Surbach, which receives the Eberbach; the Seltzbach; and the Lauter, all flow from the eastern face of the Vosges into the Rhine. The Surbach and the Lauter rise in the Bavarian territory, and the Lauter has its course on the frontier of France and Bavaria, which it separates from each other. The Moder and the Lauter, the longest of these streams, have each a course of about 45 miles; the Moder alone is navigable, and that for only 2 miles. The others are used for floating timber down from the mountains. The course of the Sarre within the department may be estimated at about 20 miles, for nearly 10 miles of which it is navigable.

There are two navigable canals. The most important is the great canal for joining the Rhône and the Rhine, formerly called Canal-de-Monsieur. This canal enters the department on the south side from the adjacent department of Haut-Rhin, and, running northward along the valley of the Rhine, opens into the Ill just above Strasbourg. The canal of the Bruche commences near the junction of the Mossig and the Bruche, and follows the valley of the latter river till its junction with the Ill just above Strasbourg.

Climate.—The department has long and cold winters; the spring is short, the heat of summer succeeding very rapidly to the cold of winter. The vicinity of the Vosges Mountains, on which snow remains till June or July, renders the summer liable to sudden transitions to cold. The autumns are uniformly long and very fine. The climate is generally healthy, but cretinism and goitre are very prevalent in parts: in 1852 there were 125 cretins and 873 gottrous persons, not idiots, in the department, spread among the population of 38 communes. The causes of these diseases are unknown; they prevail to a less extent than formerly, owing it is said to the drainage of the marshes and the extended cultivation of the soil.

Soil, Agriculture, &c.—The soil of the mountains is rocky, and in great degree barren; that of the immediate bank of the Rhine is marshy; but the flat which occupies the intervening space is rich and highly cultivated. About 450,000 acres are under the plough. The produce in corn is more than enough for the consumption. The chief crops are wheat, spelt, rye, mixed corn, and maize. Potatoes are grown in large quantities. In oats the produce is small. Tobacco has been cultivated for two centuries in this department; about 25,000 acres of the best land are under tobacco culture. Madder is successfully cultivated. The oleaginous seeds grown are the poppy and the rape. Excellent hemp and hops are grown. Cabbages are very extensively cultivated, and a great quantity of 'choucroule,' or sauerkraut, is exported to Germany. Other products are—onions, beans, gentian, plums, and cherries of which kirschwasser is made. About 11,000,000 gallons of wine are made annually from about 82,000 acres of vineyards. There is a good breadth of meadow land. Horses, cows, and pigs are very numerous. Geese are reared in great numbers; their livers are used in making the famous Strasbourg pie. The number of sheep is comparatively small. Both oxen and horses are employed in agriculture. The orchards and gardens cover about 15,000 acres. The woodlands are very extensive, amounting to nearly 300,000 acres. A considerable part of the timber is formed into small rafts, and floated down the Rhine to Mainz, where they are united so as to constitute enormous rafts from 250 to 300 yards long, and 25 to 30 yards broad, conducted each by 300 or 400 men. A part of the timber is sawn into deals and planks in Holland. The abundance of timber supplies not only sufficient fuel for domestic purposes, but also furnishes some for manufactures. It is not however sufficient for the demand, and a considerable quantity of coal is imported to make up the deficiency of wood.

The internal navigation of the department, including the Rhine (which is navigable all along the eastern frontier), amounts to about 200 miles in length. The department is traversed by 7 imperial and 32 departmental roads, and by the Paris-Strasbourg and Strasbourg-Basel railways.

The manufactures of the department are very important, comprising woollen-cloths of all descriptions, calicoes, linen, hats, playing-cards, room-paper, soap, oil, chemical products, ironmongery, hardware, mechanical and edge tools, fire-arms, gloves, surgical instruments, paper, &c. There are numerous breweries, tan-yards, paper-mills, madder-mills, and iron-works.

Divisions, Towns, &c.—The department is divided into four arrondissements, which, with their subdivisions and population, are as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Strasbourg . . .	12	161	244,172
2. Saverne . . .	7	165	109,879
3. Schélestadt . . .	8	114	139,678
4. Weissembourg . . .	6	104	93,705
Total . . .	33	544	587,434

1. Of the first arrondissement and of the whole department the chief town is STRASBOURG. *Bischwiller*, a manufacturing town of 5700 inhabitants, is situated on the Moder, 13 miles N. from Strasbourg. Its fortifications were dismantled in 1706. *Brumath*, is supposed to occupy the site of Brocomagus, a town of the Tribocci: population of the commune 3760. Brumath is 11 miles from Strasbourg by the railway to Paris. *Molsheim*, is in a wine growing district at the eastern foot of the Vosges. It is a tolerably well-built town situated on the Bruche W. by S. from Strasbourg, and has about 3380 inhabitants, who manufacture tools, cutlery and other hardwares, and paper. *Mutzig*, in a valley near the foot of the Vosges, is a walled town with 3500 inhabitants. *Wasselonne*, W. of Strasbourg on the Mossig, has manufactures of woollen-yarn, woollen-hose, paper, and leather; bleach-grounds for linen, and 4300 inhabitants. *Haguenau*, a pretty fortified town on the Moder, was founded by the emperor Frederick Barbarossa, and was one of the imperial cities of Alsace; its privileges were abolished after the conquest of Alsace by Louis XIV. In 1675 and 1705 it was besieged by the imperialists: in the second siege they were successful, but the town was retaken by the French soon after. In 1793 the imperialists and Prussians were defeated near the town by the French. Haguenau is surrounded by old walls, strengthened by towers and a ditch. It has manufactures of cotton-yarn and calico; and of woollen-cloth, cordage, soap, pitch, tiles, pottery, and earthenware. There are several oil-mills, gypsum-mills,

madder-mills (a great quantity of madder is grown round the town), tan-yards, and breweries. There are four yearly fairs for cattle and general merchandise. The town has five churches and a synagogue; a college, and a military hospital: population 10,500.

2. In the second arrondissement the chief town is *Saverne*, which was a post of some importance in the time of the Romans, who called it *Tabernæ*. The town stands on the *Zorn*, at the eastern foot of a steep and high mountain, 27 miles N.W. from *Strasbourg*, and has 5733 inhabitants. The chief building is the former palace of the bishops of *Strasbourg*, who used to spend their summers here. The townsmen manufacture hardwares, hosiery, and leather; and there are some breweries. *Saverne* has a subordinate court of justice, a college, and an hospital. *Bouxwiller*, is a busy little place, with 3600 inhabitants, who are engaged in manufacturing fustians, linens, hats, chemical products, &c.; there are also drying-houses for madder; bleach-grounds, and breweries. *Saar-Union*, N.W. of *Saverne*, is divided by the *Sarre* into two parts: *Bourquenom*, on the right bank, and *Sarrewerden*, on the left. The population amounts to 4300, who manufacture woollen-cloth, cotton goods, linen, hosiery, beer, tiles, and bricks.

3. In the third arrondissement, the chief town, *Schélestadt*, is situated 28 miles S. by railway from *Strasbourg*, on the left bank of the *Ill*, and has 8367 inhabitants in the commune. It is regularly fortified, and entered by three gates, of which the one leading to *Strasbourg* opens upon a fine avenue of poplars. The town has several good churches and public buildings. Its chief industrial products are pottery, tobacco, vinegar, starch, beer, leather, flour, &c. *Barr*, 9 miles N. from *Schélestadt*, is a well-built town of about 4500 inhabitants, situated among vineyards at the foot of the *Kirchberg*. There are cotton factories, and oil- and tan-mills driven by water-power. *Benfeld*, a station on the railway to *Basle*, 10 miles N. from *Schélestadt*, is situated on the *Ill*, and has about 2700 inhabitants. Tobacco is extensively manufactured about this town. At *Ersheim*, a town of 3500 inhabitants, 14 miles by railway N. from *Schélestadt*, cotton hosiery, snuff, cordage, tiles, leather, and pottery are manufactured; and there are dye-houses and bleach-grounds for linen. *Markolsheim*, S.E. of *Schélestadt*, near the left bank of the *Rhine*, has manufactures of linen, breweries, potteries, tile- and brick-yards, and above 2300 inhabitants. Trade is carried on in hemp and tobacco. At *Ober-Nai*, or *Ober-Ehnheim*, a small ill-built walled-town of about 5000 inhabitants, there are copper-works, cotton factories, and distilleries. At *Rosheim*, situated on the *Magel* in a valley among the *Vosges Mountains*, woollen and cotton stuffs are manufactured: population, 3500.

4. In the fourth arrondissement the chief town, *Weissembourg*, or *Wissembourg*, is a fortress of considerable strength, and is connected with the 'lines' of *Weissembourg*, works constructed along the bank of the *Lauter* to cover this part of France. It has 5110 inhabitants in the commune, and is the seat of a college and a tribunal of first instance. The chief industrial products are hosiery, straw hats, earthenware, pottery, soap, beer, bricks, and leather. *Lauterbourg*, 12 miles E. from *Weissembourg*, and the most eastern town in France, is also fortified. It stands on the *Lauter* near its mouth in the *Rhine*, and has about 2500 inhabitants, two churches, two hospitals, ropewalks, breweries, and potash factories. At *Soultz-sous-Forêts*, between *Weissembourg* and *Haguenau*, there are iron- and coal-mines, beds of asphalt, and salt-springs: population about 2000. *Niederbronn*, a small town of about 3000 inhabitants, 16 miles S.W. from *Weissembourg*, are iron-works, tanyards, breweries, and paper-mills; also some mineral springs, the waters of which are drunk and also used for baths.

The department together with that of *Haut-Rhin* forms the see of the Bishop of *Strasbourg*. Protestants of the Lutheran and Calvinist sects form a large ratio of the population. The Calvinists have consistorial churches at *Strasbourg* and *Bishwiller*, and 12 meeting-houses in other towns of the department. The Lutherans have 21 local consistories. The Jews have a consistorial synagogue at *Strasbourg*, presided over by a grand Rabbi; and 18 communal rabbis. The Catholics have 42 parish churches and 274 chapels of ease in the department, a diocesan seminary and theological school at *Strasbourg*, where also is a great Protestant seminary, and a Lutheran industrial school and gymnasium. The University-Academy of *Strasbourg* embraces within its limits the departments of *Bas-Rhin* and *Haut-Rhin*. The department of *Bas-Rhin* is included in the jurisdiction of the High Court of *Colmar*, and belongs to the 6th Military Division, of which *Strasbourg* is head-quarters. It returns four members to the Legislative Chamber of the French empire.

RHIN, HAUT, a department in the east of France, bounded N. by *Bas-Rhin*, E. by the *Rhine* and the grand duchy of *Baden*, S. by *Switzerland* and the department of *Doubs*; and W. by the departments of *Haute-Saône* and *Vosges*. Its greatest length is 64 miles; its breadth is about 36 miles. The area of the department is 1585·8 square miles. The population in 1841 was 464,775; in 1851 it amounted to 494,147, which gives 311·607 inhabitants to a square mile, or 137·023 above the average per square mile for the whole of France.

This department, like that of *Bas-Rhin*, is included between the crests of the *Vosges* on the west and the bank of the *Rhine* on the

east; its western side is consequently mountainous, while in the east it subsides into the valley of the *Rhine*. Some of the mountains, called from their rounded forms 'ballons,' are lofty. *Le Ballon d'Alsace*, at the junction of the three departments of *Haut-Rhin*, *Haute-Saône*, and *Vosges*, has an elevation of 4121 feet; and *Le Ballon de Guebwiller*, or *Soultz*, the highest point of the *Vosges Mountains*, about six or seven miles west of the town of *Guebwiller*, has an elevation of 4701 feet. The southern portions of the department are covered by the ramifications of the *Jura*. The highest summits of the *Vosges* are composed of granitic or other primitive rocks; in the neighbourhood of *Giromagny*, south of the primitive district, are the sandstones, limestones, and other formations of the carboniferous system. On the lower slopes of the *Vosges* are the variegated marls, limestones, and sandstone; and resting upon these, the oolitic formations, which also compose the mass of the *Jura*. The eastern side of the department, from the foot of the *Vosges* to the *Rhine*, is occupied by the tertiary formations. Among the mineral products are copper and lead; iron-mines are numerous; mines of antimony and coal, and beds of asphalt are worked. Granite, porphyry, marble, rock crystal, good freestone, potters' clay, and gypsum are procured; and there are several mineral springs, of which those of *Soultzmatt*, about ten miles south-south-west of *Colmar*, are the most important.

The department belongs chiefly to the basin of the *Rhine*, which river has a considerable breadth, an average depth of ten to twelve feet, and is studded with numerous islands. The various streams which flow from the *Vosges* are received by the *Ill*. [*RHIN, BAS.*] The navigation of the *Ill* commences at the junction of the *Lauch*, close to *Colmar*; but it is used for floating timber above that point. The *Lauch* and the *Fecht*, which join the *Ill*, are also used for floating timber. The *Largue*, which rises in the *Jura*, has been made a feeder of the canal from the *Rhône* to the *Rhine*. The south-west of the department belongs to the basin of the *Rhône*, and is drained by the *Halle*, the *St-Nicholas*, and the *Savourens*, which fall into the *Doubs*. None of these rivers is navigable.

The canal from the *Rhône* to the *Rhine* enters the department near the junction of the little rivers *Halle* and *St-Nicholas*, and runs north-east along the valley of the *St-Nicholas* to the summit level near *Dannemarie*; thence it runs partly along the valley of the *Ill* to the basin near *Mulhausen*, whence a branch proceeds to join the *Rhine* at *Huningue* near *Basel*, while the main branch runs northward between the *Ill* and the *Rhine* into the department of *Bas-Rhin*. The inland navigation of the department, including the *Rhine*, the *Ill*, and the canal, extends to 131 miles.

The department is crossed by 7 imperial and 15 departmental roads, and by the *Strasbourg-Basel* railway through *Colmar* and *Mulhausen*; from *Mulhausen* a branch line, 13 miles in length, runs north-west to the manufacturing town of *Thann*.

The soil of the department is stony and barren along the bank of the *Rhine* and in the *Vosges*; the central part is fertile; and among the mountains also there are some valleys of great fertility. The district formerly called the *Suntgas*, of which *Belfort* was the capital, is also considerably fertile. There is much forest-land between the *Ill* and the *Rhine*. The climate resembles that of *Bas-Rhin*, but is rather colder, and the winters are a little longer.

Cultivation is carried on with great care. Wheat, barley, oats, and other crops mentioned in the preceding article, are grown in this department in quantity sufficient for the demand, though this was formerly not the case. The meadows, which are very rich, amount to 130,000 acres, and the heaths and open pastures to above 70,000 acres. The number of horses and horned cattle is very considerable; the number of sheep is comparatively small. The vineyards cover about 28,000 acres; the growth of wine is about 12,760,000 gallons annually. The orchards, which cover nearly 15,000 acres, are very productive, especially in cherries, from which excellent *kirschwasser* is made. Pulse, hemp, flax, tobacco, and madder are grown. The woodlands comprehend 336,000 acres. The abundant supply of wood furnishes fuel for the various manufactures of the department. It is floated down the streams which flow into the *Ill* or the *Doubs*.

The department of *Haut-Rhin* is one of the principal seats of the cotton manufactures in France. All kinds of calicoes and printed goods, cotton-yarn, shawls, hosiery, &c., are manufactured. Other important industrial products are fine woollens, linens, woollen-yarn, thread, canvases, ironmongery, clock and watch movements, room-paper, soap, leather, pottery, hats, chemical products, refined sugar, spirits, glass, bar-iron, &c.

The department is divided into three arrondissements, which, with their subdivisions and population, are as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Colmar . . .	13	142	211,682
2. Altkirch . . .	6	160	149,874
3. Belfort . . .	9	191	132,591
Total . . .	28	493	494,147

1. Of the first arrondissement, and of the whole department the

chief town is COLMAR. *Ensisheim*, 15 miles by railway from Colmar, on the right bank of the Ill, was formerly the capital of Upper Alsace. It is slightly fortified, and has a central prison for eight departments and 3800 inhabitants. *Guebwiller*, situated on the Lauch, 15 miles S.W. from Colmar, contains a handsome church, erected in the middle of the last century: the townsmen spin cotton-yarn, weave stockings, gloves, caps, handkerchiefs, calicoes, cotton-prints, printed-shawls, and woollen-cloths, and manufacture nails, currycombs, potash, and refined sugar. *Kouffach*, 8 miles S. from Colmar by railway, is a walled town with 3400 inhabitants, who are engaged in spinning cotton-yarn and weaving cottons. Near the town is the castle of Isemburg, where some of the Frankish kings of the Merovingian race resided. *Neuf-Brisach* is a small well-built fortified town between the Ill and the Rhine, 9 miles E. by S. from Colmar, and has about 2500 inhabitants. It was built by Louis XIV. to serve as a check to the fortress of Alt-Brisach, on the Baden side of the Rhine, and was fortified by Vauban on the most improved principles. The streets are straight, and the houses low but regularly built. *Soultz*, a well-built walled town with 3400 inhabitants, south of Colmar on the Lauch, has manufactures of silk ribbon, woollens, paper, and leather. *Münster*, a small town with 3400 inhabitants, 12 miles S.W. from Colmar, owes its origin to a Benedictine abbey, founded here in the 7th century. It was anciently fortified, and suffered much in the Thirty Years' War. The townsmen are engaged in the manufacture of cottons, muslins, and paper. Cotton and woollen goods are manufactured at *Wintzenheim*, a small town west of Colmar with 3500 inhabitants. *Kaiserberg*, on the Weiss, 6 miles N.W. from Colmar, founded by the emperor Frederick II., who surrounded it with walls, was formerly a free imperial city. The town is well built, and has above 3000 inhabitants, who manufacture cotton goods, linen, canvass, and leather. At *Ribeauville*, a town of 7500 inhabitants, 8 miles N. from Colmar by railway, cotton handkerchiefs and other cotton goods are manufactured: near the town are the ruins of the castle of Ribeaupierre. *Sainte-Marie-aux-Mines* is, next to Colmar, the most important place in the arrondissement. It is near one of the passes of the Vosges, 18 miles N.W. from Colmar, in an agreeable situation. The *Liepvrette* divides it into two parts. It derives its name from the copper and lead mines formerly worked in the neighbourhood, but the working of these has been gradually given up. The chief occupation of the townsmen is the manufacture of cotton and woollen-yarn, of linens, woollens, and cottons, including handkerchiefs and printed calicoes, and of leather and paper. There are also tan-yards, bleaching-grounds, dye-houses, and fulling- and paper-mills. The town has a chamber of manufactures, a council of prud'hommes, and about 12,000 inhabitants in the commune.

2. In the second arrondissement the chief town is *Altkirch*, a small town 36 miles S. from Colmar, with a communal college, a tribunal of first instance, and 3500 inhabitants. *Altkirch* was built early in the 13th century by one of the counts of Ferette. There are some ancient towers yet standing. The townsmen manufacture leather, and there is a monthly fair for cattle. The only other place worth notice in the arrondissement is the important manufacturing town of *Mulhausen*, which forms the subject of a separate article. [MULHAUSEN.]

3. In the third arrondissement the chief town is *Belfort*, or *Belfort*, which is situated in the south of the department, on the left bank of the Savoureuse, a feeder of the Doubs, and has a commercial court, a tribunal of first instance, a college, and 7400 inhabitants. The town is fortified and well built. Outside the three gates are three important suburbs. The chief industrial products of Belfort are watch- and clock-works, leather, tin ware, hats, wax-candles, beer, ironmongery, and iron wire. *Cernay*, a station on the railway from Mulhausen to Thann, is situated on the Thur, and has a manufacturing population of 3500. At *Givomagny*, a small town of 2300 inhabitants on the Savoureuse, cotton stuffs, hosiery, and tiles are manufactured, and a monthly fair is held for corn and cattle. *Massevaux*, prettily situated on the Doller, 10 miles N.E. from Belfort, has manufactures of cotton-yarn and cotton goods, copper-works and iron-furnaces, and a population of 3300. *Thann*, a well-built busy manufacturing town of about 6000 inhabitants, situated on the Thur, 13 miles by railway distant from Mulhausen, has a fine old gothic church dedicated to St. Théobald, remarkable for its spire, 328 feet high, which is an imitation of that of Strasbourg. The ruins of the castle of Enguelbert, on a hill above the town, are also deserving of notice. Cotton-yarn and cotton goods, including printed calicoes, are manufactured; also machinery, starch, gunpowder, pig- and bar-iron, salt, and chemical productions.

The department is included, with that of Bas-Rhin, in the diocese of Strasbourg; it is in the jurisdiction of the High Court of Colmar, and within the limits of the University-Academy of Strasbourg. The Calvinists form a considerable element in the population of the department. The Catholics have 32 parish churches and 320 chapels of ease. The Calvinists have a consistorial church at Mulhausen, and 7 meeting-houses in other towns of the department. The Jews have a synagogue and grand rabbi at Colmar, and 18 communal rabbis spread over the department. There are colleges in Altkirch, Belfort, Colmar, Mulhausen, and Thann. The department is included in the 6th Military Division, the head-quarters of which are at Strasbourg.

It sends three members to the Legislative Chamber of the French empire.

(*Dictionnaire de la France; Annuaire pour l'An 1853; Annuaire du Commerce; Official Papers.*)

RHINE (ancient Rhenus), a large and important river in Europe, rises in the Alps of Switzerland, in several parts of its course separates that country from Germany, afterwards divides Germany from France, traverses the territories of several princes belonging to the German Confederation, and lastly drains the plains of Holland, where it reaches the sea by several arms. That portion of the river which lies within or along the boundary-line of Switzerland is called the Upper Rhine; from Basel to Cologne, it is denominated the Middle Rhine; and the remainder of the course, to its several mouths, the Lower Rhine.

Upper Rhine.—The river originates in three branches in that elevated chain of the Alps which runs eastward from the mountain-road of St.-Gothard through the Grisons. The most eastern of these three branches, the Vorder-Rhein (Fore-Rhine), is considered the principal. It rises in two small lakes, situated on the eastern declivity of Mount Badus, belonging to the St.-Gothard group, about 7500 feet above the sea-level. It runs in a ravine like a torrent, and about 12 miles from its source, at Dissentis, where it is met by the second branch, the Mittel (Middle) Rhein, it is hardly more than 3600 feet above the sea. It continues its course for about 40 miles more in an east by north direction, to Reichenau and Coire. At Reichenau the waters are increased by the third branch, called the Hinter (Hinder) Rhein, and at Coire it is nearly 250 feet wide, its waters having been increased by numerous small tributaries. From Coire downwards it is navigated by small flat river-boats, and it begins to run through a valley from one to two miles wide, in a nearly northern direction towards the Boden See, or Lake of Constanz. This valley is nearly 50 miles long. About 20 miles north from Coire two mountains come close up to the banks of the river, so as not to leave even space for a road. The eastern is called the Fischerberg, and the western the Schollberg. Their declivities along the river are extremely steep, and there is reason to suppose that the two mountains at some remote time formed one mass, and that the course of the river was different from what it is at present. In fact a low tract of alluvial ground extends south of the Schollberg westward to the small town of Sargans in St.-Gallen, and thence to the Lake of Wallenstadt. Between this lake and that of Zürich there is also a broad tract of level alluvial ground, in which the Linth Canal has been made. As the ground between the present course of the Rhine and the Lake of Wallenstadt is little more than 20 feet above the level of the river, it is supposed that the Rhine formerly took its course through this low ground, and passing through the lakes of Wallenstadt and Zürich, followed the course of the Limmat, which joins the Aar a little below the mouth of the Reuss. When the Rhine is unusually swollen there is some danger of its returning to this its supposed ancient bed. In 1817 and 1821 the danger was only averted by the great efforts of the inhabitants of the adjacent places. North of the narrow passage between the Schollberg and Fischerberg the valley is much wider, and here the river constitutes the boundary-line between Austria and Switzerland. Where the river enters the Boden-See it runs through a swampy tract of small extent. The river issues from the lake at Constanz, which is 1344 feet above the sea-level, and flowing in a western direction for a few miles, enters the Unter-See (Lower Lake), which is about 30 feet lower than the Boden-See. In this tract, and as far as Schaffhausen, the Rhine is navigable for large boats, but below the last-mentioned place its waters rush over a rock, which is between 65 and 70 feet high, and this waterfall is called the cataract of Schaffhausen or Laufen. The last name is derived from that of a castle which is contiguous to the waterfall. At Schaffhausen the surface of the Rhine is 1260 feet above the sea-level. Below this cataract the course of the river is very tortuous, between mountains and high hills, but its general direction is toward the west. Nearly 50 miles below Schaffhausen the navigation is again interrupted by a cataract, at the town of Laufenburg, where the bed is narrowed by projecting rocks to about 50 feet. At this point goods must be unshipped, and the barges descend the river by means of ropes. The last and least impediment to navigation in the Upper Rhine occurs near Rheinfelden, about 10 miles below Laufenburg, where a rapid of some length occurs, which does not stop the navigation, but is fatal to many boats which navigate this part of the river. It is called the Höllebacken (Hook of Hell). Below this rapid the river is only 850 feet above the sea; and at Basel only 800 feet.

Numerous tributaries join the Rhine in its upper course above Basel, but none of them is navigable or otherwise important, with the exception of the Aar, which with its feeders the Reuss and the Limmat, brings into the Rhine the drainage of the greater part of Switzerland. [AARGAU.]

Middle Rhine.—At Basel, where this division of the river begins, it has entirely left the mountain region of the Alps and Jura Mountains, and at the same time it changes its western into a north-north-eastern and northern course. It flows in a valley from 40 to 50 miles wide, extending between the Black Forest (Schwarzwald) and the mountains connected with it on the east, on the one side, and the Vosges and their northern prolongation the Hardt Mountains on the west, from

Basel to Mainz, a distance of nearly 200 miles. At Mainz the surface of the river is only 274 feet above the sea. Between Basel and Strasbourg, a distance of only about 80 miles, the fall of the river is not less than 847 feet, or 4½ feet per mile. Accordingly the current is very rapid, and in addition to this the wide bed of the river contains numerous sand-banks and small islands, which are subject to sudden and frequent changes in their form and position, so that navigation in this part of the Rhine is dangerous and therefore limited. Between Kehl opposite Strasbourg, and Germersheim, which places are about 50 miles distant from one another, the islands increase in size, and are less subject to change. Few islands occur north of Germersheim, and the river flows slowly, making large bends. The largest kind of barges used between Strasbourg and Mainz are of 100 tons burden, but in ascending they must be drawn up, which is chiefly done by horses.

Between Mainz and Bonn the Rhine runs between two mountain regions in a narrow valley. This valley, which contains some of the most picturesque scenery on the continent of Europe, is in some parts so narrow, that there is hardly level space enough for a road between the mountains and the banks of the river. The hills along the banks of the stream contain extensive vineyards, the produce of which is known all over Europe under the name of Rhenish wines. At Bingen a ledge of rocks crosses the river, and though the Prussian government has somewhat lessened the danger by blasting some of the rocks, neither barges nor steam-boats can pass by night or in foggy weather. Near Bacharach, farther down, there is a group of rocks, and opposite St. Goar another ledge. At Cologne the river is only 110 feet above the sea-level. The ascent by barges is very tedious.

Numerous tributaries join the Rhine in its middle course. Those which flow into it from the west have a short course, and are not navigable, with the exception of the *Moselle*, which rises on the western slopes of the Vosges, and runs first north-west, and then north, but the greater part of its course is to the north-east. After a course of 320 miles, it joins the Rhine at Coblenz. [MOSELLE.] The lower part of its course lies in a deep valley of moderate width, inclosed by hills and mountains, the slopes of which are covered with extensive vineyards, which produce the Moselle wine.

The number of navigable rivers which join the Rhine in its middle course from the right is much greater. The most southern is the *Neckar*, which rises near 48° N. lat., in the mountainous tracts by which the range called the *Raube Alp* is connected with the Black Forest, and after a course of about 170 miles falls into the Rhine at Mannheim. [NECKAR-KREIS.]

The most important of the affluents of the Middle Rhine is the *Main* or *Mayn*, which falls into it opposite Mainz. Its sources are in the *Fichtelgebirge*, not far from the boundary of Bohemia, where it originates in two branches, of which the northern is called the *White* and the southern the *Red Main*. The two branches unite about two miles and a half below *Kulmbach*, and begin to change their western course into a southern. Not far from *Bamberg* the river is joined by its only navigable affluent, the *Rednitz*: it then flows west by north to *Schweinfurt*, whence it again runs south to *Markbreit*, and from that place to the north-north-west to *Gemünden*. From *Gemünden* it again flows southward, and making a wide sweep, encircles the mountain region of the *Spessart*. At *Hanau* it turns westward, and passing near *Frankfort* in that direction, joins the Rhine. Though its sources are only about 150 miles from its mouth, the whole course exceeds 360 miles, owing to the numerous large bends. River barges ascend above the mouth of the *Rednitz*, more than 250 miles from its mouth; and from *Kitzingen* downwards, it is navigated by vessels of 100 tons burden. The whole course lies through a hilly but rather fertile and well-cultivated country. As no high hills intervene between the *Main* and the *Danube*, a canal, originally projected by *Charlemagne*, was cut by the ex-king *Ludwig* of *Bavaria* from *Forchheim* along the banks of the *Rednitz* and those of the *Altmühl*, a feeder of the *Danube*. This canal establishes a water communication between the *North Sea* and the *Black Sea*.

Farther north the Rhine is joined by the *Lahn*, which falls into it a little above the mouth of the *Moselle* at *Niederlahnstein*: it flows about 140 miles, and is navigable for moderate-sized river boats to *Diez*, about 20 miles from its mouth. It traverses a very hilly country. The river *Sieg*, which falls into the Rhine below *Bonn*, flows about 70 miles, and is navigable to *Siegburg*, which is about eight miles from its mouth. [ARNSBERG.]

Lower Rhine.—From *Cologne* to its mouths, a distance of about 300 miles, the course of the Rhine is through a low level country, though the western declivity of the hills of the *Sauerland* are near its eastern bank, between *Cologne* and *Düsseldorf*. The current is extremely gentle, as the whole fall does not amount to much more than four inches per mile, the surface at *Cologne* being, as already observed, only 110 feet above the sea-level. From this town downwards the Rhine is navigated by sea-going ships, many of which are built in the ship-yards of *Cologne*. [COLOGNE.]

About 200 miles from its mouth, and soon after it has entered *Holland*, the Rhine begins to divide into several arms; but before this division, the waters are increased by three navigable rivers, on the left bank by the *Erft*, which has a course of about 60 miles, and on the right bank by the *Ruhr*, whose course is above 100 miles,

about one-half of which has been made navigable for barges by the construction of several locks, and the *Lippe*, which is somewhat more than 100 miles long, and is navigated from *Lippstadt* by small river-boats, and from *Lünen* by large ones.

Near the village of *Pannerden*, which is within the territories of *Holland*, the Rhine divides into two arms, of which the southern is called the *Waal*, and the northern preserves the name of *Rhine*. Nearly two-thirds of the volume of water run into the *Waal*, which is more than 210 yards wide, while the *Rhine* is only 114 yards wide. The *Waal* runs westward, and the *Rhine* north-north-west. The *Rhine* divides again about 12 miles lower down, above *Arnhem*, into the *Yssel*, which runs to the north, and the *Rhine*, which turns off to the west. The *Yssel* was originally a canal, cut by *Drusus*, to unite the *Rhine* with the river which is now called *Oude* (Old) *Yssel*. It falls into the *Zuider-Zee*. The *Rhine* running westward divides for the third time about 80 miles lower down, at *Wyck*. The southern arm is called the *Leck*, and the northern goes by the name of *Kromme-Rhyn* (Crooked *Rhine*): the *Leck* is the larger river. The *Crooked Rhine* runs north-west to *Utrecht*, where it divides for the fourth and last time. The arm which runs northward is called the *Veicht*, and falls into the *Zuider-Zee*; the other, whose name is changed into that of *Oude-Ryn* (Old *Rhine*), continues westward through the marshes of *Holland*, where the waters are used for feeding numerous small canals. It passes through *Leyden*, and formerly did not reach the sea, being prevented by some sandy dunes which line the shores of this part of *Holland*; but in 1807 a canal was made through them, and the river now discharges a small quantity of water into the sea at *Katwyck*, north-west of *Leyden*. [HOLLAND.]

The *Leck*, or middle branch of the *Rhine*, was originally also a canal, made by the *Roman* general *Corbulo*; and it existed as such to A.D. 839, when the bed was greatly enlarged by an inundation, and thus it became the principal river, and the true *Rhine* was reduced to insignificance. It runs from *Wyck* by *Duurstede* westward for about 50 miles, and enters an arm of the *Meuse* that runs along the north shore of the island of *Ysselmonde*. [MEUSE.] The *Waal* runs about 80 miles from *Pannerden* to *Gorkum*, where it flows into the *Maas*. A branch of the *Meuse*, called the *West Kil*, leaves the main stream a few miles below its junction with the *Waal*. After flowing through the *Bies-Bosch* [HOLLAND] it runs west, and takes the name of *Hollands-Diep*, which divides into two, the arms that inclose the island of *Over-Flackee*. [MEUSE.] The whole country between the arms of the *Rhine* is intersected by numerous canals, most of which serve for the purpose of internal navigation, though only for small boats. The whole course of the *Rhine* amounts to about 870 miles, of which about 570 miles, from *Basel* to its mouths, are navigable.

The delta of the *Rhine* is bounded on the east by the *Yssel*, on the south by the *Waal* and the *Maas*, and on the other sides by the *North Sea* and the *Zuider-Zee*: it comprehends the whole of the three Dutch provinces of *North* and *South Holland* and *Utrecht*, and nearly two-thirds of *Guelderland*. The whole extent of the low country near the mouths of the *Rhine* is nearly 5000 square miles. All this country would occasionally be covered with the inundations of the river, or by the sea, if it were not protected by embankments. The river embankments begin at *Wesel*, in the Prussian province of *Düsseldorf*, and extend on both sides of the different arms of the *Rhine* to the sea. These embankments are generally from 25 to 80 feet above the lowest level of the river. In the basin of the *Rhine* the winter usually lasts from six weeks to two months, during which time the river is covered with ice, and the snow accumulates in the adjacent countries. If the snow has fallen in greater quantities than usual, and is suddenly dissolved by warm rains, the river in a short time swells to an extraordinary height, and lays the contiguous lowlands under water. No part of these lowlands is more subject to such inundations than the *Betuwe*, or that tract which extends between the *Rhine* and *Leck* on the north and the *Waal* on the south. When such inundations take place they are always attended with great loss of property, and sometimes of life. The basin of the *Rhine* is estimated at about 80,000 square miles, of which about 13,000 miles are assigned to the upper, 40,000 miles to the middle, and 27,000 miles to the lower basin of the *Rhine*.

Ancient writers differ respecting the number of mouths by which the *Rhine* falls into the ocean. *Cæsar* says that there are several, but *Virgil* ('Æn.' viii. 727), *Aianius* (*Strab.* iv. p. 193), and *Tacitus* ('Ann.' ii. 6) speak only of two; of which, according to *Tacitus*, the western is called *Vahalis* till its union with the *Mosa*, when it takes the name of the latter river, while the eastern, which forms the boundary between *Gaul* and *Germany*, preserves the name of *Rhine*. *Pliny* ('Hist. Nat.' iv. 29), *Ptolemaeus* (ii. 9), and other writers say that the *Rhine* falls into the sea by three mouths, of which the eastern, according to *Pliny*, was called *Flevum*, and the western, formed by the union with the *Mosa*, *Helium*; while the middle one, which was only a stream of moderate size, retained the name of *Rhine*. The channel called *Flevum* is supposed to have been formed by the canal which *Drusus* dug to connect the *Rhine* with the *Isala* (*Yssel*), and by means of which he and *Germanicus* sailed to the ocean. (*Suet.* 'Claud.' c. i.; *Tac.* 'Ann.' ii. 8.) The *Isala*, increased by the waters of the *Rhine*, flowed northward into a great lake called *Flevo*, on issuing

from which it became a river again, and fell into the ocean after forming an island of the same name. (Mela, iii. 2.) In course of time the sea made great inroads upon the land round the mouth of this river, till at length it submerged that part of the country, and became united with the lake Flevo, thus forming the modern Zuider-Zee.

Though the basin of the Rhine extends from 46° 30' to 52° N. lat., nearly the whole of it has the same climate. The distance between the upper and lower basin, amounting to about five degrees, is compensated by the greater elevation of the upper basin. Thus the plains of Switzerland, which are about 1400 feet high, resemble in climate the low countries which lie between 51° and 52° N. lat. The countries in the middle basin, being less elevated in proportion, enjoy a somewhat milder climate than the plains of Switzerland and the lowlands near the mouth of the Rhine.

The Rhine is connected by canals with the Saône and Rhône, the Schelde, the Meuse, and the Danube. A very important trade in colonial produce, manufactured goods, timber, coal, iron, corn, wine, and agricultural products, is carried on by the Rhine and its chief navigable feeders, the Moselle, the Mayn, the Ruhr, and the Neckar. The annual traffic on the Rhine and its tributaries amounts to 5,250,000 tons, of which 3,500,000 tons belong to the Rhine exclusively, and about 1,000,000 tons to the Ruhr. The free navigation of the river was guaranteed by the stipulations of the treaty of Vienna, but every one of the seven states—Switzerland, France, Baden, Bavaria, Prussia, Hesse-Darmstadt, and Holland—through which it passes, or which it touches, from the point where it becomes navigable to the North Sea, demand toll on goods and vessels passing their respective territories. The duties it is true have been considerably reduced from time to time, especially by Holland, but still they are very onerous. To give some idea of the vexations and stoppages caused by the system of Rhine tolls, it is only necessary to state that in 1854 a vessel of about 130 tons paid on the Rhine, between Emmerich and Mayence, in recognition dues and duties, no less than 82*l.* 4*s.* sterling, or above 12*s.* 7*d.* a ton. The commerce and navigation of the Moselle, the Mayn, the Ruhr, and the Neckar, are restricted in a similar way. The Rhine is navigated by steam-boats belonging to several companies, and by many steam-tugs and colliers, which ply with coals between the Ruhr and the principal towns on the Rhine.

A railway runs down the right bank of the Rhine from Basel through Freiburg, Karlsruhe, and Darmstadt to Frankfurt-am-Mayn and Wiesbaden. The line is to be continued from Frankfurt to Cologne. At Frankfurt this trunk line is joined by the Cassel railway, which is connected by the Thuringian and Westphalian lines with central and northern Germany, and by the Würzburg line with the Bavarian railways. At Bruchsal, a little north of Karlsruhe, it is joined by a branch line with the Würtemberg railway system. A French railway runs down the left bank of the Rhine from Basel to Strasbourg, whence a line runs to Paris. Farther down a line, in connection with the Paris-Strasbourg line, skirts the left bank of the Rhine from Spire to Mayence. In the Prussian territories a railway joins Bonn to Cologne, whence a short line running west connects the Rhine with the Belgian railways. From Deutz, opposite Cologne, a railway runs along the right bank of the river to Duisburg, whence it turns eastward, connecting the Rhine with the Hanoverian and Prussian lines.

The Rhine is crossed by pontoon bridges, or bridges of boats, only at Cologne, Mayence, Mannheim, and a few other places; and the railways that skirt its banks have as yet no point of junction. An iron bridge is about to be constructed over the river from the Frankenplatz in Cologne to the wharf near the railway terminus at Deutz. It will rest on three massive piers and two abutments, leaving four openings for the passage of the water each 313 feet in span. There is to be no opening in the arches, their height above the water being sufficient to admit vessels to pass. The bridge is to be divided longitudinally into two equal divisions, one for the passage of trains and the other for general traffic and use. The height of the bridge is to be greater than the level of the railroads on either side of the river, in order not to impede the navigation; but at each end a moveable platform will be constructed, with powerful machinery for raising and lowering it with a whole train to the levels of the two railroads respectively, so that there will be no necessity to unload or change carriages.

RHIO is a Dutch settlement, on the island of Bintang, which lies opposite Cape Romania, one of the promontories with which the Malay peninsula terminates on the south. The island of Bintang is a little larger than that of Singapore, and contains about 300 square miles, with a population of about 13,000. The Dutch first established themselves here in 1785, and in 1818, after Java, Malacca, and the other Dutch colonies had been restored, the Dutch government took possession of the town of Rhio in order to secure the Malacca trade; but the foundation of the town of Singapore and the rapid growth of that British colony has frustrated their design: yet Rhio is a thriving place. A large quantity of gum and terra japonica is exported. The town and fortress of Rhio is situated on the south-west coast of the island, at the entrance of a wide inlet, called the bay of Tanjung Pinang. The harbour is good and safe, but its entrance is rendered difficult and dangerous by a number of small rocky islands. Rhio is in 50° N. lat., 104° 28' E. long.

RHODE ISLAND, one of the United States of North America, lies

between 41° 18' and 42° 2' N. lat., 71° 6' and 71° 58' W. long., except Block Island, which lies between 41° 6' and 41° 15' N. lat. The state is bounded E. and N. by Massachusetts; W. by Connecticut; and S. by the Atlantic Ocean. The area is about 1200 square miles. The population in 1850 was 147,545 (of whom 8670 were free coloured persons), or 122.95 to the square mile. Rhode Island is the smallest state in the Union, but with the exception of Massachusetts the most densely peopled. The inhabitants being all free, the federal representative population is the same as the entire population in 1850; this according to the present ratio of representation entitles the state to send two representatives to Congress. To the Senate, like each of the other states, Rhode Island sends two representatives.

Surface, Hydrography, Communications.—The largest part of the state lies to the west and north-west of Narragansett Bay, and comprehends about 900 square miles; a small portion lies to the east of Narragansett Bay; and the rest is composed of the islands of Rhode Island, Canonicut Island, Prudence Island, Patience Island, Hope Island, Hog Island, and Dyer's Island in Narragansett Bay; and Block Island in the Atlantic. Rhode Island, which gives its name to the state, is the largest of the islands which belong to it. The central part of it is in 41° 32' N. lat., 71° 15' W. long. Its length is about 15 miles from north to south, with an average width of about 3½ miles. This island is the most fertile part of the state; the soil is suitable either for tillage or grazing, and is well cultivated; and the climate is so temperate and healthy, that the island is a place of resort for the inhabitants of the southern and central states in the summer months, and for invalids at all seasons. Near to Rhode Island is Canonicut Island, which is seven miles long and one mile broad, and has some beautiful scenery. Prudence Island higher up the bay, and partly between Rhode and Canonicut Islands, is a little less than the latter. The only other island requiring specific mention is Block Island, which lies about 12 miles S.W. from Point Judith on the mainland; it is about 8 miles long, and from 2 to 4 miles broad; and is chiefly inhabited by fishermen: the population of Block Island in 1850 was 1262.

Narragansett Bay, which intersects a large portion of the state, is about 30 miles long from Point Judith, on the south, to Bullock's Point, and about 10 miles wide. The entrance extends from Point Judith on the west to Point Seaconet on the east. The bay forms a safe road during the north-west storms, is navigable in all seasons, contains several excellent harbours, and has many points suitable for defence, which have been strongly fortified. Newport Harbour in the channel between Rhode and Canonicut Islands, is one of the finest in America.

The surface of the continental part of Rhode Island is generally hilly and broken, but the hills nowhere attain a greater elevation than about 300 feet above the level of the sea. Along Narragansett Bay, and on the islands, the surface is level or slightly undulating.

The rivers of this state are not more than 50 or 60 miles long, and have but an inconsiderable quantity of water. They are therefore of little value for navigation, but having generally a considerable fall, they afford a large amount of mechanical power, and work numerous mills. The *Pawcatuck*, which in the lower part of its course forms the boundary between this state and Connecticut, is navigable for about six miles. The *Pawtucket*, the principal river in the state, rises in Massachusetts, where it is called the Blackstone River; traverses the north-eastern part of Rhode Island; and falls into Providence River about a mile below Providence city. At Pawtucket village, four miles from its mouth, there are falls of about 50 feet, below which the river is known as the Seekonk: it is navigable up to the falls. The *Providence*, formed by the union of the Wanasquatucket and the Mohausick, opens into the north-western arm of Narragansett Bay: it is navigable for vessels of 900 tons burden up to Providence city. The *Pawtucket* falls into the Providence about three miles below Providence city.

The Blackstone Canal, uniting Providence with Worcester in Massachusetts, is the only canal which in part belongs to this state: about 16 miles of it is in Rhode Island, the chief part, 47 miles, being in Massachusetts. Only one railway, the Providence and Stonington, 50 miles long, is exclusively a Rhode Island line, but portions of lines belonging to other states lie within the boundaries of this state.

Geology, Soil, Climate.—That portion of the state which lies west of Narragansett Bay is occupied almost exclusively by eruptive and metamorphic rocks. The part east of the bay belongs to the Carboniferous system. The state is not rich in minerals. Iron-ore is found in various places, but it is not much worked. Coal is found, but it is an anthracite of secondary quality, and it is likewise little worked. Some copper-ore is said to have been found. Serpentine is abundant. Limestone is obtained in great quantities in the north-eastern part of the state; also marble of good quality. Freestone is extensively quarried.

The soil is generally thin. On the mainland it is mostly a gravelly loam, which with careful culture is tolerably fertile: on the islands it is slaty, but productive. The climate is temperate but changeable. On the whole it is said very much to resemble that of England, and it is generally very healthy. In places, as at Newport, which is a favourite resort of invalids, it is milder in the winter and cooler in the summer than in any other part of New England.

Productions, Manufactures, Commerce.—Grain is grown in consider-

able quantities, but the soil is for the most part better fitted for pasturage than for the plough. The cereals chiefly cultivated are maize and oats; a good deal of rye and barley is also grown; wheat and buckwheat are little cultivated. Potatoes and other vegetables are grown very largely, and of excellent quality. A considerable quantity of fruit is also grown. In the low districts extensive pine lands occur, and there are large quantities of oak, chestnut, and walnut trees, but there are no extensive forests.

Cattle and sheep are raised in great numbers on the islands and on the coasts of Narragansett Bay. Horses are numerous, and there are a great many swine. Butter and cheese are largely made; and a good deal of wool is sent to market. The rivers, Narragansett Bay, and the coasts supply plenty of fish.

The manufactures of the state are extensive. Providence is the centre of both the manufacturing and commercial industry. The cotton is the principal manufacture. In 1850 there were in the state 158 cotton factories employing 4959 males and 5916 females. The woollen manufacture employed 1758 persons; the iron about 1100 persons. There are also numerous tanneries, breweries, distilleries, paper-mills and flour-mills, manufactories of machinery, hardware, cutlery, saddlery, hats, glass, jewellery, &c.

The direct foreign commerce of Rhode Island is now very small, little more, in fact, than one-tenth of what it was fifty years back:—in 1805 the exports of the state amounted to 2,572,049 dollars, while in 1853 they were only 810,485 dollars. The imports in 1853 amounted to 366,116 dollars, of which goods to the value of 261,719 dollars were carried in American vessels. The foreign trade of Rhode Island is now chiefly carried on through the ports of Massachusetts and New York. Providence has the greatest number of vessels entering and clearing at Rhode Island ports, and Bristol and Newport together about equal Providence. The total amount of shipping owned in the state in 1850 was 40,489 tons, a large proportion of which was engaged in the cod, mackerel, and whale fisheries, and in the coasting trade. In 1853 there were 11 vessels, of the aggregate burden of 3170 tons, built in the state, of which 6 were ships and 5 schooners.

Divisions, Towns, &c.—Rhode Island is divided into five counties, the respective capitals of which, Providence, Newport, Bristol, East Greenwich, and South Kingston, are also the political capitals of the state; the meetings of the general assembly being held at each periodically. Of these, with some of the other more important towns, we give a brief notice: the population is that of 1850:—

Providence, a city, the principal capital, and considerably the largest town in the state, is situated at the head of the navigation of Providence River, 35 miles from the sea, and 394 miles N.E. from Washington; in 41° 49' N. lat., 71° 24' W. long.: population 41,513. The town is built on both sides of the river, and the two parts are connected by bridges. The harbour is safe and convenient, but somewhat difficult of approach. Vessels of 900 tons burden can lie alongside the wharfs. Most of the houses are of wood, but many are of granite and brick, and in the more modern parts of the city many of the houses are both costly and handsome. The chief public buildings are—the state house, of brick; the state prison; the arcade, which is a magnificent doric building 226 feet long, 80 feet deep, and 72 feet high, the body of stone, and the two fronts and the columns of granite; the two halls of Brown university, of brick; the athenaeum; the museum; What-Cheer building; the Dexter asylum, for the poor of Providence; Butler hospital for the insane; the Friends' boarding-school; the first Congregational, St. John's, St. Peter's, Grace, and some other of the churches are handsome buildings. Brown University, originally founded at Warren in 1764, but removed to Providence in 1770, is chiefly under the direction of the Baptists. It has 11 instructors, 252 students, and a library of 32,000 volumes. There are several public schools, and three or four libraries belonging to literary institutions. Providence is a place of great manufacturing industry. There are large cotton- and woollen-factories, worked both by steam and by water-power; extensive bleaching establishments, dye-houses, iron-foundries, machine-shops, brass-foundries, establishments for working in tin, sheet-iron, copper, brass, &c.; marble-works, grist- and saw-mills, glass-houses, carriage manufactories, numerous jewellers' and goldsmiths' shops; besides boot, hat, soap, and several smaller manufactories. But the commercial is greater than the manufacturing importance of the place. The foreign trade, like that of the state generally, has declined, but the coasting trade is extensive; and the whale, cod, and mackerel fisheries afford considerable employment. The transit and retail trades are also very extensive. The city possesses great railway facilities, and constant communication by steam-vessels is maintained with Boston and New York. There are 26 banks in the city. Providence was founded by Roger Williams in 1637.

Newport, the town next in importance to Providence, is situated at the south end of the island of Rhode Island, in 41° 29' N. lat., 71° 18' W. long., 30 miles S. from Providence: population 9563. The situation is very beautiful; the town is built in the form of an irregular semicircle around the harbour, which is one of the finest in the United States. It contains a state-house, custom-house, market-house, 12 churches, several schools, an athenaeum, and other public buildings. There are large cotton and woollen factories. The commerce of the place is less than formerly. Many of the inhabitants are engaged in the coasting trade and the whale and cod fisheries. The harbour,

which can accommodate vessels of the largest size, is defended by two strong forts. The beauty of the situation and the salubrity of the climate have rendered Newport a fashionable bathing-place, and extensive hotels, &c., afford ample accommodation for visitors.

Bristol, on the east side of Narragansett Bay, 20 miles S. by E. from Providence, population 4616, contains a state-house, churches, schools, &c.; has a good harbour, and is much engaged in the coasting trade and fisheries.

East Greenwich, on the western branch of Narragansett Bay, 15 miles S. by W. from Providence, population 2358, has some cotton and woollen-factories, and many of the inhabitants are engaged in the coasting trade and fisheries.

South Kingston, on the west side of Narragansett Bay, 38 miles S. by W. from Providence, population 3807, who are chiefly engaged in the woollen manufacture, in the coasting trade or in the fisheries.

Burrillville, on a branch of the Blackstone river, 20 miles W.N.W. from Providence, population 3538, has extensive water-power, which is applied to the working of several large factories. *Coventry*, on a branch of the Pawtuxet, 14 miles S.W. from Providence, population 3620, is another busy manufacturing town. *Pawtucket*, on both sides of the Pawtucket River, 4 miles N. from Providence, population about 7000, is next to Providence the chief seat of the cotton manufacture of the state. The village contains 12 cotton-factories and 8 banks; also 7 churches. *Scituate*, on the Pawtuxet River, 12 miles W.S.W. from Providence, population 4582, has several cotton-mills; in the neighbourhood are extensive freestone quarries. *Tiverton*, on the east side of Narragansett Bay, 20 miles S.E. from Providence, population 4699, has numerous factories chiefly of cotton goods, and a considerable coasting trade.

Government, History, &c.—The constitution of 1663, under which Rhode Island was governed for nearly two centuries, was in 1844 superseded by a new one. By this the right of voting is vested in every male citizen of the United States (not being a Narragansett Indian) who has resided for 12 months in the state, and for 6 months in the town or city for which he claims to vote, he owning real estate in such town or city worth 184 dollars above all incumbrances, or a clear yearly value of 7 dollars; and every such elector is capable of holding any office for which he is qualified to vote. The legislative body, styled the General Assembly, consists of a Senate of one member for each of the 31 towns [townships] or cities; and a House of Representatives of 72 members. The senators and representatives, as well as the governor of the state, are elected annually. The state has no (admitted) public debt. The total revenue of the state for the year ending April 30, 1854, exclusive of the balance from the previous year, was 136,150 dollars; the total expenditure for the same period was 116,348 dollars. The state militia is composed of 15,969 men, of whom 111 were commissioned officers. For educational purposes the state has a permanent school fund, the interest of which, with that of the deposit fund, and the proceeds of the militia commutation tax in each town, are applied to the support of public schools. The number of school districts is 379; the number of scholars in 1853 was 25,905, of whom 14,086 were males and 11,819 females. The only college in the state is that at Providence, already noticed. A state normal school was established by the legislature in 1854.

The first white settler on Rhode Island was the celebrated Roger Williams, who, in consequence of the severity of the laws against the non-conformists, fled from England to North America, where he arrived on the 5th of February 1631. Williams soon began to preach at Boston, and afterwards at Salem (where he became pastor of a church), in favour of unlimited religious toleration, extended not merely to every sect of Christians, but to Jews, Mohammedans, heathens, and infidels. This extent of toleration was not approved of by the New England churches, and Williams, after some years of controversy and persecution, during which he was more than once obliged to withdraw for awhile from Salem, was eventually banished from the colony. Having refused to submit to the orders of the general court, and there being evident danger of the infection of his opinions spreading very widely, it was resolved to send him to England in a ship then ready to sail. A pinnace was sent to bring him to Boston to embark, but he had fled. It was the depth of winter (January, 1636). "For fourteen weeks he was sorely tossed in a bitter season, not knowing what bread or bed did mean." He wandered towards Narragansett Bay, and was welcomed by the Indians, whose language he had learned. In June 1636, with five companions, he founded his little settlement at the mouth of the Seekonk River. He named the place Providence, as an acknowledgment "of God's merciful providence to me in my distress. I desired," he said, "it might be for a shelter for persons distressed for conscience." On the 24th of March, 1638, the chiefs of the Narragansetts, to whom the territory belonged, made over to him a large domain. This was the foundation of the state of Rhode Island, which was then called Providence Plantations.

A sect of violent Antinomian Calvinists had sprung up in Massachusetts, who became offensive to the government, and its leaders were sentenced to banishment: they were welcomed by Roger Williams, and through his influence and that of Sir Henry Vane, who was then residing in Massachusetts, they obtained from the Narragansetts the island of Rhode Island; and the colony of Rhode Island was thus founded.

The people of Providence Plantations and Rhode Island, excluded from the Colonial Union, had no chance of maintaining a separate existence without the powerful protection of the mother country; and in 1643 Roger Williams was chosen to conduct a mission to England for the purpose of obtaining a charter. The affairs of the American colonies were at this time under the control of the Earl of Warwick as governor-in-chief, assisted by a council of five peers and twelve commoners. Sir Henry Vane was one of these commoners; and chiefly through his influence a charter was granted, dated March 14, 1644, by which the two colonies were incorporated under the title of *Rhode Island and Providence Plantations*. A new charter was granted by the ministers of Charles II. in 1663, which continued to be the constitution of Rhode Island till 1844.

The colony of Rhode Island took part with the other colonies of North America in the resistance to the attempts of the English government to impose the Stamp Act of 1765, and the subsequent measures which led to the declaration of independence. But to the federal constitution she offered a strenuous resistance: Rhode Island was in fact the last of the original colonies to give in her adherence to that measure, having delayed her signature to it till May 1790.

The only subsequent event in the general history of the state was the effort made by a section of the citizens in 1840 to subvert by force the constitution of 1663, in order to adopt one of a more democratic form. In 1841 the suffrage party, as it called itself, rose in arms under one Thomas N. Dorr, whom they had elected as governor and general. A regular 'suffrage government' was organised at Providence, while the constitutional or legal government was carried on at Newport. A convention called by the general assembly framed a new constitution, which was accepted by a majority of the people; but in consequence of the disturbed state of the country it could not be organised. In 1842 Dorr failed in an attempt to seize the state arsenal, and subsequently his forces were defeated at Chepachet and himself captured. The general assembly now appointed another convention for the framing of a constitution which should be acceptable to all parties, and after some little delay the suffrage party gave in their acquiescence. A new constitution was accordingly drawn up and adopted, and peace was restored. Dorr remained in prison for some years, but was eventually released.

(Bancroft, *History of the United States; Statistical Gazetteer of the United States; Lippincott, New and Complete Gazetteer; Seventh Census of the United States; Marcou, Geological Map of the United States; American Almanac, 1855.*)

RHODES, an island off the coast of Caria in Asia Minor, opposite to Cape Volpe, between the gulfs of Syme and Macri. The harbour of the city of Rhodes is in 36° 28' N. lat., 28° 12' E. long.

Rhodes was inhabited in very early times, and had acquired considerable eminence several centuries before the Christian era. Previous to the first Olympiad B.C. 776, the Rhodians had already manifested a disposition for maritime and commercial enterprise, which subsequently more fully developed itself. They founded the colonies of Rhodé in Ibesia, Gela in Sicily [GELA], Parthenope among the Osci in Italy; and nearer home, Corydalla and Phaselis in Lycia, and Soli in Cilicia. About B.C. 660, the ancient kingly form of government which prevailed in the island, as in other Dorian states, was abolished, and magistrates, called Prytanes, probably substituted. In B.C. 408, the city of Rhodes was founded, by collecting into one spot the inhabitants of Lindus, Ialysus, and Camirus; and from this time the history of the city is identical with the history of the island. In B.C. 357 Rhodes reverted for a short time to the dominion of Athens, against which state it soon after formed a league with Cos, Chios, and Byzantium. It submitted, like the rest of Greece, to Alexander; but having taken a very decided stand, and courageously struggled through the conflicts which took place after Alexander's death, Rhodes became the mistress of the Mediterranean.

The celebrated Colossus of Rhodes was made about B.C. 300. It was begun by Chares, a pupil of Lysippus, and completed by Laches. It was formed of brass; the height is said to have been 70 cubits; the thumb was so large that few men could span it; 12 years were employed in making it. The notion that its legs rested one on each side of the harbour at Rhodes does not seem to be supported by any good authority, and modern travellers do not agree as to its site. After it had stood for 56 years, it was thrown down by an earthquake, by which the buildings of the city suffered very much. Such was the commercial importance of Rhodes, that on this occasion the great princes of the day vied with each other in the munificence of their presents to repair its losses, and came forward with ready zeal to serve a city whose fleets protected the seas against pirates and extended mercantile communication. The Rhodians (B.C. 219), assisted by Prusias, king of Bithynia, compelled the Byzantines to remit the duty which they had been in the habit of exacting from corn ships that passed through the Bosphorus, and shortly afterwards they protected Sinope against Mithridates IV., king of Pontus.

Rhodes joined Attalus, king of Pergamus, in his war against Philip III., king of Macedon. The Romans entered into an alliance with the two powers against Philip. After the defeat of Philip at Cynosephale, B.C. 197, the Rhodians joined Rome in a war with Antiochus, in which their navy was of great service. In gratitude to their new allies, the Romans gave them portions of Caria and Lycia.

From this time the prosperity of the city began to decline. Her recently-acquired continental possessions resisted her sway, and in their struggles appealing from time to time to the Roman senate, gave that body an opportunity of practising their usual policy of interference. In the Mithridatic war the Rhodians gave important aid to the Romans by sea, and were in consequence attacked by the king of Pontus with a great armament, which they defeated. In requital for their fidelity, Sulla at the close of the war confirmed their liberty. Vespasian incorporated this island in a *Provincia Insularum*, of which it was probably the seat of government. Here the ancient history of Rhodes ceases.

The code of laws enacted by the Rhodians in regard to their navy, and adopted afterwards by other maritime states (Dig., 14, tit. 2, 'De Lege Rhodia'), the powers vested in the several branches of their executive administration, their sumptuary statutes, and regulations to protect their poor, all claim especial attention from the student of ancient history. In their most flourishing age, their city, like Alexandria at the same period, was the place of resort of learned men from all countries, and a very similar style of literature sprung up in both places. The spirit of research and critical inquiry was awakened, and great progress was made in mathematics and other sciences.

Besides the celebrated Colossus, 3000 other statues adorned the city, and of these 100, according to Pliny, were on such a scale that the presence of any one of them would have been sufficient to ennoble any other spot. The architecture of Rhodes was of a stately and imposing character; the ground on which it stood sloped gradually to the sea, like the interior of an ancient theatre. The plan designed by the same architect who built the Piræus at Athens, was perfectly symmetrical, as much, Aristides remarks in his 'Rhodian Oration,' as if it had been one house. The streets were wide and of unbroken length, and the fortifications, strengthened at intervals with lofty towers, did not appear, as in other cities, detached from the buildings which they inclosed, but by their boldness and decision of outline heightened the unity and connection of the groups of architecture within. The temples were full of the finest paintings, the works of Protogenes, Zeuxis, and other artists of the school of Rhodes. The celebrated picture of Ialysus, by Protogenes, which was afterwards brought to Rome, was the object of universal admiration. The coins of Rhodes are numerous and of good workmanship.

In the reign of Heraclius (A.D. 616), Rhodes is mentioned among the conquests of Chosroes, king of Persia, but it reverted to the dominion of the Greek emperors shortly afterwards. In the kalifate of Othman, 651, it was taken by Moawiyah, one of his generals, and the fragments of the Colossus, which had been lying on the ground ever since its fall, were collected by the Saracens, and sold to a Jewish merchant of Edessa. It afterwards came again under the sway of the Greek emperors. In the year 1310 Fulke de Villaret, grand-master of the Knights of St. John, made himself master of the island, which became from that time the place of residence of the order, till their final expulsion in the 16th century. Five years after their settlement they sustained a formidable siege from Othman, the Turkish sultan, and, notwithstanding the unprepared state of their fortifications, succeeded in repulsing him, and a few years afterwards his son Orkan. From this period they continued to resist the constantly increasing power of the Turks, for about 200 years, adding to the advantages of a position naturally very strong the most skilfully designed fortifications that could be devised in the 14th and 15th centuries, and making the numerical superiority of the infidels of little avail, by their better organisation in the field, more efficient weapons and armour, and incredible valour. In 1344, in the grand-mastership of Heloon de Villeneuve, they attacked and took Smyrna, which they maintained as an outpost. About 50 years later the order engaged in a league to check the increasing power of Bajazet, and sustained a severe loss at the fatal battle of Nicopolis. In 1401 Tamerlane deprived them of Smyrna. In 1480 Mahomet II. laid siege to Rhodes, and, notwithstanding the immense force of artillery employed against it, could not take the place. The last and most memorable siege of Rhodes was June, 1522, by the Turks, conducted by their sultan Solymán II. The princes of Christendom, thinking probably that it was hopeless to attempt the defence of so distant an outpost, abandoned Rhodes to its fate, and its gallant inhabitants held out till they were nearly buried in the ruins of their fortifications. Their grand-master, Villiers de Lisle Adam, entered into a capitulation in December the same year, and evacuated Rhodes on honourable terms, retiring with his knights to the island of Malta. The island of Rhodes has ever since remained a province of the Turkish empire.

The greatest length of Rhodes, from north to south, is about 36 miles, and its breadth 18 miles. The air is mild and healthy, and fragrant from the number of orange and citron groves and of aromatic herbs. The soil is fertile, producing grapes, figs, and corn. The population has been variously estimated at from 20,000 to 40,000. The inhabitants are governed by a bey, who holds his office for life. The bey farms the revenues and pays an annual sum of half a million of piastres every year to the Porte, besides fitting out a frigate every two or three years. Ship-building is the chief employment of the Rhodians.

Homér mentions three cities of Rhodes—Lindus, Camirus, and Ialysus. These were the three most ancient Doric cities in the

island which flourished long before the foundation of Rhodes. Previous to this event which took place in B.C. 408, *Lindus*, like the other cities, was a small independent state; a great part of its population was removed to the new city, and the town lost its political but not its religious importance. It continued famous for its two ancient sanctuaries, one of Athena, said to have been built by Danaus or his daughters on their flight from Egypt; the other of Hercules, the worship in which was conducted in vituperative language. *Lindus* contained several of the paintings of Parrhasius. It was the birth-place of Cleobulus, one of the seven sages of Greece, whose song of the swallow (which the Lindian boys used to sing in spring), has been preserved by Athenæus. The site is still marked by a town called *Lindos*, a neat little place on the east side of the island. The remains at *Lindos* include many beautiful decorated tombs, a theatre at the foot of the acropolis, and ruins of two Greek temples, one of which is supposed to have been the sanctuary of Athena, above mentioned. Hamilton however ('Asia Minor,' vol. ii. p. 55), says that the building taken for a temple of Minerva was a tomb with a Doric façade excavated in the rock. The harbour of *Lindos* is frequented by small craft; the vicinity of the town produces wine and figs, but little else.

Camirus was also a coast town, and situated on white cliffs, which consist of white scagliola limestone. Hamilton thinks that the site is marked by ancient Hellenic and Cyclopean walls at a place still called *Camiro*, between Rhodes and *Lindos*. There are some more modern ruins on the spot erected by the knights of Rhodes, probably from the materials of ancient structures. No other ancient remains of *Camirus* have been discovered.

Ialysus was situated less than a mile S.W. of the city of Rhodes. It was a mere village in the time of Strabo; the city having decayed in consequence of the rise of Rhodes. The site is now marked by the village of *Ialiso*, about which a few ancient remains exist.

Of the town of Rhodes on the east side and at the northern extremity of the island, there are no remains earlier than the time of the knights, but all their works are interesting specimens of the military architecture of the middle ages. On entering Rhodes from the sea, two harbours, separated by a narrow quay, present themselves; the larger, to the north, is called *Mandraici*, and the smaller is named the *Port*; the narrow quay which separates them forms a curve, having on its extremity next the sea a round tower, and farther inland a square one of great strength and crowned with turrets of observation at the four corners. Attached to it is a curtain, which connects it with the fortification of the town within. From the other side of the smaller port a narrow quay juts out, on which is another round tower. The Turks have suffered the entrance to *Mandraici* to be so much obstructed as to impede the navigation. The buildings of the town exhibit a curious mixture of the European and Saracenic styles.

RHODEZ, properly **RODEZ**, a city of France, capital of the department of Aveyron, 312 miles S. from Paris, is situated in 44° 21' 5" N. lat., 2° 34' 48" E. long., at an elevation of 2073 feet above the level of the sea, and had 8267 inhabitants in the commune at the census of 1851. The town stands on a considerable eminence on the northern bank of the Aveyron, and nearly 500 feet above the bed of the river. It is surrounded by ancient walls, which have been converted into a terraced walk or garden. The streets, from the rapid slope of the hill on which the town is built, are steep; they are also narrow, and lined with ill-built wooden houses with projecting upper stories, which are however being gradually displaced by others of better architecture. There are four 'places,' or squares, two of them of tolerably regular form. The cathedral is built in the gothic style, and dates from the earlier part of the 15th century. The size of the nave, the boldness of the vaulted roof, the beauty of the stained-glass windows, and the height of the bell-tower (to which some writers assign an elevation of above 265 English feet) render it a striking edifice. The office of the prefect is a modern building; the other chief public buildings are the Jesuits' college and the seminary for the priesthood. The inhabitants manufacture woollen-yarn, woollen-frieze, serges, and other woollen stuffs, hats, wax and other candles, and playing-cards. There are tan-yards and dye-houses. The trade of the place is in manufactured articles, in the wool grown in the neighbourhood, and in cheese. There are four yearly fairs. Silk-worms are reared, and mules for the Spanish market are bred round the town. *Rodez* gives title to a bishop, whose diocese comprehends the department. It has several government offices, an exchange, a chamber of manufactures, an agricultural society, an hospital, cabinets of natural history and of natural philosophy, a public library of 15,000 volumes, a deaf and dumb school, a theatre, and public baths. *Rodez* occupies the site of the ancient *Segodunum*, chief town of the *Ruteni*, a Celtic tribe, whose name was afterwards given to it.

RHÔNE, one of the principal rivers of France, takes its rise in Switzerland, in a glacier near the Furka Pass, not far from the St.-Gothard and the source of the Rhine. It runs with a rapid course in a south-west direction through the canton of Valais, in which it receives many small tributaries. After its junction with one of these, named the *Drane*, at *Martigny*, it turns sharply to the north-west, and throws its turbid waters into the Lake of Geneva. Emerging from the south-western extremity of the lake is a clear blue stream,

which however is soon defiled by the muddy current of the *Arve*; it flows south-west through a savage rocky gorge of the Jura, marking out the boundary between France and Savoy. In the contracted portion of its course the Rhône, below *Fort-del-Eoluse*, disappears totally for above 100 yards under a ledge of the rocks, and forms the cascade called *Perte-du-Rhône*. [AIN.] At the south-eastern angle of the department of Ain the Rhône, leaving the frontier, enters the territory of France, and flows with a winding course, but in a general western direction, to the city of Lyon, where it is joined by the *Saône*. From Lyon to the Mediterranean it runs nearly due south, its course still rapid, and its bed obstructed with numerous shifting sand-banks and gravelly islands. In France, besides the *Saône*, it receives the *Ain*, the *Ardèche*, and the *Gard* on the right bank; and the *Isère*, the *Drome*, and the *Durance* on the left bank. Below Lyon it passes several considerable towns—*Vienna*, *Valence*, *Avignon*, *Beaucaire*, *Tarascon*, and *Arles*. After its junction with the *Saône* the Rhône is a noble stream: the scenery along its banks is generally beautiful, in parts striking, and grand. The river, which is of great importance in a commercial point of view, is navigated by numerous steamers from Lyon downwards; owing to the rapidity of the stream the up-navigation is rather tedious, and vessels plying on it must keep a constant look-out, on account of the frequent changes in the bed of the river from the shifting of the sands. Steamers ply on the river above Lyon as far as *Seyssel*, but not regularly. By means of the *Saône*, which is navigated by steamers to *Châlon*, and by canals, the navigation of the Rhône is connected with the *Garonne*, the *Seine*, the *Loire*, and the *Rhine*. At *Arles* the Rhône divides into branches, which inclose the deltoid island of *Camargue*. The eastern arm, called the *Grand-Rhône*, enters the Gulf of Lyon below the *Tour-St.-Louis*, where it has commenced the formation of a new delta. The western arm, called the *Petit-Rhône*, has its mouth a little west of the village of *Saintes-Marie*. [BOUCHES-DU-RHÔNE.] These arms are of little use to navigation; vessels making for the Rhône from the Mediterranean reach the main river by the shore-lake of *Berre* and the *Martigues Canal* from the east, and by the *Beaucaire Canal* from the west. The whole length of the Rhône is about 530 miles, 350 of which are in France. It falls 1000 feet between the Lake of Geneva and the sea. On its banks below Lyon are grown some of the finest wines of France. The *Paris-Marseille railway* runs along its left bank from Lyon to *Arles*.

RHÔNE, a department of France, the smallest except the metropolitan department of *Seine*, is bounded N. by *Saône-et-Loire*, E. by that of *Ain*, S.E. by that of *Isère*, and S. and W. by that of *Loire*. Its greatest length from north to south is about 60 miles; its greatest breadth is 28 miles. Its area is 1077.4 square miles. The population in 1841 was 500,831; in 1851 it amounted to 574,745, giving 533,455 inhabitants to a square mile, or 358,871 above the average per square mile for the whole of France. In density of population the department of Rhône ranks second among the departments of France, being surpassed only by the metropolitan department of *Seine*.

The western side of the department is mountainous; the *Lyonnais*, *Beaujolais*, and *Charolais* heights, which form the prolongation northward of the *Cévennes*, extend through it on this side from south to north. From a point in the north of the department near the town of *Beaujeu* these heights send off two offsets, one (the *Mâconnais* heights) to the north-north-east, which are separated from the principal range by the valley of the *Grône*, a feeder of the *Saône*; and another to the south-south-east, which are separated from the principal range by the valley of the *Azergue*, another feeder of the *Saône*. In the south of the department another offset branches off from the main range, from which it is separated by the valley of the *Brevanne*, and extends north-east to the banks of the *Saône*, north of Lyon; its extremity is known as *Mont-d'Or*, a name which is sometimes given to the whole branch. The extremity of another branch, running to the north-east and separated from the main range by the valley of the *Gier*, just extends into the south of the department. Some of the peaks are of considerable height; the mountain of *Tarare* is, on the north side, about 2600 feet, in the centre nearly 3000 feet, and on the south nearly 4500 feet high. The *Mâconnais* heights have in some places an elevation of above 3000 feet. The principal pass over these mountains is that of *Tarare*, where the road from Paris by *Moulines* to Lyon crosses the ridge. Southward of this are the passes through which run the roads from Lyon to *Feurs* and to *St.-Etienne*; northward of it the only pass in the department is that through which runs the road from *Beaujeu* to *Charlieu*. The road from Lyon along the western bank of the Rhône runs in several places through a narrow pass between the lower slopes of the mountains and the river.

The principal mass of the mountains is composed of granitic or other primary rocks. In the valley of the *Gier* are found the lower secondary formations, while the valley of the Rhône is occupied in the north by secondary and in the south by tertiary formations. The mineral wealth of the department comprises copper-ores and coal. The copper-mines are at *St.-Bel* near *Arbresle* on the *Brevanne*, and at *Chesny* on the *Azergue*. Coal-mines are worked. Rock-crystal, porphyry, granite, fine marble of various colours, sandstone, gypsum, potters'- and fullers'-earth, manganese, and excellent freestone, are found. Some particles of gold are brought down by the Rhône.

There are chalybeate waters at Charbonnières near Lyon, and at Neuville-sur-Saône.

The department is included in the basin of the Rhône, only a small part of the western side being in that of the Loire. The Saône touches the eastern boundary of the department about ten miles below Mâcon; this river and the Rhône form the eastern boundary to Condrieu, adjacent to the southern extremity of the department, except just in the neighbourhood of Lyon, where the department extends across so as to comprehend a portion of the eastern bank of both rivers. The affluents of the Saône are—the Grône, of which only the source and the upper part of the course are in this department; the Ardière; and the Azergue. The Azergue receives the united streams of the Brevanne, or Brevanne, and its feeder the Tardine. The feeders of the Rhône are the Izeron, the Garon, and the Gier, of which last only the lower part belongs to the department. Of the feeders of the Loire, the Sornin, the Trambouze, the Loise, and the Coize have their sources in this department. Of these rivers only the Saône and the Rhône are navigable.

The only canal is that of Givors, which extends along the valley of the Gier from Rive-de-Gier to Givors. The total length of water communication in this canal, the Saône, and the Rhône, amounts to about 80 miles. The department is traversed by 6 imperial roads; by the railway from Paris to Marseille, which passes through Mâcon and Lyon; and by the railway from Lyon to St. Etienne, which is extended down the valley of the Loire to Roanne. From Roanne a new line is authorised to be constructed to Lyon through Tarare.

The climate is healthy, but the temperature varies with the elevation of the surface. The surface may be estimated in round numbers at 690,000 acres, of which about 353,000 acres are under the plough. The banks of the Saône are remarkably fertile, and much wheat is grown there. The grain harvest is abundant, but insufficient to supply the wants of the inhabitants. Pulse, colza, madder, millet, saffron, flax, and hemp are also cultivated. The meadows comprehend 90,000 acres; the heaths and open pastures about 30,000. Neither horses nor oxen are numerous; the number of cows is considerable, approaching 50,000. Sheep are numerous; asses are both numerous and good; and on Mont-d'Or a number of goats are fed, from whose milk good cheese is made. The vineyards occupy above 75,000 acres, yielding annually about 17,000,000 gallons of wine. Some of the finest wines in France are produced here, especially the Côte-Rôtie, Romanèche, Sainte-Foy, and Condrieu. The fruits both of northern and southern France are grown, except the orange and the olive; chestnuts abound, and are sent to Paris and sold under the name of Marrons de Lyon. The mountains are for the most part covered with wood; Mont-Pilat in particular is covered with fine firs; the woodlands occupy about 85,000 acres. Pike, eel, barbel, excellent trout and perch, and other fish are taken in the streams; and the shad, the lamprey, and the sturgeon ascend the Rhône. The eel-pouts of the Saône are excellent.

The industrial products of the department are of great variety and importance. No other spot in Europe is so famous for its silk fabrics as Lyon, which is the centre of the manufacture of the finest satins, taffetas, lutestrings, velvets, lace, brocades, silk-hats, shawls, gauze, ribands, hosiery, &c. Other industrial products are—muslins, handkerchiefs, calicoes, cotton-twist, gold-lace, straw-hats, steam-machinery and mill-work, liqueurs, chemical products, &c. &c. There are also numerous dye-houses, paper-mills, type-foundries, glass-works, potteries, breweries, bleach-works, printing-offices, gypsum-mills, and hydraulic saw-mills. The general commerce in raw and manufactured produce, wine, coal, iron, planks, timber, and provisions of all kinds, is very important.

The department is divided into two arrondissements, which, with their subdivisions and population, are as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Lyon	16	128	410,139
2. Villefranche	9	128	164,608
Total	25	256	574,745

1. Of the first arrondissement, and of the whole department, the chief town is Lyon, which forms the subject of a separate article. [LYON.] *Arbresle*, a small place of about 2000 inhabitants on the Brevanne and Tardine, has silk-factories, sico-works, and potteries. *St. Genis-Laval*, 5 miles S. from Lyon, is a handsome little town of about 2500 inhabitants, with a square planted with trees. The townsmen manufacture paper-hangings, paper-stainers' colours, printers' ink, writing ink, buttons, carpets, banners, and paintings for churches. Considerable trade is carried on in wine and cattle. The environs of the town are laid out in gardens and country-houses of the merchants of Lyon. *Givors*, standing at the junction of the Givors Canal with the Rhône, 18 miles by railway from Lyon, is a busy well-built town, with about 8000 inhabitants, situated in a fertile and pleasant district. It has glass-factories and silk dye-works, and a large trade in coal and coke. At *Condrieu*, a town on the right bank of the Rhône, in the south of the department, with a population of about 3500, are manu-

factures of silk and leather; and the inhabitants carry on trade in corn, and the much-esteemed white wines of the neighbourhood. A considerable number are boatmen on the Rhône, and many boats are built here. *Oullins*, a town of about 4000 inhabitants, is situated on the right bank of the Rhône, 4 miles S. from Lyon. In the parish church is a monument to Jacquard, the inventor of the loom that goes by his name.

2. In the second arrondissement the chief town, *Villefranche*, 18 miles by railway N. from Lyon, is situated in 45° 59' 21" N. lat., 4° 48' 19" E. long., 599 feet above the level of the sea, and has 7769 inhabitants in the commune. It was founded near the end of the 11th century by Humbert, Sire de Beaujeu. The town consists of one very wide and handsome street, extending for above a mile along the road from Paris to Lyon, and of some smaller streets branching from it. The houses are well built. The inhabitants manufacture cotton- and linen-yarn, cotton goods, and leather. There is a considerable weekly market for cattle (chiefly for the supply of Lyon), hemp, flax, cotton-yarn, and cotton- and hempen-cloth. Considerable trade is carried on in hides and wine. *Villefranche* has tribunals of first instance and of commerce, a college and hospitals. *Anse*, a small town of about 2000 inhabitants, near the mouth of the Azergue in the Saône, is agreeably situated in one of the richest plains in France, at the foot of a hill covered with vineyards. *Belleville-sur-Saône*, north of Villefranche, has a manufacture of muslins and other cottons, and 2500 inhabitants, who trade in wine. The *Belleville* station is 27 miles N. from Lyon. *Tarare*, a well-built, busy, manufacturing town of about 10,000 inhabitants, situated in a narrow valley at the foot of Mont Tarare, has a commercial chamber and a council of prud'hommes. It is the centre of a manufacture of muslin, embroidery, silks, cotton-prints, merinoes, leather, and earthenware. The neighbouring mountain contains lead-ore, but the mines have been given up; marble is quarried. The town has at times suffered considerably from the swelling of the little river Tardine, on which it stands. *Beaujeu*, the ancient capital of Beaujolais, is a neat town, at the foot of a mountain crowned with the ruins of the old castle of the Sires de Beaujeu. There are cooperages, paper-mills, and tan-yards. A considerable trade is carried on in grain, wines, and iron, and in the cottons and linens manufactured in the district around. It has six yearly fairs. At *Thizy*, a small place of 2000 inhabitants, 20 miles N.W. from Villefranche, linens and cottons are manufactured; and at *Cours*, a large village of 3000 inhabitants, near Thizy, a mixed fabric of cotton and flax is woven. There are twelve fairs at Thizy, which is the mart for the surrounding country.

The department constitutes, with the adjacent department of Loire, the diocese of the archbishop of Lyon-et-Vienne: it is in the jurisdiction of the High Court and within the limits of the University-Academy of Lyon. It belongs to the 8th Military Division, the headquarters of which are at Lyon. It sends four members to the Legislative Chamber of the French empire. The Calvinists have a consistorial church at Lyon and two meeting-houses at Lyon and Tarare. For purposes of higher education there are a lyceum, or college, an academy of sciences, medical and theological schools, a diocesan seminary, and a preparatory ecclesiastical college in Lyon, and a college and normal school in Villefranche.

(*Dictionnaire de la France; Annuaire pour l'An 1853; Annuaire du Commerce; Official Papers.*)

RHUDDLAN. [FLINTSHIRE.]

RHYL. [FLINTSHIRE.]

RHYNDACUS, RIVER. [ANATOLIA.]

RIASAN, or RIASAN (sometimes written *Risan*), is an extensive government town of European Russia, which derives its name from the very ancient town of Riasan, which indeed has long since fallen into ruins, but the name has been transferred to the town of Peralawl. It is situated between 53° and 55° 40' N. lat., 38° 18' and 41° 30' E. long., and is bounded N. by Vladimir, E.S.E. by Tambow, S.W. by Tula, and N.W. by Moskwa. The area is about 16,200 square miles. The population in 1846 was 1,365,900. It is divided into 12 circles. The country is traversed by many small hills and eminences, and the banks of the rivers are high. The surface is diversified with little forests and groups of trees. It is only on the banks of the Don, the Osetr, and the Prona that the elevations are rocky; the other eminences consist of beds of stone, clay, marl, and lime, and are by no means unfruitful. The soil in general is a pretty thick layer of fine black mould. The principal rivers are the Oka, which flows from the government of Moscow, and the Don, which issues from Lake Iwanowskoe, on the frontier, both of which rivers receive smaller streams. In this government, which joins the Bakowa, a tributary of the Prona, is the greater part of the canal which, by uniting the Bakowa with the Lernoï, effects a communication between the Volga and the Don by the Oka and the Woronesh. The intermediate rivers are however only navigable by boats in spring when the water is high. In autumn, winter, and spring the weather is variable, and in summer hot. The climate is healthy.

The soil is on the whole very fertile, especially in the southern part. Rye, wheat, oats, barley, millet, flax, and hemp are cultivated. Corn is raised in sufficient quantities to allow exportation. Horticulture is general; every peasant has his kitchen-garden, where all kinds of Russian culinary vegetables are grown. Most of the peasants grow

hops, which are an article of exportation. Apples and cherries are the fruits chiefly cultivated. The farmers let their pasture-land, which is of considerable extent, to the cattle-dealers of the Ukraine. Few swine are kept, and no domestic poultry except the common barn-door fowl. Bees are very generally kept. Fish abound in the rivers, and great quantities are exported. The minerals are iron-stone, clay, marl, lime, a little freestone, gypsum, vitriol, and sulphur.

The manufactures are few, and chiefly in the towns. The country-people spin thread and worsted yarn, and manufacture coarse linen and woollen cloths, leather, wooden agricultural and domestic implements and utensils, and bast shoes. There are numerous spirit distilleries. Almost all the exports go to Moscow, from which are received in return such commodities as are required, except salt, which is obtained from the banks of the Volga.

The inhabitants are all Russians, except a small number of Mordwines, who live in a few villages; and between 4000 and 5000 Tartars, who live partly in the town of Kasimow, and partly in some villages. The archbishop of Riassan and Saraisk is at the head of the Greek clergy. The Mohammedan Tartars have their imams, mosques, and teachers.

Riassan, the capital of the government (formerly called *Pereslaw Riassanski*), in 54° 58' N. lat., 39° 20' E. long., is situated on the river Trubesch (a branch of the Oka) at its junction with the Lebeda. It is a well-built town with a fortress. It is the residence of the military governor of Riassan and Tambow, of the civil governor and the government authorities, the see of the archbishop, and has a seminary for priests, a gymnasium, the cathedral, and about 20 other churches, a public library, college, a school of drawing and architecture, an hospital, and manufactories of woollen cloth, linen, sailcloth, leather, glass, iron-ware, and needles. The houses and streets are spacious, and present a cheerful appearance, particularly in the centre of the town where is a public garden. The population is upwards of 10,000.

Saraisk on the Osetr has 5000 inhabitants, a citadel, several churches, and a great trade in cattle. There are numerous wide and straight streets, but the public buildings are in a dilapidated condition, and the town appears almost deserted. *Kasimow*, on the Oka and the Babenka, has about 7000 inhabitants, of whom 500 are Mohammedan Tartars, who carry on a great trade in furs. It was a place of considerable importance under the Tartar rule, but is now of little consequence. It contains an ancient mosque, near which is the tomb of Shah Ali.

RIBADESELLA, or RIVA-DE-SELLA. [ASTURIAS.]

RIBCHESTER. [LANCASHIRE.]

RIBE. [JUTLAND.]

RIBEAUVILLE. [RHIN, HAUT.]

RIBEIRA, GRANDE. [AZORES, St. Michael; CAPE VERD, Santiago.]

RIBEMONT. [AISNE.]

RIBÉRAC. [DORDOGNE.]

RIBIERS. [ALPES, HAUTES.]

RICCARTON. [AYRSHIRE.]

RICHBOROUGH. [KENT.]

RICHELIEU. [INDRE-ET-LOIRE.]

RICHMOND, Surrey, a town, and the seat of a Poor-Law Union, in the parish of Richmond, is situated on the right bank of the river Thames, in 51° 27' N. lat., 0° 18' W. long., distant 21 miles N.E. from Guildford, 12 miles W.S.W. from London by road, and 10 miles by the Windsor branch of the London and South-Western railway. The population of the village of Richmond in 1851 was 9065. The living is a vicarage in the archdeaconry of Surrey and diocese of Winchester. Richmond Poor-Law Union contains five parishes, with an area of 4339 acres, and a population in 1851 of 15,900.

The original name of the village was *Schens* or *Scheen*, afterwards altered to *Sheen*. Henry I. had a palace here. Chaucer the poet was clerk or surveyor of the works to the palace of Sheen in the reign of Richard II. In 1499, while Henry VII. was residing in it, the palace was destroyed by an accidental fire. Henry caused it to be rebuilt, and called it Richmond, from his own earldom. Henry died in his new palace in 1509. It was in Richmond palace that Elizabeth died in 1603. The palace was in part demolished by order of the parliament during the period of the commonwealth. The remainder was pulled down in the next century with the exception of some of the offices, which are still standing. The site is now occupied by private houses. The park, which was attached to the palace, is now known as the Old Park: it lies on the north-west and north sides of the village; and extends along the Thames to Kew Gardens, with which it was united by George III. The park now known as Richmond Park is to the south-east of the village. It was inclosed by Charles I., in whose time it was called 'the New Park:' it is about eight miles round, inclosed by a brick wall, and comprehends 2253 acres. The scenery of Richmond park is eminently picturesque. A Carthusian priory, which was established here at an early period, was restored after the general suppression by Queen Mary I., but existed at Richmond only a year.

Richmond is delightfully situated on the side and summit of an eminence on the banks of the Thames, over which there is a handsome stone bridge of five arches, erected in 1777 at a cost of 26,000*l.* Along the brow of the hill is a terrace, commanding a prospect of exceeding richness and beauty; and along the banks of the river are some delightful villas and grounds. Richmond is a favourite place of

resort in summer for the inhabitants of London, with which there is at that season communication several times a day by steam-boats. The town is well paved, and is lighted with gas. The parish church is a plain brick building of modern erection, except the tower, which is of flint and stone, and of perpendicular character. In the church or churchyard are monuments to the poet Thomson, Kean the tragedian, Gilbert Wakefield, Dr. John Moore, and other persons of celebrity. St. John's district church was erected in 1831. There are chapels for Independents, Baptists, Wesleyan Methodists, and Roman Catholics; a Commercial school; several National schools; an Industrial school for girls; two Infant schools; and a Roman Catholic school. On Richmond Hill is the Wesleyan Methodist Theological Institution for the education of young men for the ministry. The building is a very handsome one, 248 feet long by 65 feet deep, with projecting wings; it is in the Tudor collegiate style. There are a literary and scientific institution, a young men's mutual instruction society, a dispensary, and a savings bank. There are market-gardens and nursery-grounds in the vicinity.

RICHMOND, North Riding of Yorkshire, the capital of the extensive baronial liberty of Richmondshire, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parish of Richmond, is situated in 54° 25' N. lat., 1° 44' W. long., distant 44 miles N.W. from York, 233 miles N.N.W. from London by road, and 240 miles by the Great Northern and York and Newcastle railways. The population of the parliamentary borough of Richmond in 1851 was 4969; that of the municipal borough 4106. It is governed by 4 aldermen and 12 councillors, of whom one is mayor; and returns 2 members to the Imperial Parliament. The living is a rectory in the archdeaconry of Richmond and diocese of Ripon. Richmond Poor-Law Union contains 41 parishes and townships, with an area of 78,589 acres, and a population in 1851 of 13,846.

Alan Rufus, son of Hoel, count of Bretagne, a kinsman of William the Conqueror, who accompanied him in his expedition to England, obtained from William the title of Earl of Richmond, and the estates of the Saxon Earl Edwin, embracing nearly 200 manors and townships, and a jurisdiction over all Richmondshire, about a third of the North Riding. These possessions fell to the crown on Henry, earl of Richmond, becoming king of England by the title of Henry VII. Charles II. bestowed the title of Duke of Richmond on his son Charles Lennox, in whose descendants the dignity continues. The castle is situated on an almost perpendicular rock on the left bank of the Swale, about 100 feet above the bed of the river. The walks around the castle present a succession of varied and romantic scenery. Of the castle, the bold Norman keep is still almost entire; the walls are nearly 100 feet high and 11 feet thick. A small monastery, called the Gray Friary, was founded at Richmond in 1258; of the building only a steeple remains.

Richmond is said to have been a place of good trade for three centuries after the Conquest, but it subsequently declined. The town is lighted with gas, and is well supplied with water. The town-hall is a convenient building; in it the quarter-sessions are held both for the town and the North Riding. It contains a spacious assembly-room. The railway station and bridge over the Swale are handsome structures. The parish church is a gothic building, with portions of Norman character, and consists of a nave, chancel, and aisles, with a tower at the west end. Holy Trinity chapel stands in the market-place. The Wesleyan Methodists, Independents, and Roman Catholics have places of worship. Richmond Free Grammar school was incorporated by Queen Elizabeth. A new school-house has been erected by public subscription in memory of the Rev. Canon Tate, the late head-master. The school has an income from endowment of 270*l.* a year, with six scholarships at Oxford, Cambridge, and Durham, and had 60 scholars in 1854. There are also the Corporation school, in which 50 boys are taught; National and Infant schools; a school supported by Roman Catholics; a scientific society, with a library of 4400 volumes; a mechanics institute, with about 700 volumes in its library; a news-room; a savings bank; and various charities. The market is held on Saturday, and fairs are held five times in the year. A cattle-fair is held on the moor. Iron and bras founding, rope-making, and tanning are carried on. There are several corn-mills. The only manufactory is an extensive paper-mill. Many wealthy families reside in the town, and the country for several miles round is studded with the parks and mansions of landed proprietors. Races are held in the first week of September on the high moor about a mile from the town.

RICHMOND. [CANADA, WEST; VIRGINIA, U.S.]

RICKMANSWORTH, or **RICKMERSWORTH**, Hertfordshire, a market-town, in the parish of Rickmansworth, is situated on the right bank of the river Chess or Cheham, in 51° 38' N. lat., 0° 27' W. long., distant 23 miles S.W. from Hertford, and 18 miles N.W. from London. The population of the parish in 1851 was 4851. The living is a vicarage in the archdeaconry of St. Albans and diocese of Rochester.

The town is irregularly laid out. The parish church, a spacious and handsome edifice, has been recently rebuilt, except the tower. A fine painted window in this church was formerly in the church of St. John in Rouen. There are chapels for Wesleyan Methodists and Baptists, and National and British schools. Flour-mills and mills for the cotton, silk, and paper manufactures are in the neighbourhood.

There is an extensive brewery. Straw-plaiting and horse-hair weaving are carried on. The market-day is Saturday. Fairs are held in July, September, and November. The Grand Junction Canal passes close to the town.

RIDEAU LAKE and CANAL. [CANADA.]

RIDGWELL. [ESSEX.]

RIESENGBIRGE. [GERMANY.]

RIEUPEROUX. [AVEYRON.]

RIE'TI, the ancient *Reate*, once one of the principal towns of the Sabini, and now the chief town of a province of the Papal States, stands on the Velino, 42 miles N.N.E. from Rome, about 1000 feet above the sea, in an elevated plain, which is part of the western highlands of the Apennines, a large tract that projects out of the central chain of the Abruzzo. The elevated region in question formed the country of the ancient Sabini. Before the French occupation of Italy it formed the province of Sabina, which is now called Rieti, from its chief town. This tract begins at the ridge east of Antrodoco, which forms the boundary between the table-land of Aquila, 2500 feet above the sea, the waters of which run by the Pescara to the Adriatic, and the basin of the Velino, or of Rieti, the waters of which run into the Tiber. This mountain region belongs partly to the Papal and partly to the Neapolitan territories. Its length is about 70 miles from north to south, and from the sources of the Nera at the foot of Mount Tetricus, above Norcia, to the sources of the Anio, above Subiaco. Its greatest breadth, from the defile east of Antrodoco, on the road from Aquila to Rieti, to the fall of the Velino near Terni, is about 30 miles. The Nera forms the northern boundary of this mass of highlands, and drains the northern part of them by means of the river Corno, which joins the Upper Nera near Cerreto. The Velino and its affluents drain the central and largest part of the region. The Anio drains the southern part as far as the ridge which divides its basin from that of the Sacco. The Anio falls by a cascade at Tivoli into the lowlands of the Campagna, and thence flows into the Tiber. The two waterfalls of the Velino and Anio are the only outlets by which the waters of the highlands of Sabina find their way westward to the Tiber.

A succession of mountain ridges form the western boundary of the highlands of Sabina on the side of the Tiber, extending from the Anio at Tivoli to the Nera above Terni. The southern part of this range near the Anio is known by the ancient name of Lucretilis, now Monte Genaro; and the northern part, which extends to the Nera, by the name of Mount Canterius, which is seen from the valley of the Tiber towering to the eastward above the towns of Magliano, Calvi, Otricoli, and Narni. The eastern boundary of the region of the Sabini is formed by the lofty ridge of the central Apennines, consisting of the groups of Monte Sibilla, 7200 feet; Mount Terminillo, north-east of Rieti, 7000 feet; and Mount Velino, 8180 feet. Between these two ridges lies the basin of the Velino, the lower part of which forms the plain of Rieti. The *Velino* has its source in the central Apennines, about 15 miles north of Antrodoco, at the foot of Mount Cenatra, not far from the sources of the Tronto, which flows on the opposite or eastern slope to the Adriatic. It flows first southward through a narrow and deep glen until it reaches Antrodoco, where it turns to the west, passing by Civita Ducale and Rieti. Before it reaches the latter town it receives the Salto, or Imele, from the south. The Salto rises near Tagliacozzo, not far from the Lake Fucino, and flows north-west through a secluded but interesting valley called Ciolano, belonging to the Neapolitan territory. This valley abounds in remains of cyclopean constructions, which are supposed to belong to the towns of the aborigines mentioned by Dionysius (i. 14) as destroyed long before his time. The district of Ciolano has acquired a certain historical interest on account of the tragical end of the Cenci, a Roman baronial family of the middle ages, the head of which, Francesco Cenci, was murdered in the castle of Petrella, at the instigation of his wife and daughter, who were put to death after a long trial.

The Velino, after its confluence with the Salto, passes through Rieti, dividing the city from the suburb, and then turning to the north-west receives the Turano also from the south. The *Turano*, the ancient *Telonius*, rises in the Neapolitan territory, in the mountains which border the basin of the Fucino to the westward; it runs in a north-west direction nearly parallel to the Salto, passes by Carsoli on the Via Tiburtina, and after flowing along the eastern base of Mount Lucretilis, enters the plain of Rieti, where it joins the Velino after a course of about 40 miles, the greater part of which lies in the Papal States. It was on the banks of the *Telonius* that the consul P. Rutillius and 8000 men were defeated and killed during the Marsian or Social war.

The plain of Rieti is one of the most delightful spots in Italy. It is covered with plantations of mulberry-trees, vines twining round elms and maple-trees, fields of wheat, Indian corn, beans, flax, hemp, wood, and vegetables of every kind. It is traversed by two clear streams, which unite their waters about three miles below the town of Rieti, whose churches, steeples, and other massive buildings make a fine contrast with the brilliant verdure of the surrounding country. Farther down the river, between the right bank and the base of the Apennines, is a succession of marshes and lakes, the largest of which, called *Piè di Luco*, is about 10 miles in circumference; the banks are very bold and picturesque, but are considered unwholesome. The waters of the lake have an outlet into the Velino. Near this place

the two ridges that bound the plain of Rieti approach near each other, leaving only a narrow gorge through which the Velino flows on a rocky bed with a rapid declivity until it reaches the edge of the terrace, where it falls into the valley of the Nera amidst clouds of mist. The whole perpendicular height from the edge of the rock to the level of the Nera below is about 469 feet. The fall however is broken into two parts, the first of which is perpendicular, after which the water forms a succession of cascades or rapids, until it meets the Nera. A pavilion called 'la Specola,' erected by Pius VI. on a projecting shelf of rock which overhangs the precipice, commands a fine view of the fall and of the valley of the Nera. The cascade, called Della Marmora, has been considered as the finest in Europe, the mass of water being superior to all the Alpine cascades, and the height far superior to the fall of the Rhine at Schaffhausen. A rainbow is often seen hovering on the mist produced by the spray.

The name of Marmora has been given to the mountain from which the river falls, on account of the abundant incrustations, resembling marble, produced by the deposit of the waters of the Velino.

The valley of the Velino is said to have been in very remote times occupied by the Umbri, before that people descended from the highlands of the Apennines into the valley of the Upper Tiber, which has ever since retained the name of Umbria. [ETRURIA.] After the migration of the Umbri, another race of mountaineers from the central parts of the Apennines about Amiternum, near the sources of the Aternus or Pescara, became possessed of the valley of the Velinus; they were known by the name of Sabini, and they spread from thence into the country between the Nera, the Anio, and the Tiber, which they occupied almost as far as the gates of Rome. The Sabini were a remarkable people; their manners were simple, and their habits austere; they had a reputation for good faith and domestic virtue. They were religious, and even superstitious, and their country was famed for omens and prodigies.

The plain of Rieti was almost entirely covered with water, when the consul M. Curius Dentatus, B.C. 240, made a cut through the rock, deepening and widening the outlet for the waters of the Velino, and drained thereby the fields of Reate. In modern times the bed of the Velino above the fall has repeatedly become obstructed by calcareous deposits, and the river has again overflowed the plain; to remedy which Pope Paul III. made a new cut, and Clement VIII. afterwards restored the old one made by Curius.

Reate is said to have derived its name from Rhea, or Cybele, the ancient patroness of the place. Like the rest of the Sabini, Reate was an early and constant ally of Rome, and is mentioned by Livy as having, together with Amiternum, furnished soldiers for Scipio's expedition to Africa. Cicero, in various places, extols the fidelity of the Sabini, and particularly of the people of Reate. In modern times the people of Rieti were among the first to pay voluntary allegiance to the see of Rome as their temporary sovereign. Rieti was often an asylum for the popes in the middle ages, when driven away from Rome by faction or foreign invasion. In 1831 the people of Rieti showed their devotedness to the papal see by repulsing the insurgents from Bologna and the Romagna who were advancing towards Rome.

Rieti is built partly on the slope and partly at the foot of a hill; it is a bishop's see; it has a college and a clerical seminary; it has also manufactures of coarse woollens, silks, glass, and leather. The population amounts to about 10,000, among whom are many wealthy landed proprietors. The town-house, or governor's palace, is a massive building in the highest part of the town, and enjoys a splendid view of the surrounding country. The cathedral was built in the 12th century, but has been repeatedly repaired. There are several churches and convents, which, as well as the episcopal palace, are worthy of notice.

The province of Rieti was formerly united to that of Spoleto, the two forming a province called Spoleto-e-Rieti. It contains 513 square miles, with a population of 77,212 in 1850.

RIEZ. [ALPES, BASSES.]

RIGA (in the language of Livonia, *Rīga*; in that of Esthonia, *Riõlin*), the capital of the government of Livonia, is situated in 56° 55' N. lat., 24° 6' E. long., on the right bank of the Düna, about 5 miles above its entrance into the Gulf of Riga. The width of the river and the distance of the town from the sea make the port very spacious and secure, and the merchantmen come up to the quays. In summer a bridge of pontoons, loosely attached to piles, and rising and falling with the tide, is laid across the river; this bridge is a pleasant and fashionable promenade in the summer time. The central boats are moveable, to allow the passage of vessels. The town is surrounded with ramparts and bastions, and is otherwise strongly fortified, the fortifications having been materially strengthened and added to in 1854 and 1855, and defences were erected at the mouth of the river. Besides the town itself there are one suburb within the palisades, and two more distant suburbs on the left bank of the Düna. There are three gates towards the country and four towards the Düna. The streets are narrow and crooked, and the town dark and gloomy. Before the palace is a spacious parade, in which the merchants erected in 1817 a granite column 23 feet high, surmounted by a bronze statue representing the goddess of Victory, 9 feet high, in memory of the repulse of a French force by the citizens of Riga in 1812. Of the Lutheran churches, the most remarkable are the large and lofty

cathedral, attached to which is a quadrangle surrounded with cloisters, and which contains the museum and the public library of 18,000 volumes; and St. Peter's church, which has a fine tower commanding an extensive prospect. There are also several Greek, Calvinist, Livonian, and Roman Catholic churches. The other public buildings are—an imperial palace, with an observatory; the residence of the civil governor; an ancient palace, partly used as the residence of the military governor, and partly serving for barracks; the exchange, erected in 1812; the assembly-house of the estates of Livonia; the arsenal; the hospital of St. George; the Catherinenhof, a bomb-proof warehouse 445 feet in length; and a theatre. There are numerous literary and useful institutions, as the gymnasium, the Economical Society, the Society for the Study of the History and Literature of the Baltic Provinces, the cathedral school, and the commercial bank. The population is about 60,000, of whom about one-half are Protestants, chiefly Germans and their descendants, and the remainder are mostly Livonians.

The town of Riga was founded about the year 1200, by Albert, the third bishop of Livonia, Christianity having been introduced in the middle of the 12th century, by Meinhard, a monk of Bremen, who was ordained by the Pope as first bishop of Livonia. The founder granted it several privileges and a considerable extent of territory. The city, which was at that time a colony of Germans, soon became rich and powerful, and in the 13th century joined the Hanseatic League, and its commerce was the source of such great wealth that the power of the city and the pride and luxury of the inhabitants became proverbial. At the beginning of the 16th century it belonged to the Teutonic knights, who were obliged to submit to Poland in 1561. In 1621 it was besieged and taken by Gustavus Adolphus. In 1710, after a vigorous defence, it was taken by Peter the Great, when half the town was in ruins, many hundreds of the inhabitants had perished by the enemy's fire, and 20,000 had been carried off by the plague during the siege. In the siege of 1812, the suburbs were burnt, and also 200 houses in the town itself, and 1500 inhabitants perished. The suburbs have been rebuilt, and are much handsomer than before. The town has suffered several times by fires and inundations. Riga is next to St. Petersburg the greatest emporium of foreign commerce in the empire. The exports consist of fish and of the great staple articles of Russian produce, corn, timber, flax, hemp, hemp-seed, flax-seed, tallow, Russia leather, and sail-cloth. During 1849 the quantity of flax exported from Riga amounted to 44,700 tons. The number of ships which arrived at the port in 1849 was 1749; the number which left was 1677. Riga has several sugar-refining houses, and considerable manufactures of woollen and cotton fabrics, tobacco, starch, looking-glasses, and iron-ware. The construction of a railway from Riga to Dunaburg has been recently authorised by the government. [LIVONIA.]

RIGNAC. [AVEYRON.]

RIMINI. [FORLÌ.]

RINGWOOD, Hampshire, a market-town, and the seat of a Poor-Law Union, in the parish of Ringwood, is situated on the left bank of the river Avon, in 50° 50' N. lat., 1° 47' W. long., distant 27 miles S.W. from Winchester, 92 miles S.W. by W. from London by road, and 104 miles by the London and South-Western railway. The population of Ringwood parish in 1851 was 3928. The living is a vicarage in the archdeaconry and diocese of Winchester. Ringwood Poor-Law Union contains five parishes and townships, with an area of 16,425 acres, and a population in 1851 of 5465. The town is lighted with gas. The manufacture of thread and woollen gloves employs some of the inhabitants. The chancel and transepts of the parish church appear to have been erected about 1230; the nave and the tower are more recent. There are chapels for Wesleyan Methodists, Independents, and Unitarians, and National schools. There is an excellent corn-market, held every Wednesday. Fairs for horses and cattle are held on July 10th and December 11th.

RINTELN. [HESSE-CASSEL.]

RIO GRANDE DEL NORTE. [BRAZIL.]

RIO JANEIRO. [JANEIRO.]

RIO NEGRO. [NEW GRANADA.]

RIOBAMBA. [ECUADOR.]

RIOJA, LA, one of the provinces of the Argentine Confederation, comprehends the country between the Gran Salina and the Andes, and extends from north to south from 28° to 31° S. lat. It is bounded S. by the provinces of San Juan and San Louis, E. by Cordova, N.E. and N. by Catamarca, and W. by the republic of Chili. The area is about 5850 square miles. The population is variously estimated at from 18,000 to 25,000.

The country is described generally under ARGENTINE CONFEDERATION. It consists of a narrow strip of cultivable land along the eastern base of the Sierra de Velasco, the two valleys of Famatina and Guandacol, and a pastoral tract extending round the southern extremity of the Sierra de Velasco. Only the northern districts of the country east of the Sierra Famatina are fit for agriculture. The province is by its position almost cut off from intercourse with the more civilised parts of the Confederation. The roads leading to La Rioja are mere circuitous paths, hardly passable by mules, and the country is altogether in the most backward condition. The province is divided into four departments—Arauco, Famatina, Guandacol, and the Llaños. Arauco

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lies east of the Sierra de Velasco, and produces wheat, maize, and cotton; but its principal wealth is its vineyards. From 7000 to 10,000 barrels, of 16 gallons each, of a strong sweet wine, and 100 barrels of brandy, are annually made, nearly the whole of which is exported to Cordova and the neighbouring provinces. The capital, La Rioja, is also that of the whole province. Famatina lies to the west of Arauco, between the Sierra de Velasco and the Sierra Famatina. It contains rich orchards in its northern districts, and makes and exports about 6000 barrels of wine annually. This department takes its name from the Sierra Famatina, celebrated for its mineral wealth. The silver-mines of Famatina are very rich, but the remoteness and inclemency of their situation—they being above the line of vegetation, and only accessible by difficult mountain-paths—have hitherto prevented them from being worked except on a small scale. The capital, Chilceto, is a place of no importance. Goitre prevails to a fearful extent in the valley of Famatina. Guandacol lies between the Sierra Famatina and the Andes, and produces very rich crops of wheat. It is thinly inhabited, and chiefly by aborigines, who hunt the vicuña in the adjacent mountains. The wool of the vicuña is the only article of export. Guandacol, the capital, and Vinchina are the only towns. The Llaños consist chiefly of a desert plain, containing a great number of grassy oases, on which there are numerous cattle-farms. About 20,000 head of cattle are annually reared. Like the other provinces of the Argentine Confederation, La Rioja is a federal state, owning a qualified dependence upon the central government. The state government is nominally vested in a governor and a municipal junta of five members.

La Rioja, the capital of the state, is situated at the foot of the Sierra de Velasco, in 29° 12' N. lat., 59° 50' W. long. It contains some substantial houses, a few public buildings, the only school in the province, and about 3000 inhabitants.

RIOM. [PUY-DE-DÔME.]

RIONERO. [BASILICATA.]

RIONI, RIVER. [PHASIS.]

RIPABTANSONE. [FERMO.]

RIPLEY. [DERBYSHIRE; YORKSHIRE.]

RIPOLL. [CATALUÑA.]

RIPON, West Riding of Yorkshire, a market town, municipal and parliamentary borough, and the seat of a bishopric, in the parish of Ripon, is situated on the right bank of the river Ure, in 54° 8' N. lat., 1° 32' W. long., distant 23 miles N.W. from York, 212 miles N.N.W. from London by road, and 215 miles by the Great Northern and Leeds Northern railways. The population of the borough in 1851 was 6080. The borough is governed by 4 aldermen and 12 councillors, of whom one is mayor; and returns two members to the Imperial Parliament. The livings are perpetual curacies in the archdeaconry of Richmond and diocese of Ripon.

When Eata, abbot of Melrose, founded a monastery here in 661, there were only 30 houses in the town. A few years after, Aldfrid, king of Northumbria, gave the monastery to Wilfred, archbishop of York. The town was made a borough in 886 by Alfred the Great. The town suffered reverses in the wars against the Northumbrian Danes, in the devastations of the Normans, and in the invasion of Robert Bruce. Henry IV. fixed his residence here when he was driven from London by the plague.

The collegiate church of Ripon, commonly called the minster, now the cathedral, is dedicated to St. Peter and St. Wilfred; it is parochial as well as collegiate. Many parts of it are very fine, especially the west front, which is a bold and good example of the early English style. The first stone of the present building was laid in 1331, but the choir was probably not finished till 1494. It is considered to be one of the best-proportioned churches in the kingdom. Its length from east to west is 266 feet 5 inches, the transept is 132 feet long, the nave and aisles are 87 feet broad, and the choir and aisles 66 feet 8 inches broad. It has two uniform towers at the west end, each 110 feet high, besides the great tower, called St. Wilfred's tower. The breadth of the west front is 43 feet, or, including the two towers, 102 feet. Under the chapter-house is a crypt, believed to be of Saxon date; it contains an immense collection of human remains in good preservation, piled in regular order round the walls. Trinity church was built and endowed in 1826, at a cost of 13,000*l.*, by its first incumbent, the Rev. Edward Kilvington. It is a cruciform structure, in the early English style. The Wesleyan and Primitive Methodists and Independents have places of worship. The Free Grammar school, founded in 1553 by Philip and Mary, has an income from endowment of nearly 600*l.* a year; the number of scholars in 1854 was 55. There are National and Infant schools, a Blue-Coat school, and a Wesleyan Training school. St. Mary Magdalene's hospital, founded by Archbishop Thurstan in 1144, is divided into six dwellings for poor widows, who receive a small annual stipend. In the hospital of St. Anne eight poor women are similarly maintained. The public rooms, erected in 1834, comprise a dispensary, a mechanics institute, a subscription library, and a news-room.

Ripon was once celebrated for its manufacture of spurs, which were in such high repute, that 'as true steel as Ripon rowels' became a proverbial expression to denote honesty and courage; it was also once noted for its woollen manufactures. Saddle-trees are now largely manufactured in Ripon. Tanning, malting, and iron and brass

founding are carried on. There are several flour-mills and varnish manufactories. There is a manufactory of steam-engines, water-wheels, and engine-boilers. The market-place is a spacious square, surrounded chiefly by shops and good houses; in the centre stands an obelisk 90 feet high, which is surmounted by the arms of Ripon, a bugle-horn and a spur-rowel. On the south side of the market-place is the town-hall, built in 1801. The streets are well paved, and lighted with gas. There is a good supply of water. A county court is held. The market is on Thursday. Six fairs are held annually, chiefly for leather, cattle, and cloth. Near the town the river Ure is crossed by a handsome bridge of 17 arches. The Ure navigation was brought up to the town by means of a short canal in 1787.

The diocese of Ripon was formed in 1838 from the dioceses of York and Chester. It is in the province of York, and extends over a great part of the West Riding, and over the liberty of Richmondshire in the North Riding. It is divided into the archdeaconries of Richmond and Craven. The chapter consists of the dean, the two archdeacons, six canons, a chancellor, and two minor canons. The income of the bishop is fixed at £5000. annually.

RISBOROUGH. [PRINCE'S RISBOROUGH.]

RISBRIDGE, a hundred in the county of Suffolk, which gives name to a Poor-Law Union. Risbridge Union contains 26 parishes, of which five are in the county of Essex, the remaining 21 being almost all in Risbridge hundred, Suffolk. The area of the union is 53,572 acres; the population in 1851 was 18,117.

RISING-SUN. [INDIANA.]

RIVE-DE-GIER. [LOIRE.]

RIVES. [ISÈRE.]

RIVESALTES. [PYRÉNÉES-ORIENTALES.]

RIVOLI, a town in Piedmont, situated about 10 miles W. from Turin. A wide and straight avenue, lined with fine elm-trees, leads from Rivoli to the capital, through a rich plain irrigated by canals. Rivoli has 5000 inhabitants, and a royal palace situated upon a height.

There is another Rivoli which is in the Austrian province of Verona, on the right bank of the Adige, and is celebrated for the victory gained by the French over the Austrians January 17, 1797. General Massena obtained afterwards, under the empire, the title of Duke of Rivoli.

ROANNE. [LOIRE.]

ROBERTSTOWN. [KILDARE.]

ROCHDALE, Lancashire, a market-town, parliamentary borough, and the seat of a Poor-Law Union, in the parish of Rochdale, is situated on both sides of the river Roch, in 53° 38' N. lat., 2° 10' W. long., distant 48 miles S.E. from Lancaster, 198 miles N.W. by N. from London by road, and 200 miles by the North-Western and Lancashire and Yorkshire railways. The population of the borough in 1851 was 29,195. The affairs of the town are managed by Improvement Commissioners. The borough returns one member to the Imperial Parliament. The living is a vicarage in the archdeaconry and diocese of Manchester. Rochdale Poor-Law Union contains six townships, with an area of 40,340 acres, and a population in 1851 of 72,515.

Rochdale is called Reodham in the Domesday Survey. In the time of Edward III. some Flemings introduced the woollen manufacture into the parish; and two centuries afterwards, in the reign of Elizabeth, it was still famous for its woollens. In 1610 there were five fulling-mills established on the Spodden, or Spotland brook, in this parish.

The town has been considerably improved of late years. The houses are chiefly of brick; some of the best are built of freestone quarried in the neighbourhood; they are commonly covered with stone instead of slates. The streets are well paved, and lighted with gas; and the town is supplied with water from four reservoirs. The old stone bridge of three arches over the Roch has been widened and improved; about a quarter of a mile below it is another stone bridge of one arch, and just above it an iron bridge for foot passengers. The parish church, which occupies an elevated site, was built in the 12th century. It is partly of late Norman and partly of the perpendicular style. St. Mary's church, a plain brick building, was built in 1740 as a chapel of ease to the parish church. St. James's church was built in 1814. The Wesleyan and Association Methodists, Baptists, Independents, the Countess of Huntingdon's Connexion, Primitive Methodists, Quakers, Roman Catholics, and Unitarians, have places of worship. The Grammar school, founded in 1565, had 9 scholars in 1854, of whom 1 was free. There are National, British, Infant, and Charity schools, and a school supported by the Society of Odd Fellows. A literary institute connected with the Established Church, an Athenaeum, a people's institute with libraries and reading-rooms attached, a temperance-hall, and a dispensary are in the town. The town-hall, a neat building, is also used as a news-room. There is a commodious jail, called the New Bailey. A county court is held in the town.

The manufactures of Rochdale are in a prosperous condition, and are rapidly increasing in importance: they comprehend woollen goods, as baize, flannels, coatings, and friezes; and strong calicoes and other cotton goods; but the woollen fabrics form the staple. Coal is dug, and slates, flagstones, and freestone are abundantly quarried in the parish. There are several hat-manufactories, cotton-spinning mills, iron and brass foundries, and machine factories. There are two markets: on Monday for manufactured goods, wool, oil, dye-stuffs,

and grain; and on Saturday for provisions. Fairs are held for cattle, horses, and pedlery on May 14th, on Whit-Tuesday, and on November 7th. The Rochdale Canal, which unites the Duke of Bridgewater's Canal at Manchester with the Calder and Ribble navigation near Halifax, passes at a short distance south-east from the town.

ROCHE-BERNARD. [MORBIHAN.]

ROCHEFORT. [CHARENTE-INFÉRIEURE.]

ROCHEFOUCAULT. [CHARENTE.]

ROCHELLE. [CHARENTE-INFÉRIEURE.]

ROCHESTER, Kent, an episcopal city, a municipal and a parliamentary borough, is situated on the right bank of the river Medway, immediately adjacent to the parliamentary borough of CHATHAM, with which it forms one continuous town, in 51° 23' N. lat., 0° 30' E. long., distant 8 miles N. from Maidstone, 29 miles E.S.E. from London by road, and 31 miles by the North Kent branch of the London and South-Eastern railway. The population of the city in 1851 was 14,938. The borough is governed by 6 aldermen and 18 councillors, of whom one is mayor; and returns two members to the Imperial Parliament. The livings are in the archdeaconry and diocese of Rochester.

Rochester probably existed antecedently to the Roman invasion. By the Romans it was called Durobriva. During the independence of the Saxon kingdom of Kent it was of importance both as the seat of a bishopric (established about 604) and as a place of strength, situated at the passage of the Medway. It was destroyed by Ethelred, king of Mercia, in 676, and by the Danes in the time of Ethelwulf, in 839; it was besieged again by the Danes in 885, but relieved by Alfred, who drove the invaders to their ships. At various periods from the 10th to the 18th century Rochester city and its castle, which had been built or repaired by the Conqueror, were the objects of hostile attack and siege. Three times in the 12th century the city was nearly destroyed by fire. In the rising of the commons under Wat Tyler, the castle was assailed. Edward IV. was the last king who paid any attention to the repair of the castle. James II. embarked at Rochester when he fled to France after his abdication, in 1688.

The town consists of several streets irregularly laid out; the principal street leads from the bridge at the west end of the town into Chatham on the east side. On the left bank of the Medway is Strood, which is united with Rochester by the bridge. Rochester, Chatham, and Strood thus form in effect one town: they are commonly spoken of in the locality as 'the three towns.' The streets are lighted with gas and paved, and the houses are of respectable appearance. The environs are extremely pleasant, and in the outskirts of the town are some handsome villas, and rows of neat modern houses, built on the higher ground which rises from the low margin of the river.

The cathedral is situated on the south side of the High-street within the ancient Priory gate. It consists of a nave with side aisles, a choir (the floor of which is raised 10 steps above the floor of the nave), a principal transept, at the junction of the nave and choir, and a smaller transept at the east end of the choir. At the intersection of the principal transept is a central tower, erected in 1825; at the western end of the church there appear to have been originally four low towers, two on each side the doorway and two at the extremities; of these only two now remain, which are different in style. On the north side of the choir, between the two transepts, but nearer to the principal one, is a low square tower, now in ruins, called Gundulph's tower. The dimensions of the building are as follows:—Length of the nave 150 feet; breadth with side aisles 66 feet; length of the choir 156 feet; making the total length of the church 306 feet; length of the principal transept 122 feet; of the smaller transept 90 feet; area of Gundulph's tower, inside, 24 feet square; walls of Gundulph's tower 6 feet thick. Extent of the west front of the cathedral 81 feet. The chapter-house is in ruins; a mean building, erected in the place of it, serves for chapter-house and library. The nave is part of the structure of Bishop Gundulph, who rebuilt the cathedral, near the close of the 11th century, on the site of the previous structure, said to have been founded in 604, when the diocese was constituted. The west front is a good specimen of enriched Norman architecture; but the great west window is an insertion of perpendicular character, as are most of the other windows of the nave. The nave has Norman piers and arches, except in the part nearest the choir, where the arches are early English. The roof of the nave is now flat, but there are indications that it was intended at first to be vaulted. Most of the eastern part of the church is of plain early English architecture. The roof of the choir and of both transepts is vaulted and groined. The pillars of the choir are of Petworth marble. The crypt is very spacious, extending under the buildings of the choir; its character is early English, scarcely differing, in one part, from Norman. There are several chapels, in one of which the bishop holds his consistory court. The interior of the cathedral was about the year 1842 repaired and in many places restored by the dean and chapter at an expense of about 14,000*l.*

There are two parish churches in Rochester, St. Margaret's, which was rebuilt in 1824, and St. Nicholas', erected in 1624. The Wesleyan Methodists, Independents, Quakers, and Jews have places of worship. The Cathedral Grammar school, founded in 1542, has an income of 598*l.* 6*s.* 8*d.* a year. It has four exhibitions at Oxford or Cambridge, and two restricted to University College, Oxford. The number of scholars in 1854 was 62, including 20 free scholars; each of the free

scholars receives 16*l.* 13*s.* 4*d.* a year from the endowment. Sir Joseph Williamson's Free Mathematical school, founded in 1703, is free to the sons of freemen of Rochester. It has an income from endowment of about 600*l.* a year, and had 47 scholars in 1854. There are National and British schools, a dispensary, and a savings bank. Watts' Charity for Poor Travellers provides entertainment and a night's lodging for wayfarers. This charity has an endowment of about 3000*l.* a year, which is applied in part for the benefit of the local poor.

The bridge at Rochester in the time of Henry I. appears to have been of wood, with 10 arches or spaces between the piers, and a total length of about 431 feet. A stone bridge of 11 arches, 560 feet long, with a stone parapet and balustrades, was completed in the reign of Richard II. Near this bridge, but a little lower down the river, is a new bridge, chiefly of iron, constructed by Messrs. Fox and Henderson, from designs by Sir William Cubitt. There are three lofty arches; the centre arch, 50 feet in span, opens at the crown to allow large vessels to pass without lowering masts. The approaches to the bridge rest on a series of brick arches. The castle is on the bank of the Medway, just above the old bridge. The outer walls inclosed a quadrangular area nearly 300 feet square, and are, with their towers, now in ruins. The keep, a massive square building, is yet standing, with a tower at each angle rising 12 feet above the rest of the building; three of these towers are square, that at the south-eastern angle is round. On the north side is another tower, through which was the entrance; it joins the keep, and rises about two-thirds of its height. The walls of the castle are of great thickness, built of Kentish ragstone, and cemented with a grouting or mortar, equal to the stone itself in hardness. The architecture is Norman, except perhaps the round tower at the south-eastern angle.

The other public buildings are, a commodious town-hall, with a market-house beneath, and a small jail adjacent; a clock-house, built by Sir Cloudesley Shovel on the site of a former town-hall; a neat theatre; and the bridge chamber or record-room, opposite the east end of the bridge. There are some remains of the city walls; and part of the fortifications of Chatham are within the city.

Frindsbury, which forms part of the borough of Rochester, consists chiefly of one long street. The church is on an eminence commanding a very fine prospect. The Wesleyan Methodists have a chapel, and there are National schools. Upnor Castle, erected by Queen Elizabeth, on the Medway, is in Frindsbury parish: it consists of an oblong central building, with a round tower at each end, and is surrounded by a moat; it has been occasionally used as a powder magazine.

There are no manufactures in Rochester. The chief source of its prosperity is the trade supplied by the government establishments at Chatham and Strood. Trading vessels come up to the bridge, where they discharge their cargoes, chiefly coals, which are conveyed up the river in small craft. The oyster-fishery is carried on with great activity under the direction of the corporation. Considerable quantities of oysters are sent to London or exported to Holland; shrimps also are sent to London. The number of vessels registered as belonging to the port of Rochester on December 31st, 1853, was, under 50 tons, sailing-vessels, 324, tonnage 10,091; steamers 4, tonnage 154; above 50 tons, sailing-vessels 62, tonnage 7745; and one steam-vessel of 62 tons. During 1853 there entered the port, 2453 vessels of 204,791 tons; and there cleared 974 vessels of 38,137 tons. During the year 41 steam-vessels entered, of 2945 tons. There are two weekly markets, one on Tuesday for corn, and one on Friday for provisions; and there is a monthly cattle-market. Fairs are held on May 30th and December 10th. Quarter sessions and a county court are held in Rochester. The city has returned members to parliament since the reign of Edward I.

The diocese of Rochester includes the city and deanery of Rochester, the county of Essex except 10 parishes, and the whole of Hertfordshire. The number of benefices is 562. The diocese is in the province of Canterbury, and is divided into the archdeaconries of Rochester, Essex, Colchester, and St. Albans. The chapter consists of the dean, the four archdeacons, five canons, a chancellor, and five minor canons. The income of the bishop is fixed at 5000*l.*

ROCHESTER, U. S. [NEW YORK.]

ROCK ISLAND CITY. [ILLINOIS.]

ROCK RIVER. [MISSISSIPPI RIVER.]

ROCKCORRY. [MONAGHAN.]

ROCKFORD. [ILLINOIS.]

ROCKINGHAM. [NORTHAMPTONSHIRE.]

ROCKY MOUNTAINS is a term usually applied to an extensive mountain system in North America, corresponding in a measure to that of the Andes in South America. Believing that this term has too general a signification to be with propriety applied to a particular system, some geographers have proposed to call the North American range the *Chippewyan Mountains*, but this designation has not come into common use. Though farther inland than the Andes, the Rocky Mountains are like them much nearer to the Pacific than to the Atlantic Ocean. It was formerly supposed that these mountains were only a continuation of the Andes, the two mountain regions being connected by a chain which traversed the Mexican Isthmus. But it is now known that two depressions intervene between the Andes and the

Rocky Mountains on the Isthmus of Panama and on that of Nicaragua. [ANDES.]

This mountain system, which is noticed generally under AMERICA, vol. i. col. 284, may be divided into three parts—the Southern, Central, and Northern Rocky Mountains. The Southern extends from 19° to 40° N. lat.; the Central from 40° to 49° N. lat.; and the Northern from 49° to 70° N. lat. The whole length is about 5000 miles.

The *Southern Mountains*, about 22° N. lat., divide into several ranges, which are described under MEXICO. The most easterly ranges belong to TEXAS. That part of the Southern Mountains which extends from 34° to 42° N. lat., has a breadth of from 50 to 100 miles. The mountains rise abruptly from the plains to the east of them, towering into peaks of great height, which are visible at the distance of more than 100 miles east of their base. They consist of ridges, knobs, and peaks variously disposed, among which there are many wide and fertile valleys. The more elevated parts of the mountains are covered with perpetual snow, which gives them a luminous, and at a great distance even a brilliant appearance, whence they have derived the name of the 'Shining Mountains;' and some of the loftiest summits are more than 11,000 feet above the sea-level. This part of the range is described under NEW MEXICO. Here occurs, near 36° N. lat., the most frequented pass over the Southern Rocky Mountains, being that of the great overland route from Missouri to Santa Fé in New Mexico and the country westward. Some distance south of this, near the boundary of Mexico and the United States, is another much-frequented pass, that of the Paso del Norte.

The *Central* portion of the Rocky Mountains, extending from 40° to 49° N. lat., appears to consist in its southern part of two, but farther north of three or four, distinct ranges. These ranges are loftier and more difficult of transit than any other part of the system. The only really practicable pass is that known as the Great South Pass, near 42° N. lat., over which flows the great stream of emigration to Utah and California. The mountains of the central range are however of very unequal elevation; they present rather the appearance of extensive groups than regular ranges, and are here and there overtopped by high peaks, among which some rise more than 13,000 feet above the level of the sea. Fremont's Peak, north of the Great South Pass, is 13,570 feet high. [NORTH-WEST TERRITORY; WASHINGTON TERRITORY.] The higher parts of the ranges consist of granite, and are bleak and bare, being nearly destitute of vegetation, but many of the inferior ridges are scantily clothed with scrub pines, oaks, cedar, and furs. In some places these mountains have traces of volcanic action. On the eastern side of this region originate the numerous rivers by whose confluence the Missouri is formed, besides its first great confluent the Yellow Stone River, which receives the waters of the Big Horn River, and the Nebraska or Platte River. The great velocity with which the Missouri flows through all its course, and the numerous falls on its upper branches, together with the severity of the climate, favour the supposition that the base of this hilly region is at least 5000 feet above the sea-level. On the western side of this part of the Rocky Mountain system originate most of the upper tributaries of the Oregon or Columbia River.

The *Northern* section of the Rocky Mountains extends from 49° N. lat. to the Arctic Ocean west of the mouth of the river Mackenzie, a distance of about 2000 miles, and is described generally under AMERICA and HUDSON'S BAY TERRITORIES. The direction of the Rocky Mountains here is nearly due north-west. The southern portion, between 49° and 55° N. lat., seems to be the highest part of the whole range. Most of the summits are covered with snow all the year round. Mount Hooper is 15,690 feet and Mount Brown nearly 16,000 feet high; these two summits are between 52° and 53° N. lat. On their eastern declivities rise the northern fork of the Saskatchewan and the river Athabasca, and from the western descend the rivers that form the northern fork of the Oregon River. There are two passes over this portion of the Rocky Mountains: the more southern is near 52° 30' N. lat.; the northern occurs near 53° 30' N. lat., between the Red Deer River, a branch of the Athabasca, and the northern branch of the Columbia River; but these passes are only practicable from the end of June to the middle of September, when they are crossed by the agents of the Hudson's Bay Company, who bring the furs collected in the countries west of the Rocky Mountains to their establishments on the east of that range.

Farther north, between 56° and 57° N. lat., the Peace River breaks through the eastern range of the mountains, its upper course being in a valley between the two principal ranges, which appear to be here of nearly equal height: both of them contain summits which are always covered with snow; their height above the sea-level however seems to fall short of 5000 feet. The western range, which is about 200 miles from the Pacific, constitutes the watershed between the rivers which run east to the Atlantic and west to the Pacific. North of 57° N. lat. the mountains appear rather to sink lower than to rise. As far north as 62° N. lat. they seem to occupy a much greater width, and consist of three or more nearly parallel ranges, and the watershed between the rivers which fall respectively into the Atlantic and Pacific is advanced much more to the west. The Turnagain River, which after having left the mountain region assumes the name of the Southern Branch of the Mackenzie, rises on this watershed, and breaks through two ranges of mountains before it reaches the great plain east of the Rocky

Mountains. Between the ranges which fill up this immense tract of country there are low tracts, which however are partly covered with water. It is said that about one-sixth of the entire surface of this region consists of extensive lakes.

Between 62° and 69° N. lat., the eastern ranges of the Rocky Mountains approach the valley of the Mackenzie River. Dr. Richardson says that they appear to consist of short conical peaks, scarcely rising 2000 feet above the river. Lateral ridges project from their sides, which stretch south-south-west and north-north-east, being nearly at right angles to the general course of the great range, to which they belong. Their bases are from one to two miles wide, and their eastern slopes present a succession of precipices, with shelving acclivities beneath them, formed of débris, and exhibit on their faces regular lines of stratification. The valleys which separate these ridges and open upon the river, are narrow, with level bottoms, but very steep sides well clothed with trees. One of these ridges presents towards the river a very precipitous descent, 1200 feet high, which extends for at least 15 miles. A large portion of this mountain region is drained by the Peel River, which breaks through the eastern ridge near 67° 40' N. lat.; at its junction with the Mackenzie River the Peel is of considerable size, and brings down a great volume of water.

The most northern portion of the Rocky Mountain system to its termination on the shores of the Arctic Ocean consists of several parallel ridges. Between the embouchure of the most western arm of the Mackenzie River (137° W. long.) and 146° W. long., four distinct ridges are seen from 12 to 25 miles from the shore. At their northern extremity they are separated by valleys about 20 or 30 miles wide. The summits of the two eastern chains, called Richardson Chain and Buckland Chain, are lower, being free from snow in summer, but the two western, called British Chain and Romanzow Chain, are always covered with snow. Romanzow Chain occupies the greatest width, and presents to the Arctic Ocean a front exceeding 60 miles in extent. These chains consist of slate-rocks; their summits are rounded and naked, but the narrow valleys between them are covered with grass. No bushes nor even shrubs appear on their declivities. At a great distance farther west, between 151° and 152°, the northern extremity of another chain, called the Pelly Mountains, is seen from the shores of the Arctic Ocean. It is most probable that the mountain-chain which is observed to skirt the shores of the Pacific, at no great distance from the sea, and in numerous places to advance with its offsets close to the water's edge, forms a part of the Rocky Mountain system and is connected with it. But on this point we are without information, the interior of the countries along this coast not having been explored by Europeans.

(Humboldt, *Essai Politique sur la Nouvelle Espagne*; Pike, *Exploratory Travels through the Western Territory of North America*, &c.; James, *Account of Major Long's Expedition to the Rocky Mountains*; Lewis and Clarke, *Travels to the Source of the Missouri*, &c.; Mackenzie, *Voyages through the Continent of North America to the Frozen and Pacific Oceans*; Franklin, *Second Expedition to the Polar Sea*; Dease and Simpson; Fremont; Ruxton, &c.)

ROCROY. [ARDENNES.]

RODEZ. [RHODEZ.]

RODINGS, THE. [ESSEX.]

ROERMOND, or RUREMONDE. [LIMBURG.]

REGULX. [HAINAULT.]

ROGLIANO. [CORSIKA.]

ROHILCUND. [HINDUSTAN.]

ROHUR. [CUTCH.]

ROMA, COMARCA DI, a province of the Papal state, in which the city of Rome is situated, and which is under the same administrative authorities as the metropolis itself. It consists of the Agro Romano, or territory immediately around Rome, and of the districts of Tivoli, Albano, and Subiaco. The province extends on both banks of the Tiber, including Bracciano, Monte Rosi, and Monte Sant' Oreste (the ancient Soracte) on the west or right bank of the river, and it extends as far as Magliano on the eastern or left bank, including Palombara, Tivoli, Vicovaro, and the whole valley of the Anio, with Palestrina, Frascati, Albano, Genzano, and Porto d'Anzo and Nettuno on the sea-coast. It is bounded N. by the provinces of Viterbo and Rieti, E. by the kingdom of Naples, S. by the province of Frosinone and the Mediterranean, and W. by the province of Viterbo. The area is 1699 square miles: the population including the city of Rome in 1850 amounted to 304,266. The chief products are corn, cattle, oil, wine, and fruits.

The surface of the province is diversified in its eastern and northern parts by ramifications of the Roman and Tuscan sub-Apennines respectively; both districts abound in picturesque scenery. The eastern region is drained by the *Teverone* (ancient *Anio*) which rises in Monte Tarino near the Neapolitan frontier, and passes Subiaco in a north-west direction. A few miles lower down it turns south-west passing Tivoli, where it makes the renowned cascades, and enters the Tiber on the left bank about two miles north of Rome. The northern and central parts of the province are drained by the Tiber, or *Tevere*. [PAPAL STATES.] Some smaller streams run directly into the sea, the principal of which is the *Arrone*, the outlet of Lake Bracciano. There are several lakes, the largest of which, namely those of Albano, Bracciano, and Nemi, occupy ancient craters. There are many smaller lakes and some large marshes on the sea coast. Besides the two hilly

districts already named the province presents an extensive plain diversified only by the gentle undulations of the Campagna, many parts of which are infested by malaria. The highest points in the Roman sub-Apennines are Monte Guadagnolo, to the south-east of Tivoli, and Monte Genaro (4185 feet above the sea). The latter is supposed to be the *Mons Lucretilis* of Horace. The Monte San Oreste (ancient Soracte), in the north of the province, is a mass of limestone projecting up from the tufa of the Campagna to the height of 2000 feet above the sea. It is in parts beautifully wooded. On its summit is the monastery of St. Sylvester, which was founded by Carloman, son of Charles Martel, on the site of a church built here by St. Sylvester before his elevation to the Holy See, in commemoration of the conversion of Constantine the Great. Gusts of wind still issue from the fissures on the east side of the mountain as described by Pliny. Mount Soracte fills up the fork between the Tiber and its feeder the Treia, which is formed by the junction of two streams that flow in ravines and unite their waters between the mountain and the town of Civita Castellana. They are the Rio Ricano, which is the outlet of the Lake Vico and the most northern of the two; its course is nearly due east: and the Rio Maggiore which also flows east past Sutri and Nepi in the neighbouring province of Viterbo.

In the valley of the Teverone are the following towns:—*Subiaco*, the ancient *Sublaqueum* (population 5836), built in a most picturesque situation on a hill on the right bank of the river. It is supposed to occupy the site, or part of the site, of Nero's villa, remains of which still exist. Subiaco has a fine church dedicated to St. Andrew, a papal chateau, and several convents, the most famous of which are those of Santa Scholastica and St. Benedict, both founded in the 5th century. The Teverone forms some cascades below the town. TIVOLI (ancient *Tibur*), celebrated for the cascades of the Anio and for its antiquity, is described in a separate article. A short distance west of Tivoli is the Lake of *Solfatara*, the ancient *Aqua Albulæ*, whose sulphureous waters are carried by a canal into the Teverone. The waters are of a milky colour and always have a strong smell of sulphur. Their petrifying qualities are continually contracting the area of the lake, which in the time of Father Kircher was a mile in circuit but is now only about 500 feet in diameter. There are other smaller lakes of the same character near the Solfatara. North of Tivoli is *Vicovaro* (the ancient *Varia*), now a village of about 1000 inhabitants. Between Vicovaro and Monte Genaro is *Licenza* (the ancient *Digentia*), situated on the bright limpid stream immortalised by Horace, of whose villa there remain some scanty memorials. To the west of Licenza, near the Tiber is *Palombara*, a small town of 2700 inhabitants.

Among the hills of the ancient Hernici round the source of the Sacco are—PALESTRINA, described in a separate article. *Paliano*, situated on an isolated rocky hill fortified with towers and bastions, and approached only by means of a drawbridge: population, 3700. *Cavi*, picturesquely situated on a rock of tufa above a torrent-feeder of the Sacco, over which a fine bridge of seven arches is thrown: population, 2000. *Genzano*, built on a steep hill 4 miles E. from Cavi, is famous for its chapel of the Madonna, on whose feast the peasantry of all this part of the province assemble in the town: population 2500; on the summit of the hill is a baronial castle of the Colonna, separated from the town by a drawbridge. *Olevano*, a mediæval town situated in the midst of the most romantic scenery, a few miles north of Genzano, has about 3000 inhabitants. *Zagarolo*, a small town of 3600 inhabitants, situated on a long ridge that projects into the plain about 6 miles W. from Palestrina, has some handsome churches and a baronial castle, which formerly belonged to the Colonna. *Castiglione*, a small place west of Zagarolo, stands on the site of the citadel of ancient *Gabii*, of which there are still some remains. The Lake of *Gabii*, which occupied an ancient crater, and is not mentioned till the 5th century, has been recently drained by Prince Borghese. Near the junction of the Osa with the Teverone, a little north of Castiglione, stood *Collatia*, the scene of the death of Lucretia, the wife of Collatinus.

About 12 miles E. from Rome, situated on one of the lower eminences of the Alban Hills, is *Frascati*, surrounded by magnificent villas. [FRASCATI.] North-east of Frascati is the ruined village of *Colonna*, which gave title to the historical family of the Colonna, and occupies the site of the ancient *Laticum*. South of Frascati, on an isolated hill at the base of Monte Cavi, the ancient *Mons Albanus*, is *Marino*, which occupies the site of the ancient *Castrimanium*, and has about 5100 inhabitants; it is a well-built town with some interesting churches, which are adorned with fine pictures. Between the hill on which Marino stands and the ridge of Alba Longa is a deep wooded glen, called Parco di Colonna, in which the ancient Latins held their general assemblies. The stream called by Livy, *Aqua Ferentina*, still traverses it, and may be traced to its source at the base of a mass of tufa. Near Marino also is *Grotta Ferrata*, a small village celebrated for its Basilian monastery; the chapel of which is decorated with magnificent frescoes by Domenichino. The region of the Alban Hills, the Alban Lake, the town of Albano, &c. are noticed under ALBA LONGA. Separated by a deep ravine from Albano is *L'Ariceia*, a small place of 1400 inhabitants, which occupies the site of the citadel of the ancient *Ariceia*, ruins of which are spread about the neighbourhood. The region of the Alban Hills abounds in evidences of ancient volcanic action; the hill slopes are in many parts covered with vineyards. From L'Ariceia is

seen beyond the broad crater of Vallerioccia the hill of Monte Giove, famous as the site of *Corioli*; and on another hill to the south-east the village of *Civita Lavinia*, the site of the ancient *Lanuvium*. East of L'Ariccia is the village of *Nemi* and the beautiful lake of the same name, the ancient *Lacus Nemorensis*, which occupies an extinct crater, and is 5 miles in circumference. Near the south shore of the lake is *Gensano*, a town of 4700 inhabitants, celebrated for its flower-mosaics on the octave of the feast of Corpus Christi. The Appian Way between L'Ariccia and Gensano is carried across the crater of Vallerioccia by a magnificent causeway.

The Campagna to the south-east of *Ostia*, which forms the subject of a separate article [OSTIA], is covered near the sea with pine plantations and with the great Laurentine forest, which skirts the Mediterranean for above 50 miles, with a breadth of about 3 miles from the coast, and abounds with buffaloes, wild boars, and wolves. This region, once dotted with cities, is now all but deserted on account of the malaria. Two miles from *Ostia* is *Castel Fusano*, a castellated mansion of the Chigi family, built on the site of Pliny's Laurentine Villa. Farther south, among gigantic groves of stone-pine, ilex, laurel, and wild olive, is *Torre di Paterno*, a solitary brick-tower, built about half a mile from the sea, among the ruins of an imperial villa. About a mile inland from *Torre di Paterno* is the site of *Laurentum*. The ancient Laurentine Way still leads from this region to Rome, but the polygonal blocks with which it is paved have in places been displaced by the roots of the trees which have encroached upon it, and rendered it impassable for carriages. *Pratica*, a small hamlet on a strip of table-land, separated from the plain by deep glens, except at one point, marks the site of the ancient *Lavinium*. The Borghese family have a large mansion here, the tower of which commands a fine prospect of the coast, the plain of the Campagna, the Alban Hills, the Ciminian Wood, and the domes and palaces of Rome. *Pratica* is 18 miles south-south-east from Rome. A few miles south-east of *Pratica* is the small hamlet and castle of *Ardea*, which marks the site of the ancient *Ardea*, the city of *Turnus*. A great castellated mansion of the Cesarini occupies the site of the citadel. At the extreme south point of the coast are the towns of *Porto d'Anzo*, on the site of the ancient *ANTURUM*, which is noticed in a separate article: and *Netuno*, about a mile south of the preceding, which is the largest town now on the coast of Latium, although the population hardly exceeds 1000. The whole coast hereabouts is covered with ruins of Roman villas. The town contains remains of a temple of Neptune, and also an old fortress, now tenanted by the coast-guard. All this part of the coast belongs to the princely house of Borghese. The malaria and swarms of mosquitos render it uninhabitable in the summer and autumn.

On the right bank of the north arm of the Tiber, which is called the *Fiumicino*, are the extensive remains of the *Portus Trajanus*, now *Porto*, which was founded by *Claudius* and enlarged by *Trajan*, so as to be the naval arsenal of Rome. The docks formed by *Trajan* are a mile and a half in circuit, and there are still remains of large magazines; and numerous slips for ship-building purposes. *Porto* was a place of importance under the empire. It gave title to a bishop from the 3rd century. It was taken by the Saracens in the 9th century and soon after abandoned. At the mouth of the *Fiumicino* is the marine village of *Fiumicino*, in which is a lofty square tower surmounted by a beacon to point out the entrance to the river. The current of the Tiber through the *Fiumicino* is deep and rapid, and the navigation except by steam tedious. Steamers ply to Rome, and steam-tugs tow vessels of 200 to 300 tons up to the *Ripa Grande*. The southern arm of the Tiber, which passes *Ostia* on the site of *OSTIUM*, the port of ancient Rome, is called *Bocca di Fumara*. The delta between the two arms (if it be a delta) is called *Isola Sacra*, or *Holy Island*, probably from its being included in the gift of *Constantine* to the *Holy See*, or it may be from the church and tomb of *St. Hippolitus*, bishop of *Porto*; the tower of the church is still standing. The *Fiumicino*, it is asserted by some, originated in a cut made by *Trajan* to his new harbour.

Northward from the Tiber at a short distance is a large shore-lake or marsh called *Maccarese*, a little north of which the *Arrone*, the outlet of *Lake Bracciano*, enters the sea. The *Polidoro* is another small stream that falls into the Mediterranean on this coast. A little way north of the mouth of the *Polidoro* is *Monterone*, on the road between Rome and *Civita Vecchia*, where there are tumuli containing Etruscan tombs. But the most interesting place in this region is *Cerveteri*, a village of about 800 inhabitants, situated on a strip of table-land with perpendicular sides 50 feet high on all sides except the west, which is cut through artificially. This is the site of the ancient *Cære*, the *Agylla* of *Herodotus*, and the city of *Mezentius*. The village occupies the ground on which the citadel of *Cære* stood. The four gates of the town may still be traced and the roads leading to them. The necropolis of *Cære* is a hill separated from the town by a small stream; a great number of Etruscan tombs have been explored in this hill. Many of them are said to be above 3000 years old. The articles found in them are preserved in the antiquarian collections of Rome. Farther inland on the *Arrone* is *Galera*, which represents the ancient *Galeria*. It has been long deserted in consequence of a malaria, and is now in ruins. The lake of *Bracciano*, which is about 18 miles N.W. from Rome, is nearly circular in form, and 22 miles round. It is surrounded by hills on all sides except the

south, where it borders on the wide unhealthy Campagna. On the south-west shore is the town of *Bracciano*, which has a large paper factory, a splendid baronial castle built by the *Orsini* (the finest feudal castle in Italy), and about 2000 inhabitants. The castle of *Bracciano* now belongs to the *Torlonia* family. The Lake of *Bracciano* is the ancient *Lacus Sabatinus*. Its shores seem to have once formed the crater of a volcano, being formed chiefly of lava and scoria. Between the lake and *Baccano* are three other craters and two small lakes. The village of *Baccano* is situated within the lip of a crater on the high road from *Viterbo* to Rome. A little south of *Baccano* the traveller gets his first view of Rome. The stream that rises in the crater of *Baccano* has by some been considered to be the *Cremera* which flowed past *Veii*. The site of the citadel of *Veii* is marked by the tower and hamlet of *Isola Farnese*, which lies a little east of the road between *Baccano* and *La Storta*, the first post-station out of Rome. The walls and gates of *Veii* may still be traced. Several valuable relics of antiquity have been found in the tombs of *Veii*. A Roman municipium was built in imperial times on the site of *Veii*. It was about two miles in circuit, and far within the limits of the old Etruscan city. The hamlet of *Isola* is gone to decay in consequence of malaria.

ROME, ROMA, the capital of the States of the Church, and formerly of the whole Western world, is situated in the Campagna, on the banks of the Tiber, 15 miles from the sea-coast, in 41° 54' N. lat., 12° 28' E. long., and had a population of 175,838 in 1852. The site of Rome consists partly of several strips of low land on both banks of the Tiber, the ordinary level of the river being there about 35 feet above that of the sea, and partly of the table-land of the Campagna, which rises on both sides from 150 to 200 feet above the river. The projections of this table-land which advance towards the river have been called hills; and hence the name of the Seven Hills. After the enlargement of the city walls by *Aurelian*, these hills or projections were considerably more than seven. On the right bank of the river, the Vatican and the Janiculum, which are within the modern city, are a continuation of the ridge of *Monte Mario*, which is outside of the walls to the north, and is 450 feet above the sea, and of *Monte Verde* to the south. On the left or eastern bank, the table-land of the Campagna extends, within the walls of Rome, in a semicircular shape, forming several projections to the west towards the river. The low grounds between these projections and the river constitute the *Campus Martius*, on which the greater part of the modern city is built. Beginning from the north, the first projection of high lands within the city is the *Monte Pincio* (the ancient *Collis Hortulorum*); farther east, and partly separated from it by a depression or ravine, is the *Quirinal*, and still farther south-east the *Esquiline*. In a kind of recess between the *Quirinal* and the *Esquiline* is a smaller projection, the *Mons Viminalis*, which is hardly distinguishable from the other two. It rises above and north of the church of *San Lorenzo Panisperna*. The *Quirinal*, *Viminal*, and *Esquiline* are joined on the east, within the walls of Rome, by an extensive plateau, which is about 150 feet above the ordinary level of the Tiber, and which slopes gently towards the country outside of the walls of Rome. The highest points of the *Esquiline* and the *Quirinal* are nearly 200 feet above the Tiber. South of the *Esquiline*, and separated from it by a depression or valley, is *Mount Cælius*, which is divided on the south from the *Aventine* by the valley of the *Aqua Crabra* or *Marrana*. Within the space that is inclosed between the table-land and the Tiber, and in the middle of the ancient city, there are three small insulated hills, the *Palatine*, the *Aventine proper*, and the *Capitol*, of which the *Aventine* is the most southern and the *Capitol* the most northern. The *Capitol* rises between the south-west extremity of the *Quirinal* and the left bank of the Tiber, and nearly fills up the intermediate space. The ancient city of Rome, before the time of *Aurelian*, lay south and east of the *Capitol*, and along the *Palatine*, *Aventine*, *Cælian*, *Esquiline*, and *Quirinal* hills: the main bulk of modern Rome lies north of the *Capitol*.

The Tiber, on approaching Rome from the north, makes a sweep to the east towards the base of *Monte Pincio*, receding from *Monte Mario* and the *Vatican* hill on its right bank; but on reaching *Ripetta* within the city, the river makes a bend to the westward, and flows along the north-eastern base of the *Janiculum*, after which it turns again to the east as far as the base of the *Capitol*. It then turns again to the south-west, sweeping past the base of the *Aventine*, and along the southern extremity of the *Janiculum*. It then assumes a course south by east. The level space between the *Vatican Mount*, the north end of the *Janiculum*, and the right bank of the river, is the *Vatican field*, which is about a mile long from east to west. It contains the *Borgo*, or suburb of Rome, inclosed by the pope, and *St. Peter's church*, the *Vatican palace*, and their appurtenances. The space between the long ridge of the *Janiculum* and the right bank of the Tiber constitutes the district of *Trastevere*, which is another suburb of Rome. The space on the left bank running north and south, and between the great westward bend of the river and the eastern hills, is the site of the modern city of Rome, properly speaking which extends also along the slope of the *Pincian*, *Quirinal*, part of the *Esquiline*, and the *Capitol*, forming a kind of triangle, of which, the apex is to the north, at the *Porta del Popolo*, and the base extends from *Santa Maria Maggiore* on the east, to the *Tiberine Island* on the

west, a distance of about a mile and a quarter, whilst from the Porta del Popolo to the foot of the Palatine opposite Ponte Rotto, the farthest southern point of modern Rome, the distance is rather more than a mile and a half. All to the south and east of these limits, forming about two-thirds of the area within the walls, consists of ruins, gardens, and fields, with some churches, convents, and other scattered habitations.

The present line of walls of Rome proper on the left bank of the river is generally understood to be that traced by Aurelian, restored by Honorius, and afterwards by Belisarius, and since repeatedly renewed by several popes. It describes an irregular polygon, of which the longest diameter is three miles in length from north-west to south-east, from the Porta del Popolo to the Porta San Sebastiano on the Appian road. The whole circuit of the present walls, including those of Trastevere and of the Borgo or Vatican, is between 14 and 15 miles. The wall is made of brick mixed with stones and rubbish, and has been often repaired. It varies in height, but in most places does not exceed 15 feet. It has no ditch, but is flanked by towers and bastions, which were repaired by Pope Benedict XIV. Rome has 16 gates, some of which however are walled up. Beginning from the north is:—1. Porta del Popolo, on the Flaminian way, or high northern road, which divides at a short distance from Rome, one branch leading to Florence and the other to Ancona. 2. Farther east, the next gate is Porta Pinciana. 3. Porta Salaria, on the road to Rieti. 4. Porta Pia, on the north-east, formerly Nomentana, the road from which joins the Via Salaria. 5. Porta San Lorenzo, facing the east, and leading to Tivoli. 6. Porta Maggiore, leading to Palestrina: this is the handsomest of the gates of Rome, being originally part of the aqueduct of Claudius restored by Vespasian and Titus, which is attested by the triple inscription over it. It consists of a fine arch which crosses the high road, built of Travertine or Tiburtine stone. 7. Porta San Giovanni, which looks to the south-east on the modern road to Albano and Naples. 8. Porta Latina, the road from which joins the Naples road. 9. Porta San Sebastiano, on the ancient Via Appia. 10. Porto San Paola, on the road to Ostia. Crossing the Tiber, we find—11. Porta Portese, which leads to Fiumicino, the present port of Rome. 12. Porta San Pancrazio, on the summit of the Janiculum, which is nearly 300 feet above the Tiber. Outside of this gate is the Villa Pamfilii, with its shady walks, its waterworks, and beautiful groves of lofty umbrella pines. 13. Porta Cavalleggieri, south-west of St. Peter's; it leads towards Civita Vecchia. 14. Porta Fabbrica, on the same side, is now walled up. 15. Port' Angelica, on the opposite or northern side of St. Peter's, on the road leading to Monte-Mario. 16. Porta Castello, which opened from the Castle of San Angelo northward into the country, and is now walled up. Besides these, there are two internal gates, one called Santo Spirito, leading from the Borgo to the Lungara, and the other Porta Settimiana, leading from the Lungara to Trastevere. These districts, Borgo and Lungara, have been consecutively annexed to the modern city.

The course of the Tiber within Rome, including its windings, is about three miles; the banks are not built up with quays or walks, but in most places the river is bordered by the backs of houses generally of an inferior sort; in other places there is a slip of sand or gravelly ground between the houses and the river, which is frequently overflowed. There are only two places where there is a sort of quay or landing-place; one in the northern part of the town, on the left bank, above the bridge of San Angelo, called Ripetta, where the boats from the inland provinces on the upper Tiber land wine, charcoal, and provisions; and the other at the southern extremity of the town, on the right bank near Porta Portese, called Ripa Grande, where sea-vessels land their cargoes, and where there is a line of warehouses and a custom-house. There are three bridges across the Tiber within Rome; the northernmost is Ponte Sant' Angelo, the Pons Ælius, built by Hadrian, and restored by several popes, and lastly by Clement IX., by whose order Bernini constructed the present balustrade and the statues with which it is decorated. It is about 300 feet long, but the width of the bed of the river is not more than 200 feet. The Ponte Sisto, formerly Pons Janiculensis, built originally by Marcus Aurelius, and rebuilt by Sixtus IV., is about 300 feet long, the bed of the river being 230 feet wide. About half a mile lower down is the island of San Bartolomeo, the ancient Insula Tiberina. This island is of an oblong shape, something like a ship, being about 1000 feet long, and 800 feet wide in the middle of its length. It is joined to the mainland by two bridges; one to the left bank called Ponte San Bartolomeo; and the other to the right bank, called Ponte Quattro Capi, from a head of Janus Quadrifrons which once decorated it. The two arms of the river together form a bed of about 200 feet in width. There are also within Rome the remains of three ancient bridges; the Triumphalis, called also Vaticanus, just below Sant' Angelo, of which the piers have fallen into the bed of the river and occasion a rapid; the Pons Palatinus, now called Ponte Rotto, of which three arches remain on the Trastevere side; and lastly, the Pons Sublicius, at the foot of the Aventine, the first bridge built by the Romans, of which there are very few vestiges.

Rome is divided into 14 districts, called Rioni, which however do not correspond in their boundaries to the Regiones of the ancient city. The modern Rioni are of very unequal extent, their boundaries being determined with reference to the population included within them.

Thus the inhabited part of the city contains 11 Rioni, namely—1. Campo Marzo, near Porta del Popolo; 2. Colonna; and 3. Trevi, along the slope of the Pincian and Quirinal; 4. Sant' Eustachio; and 5. Pigna, in the middle of the lower town; 6. Ponte; 7. Parione; and 8. Regola, near the left bank of the Tiber; 9. Sant' Angelo in Pescheria, between the Capitol and the Tiber; and 10. Trastevere, and 11. Borgo, on the right bank of the river. The whole of the ancient or southern city is comprised within three extensive Rioni, namely—12. Monti, on the north-east; 13. Campitelli, south-east; and 14. Ripa, south-west.

The modern city of Rome may be conveniently divided, for the sake of topographical description, into three great divisions:—1. The lower part of the town between the eastern hills, the Tiber, and the Capitol. 2. The upper town, which extends along the eastern hills. 3. The part of the town which is on the right bank of the Tiber.

I. The Lower Town, which occupies the site of the ancient Campus Martius and Campus Tiberinus, is the seat of all the bustle and trade. It is crossed in its central part from north by west to south by east by the street Del Corso, which is about a mile in length from the Piazza del Popolo, or great northern entrance of Rome, a handsome open place with an obelisk in the middle, to the Venetian palace, near the foot of the Capitol. Two other streets branch out from the Piazza del Popolo on the right and left of the Corso, and at an acute angle with it. One leads south-east to the fine open place called Piazza di Spagna, the great resort of foreigners, at the foot of the Pincian Mount, after crossing which it continues in the same direction to the College of Propaganda at the foot of the Quirinal. The other street, called Ripetta, runs in a south direction, parallel to the bank of the Tiber, and then following the bend of the river leads, under a different name, to the bridge of Sant' Angelo.

About the middle of the Corso is a square, called Piazza Colonna, from the column of Antoninus which stands in the middle of it. It was raised by the senate in honour of the emperor Marcus Aurelius Antoninus, and in memory of his victory over the Marcomanni and other German tribes. After the extinction of the western empire this column and its pedestal suffered greatly from fire, from lightning, and from wanton injury. Pope Sixtus V. repaired it at the expense of 10,000 scudi, and placed the inscription which is now seen on the pedestal, the original one having been probably defaced. He also raised on the summit of the pillar a bronze statue of St. Paul; that of Marcus Aurelius, which formerly stood there, had been removed—it is not known when or by whom. The shaft of the pillar is 13 feet 1 inch in diameter at the bottom, and one foot less at the top; its height, including the pedestal and capital, is 136 feet, of which 13 feet are under ground; and the statue on the top and its pedestal are 27½ feet more, making the whole height 163½ feet. The capital is Doric. The shaft is made of 28 blocks of white marble placed one above the other; a spiral staircase of 190 steps is cut through the interior of the marble and leads to the gallery on the top, which is surrounded by a balustrade. The exterior of the shaft is covered with bassi-relievi placed in a spiral line around, which represent the victories of Marcus Aurelius. The column is still one of the most striking monuments of ancient Rome and one of the principal ornaments of the modern city.

Immediately to the west of the Piazza Colonna is an irregular square, which crowns a slight eminence called Monte Citorio, or Citorio, a small hill which rises in the middle of the Campus Martius. It contains a fine building, called Curia Innocenziana, in which the courts of justice sit: a handsome obelisk stands in front of it. Returning to the Corso, and following it southward, we meet with a street on the left, which leads to the Fontani di Trevi, the handsomest fountain in Rome, and then we come to another street, leading to the ascent of the Quirinal, or Monte Cavallo. Farther up the Corso, on the right, is a wide street called Stada del Gesù, which leads to the splendid Jesuit church and convent of that name, whence, turning to the left, is a street that leads to the foot of the Capitol. The whole of this part of the city, in the neighbourhood of the Corso, consists chiefly of regular and substantial buildings. The most remarkable are—1. Palazzo Borghese, near Ripetta, one of the largest and finest in Rome: it contains a choice collection of paintings by Titian, Domenichino, Albano, Annibale Caracci, Caravaggio, Parmigiano and other great masters. 2. Farther north the old mausoleum of Augustus has been transformed into an amphitheatre, called Corra, for bull-fights, fireworks, and other popular diversions. 3. Palazzo Ruspoli, on the Corso, in a good style of architecture by Ammanato, has a much-admired staircase, constructed by Martino Longhi, consisting of 115 steps, each of a single block of white marble. The extensive ground-floor of the palace has been converted into a coffee-house, which is the largest in Rome, and consists of various rooms, where several clubs of lawyers, merchants, and other persons assemble, that of the contributors to the 'Giornale Arcadico,' the literary review of Rome, among the rest. The artists' club is held at the Caffé del Greco, in the Piazza di Spagna; that of the antiquarians at the caffè of Fontana di Trevi; the club of professors and other men of letters meets at the Caffé di Monte Citorio. 4. Palazzo Ghigi, which forms the north side of the Piazza Colonna, contains some choice paintings, and a fine library rich in curious manuscripts. 5. Palazzo Piombino, on the opposite or south side of the square. 6. Palazzo Sciarra Colonna, on the Corso, has a rich collection of paintings and a handsome

Doric marble gate. 7. Palazzo Doria, a vast building, designed by Borromino, also contains a gallery of choice paintings. 8. Palazzo Torlonia, formerly Odescalchi, or Bracciano, on the Piazza Santi Apostoli, has a splendid marble gallery and some good modern paintings. 9. On the opposite side, next to the church of Santi Apostoli, is the Palazzo Colonna, with a handsome court and gardens behind, which extend up the slope of the Quirinal, and a gallery of paintings with some splendid portraits by Titian, Veronese, and Giorgione. 10. The huge Palazzo di Venezia, so called because it once belonged to that proud republic, is now occupied by the Austrian ambassador: it looks like an old castle, with its massive walls and battlements. 11. Opposite the church Del Gesù is the Palazzo Altieri. All these palaces are in the immediate neighbourhood of the Corso. The principal churches in the same district are—1. Santa Maria del Popolo, which, like most churches at Rome, contains some good paintings, several remarkable sepulchral monuments, and also a handsome chapel belonging to the Ghigi family. 2. San Carlo al Corso. 3. San Lorenzo in Lucina, raised on the ruins of an ancient temple. 4. San Ignazio, which is rich in ornaments, adjoins the Roman College. 5. The handsome church Del Gesù contains some good paintings; the splendid chapel of St. Ignatius, enriched with lapis lazuli, silver, and gold; and the mausoleum of Bellarmine, by Bernini. 6. Santi Apostoli, with the fine mausoleum of Pope Ganganelli, the work of Canova, and a cenotaph by the same illustrious artist to the memory of his friend the engraver Volpato. In the adjoining cloisters is the tomb of Cardinal Bessarion. 7. San Marcello contains the sepulchral monument of Cardinal Consalvi. 8. Santa Maria in Vialata, &c.

West of the Corso, and between it and the Tiber, is a dense mass of irregular streets, a busy part of the town, containing market-places, shops, and inferior dwellings, with here and there a fine building. Towards the centre of this district is the fine oval space called Piazza Navona (the ancient Circus Agonalis), one of the largest in Rome, with its fountains, by Bernini, its three churches, and the modern palace Braschi at one extremity of it. The university called La Sapienza is in the neighbourhood. Between it and the Corso is the church of Santa Maria Rotonda, the ancient Pantheon, which is above 18 centuries old, and one of the best preserved monuments of antiquity. It consists of a rotunda with a noble Corinthian octastyle portico erected by Agrippa, the son-in-law of Augustus. It is by far the largest circular structure of ancient times, the external diameter being 188 feet, and the height to the summit of the upper cornice 102 feet, exclusive of the flat dome, which makes the entire height about 148 feet. The portico (103 feet wide) is octastyle, yet there are in all sixteen columns, namely, two at the returns, exclusive of those at the angles, and two others behind the third column from each end, dividing the portico internally into three avenues, the centre one of which is considerably the widest, and contains the great doorway within a very deep recess, while each of the others has a large semi-circular tribune or recess. But although, independently of the recessed parts, the portico is only three intercolumns in depth, its flanks present the order continued in pilasters, making two additional closed inter-columns, and the projection there from the main structure about 70 feet; which circumstance produces an extraordinary air of majesty. The columns are 47 feet high, with bases and capitals of white marble, and granite shafts, each formed out of a single piece. The interior diameter of the rotunda is 142 feet, the thickness of the wall being 23 feet through the piers, between the exhedra, or recesses, which, including that containing the entrance, are eight in number. The dome has five rows of coffer (now stripped of their decorations) and a circular opening in the centre, 26 feet in diameter, which not only lights the interior perfectly, but in the most charming and almost magical manner. As an interior, Grecian architecture has nothing whatever that even approaches it.

On one side of the church of Santa Maria Rotonda is the Palazzo Giustiniani, and on the other side of it is the large church and Dominican convent of Santa Maria sopra Minerva. Nearer to the river are—1, the Palazzo della Cancelleria, by Bramante. 2, the Palazzo Farnese, the best-built in Rome, with a square before it, ornamented by two handsome fountains; some of the apartments are painted by Caracci, Zuocari, Vasari, and others. Next to the Piazza Farnese is another square, called Campo di Fiora. 3, the Palazzo Spada, with a collection of ancient sculptures, among others the supposed statue of Pompey, and some very fine basso-relievos, found at Santa Agnese without the walls. 4, the handsome church of Santa Maria in Vallicella, belonging to the brothers of San Filippo Neri, or Congregation of the Oratory, a most gentlemanly, unassuming, and useful body of clergymen. The library contains many valuable manuscripts, historical and ecclesiastical. 5, the church Santa Maria dell'Anima has some good paintings, and the monuments of Pope Adrian VI. and of Lucas Holstenius, a Protestant converted to Catholicism, who died librarian of the Vatican. Near the left bank of the Tiber, and parallel to it, runs a handsome regular street, called Strada Giulia, about three-quarters of a mile long, from Ponte Sisto to Ponte San Angelo. This district, though well built, is dull, when compared with the Corso and the adjoining streets.

South of Ponte Sisto, along the left bank of the Tiber, and extending round the western base of the Capitol to the foot of the Palatine, is the lowest, meanest, and dirtiest part of modern Rome. It is partly

occupied by the Jews, who are cooped up to the number of 4000 in several narrow filthy alleys, in rows of tall old houses, near the river-side, between Ponte Sisto and Ponte San Bartolomeo. Their district, called Ghetto, is separated by a wall from the rest of the town. They have their rabbis and a synagogue, a sort of municipal council, their schools, support their own poor, and follow their customary occupation of buying and selling. Facing the Ghetto is the island of San Bartolomeo, with the church of that name, and an hospital, kept by the congregation of the Ben Fratelli, whose motto is, 'Fate bene, Fratelli' ('Brethren, do good' to your fellow-men), and who devote themselves to tend the sick poor gratuitously. Proceeding farther south, along the left bank of the river, is a succession of narrow streets extending to the foot of the Palatine, with some of the most ancient churches in Rome, especially Santa Maria in Cosmedin, built in the 3rd century of our era, on the ruins of a temple dedicated to Pudicitia Plebeia. (Livy, x. 23.) The church of Santa Maria in Cosmedin is adorned with two rows of fine ancient columns. It is also called Bocca della Verità, from a large stone mask with a large mouth which is seen in the portico of the church, and the use of which is unknown. In the same neighbourhood are the churches of San Giorgio in Velabro, Santa Anastasia, Santa Maria Egiziaca, and of San Teodoro, said to be on the site of the temple of Romulus, on the Palatine, at the southern extremity of the inhabited part of modern Rome, on the left bank of the Tiber. Beyond it, the Aventine, Palatine, and Cælian hills stretch to the south and south-east. They are occupied with fields and gardens, and contain several churches, convents, and scattered ruins. The most remarkable churches are—Santa Sabina and San Alessio, on the Aventine; and Santa Bonaventura and its adjoining convent and garden, on the Palatine. The Cælian, an extensive hill, has some interesting churches:—1. San Gregorio, a fine building on the west slope of the hill, which has splendid frescoes by Domenichino and Guido, representing the Martyrdom of St. Andrew; a painting of St. Gregory by Annibale Caracci; and a statue of the same pope. 2. San Stefano Rotondo is an ancient circular building, transformed into a church in the 5th century. 3. San Giovanni e Paolo, belonging to the Order of Barnabites, in a fine situation, commanding a view of the Palatine and Aventine, is much resorted to by persons religiously inclined, who retire thither for a time, and board in the convent, where they employ themselves in pious exercises and in quiet meditation, which the solitude of the spot and the view of the majestic ruins before them are well calculated to assist. A solitary palm-tree rises in the garden of the convent; there is another in the garden of Santa Bonaventura on the Palatine. The Villa Mattei occupies a considerable space on the Cælian Hill. A large group of buildings connected with the Basilica of San Giovanni occupies the eastern end of the Cælian. The Colosseum, triumphal arches, and other ancient remains, are noticed hereafter. Between the Lateran and the Colosseum is the remarkable ancient church of San Clemente.

South of the Aventine, and between it, the Tiber, and the walls, is a large space of low ground laid out in fields, part of which are common, and go by the name of 'Prati del Popolo Romano.' An artificial hill, called Mount Testaccio, rises on one side of them; it is formed of a quantity of broken earthenware (testæ) and other rubbish which has been thrown and has accumulated here from ancient times, and over which a green turf has formed. The modern Romans have excavated cellars in the side of the hill, where they keep their wine cool, and the place is resorted to on holidays by the populace of Rome. On the other side, by the gate of San Paolo, is the Protestant burying-ground, and near it is the pyramid of Caius Cestius.

II. The upper town, or eastern part of modern Rome, stretches up the slope of the Pincian and Quirinal hills, and occupies also part of the plateau which unites all the eastern hills of Rome. This part is not so densely built as the lower town: it consists in great measure of palaces and villas, of churches, convents, and other large buildings, with spacious courts and gardens, and is intersected by two fine long streets, which cross each other at right angles on the summit of the Quirinal, forming there a small circus, with a fountain at each bifurcation, from which the place is called Le Quattro Fontane.

On the terrace or plateau of the Pincian Mount, in this part of Rome, there is a fine promenade or public walk. Next to it is the villa Medici, now the academy of French pensionary artists; the church of La Trinità de' Monti; and the esplanade with the obelisk in front of it, from which there is a splendid view of modern Rome. From this esplanade a good street, called Via Sistina, leads in a south-east direction to the Piazza Barberini, which lies in the depression between the Pincian and the Quirinal. The Palazzo Barberini, one of the largest in Rome, is at the east end of the Piazza. It contains a good collection of paintings, among others the celebrated portrait of La Cenci, by Guido, who had seen her on the scaffold at her execution. The library of the Barberini palace has about 50,000 printed volumes, and many valuable manuscripts. At the north end of the Piazza Barberini is the church and convent of the Capuchins, with its garden, which is kept in excellent condition, like all the gardens of the convents of that order. Adjoining is the vast and splendid patrician villa Flaminio, which has beautiful walks; in the apartments of the principal casino is a valuable collection of ancient sculptures, and also the fresco of Aurora by Guercino.

South of the Piazza Barberini rises the Quirinal Mount, which bears

on its summit the extensive pontifical palace and gardens. At Rome it is commonly called Monte Cavallo, from the two colossal statues of Castor and Pollux, with their horses, which stand in the square before the palace. On the east side of the square is the Palazzo della Consulta, and next to it the Palazzo Rospigliosi, which occupies an extensive area. In a detached gallery or summer-house of the latter is the celebrated Aurora of Guido, which is considered the masterpiece of that great painter. A fine street, about a mile in length, leads from the square of the pontifical palace along the plateau of the Quirinal to Porta Pia, passing near the *Thermae* of Diocletian. It is crossed at the Quattro Fontane by another street, leading from the Piazza Barberini to the church of Santa Maria Maggiore, whence several streets lead to Porta Maggiore, Porta San Lorenzo, and Porta San Giovanni. The magnificent church of Santa Maria Maggiore on the Esquiline Hill, which here joins the Quirinal, is the eastern extremity of modern Rome. Beyond it, north, east, and south, the whole expanse of the Esquiline is occupied by gardens, villas, and fields, with some solitary churches. The more interesting of these churches are—1, San Pietro in Vincoli, built first by Eudoxia, wife of Valentinian III., and rebuilt by Pope Adrian I.; it contains the mausoleum of Julius II., with the statue of Moses by Michel Angelo; 2, the handsome church of San Martino ai Monti, which, with its ancient oratory and vaults, its modern embellishments and the frescoes by Poussin, is worthy of notice.

Between the west slope of the Esquiline and the south slope of the Quirinal are several streets, which extend to the Campo Vaccino. Farther north, at the foot of the Quirinal, and in the gap between it and the Capitoline Mount, is the piazza which contains Trajan's column.

The Capitoline Mount, celebrated in the history of ancient Rome, is called by corruption Campidoglio. It rises on the eastern skirts of the inhabited part of modern Rome, which it divides from the Forum and the other forsaken districts of the ancient city. The Capitoline Mount is of an oval shape, and about one mile in circumference at its base; it is divided from the Quirinal to the north-east by a narrow valley, in which the Forum of Trajan once was, and the Pillar of Trajan still is; it has to the east the Forum of Augustus and the Via Sacra, which divides it from the Esquiline Hill; to the south-east the valley of the Forum Romanum, which divides it from the Palatine Hill; to the south the Forum Boarium, which divides it from the Aventine Hill; and the Tiber to the south-west. It has two summits, one to the north towards the Quirinal, on which the church and Franciscan convent of Ara Coeli now stand; and another to the south towards the Tiber, on which are the Caffarelli palace and gardens. At the south end was the Tarpeian rock, down which state-criminals were hurled. The height of this side of the hill is very much reduced, the ground at the foot of it having been considerably raised by ruins and rubbish, and the rock itself having been sloped down, and houses built against it. The height of the Capitol, taken at the pavement of the church of Ara Coeli, which is the highest summit, is 155 feet above the sea, 135 feet above the Tiber taken at its medium height, and about 90 feet above the present surface of the Forum, which however is in several places 20 feet higher than its ancient level. This hill is said to have been called Saturnius in the ante-Roman times. When the first Romans built their town on the Palatine, they built their *arx*, or citadel, upon the hill afterwards called the Capitoline. In their first war with the Sabines the latter took possession of this stronghold by the treachery of a woman called Tarpeia, the daughter of the Roman commander. Hence the hill took the name of Tarpeius. After the peace Tatius and his Sabines settled on the Tarpeian Mount, and Romulus remained on the Palatine. Tarquinius the Elder began to build a temple to Jupiter on the Tarpeian Mount, the summit of which he levelled for the purpose. The building was afterwards continued by Tarquinius Superbus. In digging some part of the foundations it is said the workmen found a human head quite fresh, which was interpreted to signify that the spot would be the head and centre of the Roman power. (Livy, i. 55.) The temple was accordingly dedicated to Jupiter Capitolinus, from *caput*, 'a head.' The temple stood on the northern summit of the hill where the church of Ara Coeli now stands. It was burnt in the civil war of Marius, but Sulla rebuilt it with much greater splendour and of the most costly materials. It is said to have been 200 feet long and 185 feet wide; it had a peristyle with three rows of marble columns in front, and two rows of pillars divided the interior into three aisles, at the farthest end of which were three cells dedicated to Jupiter, Juno, and Minerva. The vault of the temple and the external roof were covered with plates of gold. This temple was the principal sanctuary of Rome, to which the victorious generals and emperors went in triumphal procession to sacrifice to the gods. Many other temples and public buildings were raised successively on the Capitoline Hill. The temple of Concord stood on the slope towards the Forum. In the intermontium or little valley between the two summits (Clivi) stood the asylum or place of refuge, between two plantations of oak-trees.

The principal buildings of the modern Capitol consist of three palaces, the work of Michel Angelo, forming three sides of a square, in the middle of which stands the equestrian statue of Marcus Aurelius. The open side faces the north-west towards the modern city. The palace facing it is that of the senator of Rome; to the left of it is the palace de' Conservatori, which is filled with collections

of pictures, statues, and objects of vertu, among which is the famous bronze wolf of the Capitol mentioned by Cicero in his third 'Catalinarian Oration;' and to the right the Capitoline Museum, one of the finest collections of statues and sculptures in Italy. Among the treasures of this museum are the celebrated Dying Gladiator, and the Antinous and the Faun from Hadrian's villa. The three palaces and the square between occupy the intermontium, the two summits being occupied by the church of Ara Coeli and the palace and gardens of Caffarelli. Two ways lead down by the senatorial palace into the Campo Vaccino, or ancient Forum, one of which passes the site of the Mamertine prison.

III. The third great division of modern Rome lies on the right bank of the Tiber, and consists of two distinct parts: Il Borgo, or Vatican, and Trastevere, properly so called, which are divided from one another by an inner wall. The Borgo, or Città Leonina, extends from the bridge of St. Angelo to the Piazza of St. Peter's. The Vatican Mount was outside the walls of ancient Rome, and originally within the territory of Etruria. In the plain between the hill and the Tiber Caligula constructed a circus for chariot-races, which was the scene of the martyrdom of many of the early Christians. Nero fixed an obelisk in the middle of it, the same which now stands before St. Peter's. This circus, being afterwards used by Nero, was called by his name. Nero had also gardens in the same neighbourhood. The circus was destroyed under Constantine, who built on its site a church or basilica, dedicated to St. Peter, who, according to tradition, was buried on that spot. This church was consecrated by Pope Sylvester I., and enriched by Constantine with splendid ornaments and ample revenues.

Pope Leo IV., about A.D. 850, walled round part of the Vatican Hill and the plain beneath, to protect the church of St. Peter against the incursions of the Saracens, and he gave the uninclosed grounds to a number of Corsican families, which, having been driven from their country by the Saracens, had taken refuge at Rome. It then became a suburb of Rome, and was called Leonina Civitas. In 1146 Eugenius III. began building a palace near the church of St. Peter for the Papal residence, which grew by degrees, under successive popes, into an immense mass of buildings, known by the general name of the Vatican. The Lateran palace had been formerly the residence of the popes. Gregory XI., on his return from Avignon, fixed his permanent residence in the Vatican on account of the protection of the neighbouring castle of St. Angelo. The palace of the Vatican continued to be the residence of the popes until about the middle of the 16th century, when Paul III. built the palace on the Quirinal Mount, which, on account of its healthier and purer air, has since been preferred to the Vatican, which is however occasionally used as a winter residence, as well as on the occasion of grand ceremonies being performed in St. Peter's, when the Pope removes to the Vatican to be near at hand.

The old church of St. Peter was a large structure, more than 300 feet in length: it lay lower than the present church, which has been raised above it, and which is much larger. Part of the ancient church is become a subterraneous vault under the pavement of the modern building: it contains chapels and altars, with old monuments, sculptures, and mosaics, and the public have access to it on certain days only.

Pope Julius II. commissioned the architect Bramante to make a plan of a new church. The plan of Bramante was a Latin cross, surmounted by a vast and lofty dome. Julius II. himself laid the first stone on the 18th of April, 1506. Bramante raised the enormous pillars which support the cupola. After the death of Julius and Bramante, Leo X. entrusted the work first to Giulio di San Gallo and to Raphael d'Urbino, who was an architect as well as a painter; and afterwards to Peruzzi, who altered Bramante's plan into that of a Greek cross, but effected little towards its execution. After Peruzzi's death, Pope Paul III. sent for Michel Angelo, who carried forward the works with his characteristic energy, raised the drum of the cupola, covered over the body of the church, and cased the inside with stone. After the death of Michel Angelo, his pupil Barozzi, or Vignola, continued the building, and cased the exterior with travertine. He died in 1573, and little more was done till 1585, when Sixtus V. resolved that the dome should be finished, and commissioned Domenico Fontana and Giacomo della Porta, who, after making the necessary plans and arrangements, began the work in July, 1588. It was carried on night and day; 600 workmen were employed on it; and in May 1590 the last stone, after being solemnly blessed by the Pope, was fixed in its place at the sound of a discharge of cannon from the castle of St. Angelo. By the following November the crowning of the dome was completed. Paul V. (Borghese) being elected Pope in 1605, appointed Carlo Maderno to be architect of St. Peter's, who lengthened the nave of the church so as to give it the shape of a Latin cross. He then built the portico, which was finished in six years, and was open to the public in 1612. Two years later the whole structure was completed. Sixtus V. and his architect Fontana had already raised the obelisk before the church. Paul V., and after him Innocent, constructed the two magnificent fountains by the sides of it; and Alexander VII. began in 1661 the two semicircular colonnades which inclose the Piazza, or open area, in front of the church. Bernini was the architect of this last work, which was finished in 1667. Lastly, Pius VI. built the fine Sacristia and Chapter-house which adjoin the church.

Such a building as St. Peter's, carried on under many different architects for a period of more than a century, must have faults and incongruities. The portico in front, the approach to which is formed by the beautiful colonnades of Bernini, which conceal the buildings on each side of the piazza, is mostly objected to, as spoiling the view of the church itself. But St. Peter's as a whole may be safely said to be the most magnificent structure raised by man. Its interior well corresponds with its external appearance: the proportions are so well kept, that the eye, at first, is not struck with the vastness of the edifice until some of the parts are examined separately. For a description of the structure itself, and its gorgeous ornaments in marble, bronze, stucco, and gold, its altars, chapels, paintings, mosaics, sculptures, and numerous sepulchral monuments, we must refer the reader to guide books, and to professional works on the subject: here we can only state the dimensions of this vast structure. The total length of the interior within the walls is 602 feet; length of transept 445 feet; the nave increases from 77 feet at the entrance to 89 feet, and is 150 feet high; the aisles are 21 feet wide and 47 feet in height. The height of the baldachino, or canopy over the high altar (which is immediately under the dome), to the top of the cross is 93 feet. The four great pillars on which the dome rests are 232 feet in circumference. The diameter of the cupola is 193 feet. The base of the lantern of the dome is 400 feet, and the top of the cross 430 feet above the pavement. The high altar stands immediately over the grave of St. Peter.

The assemblage of buildings called by the name of the Vatican, and which extends in an oblong irregular mass north of St. Peter's as far as the town walls, consists mainly of—1, the Papal palace; 2, the court and garden of Belvedere; 3, the library; 4, the museum. The Papal palace contains, among other remarkable objects, the Sistine and Pauline chapels, painted by Michel Angelo: the Sistine chapel contains the painting of the Last Judgment; the four 'stanzes,' or apartments, painted by Raffaele; and the 'logge,' or open galleries, painted by Raffaele's pupils under his direction. The principal staircase, made by Bernini, is a splendid work of art. The Vatican is said to contain altogether eight great staircases, more than twenty courts, twelve great halls, and several thousand apartments large and small. A corridor, about a thousand feet long, joins the Papal palace to the building called Belvedere, which serves as a museum. About half-way up this corridor is the entrance to the Vatican library, which was built by the architect Fontana under Sixtus V. Pope Nicholas V. was the founder of the Vatican library, which has been increased by many popes. It now contains about 100,000 printed volumes and 24,000 manuscripts, of which 5000 are in Greek, 16,000 in Latin, and 3000 in the oriental languages.

The museum, or collection of works of art, mostly of ancient sculpture, was begun by Clement XIII. and Clement XIV., and greatly increased by Pius VI. Pius VII. began a new collection, to which has been given the name of Museo Chiaramonti. The two together, which are distributed along the court, garden, and palace of Belvedere, constitute the richest museum in Europe. Another and more extensive garden belonging to the Pope is annexed to the Vatican palace, and extends along the brow of the hill.

The other remarkable building in the Borgo is the great charitable establishment of Santo Spirito, the largest in Rome, situated close to the right bank of the Tiber. It comprises an hospital for the sick, which in the summer months contains from 1000 to 1200 patients at a time, a founding hospital, and a lunatic asylum.

The castle of Sant'Angelo (of which the massive circular tower was built by Hadrian for his mausoleum, and the fortifications around it, consisting of ramparts, ditches, and bastions mounted with cannon, were begun by Pope Boniface IX. and continued by successive popes) is the citadel of Rome, but it is not capable of a regular defence. It serves as a state prison and also as a house of correction.

The district called Trastevere lies south of the Borgo and between the Janiculum and the Tiber, and communicates with the Borgo by the handsome gate of Santo Spirito. The Janiculum is a long straight ridge about a mile and a half long from north to south, and it rises nearly 300 feet above the level of the river. In the northern half of its length it rises almost immediately from the bank of the Tiber, leaving however sufficient level ground for a street, which from its length is called La Lungara. This street contains some fine buildings, the Palazzo Salviati, the Palazzo Corsini, one of the handsomest in Rome, once the residence of Christina of Sweden, with a gallery of paintings, a library, and delightful gardens, which extend up the slope of the Janiculum, and from which there is a splendid view of Rome; and lastly, La Farnesina, a house and gardens built by the wealthy banker Ghigi in the time of Leo X., with some fine frescoes by Raphael. On the slope of the Janiculum is the Villa Lante, the casino of which was painted by Giulio Romano. The church and convent of San Onofrio, likewise on the Janiculum, above La Lungara, is worthy of notice, as having been the last asylum of Tasso, where he died and was buried.

Towards the southern end of the Lungara the hill recedes farther from the banks of the river, which here makes a bend to the east, and it is within this bend that the great bulk of the district called Trastevere is situated. Some of the streets run up the Janiculum to the gate of San Pancrazio, but the higher part of the hill is chiefly unbuild,

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though it is inclosed within the walls. The villa Spada is in this part, near the gate, outside of which is the villa Pamfilii, a favourite promenade of the youth of Rome, with shady walks, water-works, and clusters of lofty umbrella pines. Among the most remarkable buildings of Trastevere is the church of San Pietro in Montorio, which covers the spot on which St. Peter was crucified, and contains some fine paintings. Above San Pietro in Montorio, in a commanding situation, is the fountain of L'Acqua Paola, the largest in Rome, which appears at a distance like a triple triumphal arch with streams of water rushing through: it was constructed by Paul V. with the marble taken from a temple of Minerva. Lower down, at the foot of the hill, is the collegiate church of Santa Maria in Trastevere, a vast and handsome structure, with granite and porphyry columns, rich marbles, some good paintings, and an old mosaic of the 12th century. Near to it is the fine Benedictine convent of San Calisto, in the library of which is a splendid illuminated Latin Bible of the 9th century. A long street leads from San Calisto to the church and convent of San Francesco a Ripa, once inhabited by St. Francis of Assisi. The church is ornamented with paintings, sculptures, and rich marbles, and has a chapel with vaults belonging to the Pallavicini family. Not far from San Francesco is the large building of San Michele a Ripa, near the Tiber, facing the Aventine Hill, which rises on the opposite bank. San Michele is one of the most useful and best conducted charitable establishments of Rome, and is inhabited by above 700 persons. It consists of a workhouse, or house of industry for poor boys and girls, of a school of the fine arts for those boys who have a taste for them, of an asylum for the old and infirm of both sexes, and of a house of correction for juvenile offenders. Along one side of this vast building is the handsome quay and landing-place of Ripa Grande, where vessels which ascend the Tiber from the sea land their goods, and annexed to which are warehouses. Below it is the Porta Portese, or gate leading to Fiumicino, which is the southern extremity of Rome on the right bank of the Tiber.

There are above 360 churches in Rome, most of which are worthy of notice, either for their antiquity, architecture, or their decorations. A few of the most interesting have been mentioned. The churches constitute one of the principal attractions of modern Rome. One of the most remarkable, the church of St. John in Laterano, remains to be noticed.

The Basilica Lateranensis, with a palace and other buildings annexed to it, is situated at the south-eastern extremity of Rome, near the walls of Aurelian and Honorius, in the older and now desolate part of the city. This group of buildings is called 'in Laterano,' from being built on the estate once belonging to Plautius Lateranus, who was put to death by order of Nero (Tacitus, 'Ann.,' xv. 60). It appears that the later emperors had a palace on the spot, and that Constantine had a church or chapel annexed to the palace. This was the beginning of the splendid church of St. John in Laterano. Constantine, or some of his successors, gave up the palace to the bishops of Rome, and the Lateran, till the beginning of the 14th century, was the residence of the popes, who enlarged the adjoining church at different times, and made it their episcopal or patriarchal church, which it continues to be. The pope, in his quality of bishop of Rome, goes to take solemn possession of it after his election, and he officiates there on certain great festivals, for which reason it is styled the head church in the world, 'Ecclesiarum Urbis et Orbis Mater et Caput.'

Many councils have been held in the palace of the Lateran, five of which are styled Ecumenic, or universal. The palace fell to ruin during the long residence of the popes at Avignon in the 14th century, and a fire broke out in 1308, which consumed the greater part of it as well as the church. The church was restored, but the palace was abandoned, and Gregory XI., when he transferred his residence to Rome in 1377, fixed his residence in the Vatican palace, which then came to be considered as the residence of the pontiffs till the 17th century, when they went to reside on the Quirinal. Sixtus V. however in 1586 ordered a new palace to be built next to the Lateran church, which was not finished until more than a century after his death, and is that which now exists. It is used at present as an asylum for the poor; and there is also a large hospital on the other side of the square. The whole vast mass of buildings called by the name of Lateran has been much changed from what it was when the popes resided here. The interior of the Basilica, or church, in its present state, was completed in the 17th century by Clement VIII. and Innocent X., and the splendid front was raised by Clement XII. The church has a nave with double aisles, and is enriched with pillars of rare marble, statues, paintings, gildings, and bronzes. The middle gate, which is of bronze, and of masterly workmanship, was taken from the Æmilian Basilica in the Forum. The statue of Constantine, under the portico, was found in the Thermæ of that emperor on the Quirinal Mount. The ceiling of the nave, which is carved and gilt, is one of the richest in Europe. The bronze mausoleum of Martin V. is erected in the nave. Among the side chapels that belonging to the Corsini family is one of the richest in Rome; the pillars, walls, and pavement are of valuable stones, and the mausoleum of Clement XII. consists of a beautiful urn of porphyry, which lay under the portico of the Pantheon. The altar of the Blessed Sacrament is adorned with four fluted columns of gilt bronze. The cloisters, which date from the 13th century, have some curious

monuments of the middle ages. In every respect the church of the Lateran is one of the most interesting in a city abounding with magnificent churches. The obelisk of Syene granite which stands in the square at the back of the church is the highest in Rome, and perhaps in the world. The whole height of the obelisk, pedestal and ornaments included, is about 150 feet. The Baptistery of Constantine, which adjoins the church, is rich in marble pillars and paintings, and it contains the oldest baptismal font in Rome. The church of St. John in Laterano is collegiate: its chapter of canons and prebendaries, instituted by Boniface VIII. in 1300, has at its head a Cardinal Archbishop.

Under the fine portico on the north side of the building, constructed by Pope Sixtus V. from designs by Fontana, is the celebrated Scala Santa, or 'Holy Staircase,' which is said to contain a number of steps from the house of Pilate, which Jesus Christ ascended, and which are held in great veneration. Pious people ascend them on their knees, and to prevent the steps from being worn out, they have been covered with boards.

East of the Lateran, and in the eastern angle of the city, stands the Basilica of Santa Croce in Gerusalemme, which was built near the Amphitheatrum Castrense by the empress Helena. It derives its name from the circumstance that a portion of the true cross is deposited in it, and that earth brought from Jerusalem was mixed with the foundations. This basilica was consecrated by St. Sylvester, and has been often repaired. Underneath the church is the chapel of St. Helena, which is decorated with mosaics. The consecration of the Golden Rose, sent by the Pope annually to one of the great Catholic sovereigns, takes place in the Basilica of Santa Croce.

The great basilicas, namely St. Peter's, St. John, Lateran, Santa Maria Maggiore, and Santa Croce in Gerusalemme, are within the walls. Outside the walls are three other basilicas of great antiquity and historical interest. 1. The Basilica of San Paolo Fuori le Mura (or St. Paul without the walls), about 4 miles from the city on the road to Ostia, was founded by Constantine the Great above the tomb of the apostle. It was rebuilt by the emperor Theodosius on the original plan, which was carefully preserved in all the subsequent repairs and restorations. This church, formerly unrivalled for its magnificence and for its collection of Christian antiquities, after divine worship had been performed in it for about 1500 years, was destroyed by fire in 1824. It has been since rebuilt, and was consecrated by Pope Pius IX. in 1854. The site of this church is exposed to malaria in the summer months. This basilica was under the protection of the kings of England before the Reformation. 2. The Basilica of San Lorenzo is a mile outside the walls on the road to Tivoli. It was founded by the empress Placidia, and entirely rebuilt by Pope Pelagius II. in A.D. 578. The portico, of six Ionic columns, four of which are twisted, is supposed to date from the 8th century. Among the vast collection of Christian antiquities in this church, which is built over the tomb of St. Lawrence, are two marble amboines, or pulpits, relics of the earliest ages of Christianity. From one of the chapels in this church there is a descent to the catacombs of Santa Cyriaca. 3. About two miles out of the city, on the Appian way, is the Basilica of San Sebastiano, which was founded about the time of Constantine, but the present structure was erected in 1611 by Cardinal Borghese. The sanctuary is famous for its relics. Under the altar of one of the chapels is the tomb of St. Sebastian. There is an entrance from this basilica to the celebrated catacombs of St. Callistus, in which the Christians of Pagan Rome met for divine worship and for concealment, and in which they buried the remains of martyrs to the faith.

The palaces of the nobility form another class of interesting objects. They are generally buildings of princely magnitude and imposing style, containing vast courts and long ranges of spacious apartments, and Rome can boast of a greater number of these than any other capital in the world. In point however of interior comfort, neatness, or splendour, most of them are sadly deficient. The walls are of Travertino, or Tiburtine stone, the pillars and staircases are frequently of marble and other costly materials. The ground-floor is either let as shops or used for coach-houses, stables, kitchens, or other menial offices, and the windows are guarded with a strong iron-grating, without glass behind it, which gives to the lower part of the building the appearance of a prison. Several of the Roman palaces are partly let to lodgers, and the owners occupy only one floor, or part of a floor; the building being too large for any single family to live in, except such as a baronial family of the feudal times with its numerous dependents. The higher and wealthier Roman nobles however, the Borghese, Colonna, Doria, Rospigliosi, and others, still retain something of that feudal state, although they have lost their feudal jurisdiction.

The villas of the Roman nobility are more pleasant than their palaces, and resemble much the country-houses of the wealthy Romans of old. Several of the villas are within the walls of Rome, such as Medici, Piombino, Mattei, and Corsini; others are outside of the walls, such as the Villa Pamfili, on the Janiculum; Villa Patrizi, outside of Porta Pia; and the Villa Madama, upon Monte Mario. The Villa Albani, although plundered by the French in 1798, has recovered so much of its treasures as to be reckoned the third museum of antiquities in Rome, and next to the Vatican and the Capitol. Cardinal Alessandro Albani, who created this noble villa and its still nobler

museum towards the middle of the 18th century, made it the business of his life; he was a man of taste and an enthusiast for antiquity and the fine arts. Among the finest sculptures are—the rilievo of Antinous, the Thetis found in the villa of Antoninus Pius at Lanuvium, the Minerva, the Jupiter, the Apollo Sauroctonos, Diogenes in his tub, the two Caryatides representing Grecian basket-bearers, the bassi-relievi of the triumph of M. Aurelius and others. The contents of the museum Albani are illustrated in the works of Winckelmann.

The Villa Borghese, on the Pincian Mount, outside of the walls, is well known for its gardens, its laurel and myrtle groves, its fine sheet of water, its temple, and hippodrome. The fine museum of ancient sculptures was sold to Napoleon I., and is now in the Louvre; but it has been partly replaced by new acquisitions.

The numerous handsome fountains form another peculiar ornament of modern Rome as works of art, independent of their utility. Rome is better supplied with good water than most continental towns, and was much more abundantly supplied in ancient times. Of the ancient aqueducts three still continue to carry water into the town, having been repaired by the popes. The first is that of the Acqua Vergine, the best in quality, which comes from near the ancient Collatia, 14 miles north of Rome: it supplies a great part of the lower town, and feeds 13 public fountains, of which those of Trevi, of La Baraccia in Piazza di Spagna, of Piazza Navona, and Farnese, are the principal. The second is the Acqua Felice, the ancient Aqua Marcia and Claudia, restored by Pope Sixtus V.: it comes from the east, and supplies the upper or eastern part of the town, and feeds 27 public fountains, of which that of Moses, near Porta Pia, that of Triton in the Piazza Barberini, and that of Monte Cavallo, are the principal. The third aqueduct, called Acqua Paola, the ancient Aletina, enters Rome by the Janiculum, and supplies both the Trastevere and the Vatican, feeding the Fontana Paolina and the splendid fountains before St. Peter's: passing the Ponte Sisto by conduits, it supplies the adjoining fountain and the neighbouring district of Strada Giulia.

The obelisks which adorn most of the squares of Rome are another peculiar feature of this city. There are no less than 12 Egyptian obelisks, most of them covered with hieroglyphics, erected in different parts of Rome. When the Romans became masters of Egypt they removed many of these monuments to their own capital, among others that of the Lateran, which is the largest now known, its shaft being 105 feet (although it has been reduced, a portion at the lower part having been cut off in consequence of being fractured), and two of its sides 9 feet 8½ inches, the other two 9 feet. This obelisk was first conveyed from Heliopolis to Alexandria by Constantine, and by that emperor's son, Constantius, brought from the latter city to Rome, where it was erected in the Circus Maximus. The shaft of the Lateran obelisk weighs about 445 tons in round numbers. Augustus also had previously brought two from Heliopolis. That which was originally placed in the Vatican Circus by Caligula, and now stands in the piazza of St. Peter's, is next in size to that of the Lateran, though supposed to have been somewhat abridged of its original dimensions. The entire height, including the pedestal and the ornament at top, is about 132 feet; the shaft itself is 83 feet, and 8 feet 10 inches square at its base, and 5 feet 11 inches at the other end.

The streets of Rome are generally narrow, like those of most old cities, but many of them are straight and regular, and the great number of open spaces, such as squares, gardens, large courts, &c., render the town generally airy. The pavement of the streets is made of selci, or small cubes of basaltic stone, not very agreeable to pedestrians, especially as there are no footpaths except along the Corso. The streets are lighted at night with gas. Rome possesses a great advantage over many continental towns, in being provided with a regular system of sewers, partly ancient and partly modern.

The lower town is subject to occasional inundations from the Tiber, which sometimes rises, in seasons of extraordinary rains, from 25 feet to 30 feet above its ordinary level, whilst a considerable part of the town is hardly 20 feet above the level.

The climate of Rome in ancient times was considered healthy when compared with the surrounding country. The dense population of the ancient city, its elevated position, the plentiful supply of wholesome water, the convenience of an admirable system of sewers, and other circumstances contributed to maintain a tolerable state of salubrity within the walls. Cicero remarks the good choice of those who built Rome in the most favourable spot in the midst of a generally unhealthy region. ('De Repub,' ii. 6.) Horace however ('Epist,' l. 7), complains of the fevers which prevailed in the month of August. The improvements made by Augustus, and the reconstruction of the town after the great fire in Nero's time, seem to have had a good effect on the salubrity of the city, and Frontinus (i. 18) observes that the increased supply of water by means of additional aqueducts had contributed to render the atmosphere purer than it was in the old times. After the fall of the empire, and the ravages committed by the barbarians, we read of the abandonment of Porto, Ostia, Ardea, and other neighbouring towns in consequence of the malaria. At the same time a gradual removal was taking place within the walls; the population, which was much diminished, was leaving the southern part of the city for the northern, the hills for the plain of the Campus Martius.

As the southern hills, the Cælian, Aventine, Palatine, and Esquiline

became abandoned, they became also unhealthy, for populousness and salubrity go together in the whole Maremma region. But still the unhealthiness of the city was, and is, much less in degree than that of the country without the walls, and especially of the lowlands towards the sea-coast. There are families and whole religious communities that live all the year round on the desolate hills of old Rome without any remarkable inconvenience, though no one would venture to spend the summer months, at least from choice, outside of the walls between Rome and the sea. The miasmata which produce the malaria, emanate from the volcanic soil of the Campagna, acted upon by the rays of a burning sun; they seem to be of a dense heavy nature, seldom rising very high above the ground unless wafted by the winds. Walls appear to stop their advance, fire dispels them, and house foundations and pavements prevent their emanation.

It seems now proved that whenever the population has decreased within Rome, from political and other causes, the air has become less wholesome, and that the thinly-inhabited districts are, independently of their situation, unwholesome in summer, when compared with the more populous parts of the town. Thus the neighbourhood of the Corso and the lower town in general, and even the low filthy quarter of the Jews, are salubrious, whilst the eastern part of the fine street of Porta Pia, the neighbourhood of Santa Maria Maggiore, and that of the Lateran are considered unhealthy in summer, although they are on comparatively high ground. The parts of the Quirinal and the Pincian which are built upon are the most desirable situations in modern Rome for fresh air and health. On the other side of the river the thinly-built district of La Lungara and the Vatican are considered unhealthy in summer, whilst the densely-peopled part of Trastevere is less complained of. The fact is, that wherever the population gets thin and miserable, the malaria will gain ground; it will take possession of houses and gardens from which the warmth of the blazing hearth, and the cheering breath of human life, and the cares of domestic industry have disappeared.

The temperature of Rome is generally mild and genial. Frosts occur in January; but the thermometer seldom descends lower than 26° Fahr., and the mid-day sun generally produces a thaw. The tramontana, or north wind, sometimes however blows cold and piercing for days together. Snow falls at times, but it seldom remains on the ground for more than a day. Orange-trees thrive in the open air; but lemon-trees require covering during the winter months. Rains are frequent and heavy in November and December, but fogs are rare. In the summer months the heat is at times oppressive, especially when the scirocco, or south wind, blows. The hour which follows sunset is considered the most unwholesome in summer, and people avoid exposure to the open air. The sky of Rome has been admired by most travellers for its soft transparent light, its ultramarine blue tinge, and the splendid colours of the sunset, which Claude has so well rendered.

Antiquities: Baths.—The Baths of Titus were constructed near the Flavian Amphitheatre about A.D. 80, on the site of the gardens of the golden house of Nero, between the Colosseum and the Esquiline. The ruins stand now in a vineyard. The Baths of Trajan, partly on the same site, and adjoining those of Titus, were commenced by Domitian and finished by Trajan: they extended towards the church of San Pietro in Vincoli, which they almost touched. (In the church of San Pietro in Vincoli is Michel Angelo's celebrated statue of Moses.) The Baths of Trajan resemble very much those of Diocletian in plan: they occupy an area of about 1100 feet by 800 feet. One of the great hemicycles near the northern angle still remains. On the shorter sides, near the eastern and southern angles, are the remains of two hemicycles with niches for statues. The long side opposite the Colosseum contains in the centre the remains of a great semicircular theatre. There are few (and those few are unintelligible) remains of the internal part of the building. Part of the golden house of Nero remains under the Baths of Trajan. In the passages and chambers of this house there are still some elegant arabesque decorations, the colours of which in many parts are still very vivid.

The Baths of Constantine were, according to Victor, in the region of the Quirinal. They were erected about A.D. 326, and were repaired in the middle of the 5th century. In 1519 some of the ruins were still in existence, but they disappeared about 1527. Palladio restored the plan, and in the reign of Clement XII. an excavation was made on their site, when a magnificent portico, with an ornamented ceiling, and walls painted with historical subjects, were discovered.

The Baths of Diocletian, situated on the Viminal, were erected by Diocletian about A.D. 302. They were of vast dimensions. The extensive and capacious ruins were adapted to the purposes of a monastery, and Michel Angelo transformed the ancient tepidarium, the caldarium, and a part of the frigidarium into a church with its dependencies. The church is called Santa Maria degli Angeli. The rest of the ruins consist of large brick masses with arches of enormous span: some of these masses still support parts of the vaulted ceiling. On a part of the site of the baths Michel Angelo constructed a spacious and elegant cloister.

The Baths of Agrippa were inclosed within the space circumscribed by the square of the Pantheon, the street of the Theatre della Valle, the street of the Stimmate, and that of Gesù. They occupied a space about 500 feet from east to west and 700 feet from north to

south. The Pantheon has been sometimes considered a part of these baths.

The Baths of Nero were situated on the ground which stretches from east to west between the square of the Pantheon and the square Della Madama. Eusebius fixes the date of their construction at A.D. 65. One hemicycle alone of these baths exists in the inn of the Piazza Rondanini.

The Baths of Caracalla, commenced about A.D. 212, and continued by Elagabalus and Alexander Severus, are situated on a prolongation of the Aventine, not far from the gate of San Sebastian. They are perhaps the most extensive ruins in Rome; but being stripped of their marbles, columns, stuccoes, and paintings, they consist only of vast and lofty walls, corbels, and niches of brick and tile, and for the ordinary spectator possess in this dilapidated state little interest. The ruins stand in three separate vineyards.

Temples.—The ruins of the temple erected by Maxentius to the memory of his son Romulus, are vulgarly called the Stables of the Circus of Caracalla. They are situated in a large inclosure forming part of the villa of Maxentius on the Appian Way, and about a mile from the gate of San Sebastian. The lower part or basement is purely sepulchral, with niches for the sepulchral urns. The ceiling is vaulted, and supported by a huge central pier.

The Temple of Vesta, situated in the Forum Boarium near the Tiber, was constructed in the time of the Antonines. It is of a pure Greek style. Twenty Corinthian columns, of which nineteen remain, surrounded the circular cella, which was formed of masonry in the Greek taste. These columns are of Parian marble, and fluted; they are raised on a series of steps, most of which have been destroyed or removed. The ancient entablature and roof are wanting, and the latter is supplied by an ugly tile covering.

The Temple of Ceres and Proserpine, rebuilt by Tiberius, and now forming part of the church of Santa Maria in Cosmedin, is situated almost opposite the circular temple of Vesta. A part of the cella constructed with large masses of travertine, and eight columns of the peristyle, remain partly walled up in the church. The fluted white marble columns are in a good style, and of the composite order.

The Temple of Fortuna Virilis, originally built by Servius Tullius on the banks of the Tiber, was burnt and rebuilt in the time of the republic. It is of an oblong figure, constructed of travertine stone and tufa, and stuccoed with a fine and hard marble stucco. The hexastyle portico of the Ionic order has been walled up between the columns, and an engaged intercolumniation is continued on the walls of the cella. The temple is placed on a high moulded basement, and was ascended by a flight of steps. The columns support an entablature, the cornice is bold, and the frieze is decorated with festoons supported by infantine figures, and intermixed with skulls of oxen and candelabra.

The Temple of Fortune is situated in the Forum Romanum, on the Clivus Capitolinus. On the entablature is the following inscription:—

SENATUS POPVLVSQVE ROMANVS
INCENDIO CONSUMPTVM RESTITVIT.

The Temple of Jupiter Tonans, situated also on the Clivus Capitolinus, was built by Augustus, and is supposed to have been restored by Septimius Severus and Caracalla. The portico was hexastyle, of the Corinthian order, and of white Luna marble. The columns are deeply fluted. Upon the frieze are carved instruments of sacrifice, and the decorations which remain indicate that the building was highly ornamented.

Of the Temple of Concord which stood near the temple of Jupiter Tonans, there remain only the ruins of the cella, which was originally covered with giallo antico and pavonazzetto. The pavement was formed of slabs of the same material, and numerous fragments discovered in the late excavations prove that it was profusely enriched with ornamental carvings and statues, and that it was also destroyed by fire.

The Temple of Antoninus Pius is in the Forum of Antoninus, now the Piazza della Pietra, and at a short distance from the Column of M. Aurelius Antoninus. Eleven large Corinthian columns, which are much injured, remain on the north side, and support a white marble architrave; the rest of the entablature, being much ruined, was restored with stucco. The columns have been walled together, and form the front of the present Custom-house, in the court of which there are several fragments of vaulting adorned with sunk panels.

The Temple of Antoninus and Faustina was erected by the senate to the emperor and his wife in the Forum Romanum. The two sides of the cella, once clothed with marble, remain, as well as the magnificent marble entablature over them. The hexastyle portico, with the return columns of the Corinthian order, each of one single piece of Carystian or Cipollino marble, still supports a considerable part of the entablature. In the frieze are griffins, candelabra, and other ornaments, in a fine style of art. On the ruins of the cella has been erected the church of San Lorenzo in Miranda.

The Temple of Romulus and Remus is a circular temple in the Forum Romanum, near the temple of Antoninus and Faustina. In the year 527, this building was used as a vestibule to the church of Santi Cosmo and Damiano, erected by Felix IV. Urban VIII. applied the present Etruscan bronze door, found at Perugia, and placed the

two antique porphyry columns, with their entablatures, in their present situations.

The Temple of Peace, called also the Basilica of Constantine, was built by Maxentius, and after his death dedicated by Constantine. This edifice, which consisted of three naves, has the northern-most till in good preservation, and divided into three great arches, embracing the whole length of the nave. The centre arch, at a later period, was altered into the form of a tribune. The vaultings of all three are decorated with enormous sunk panels and stuccoed ornaments, and the walls with niches. The southernmost nave was similar, but without a tribune. All except the indications of the piers have disappeared, as well as the great central nave, at the extremity of which was the principal tribune, of which there are only a few fragments of the vaulted ceiling on the ground. Winding brick staircases led up to the roof; one is still almost entire. The building was 300 feet long and 220 feet wide. The principal façade faced the Colosseum, and part of an external arcade remains in this direction. The pavement was of giallo antico, pavonazetto, and cipollino. At a later period this building was converted into a Christian church, at which time an entrance was formed towards the Palatine, on the Via Sacra.

The Temple of Minerva Medica was a circular domed temple of brick, erected probably about the time of Diocletian. The circumference has nine niches for statues, seven of which have been found among the ruins at different times. Only a part of its bare walls and a small portion of the dome, with the buttresses to secure it against a lateral thrust, now remain.

The Temple of Nerva, situated in the forum of Nerva, was consecrated by Trajan to the memory of Nerva; it was one of the most sumptuous edifices in Rome. Only three columns and a pilaster, partly buried in the ground, on the south side, now remain.

The Temple of the Sun, on the terrace of the Colonna gardens on the Quirinal Hill, is said to have been erected by Elagabalus. It was of gigantic dimensions, and highly enriched, if we may judge from the two great masses that are left—a part of an architrave and frieze, and the angle of the pediment. Many fragments of sculpture dug up in the gardens have been fixed in walls at the back of these two masses. The site was eminently calculated for a colossal temple, as the entire height of the building would have been visible from most parts of Rome.

The Temple of Janus no longer exists, but its site is supposed to have been the junction of the four great forums, in the immediate vicinity of the Mamertine prison, the arch of Septimius Severus, and the Basilica Pauli.

A temple for a long time called the Temple of Jupiter Stator, and afterwards the Temple of Minerva Chalcidica, is situated in the Forum Romanum, next to the site of a temple of Castor and Pollux. The ruin consists of three marble Corinthian fluted columns on an isolated basement of travertine; the columns support a part of the highly enriched entablature, which is in tolerable preservation. The proportions and execution of this fragment are the very finest, and, since the restoration of true architecture, it has served as the great model of the Corinthian order. Of the temple of Jupiter Capitolinus, originally built by the Tarquins, burnt a.c. 83, and rebuilt by Sulla, there remain only some vast substructions in the gardens of the Caffarelli Palace. A temple was built to Æsculapius on the island of the Tiber, the site of which is occupied by the convent and church of San Bartolomeo.

Gates.—Many of the gates of ancient Rome still remain, most of them having been rebuilt by Honorius or Belisarius. We mention the following:—Porta San Lorenzo, built by Honorius, A. D. 402, and called Tiburtina from its leading to Tivoli; it also opened out on the Via Collatina. This gate is attached to the monument at the junction of the three aqueducts, the Aqua Marcia, Tepula, and Julia, which bears an inscription alluding to the repairs made by Caracalla. The aqueduct called Marcia is commemorated by a coin of the Marcii, which possibly may represent the original monument.

The Porta Maggiore, situated at the spot called the 'Spes Vetus.' Here are the ancient gates of the Via Labicana and Via Prænestina, formed by the monument of the Claudian aqueduct. The magnificence of these gateways was owing, in a great measure perhaps, to the circumstance of the Claudian aqueduct passing over them. The three great inscriptions on the attic above the gateways show, first, that Tiberius Claudius, the emperor, brought to Rome the Claudian waters composed of the Cærulean and Curtian streams, and also the Aniene Nova. The second indicates the restoration by Vespasian; and the third, that by Titus. This magnificent façade consists of two great archways, and three piers, each decorated with two rusticated columns of the Corinthian order, placed on a rustic basement, and supporting an entablature and pediment. Above these is the lofty attic in which are the two water-channels. This attic is surmounted with a cornice. Severe in character, this structure is one of the best preserved, and one of the most imposing architectural masses in Rome. From this gate may be seen the four aqueducts, Julia, Tepula, Marcia, and Aniene Vetus.

The Porta San Paolo, substituted by Honorius for the ancient gates of Servius called Trigemina, Minucia, Navalis, and Lavernalis. Being built on the Via Ostiensis, it was called also Ostiensis. The present gate was rebuilt by Belisarius, who constructed it on a new level, the

ancient being 26 palms lower. The internal gate is older than the time of Belisarius, and is formed with a double arch.

The Porta del Popolo, the Flaminian Gate, the chief entrance into Rome, was built by Honorius on a site a little higher up than the present gate, towards the Pincian hill, on a slight elevation; it was removed between the 6th and 8th centuries to its present situation. The name of Porta del Popolo was given to it in the 15th century. Aided by Vignola, Pius IV. decorated the external front, after the design of Michel Angelo. The internal decoration of this gateway is by Bernini.

The Porta Latina, flanked by round brick towers, is built up in the walls near the modern gate of San Sebastiano, in the south-eastern angle of the city. On a spot near it St. John is said to have suffered martyrdom in A. D. 96. Inside the walls, between the Porta Latina and the Porta San Sebastiano, is the tomb of Scipio.

The Porta San Sebastiano, the ancient Porta Appia, presents two fine semicircular towers of brickwork resting on substructions of solid marble. Inside of it is the arch of Drusus.

The Porta San Pancrazio, on the Janiculum, is probably the ancient Porta Janiculensis. Outside the walls between this gate and St. Peter's are the grounds of the Villa Pamfili. It was here the French commenced their operations against Rome in the siege of 1849.

Tombs and Monuments.—Among the ancient tombs not the least remarkable is the sepulchre of Eurysaces the Baker, which is situated at the junction in Bivis of the Via Labicana and the Via Prænestina, close to the monument of the Claudian aqueduct. The tomb of C. Publicius Bibulus stood originally without the walls of Servius Tullius; it stands now at the extremity of the Corso, and consists of two stories, one of which is buried in the soil. This monument appears to have been erected prior to the Augustan age. The tomb of the Claudii, a mass of shapeless rubble, stands on the Via Marforio almost opposite the tomb of Bibulus.

The Pyramid of Caius Cestius, constructed in the reign of Augustus, for the ashes of Caius Cestius, and situated near the Porta San Paolo, is a pyramidal mass of masonry covered with slabs of white marble, and is erected on a basement of travertine. In the centre is a small vaulted sepulchral chamber, decorated with arabesques, of which some brilliantly coloured portions remain. At the angles are two Doric fluted columns of white marble placed on pedestals, and on one of two bases which have been discovered, was a bronze foot, which, from an inscription on the base, appears to have belonged to a statue of Caius Cestius.

The Tomb of Scipio is situated on a cross-road connecting the Via Appia and the Via Latina. The chambers are irregularly excavated in the tufa rock, and appear to have been turned into a tomb, having been originally formed for the purpose of procuring building materials. The ancient entrance consists of a rude arch upon peperino imposta, and appears to have been partly covered with stucco and painted. Over the arch is a stout moulding, upon which there was anciently a second story. Several slabs of marble with inscriptions are attached to the sides of the passages and chambers cut in the tufa. An elegant sarcophagus of peperino with a bust of the same material were found in one of these chambers, and have been placed in the Vatican.

The Tomb of Cæcilia Metella, constructed on an eminence on the side of the Appian way, a little beyond the Circus of Romulus, and dedicated to the memory of Cæcilia Metella, daughter of Quintus Metellus, and wife of Crassus, is round in form, and placed on a square basement constructed with magnificent blocks of travertine. It is surmounted with a beautiful decorated frieze and an elegant cornice, from which most probably rose a dome or a conical-formed roof, now destroyed. In its place there is a battlemented wall, built A. D. 1300, which indicates its change from a sepulchre to a fortress. In the time of Paul III. a sarcophagus was found here, which was placed in the cortile of the Farnese palace in Rome.

The Mausoleum of Augustus, constructed by Augustus, between the Via Flaminia and the banks of the Tiber, was destroyed in 1167 in a popular tumult, and became a shapeless ruin. The building was of circular form, 220 Roman feet in diameter, and was probably domed. Round the inner circumference were thirteen sepulchral chambers and an ample chamber in the centre. In the latter part of the last century the remains of this edifice were turned into an amphitheatre for bull-fights and fireworks. Two obelisks without hieroglyphics, which formerly stood at the entrance of the Mausoleum, now adorn the piazza of Santa Maria Maggiore and the Quirinal.

The Mausoleum of Hadrian, now called Castle of San Angelo, erected by Hadrian on the right bank of the Tiber, within the gardens of Domitia. This building consists of a circular tower whose present diameter is 188 feet, placed on a quadrilateral basement, each side of which is 253 feet. It was once highly decorated, but no vestiges of the decorative part remain. Procopius, who described it in the 6th century, before it was injured, says it was built of Parian marble, and adorned with statues, both of men and horses, of the same material. ('Goth.' lib. i.) Between the time of the rebuilding of the walls of Rome by Honorius and the Gothic war, it appears to have been already turned into a fortress, but without injury to the decorations. During the wars with the Goths, the Romans, being shut up in the building, were reduced to the necessity of throwing down the statues on their besiegers. In the 10th century it was fortified, and it has been since

extended and strengthened by the popes. The ancient doorway is situated immediately in front of the bridge; a spiral-way led to the sepulchral chambers at the summit of the building; part of the white mosaic floor with which the way was paved is still remaining.

Bridges.—The Pons Ælius, now Ponte San Angelo, crosses the Tiber immediately opposite the Mausoleum of Hadrian. It was constructed by Hadrian as an entrance to his mausoleum and the gardens of Domitia, in which he also built his circus. The whole of this bridge is ancient except the parapets, some trifling restorations of masonry, and a small arch on the side of the Castle of San Angelo. It consists of three large and two small arches, with buttresses attached to the piers and starlings projecting beyond them. It is decorated with modern statues.

The Pons Milvius, now Ponte Molle, on the Flaminian Way, rather more than a mile from the city. The construction of this bridge is attributed to Æmilius Scæurus, about B.C. 100. A part only of the bridge is ancient. Nicholas V. restored it in the middle of the 15th century, up to which period the extremities consisted of wooden drawbridges.

The Pons Sublicius, or Sublician Bridge, first erected by Ancus Marcius of wood, was destroyed by an inundation in the time of Augustus, and rebuilt of stone by M. Æmilius Lepidus, the censor, from whom it took the name of Æmilian. It was restored by Antoninus Pius, and in little more than six centuries after was destroyed by a great inundation of the Tiber during the reign of Pope Adrian I. The basements of the piers are visible when the water is low. From a coin of the Æmilii it appears to have consisted of three arches, and was adorned with an equestrian statue of the censor.

The Pons Fabricius, built by Fabricius, the Curator Viarum, A.U.C. 690, connects the city with the Isola Tiburtina, and is the best preserved of the ancient Roman bridges. Pons Gratianus is a continuation of the Pons Fabricius, connecting the Isola Tiburtina with Trastevere. It was constructed about A.D. 367.

The Pons Janiculensis, now Ponte Sisto, connecting Trastevere with the city above the Fabrician Bridge, appears to have been restored by one of the emperors. It was reconstructed in 1774.

The Pons Palatinus, or Senatorius, now called Ponte Rotto, was below the Fabrician and Gratian bridges, and above the Sublician; only three arches of it remain on the Trastevere side. It was first built by P. Cornelius Scipio Africanus, and was repaired by Augustus. It was a very handsome bridge, and had a roof supported by marble columns. Being carried off by a great flood, it was rebuilt by Pope Pius III., and again by Gregory XIII. in 1575; after which it broke down, and has not been repaired since.

The Pons Triumphalis, called also Pons Vaticanus, was constructed in a bend of the river near the Vatican. It is conjectured to have been built by Caligula or Nero as a means of easy access to their gardens on the Vatican. It appears to have been ruined about the 5th century: some remains of the rubble piers of this bridge may be seen when the water is low.

Theatres.—Of the Theatre of Pompey, built by and named after Pompey the Great, there are some ruins under the Palazzo Pio, near the Campo di Fiore.

The Theatre of Marcellus, built by Augustus, and dedicated to Marcellus, son of Octavia, his sister, in honour of whom he named the portico attached to this theatre. This was the second solid theatre constructed in Rome, and consisted of three orders, the upper of which is entirely lost. The remains of this building are in the Piazza Montanara, and a small part near the entrance to the Palazzo Orsini. The style of the architecture was the Palladian model of the Roman Doric and Ionic orders.

The Flavian Amphitheatre, or Colosseum, well characterised by Byron in its present state as

“A noble wreck in ruinous perfection,”

was commenced by Vespasian, in the last year of his life, on the site of the great pond formed by Nero within the extent of his Domus Aurea. The following brief description will give an idea of the exterior of this building when perfect:—Its form is that of an ellipse, the axes of which are 620 feet and 513 feet long respectively. The arena is 287 feet long and 180 feet broad. The difference between the external and internal diameters (166 feet 6 inches at each end) is occupied by four corridors and two blocks of radiating substructions—in, or between, which are the staircases and ways from the outer corridors to the inner, and to the arena, together with the concentric or encircling walls which gird the structure, separate the corridors, and inclose the arena. Two of the surrounding corridors lie together, or adjoin each other, on the outer side; and in this particular the Colosseum exceeds every other structure of the kind, all the rest having but one only; it thus acquires a second gallery, in which also it is singular. The space covered by this edifice is little short of six acres.

The outer encircling wall is pierced with 80 openings, leaving of course an equal number of piers; every opening is arched, and in or against every pier is a column projecting about half its diameter, and supporting an entablature which runs in an unbroken line all round the structure. With the exception of the four central openings, which lie on the diameters of the ellipse, and are each nearly two feet wider than the rest, all the openings are very nearly the same, their width being 14 feet 6 inches. An exactly similar series of arches, diminished

only in proportion to the smaller extent of the ellipse, separates the second corridor from the first; and another, bearing the same relation to the second series that the second does to the first, or outer, bounds the second corridor.

The external elevation of the Colosseum (which alone can be noticed, as a detailed description of the building is given in another part of the ‘English Cyclopædia’) is composed of three stories of attached or engaged columns with their usual accessories, and a pilastered ordinance, forming a species of attic, which is pierced with windows—one in every other interspace. The lowest ordinance of columns rests on the upper step of the substructions, or on the ground-floor of the structure; it is of what is termed the Doric style. The intervening arches are semicircular; they spring from moulded imposte, and have moulded archivolts on their outer faces. The second ordinance is in the Roman Ionic style, having voluted capitals to the columns; and the third is in the Corinthian or foliated style: these rest upon continued, but recessed, stylobata; their entablatures are unbroken throughout, and the arches in the intercolumniations in both correspond exactly—except in minor details—with those of the lowest or Doric ordinance. The pilasters have foliated capitals also, and are called composite; they rest on deep plinths under which there is a continued and recessed dado superimposing the Corinthian entablature; this dado is pierced with holes or small windows alternating with those of the ordinance above, to give light to the corridor behind the lower and under the upper gallery on the inside. The crowning entablature, which runs its cornice round in one unbroken line, is made bold and effective by deep modillion blocks or consoles occupying the whole depth of the frieze.

The Amphitheatre Castrensium, a small brick amphitheatre, erected probably in the first century of the Christian era. It originally stood without the walls of Servius Tullius, but during the reign of Honorius it was employed to form part of the new inclosure, and the arches were filled up. On the inside the form of a semi-ellipse on its greatest axis is all that can be discerned; but externally the engaged Corinthian columns of the lower order, with their brick capitals, are well preserved; of the upper order there only remain a pilaster and part of an arch.

Arches.—The Arch of Titus, which stands near the ruins of the Temple of Venus and Rome, was erected by Domitian in honour of Titus and his conquest of Jerusalem. It is of Pentelic marble, and of an elegant design, but with only one arch. On the sides of the piers under the arch, which is highly decorated, are two very fine bas-reliefs, illustrating the victory of Titus over the Jews. In one of them is represented the golden table, the trumpets and horns of silver, and the golden candlestick with its branches. The triumph of Titus is represented also on the frieze on the outside of the arch.

The Arch of Septimius Severus, erected A.D. 205 by the senate and Roman people, in honour of Septimius Severus and his sons Caracalla and Geta, for their victories over the Parthians and other oriental nations. This arch is also of Pentelic marble, with archways and transverse archways through the piers of the centre arch. Each front is decorated with four fluted columns, and a series of bas-reliefs. Above the attic was a marble group representing the emperor and his two sons, in a chariot drawn by six horses. The whole of the mouldings and the vaulting are highly enriched with carved ornaments.

The Arch of Constantine, erected in commemoration of his great victory over Maxentius, stands near the Meta Sudana, and fronting the Colosseum. It is formed with three archways, adorned with four beautiful columns of giallo antico on each side, and enriched with many fine bas-reliefs and statues. Above the attic was a triumphal quadriga. The roadway passes under the arch.

The Arch of Dolabella. This single arch of travertine was constructed A.D. 10, by the consuls Publius Cornelius Dolabella and Caius Junius Silanus. It stands near the church of San Giovanni and Paolo, and is thought to have been the entrance to the Campus Martialis, where the Equiria, or equestrian games in honour of Mars, were celebrated, when the Campus Martius was inundated by the Tiber.

The Arch of Gallienus, upon the site of the Esquiline gate, dedicated to Gallienus and Salonina, by Marcus Aurelius Victor. The gate is formed of a single arch, adorned with four pilasters, and flanked with two buttresses, a part of one of which remains on the side towards the church of Santa Maria Maggiore. The structure is formed of large blocks of travertine.

The Arch of Drusus, erected across the Appian Way, close to the gate of St. Sebastian, by the senate, to Claudius Nero Drusus, father of the emperor Claudius. It consists of one arch only, adorned on each side with two marble columns of the Composite order; above the entablature are the remains of a pediment, and there was also an attic. Caracalla used the arch as part of the line of his aqueduct for his Thermæ.

The Arch of Janus Quadrifrons, situated in the Velabrum, is square, 105 palms on each face, with a large arch in each front, forming an open vaulted space. In each of the piers supporting the arch are twelve niches in two rows, between which were small columns as a decoration forming a double order. The construction is formed of large blocks of white marble. The upper part is ruined. The building was held by the Frangipani as a fortress.

The Arch of Septimius Severus, situated also in the Velabrum, and close

to the Arch of Janus, is a small structure highly enriched, and consists of a single opening, square in form, and supported on broad pilasters filled with ornament. The inscription shows it to have been erected by the bankers and dealers of the Forum Boarium in honour of Septimius Severus, Julia Domna his wife, and Caracalla.

Columns.—The Column of M. Aurelius Antoninus, in the Piazza Colonna, has been already noticed.

The Column of Antoninus Pius was discovered on the Monte Citorio, in the house of the Mission, in 1709. It was of a single piece of red granite, and had a white marble pedestal, now in the Vatican gardens. The granite shaft, which was 68 Roman palms long, was used to restore the obelisks erected by Pius VI.

The Column of Trajan, formed of 34 pieces of white marble, was erected by Trajan, as a decoration to his great forum, at the west base of the Quirinal. The height represents the height of the Quirinal cut away and removed for the level site of the forum. This column, admirable both for its proportion and for the design and execution of the bas-reliefs and ornaments, which are in the best taste, was the receptacle for the ashes of Trajan. A series of bas-reliefs are round the shaft, in a spiral, forming a pictorial history of the achievements of the emperor. It is in a high state of preservation. A statue of St. Peter is placed on the pedestal at its summit, and it is ascended by a spiral staircase.

The Column of Phocas, erected in the Forum Romanum by the exarch Smaragdus to the emperor Phocas A.D. 608, is a fluted Corinthian column. On the top of the capital there was a gilt statue of the emperor. The pedestal is placed on a flight of steps of bad construction.

Forums.—The forums of Trajan, Nerva, and Augustus were situated between the Quirinal and the Capitoline. The Forum Romanum lay between the Capitoline and the Palatine; and between the west base of the latter and the Tiber was the Forum Boarium, along the north of which ran the Cloaca Maxima; and to the south, between the Palatine on the east and the Aventine on the west, was the Circus Maximus. Between the Forum of Augustus and the Forum Romanum the Via Sacra led down from the Capitol in the direction of the Colosseum, to the east of which was the street called Suburra, between the Esquiline and the Cælian hills. Northward from the Forum of Trajan was the Forum Suarium and the Forum of Antoninus, which lay between the Flaminian Way and the Quirinal. West of the Flaminian Way, and between it and the Tiber, was the Campus Martius and the Flaminian Circus. It has been before stated, that the modern city covers this part of the ancient site, and the position and extent of most of these forums are now all but unknown. The Forum of Nerva is marked by an irregular line of wall, remarkable for its height and massive masonry of travertine, set without cement. It is highly probable that the wall is much more ancient than the date of the formation of the forum. Through this wall there is an ancient archway with the masonry cut diagonally. Of the Forum of Trajan only the celebrated Column of Trajan and part of the Basilica Ulpia can be seen; the rest of the site is buried under the adjacent streets and houses. The columns of the basilica are of gray granite, and have been replaced in their respective situations. The site of the steps and pedestals at their entrance may be distinguished, and numerous fragments of marble capitals, entablatures, and ornaments are ranged round the area.

Miscellaneous.—The Mamertine and Tullian Prison, situated near the Capitol, and close to the Roman Forum, was built prior to the reign of Servius Tullius, and enlarged by him. Part of the front, 45 feet long and 18 feet high, is constructed with large blocks of tufa without cement; a part is also buried in the earth. The prison was divided into two floors, and the round hole through which criminals were dropped into the lower prison still exists. There is a tradition that St. Peter was confined in this prison by order of Nero. It underwent some repairs A.D. 23; but there is no doubt that the building is of a much more ancient time. The masonry resembles that of the Treasury of Atreus at Mycæne and the tombs of Tarquinii, and it was probably the work of ancient Etruscan workmen. The prison is now covered by the church of San Giuseppe, and is far below the level of the surrounding soil.

The Cloaca Maxima, constructed by Tarquinius Priscus about B.C. 600, is perhaps the most memorable work of ancient Rome. It was built to drain the marshes between the Palatine and Capitoline hills. The masonry is of the same massive and durable character as that of the Mamertine Prison. It is a tunnel or arched sewer, 14 feet wide and 14 feet high, constructed of vast blocks of volcanic stone put together without cement. Two parts of this great sewer only are visible, one near the arch of Janus Quadrifrons, opposite the church of San Giorgio in Velabro, and the other on the Tiber near the temple of Vesta, a little below the Ponte Rotto.

The Prætorian Camp was built by Sejanus, in the reign of Tiberius, without the walls of Servius, to the north-east of Rome, and dismantled by Constantine the Great. Three sides of the walled inclosure of a rectangular figure were joined by Honorius to his new walls, and form a large rectangular recess on the plan of Rome. The site of the camp is now a vineyard.

The Meta Sudans was a fountain placed at the point of junction of four ancient regions, and within a short distance of the Colosseum. It

was reconstructed by Domitian in the form of a cone, in the centre of a circular basin 80 Roman feet in diameter. The water came out in a jet from the top of the cone. The gladiators of the amphitheatre washed themselves at this fountain, which was repaired a few years ago.

The Portico of Octavia, built by Augustus, near the theatre of Marcellus, as a place of refuge for the spectators in the theatre from a storm. The portico, which had been burnt, was restored by the emperors Septimius Severus and Caracalla. The ruin consists of one of the principal entrances only, which had two fronts each, adorned with four Corinthian fluted columns of white marble and two pilasters, supporting an entablature and pediment. Several columns of Cipolino and Carystian marble are walled into the houses of the fish-market (Pescheria), in which the ruin is situated. A part of the portico is now used as a church.

The Palace of the Cæsars, commenced by Augustus Cæsar, on the site of the house of Hortensius, the orator, and of Catilina. Augustus added to the original dwelling of Hortensius a temple dedicated to Apollo, with a portico of Numidian columns, and also a library. This palace was extended by Tiberius towards the Velabrum to the extremity of the Palatine Hill. This part, in contradistinction to the Domus Augustana, was called Domus Tiberiana. It was increased towards the forum by Caligula, and united to the Capitol by a bridge, which was afterwards destroyed by Claudius. The Palatine not being sufficient for Nero, he extended the palace of the Cæsars over the whole of the plain between it, the Cælius, and the Esquiline, and a part even of the Esquiline itself, thus uniting the palace with the gardens of Mæcenas. This extensive palace having been destroyed by the great fire of Rome in the reign of Nero, it was rebuilt by him in a sumptuous style, and called the Domus Aurea, or Golden House. After having suffered many changes and mutilations during the reigns of successive emperors, it was much injured at the sacking of Rome by the Vandals. Yet Heraclius inhabited it in the 7th century, and in the time of Pope Constantine, in the beginning of the 8th century, the greater part of it was standing. Extensive remains of the substructions and some of the corridors still exist, especially towards the Circus Maximus. The ruins of the palace of the Cæsars stood in what is now called the Orti Farnesiani, and here may be recognised the position of a part of the palace of Augustus, of that of Tiberius, of Caligula, and of Nero. The most extensive parts of the ruins are the foundations and basements which sustained the external porticoes, and the basements of the other parts of the palace, which from time to time was enlarged. On the higher part of the hill may be seen considerable remains of the famous Palatine Library, built by Augustus, and the magnificent Temple of Apollo connected with it, and built after the victory of Actium. Towards the Circus Maximus are the foundations of the theatre built by Caligula, in the palace which he joined to the front of the house of Augustus. Near the Temple of Apollo, but below it, there are two small chambers, called the Baths of Livia, which are very well preserved, and the painting and gilding are in good taste.

The Curia Hostilia, on the southern side of the forum. Three walls only of this building remain; they were originally covered with marble, and the façade was probably decorated with columns.

The Milliarium Aureum, or Golden Milestone, from which distances were measured, stood near the temple of Saturn and close to the arch of Septimius Severus, in the Forum Romanum. It is a circular pillar on a circular basement lined with marble, and was erected by Augustus.

The Circus Maximus, situated in the valley at the south side of the Palatine Hill, was founded by Tarquinius Priscus, and restored and enlarged by Julius Cæsar. Augustus erected the obelisk of the spina. It was burnt in the great fire of Rome under Nero. Vespasian restored and perhaps enlarged it. Trajan embellished it, and under Constantine the Great it was again repaired and beautified, and his son Constantius erected the second obelisk. Of this vast edifice the general form only is distinguishable in the vineyard in which it now stands.

The Circus of Romulus, commonly called the Circus of Caracalla, is adjoining to the Temple of Romulus, and is of the same style of brick construction. This circus was consecrated by Maxentius, A.D. 311, according to the inscription upon it.

General Topography.—The part of Rome built by Romulus about B.C. 752 occupied the Palatine Hill on the eastern side of the Tiber. This town, built in a square form, was intersected by two main streets, one running from north to south, the other from east to west. This square town existed till a very late period, and was surrounded by a wall pierced by three gates. The Pomerium, that is, the precincts within which auguria could be taken, ran, according to Gellius (xiii. 14, 2), round the foot of the hill; but was afterwards extended. Towards the Capitoline and the Aventine respectively the town was surrounded by swamps and ponds. Between the Palatine and Cælian the valley was not so deep, and it contained a long tract of elevated ground called the Velia, on which side the town, being easy of access, required fortifications.

As early as the time of Romulus, Etruscan settlements existed on the Cælian Hill, and extended over Mons Cispinus and Oppius, which are parts of the Esquiline. They were compelled by the Romans to

abandon their seats on the hills, and to descend into the plains between the Cælian and the Esquiline, whence the Vicus Tuscanus in that district derived its name.

The three hills north of the Palatine, that is, the Quirinal, Viminal, and Capitoline, were occupied by the Sabines, and the last of these hills was their citadel. When the Latin and Sabine towns became united, the valleys between the hills must have been drained, and the cloaca by which this was effected belong to the earliest architectural remains of Rome. The valley between the Palatine and Capitoline was set apart as the place of meeting for the two nations (Comitium and Forum Romanum), and the boundary between the territories of the two towns was probably marked by the Via Sacra, which came down from the top of the Velia, ran between the Quirinal and the Palatine, and then making a bend proceeded between the latter hill and the Capitoline, as far as the temple of Vesta, whence it turned right across the Comitium towards the gate of the Palatine.

The Seven Hills inhabited by these three different nations were united into one town, and surrounded by a wall by king Servius Tullius. The new fortification consisted in some places of a wall, probably with towers at certain intervals; in other places the steep sides of the hills rendered artificial fortifications unnecessary, for instance on the western side of the Capitoline. The north-eastern part from the Colline to the Esquiline gate, seven-eighths of a mile in length, was fortified by a wall, or rather mound. From the border of a moat 100 feet broad and 30 feet deep, was raised a wall 50 feet wide and above 60 feet high, faced towards the moat with flagstones, and flanked with towers. Traces of this gigantic work are still visible. The walls of Servius were above six miles in circuit and had above 20 gates, the sites of almost all of which are determined. They included considerable tracts of land which were not occupied by buildings, but were either pasture-grounds or covered with wood or thickets, such as great parts of the Esquiline and Viminal. It was however principally the inner space near the wall itself which was not occupied by buildings until a very late period.

Many great buildings were erected at Rome during the kingly period. The great temple of Jupiter was on the Capitol. The prison of Tullius, called Carcer Tullianus, or Mamertinus, was at the eastern foot of the Capitoline. The Circus Maximus was between the Palatine and the Aventine. The Forum Romanum was between the Palatine and Capitoline. The Cloaca Maxima carried the waters of the Velabrum and the Forum Romanum into the Tiber, and is still a stupendous work. Of the wall of Servius Tullius few traces remain; but it existed in the 8th century of Rome.

About 120 years after the establishment of the republic, when the city was taken by the Gauls, the whole was consumed by fire, with the exception of the Capitol, a few houses on the Palatine, and some of the works above enumerated, the magnitude of which saved them from destruction. The hasty mode in which the city was rebuilt explains the fact that down to the time of Nero the streets of Rome were narrow, irregular, and crooked, and, in point of beauty and regularity, Rome was far inferior to most of the other great towns in Italy. Down to the 5th century of the city, private houses were generally covered with shingles, and there continued to be a number of groves within the walls of the city. But towards the end of the period, which is comprised between the Gallic conflagration and the end of the second Punic war, Rome began to be embellished with temples, which however, both as to material and architecture, were far inferior to the temples of Greece. High roads and aqueducts also began to be built. The streets of the city itself were not paved, though we have no reason to suppose that they were neglected. At a somewhat later period we find public places, streets, and walks under the porticoes, commonly paved with large square blocks of tufo or of travertine. In the year B.C. 176, the censors ordered the streets of the city to be paved with blocks of basalt, which were laid on a stratum of gravel, such as is still visible in a part of the Via Appia. At the time of the war with Hannibal, the district near the river, between the Capitoline and Aventine, was almost entirely covered with buildings.

The private houses had from the earliest times been very simple in structure; but after the conquest of Greece, and more especially of Asia, individuals began to build their dwellings in a magnificent style, and the taste for splendid mansions and palaces increased so rapidly, that a house like that of Crassus, which at first was universally admired for its splendour and magnificence, in the course of a few years was lost among superior buildings. Public edifices however still remained the chief objects of the pride of the Romans. Theatres were erected in several parts of Rome during the last century of the republic. During the civil wars between Marius and Sulla the number of houses had increased to such a degree, that the walls of Servius Tullius in several parts lay within the city itself.

Of all the splendid buildings which were raised during the latter part of the republic scarcely any traces exist, and Augustus might well say that he had changed Rome from a city of bricks into one of marble; for the roads, aqueducts, and public buildings of every description, temples, arcades, and theatres, which were raised during his long and peaceful reign were almost innumerable. The whole plain between the Quirinal and the river became a new town, which in splendour and magnificence far surpassed the city of the hills: this

new town was one mass of temples, arcades, theatres, and public places of amusement, not interrupted by any private habitations. Aqueducts for the purpose of supplying the city with water had been built as early as the year B.C. 813, and the first (Aqua Claudia) was begun by Appius Claudius. It ran almost entirely underground, and conveyed the water from a distance of about eight miles in the direction of the Porta Capena into the city. Other aqueducts were constructed, but it was not until the imperial period that this kind of architecture reached perfection, and most of the remains which are still extant belong to the period of the empire. They were mostly built upon arches which had an easy inclination, so that the water ran gently from its source towards the city. Each of the 14 Augustan regions, according to a survey taken in the reign of Vespasian, contained 19, or, according to a later account, 22 vici, with as many sacella in places where two streets crossed each other. Each vicus seems on an average to have contained about 230 dwelling-houses, so that every region contained rather more than 4500. About one twenty-fifth part of this number of houses were 'domus,' that is, habitations of the rich (palazzi), with a portico in front and an extensive inner court (atrium). The remainder consisted of 'insulae,' that is, habitations for citizens of the middle and lower classes: they had no portico in front, but mostly an open space which served as a shop or workshop. In the interior they may have had a court, but of smaller extent than the atrium of a domus. The number of these insulae was about 44,000. All Roman houses were very high. Augustus fixed 70 feet and Trajan 60 feet as the height, above which none were allowed to be built; and the upper story was generally of wood. It was a law of the Twelve Tables, which also occurs in the Roman legislation of later times, that no two houses, whether domus or insulae, should be built closely together but that an open space of five feet should be left between them.

Tiberius, besides completing many of the buildings of his predecessor, began the Prætorian camp on the north-east side of the city, in the Campus Viminalis, and surrounded it with high walls. The wealthy Romans at this time had their palaces principally in the eastern districts, from the Porta Collina to the Porta Cælimontana; they did not however form streets, but lay in gardens within the fields between the high roads which issued from the city; and hence they are generally called Horti, as Horti Mæcenatis, &c. All that had been done for the embellishment of the city previous to the reign of Nero was eclipsed by the magnificent buildings of this emperor; but the greater part of these works, together with those of former days, perished in the conflagration which took place in his reign. In his restorations the face of the city assumed a totally different aspect. On the ruins of the temples and the imperial palace on the Palatine rose the so-called Golden House of Nero, which occupied a space equal to a large town. The greatest care was taken to make the new streets wide and straight, and that the buildings should not exceed a reasonable height. In order to render possible the execution of the regular plan the several quarters of the city were measured, and the heaps of ruins were removed and conveyed in ships to Ostia, to fill up the marshes in its vicinity. All the new buildings were massive, and constructed of the fire-proof peperino, without the old wooden upper story. The width of the new streets rendered it necessary to extend the city beyond its former limits. Some time afterwards, in the reign of Vespasian, a measurement of the circumference of Rome was taken, according to which it amounted to 13½ Roman miles. The subsequent emperors continued to increase and embellish the city; but under Commodus a great part was again consumed by a fire which destroyed all the buildings on the Palatine. Septimius Severus exerted himself to restore the parts which had been burnt, and to ornament the city, and some of his buildings are still extant. But the grandeur and magnificence of the thermæ of Caracalla, south of the Porta Capena, surpassed all the works of his predecessors. Almost all the great buildings, or their remains, which still exist at Rome, belong to the period between Nero and Constantine.

The most extensive work of this latter period is the immense wall, with its numerous towers, with which Aurelian surrounded the city. The work, which was completed in the reign of Probus (A.D. 276), does not however enable us to form a correct estimate of the real extent of the city, as the objects of the fortification may have rendered it necessary to inclose parts which were not covered with buildings. The Janiculum, which seems to have been fortified from the earliest times of the republic, was now for the first time included within the city walls, together with the Regio Transtiberina. The whole circumference of these new fortifications was about 21 miles. In the time of Honorius some parts of this wall which were decayed were restored. Though the present walls do not much exceed the height of 15 or 20 feet on the inside, owing to the accumulation of rubbish, they are in many places as much as 50 feet high on the outside.

After the time of Constantine, when the emperors and the Roman nobles had adopted the Christian religion, the decay and destruction of the ancient edifices commenced. The building of numerous churches was the immediate cause of this destruction. Neither the court nor private individuals possessed sufficient wealth to raise buildings equal in form or material to those of their ancestors, and as heathen temples could not always be converted into Christian churches, they were generally pulled down, and the materials used for other purposes. During the 5th century of our era great calamities were

inflicted upon Rome by the ravages of the northern barbarians. The buildings destroyed at the capture of the city by Alaric were near the Porta Salaria, where the enemy entered. There are in this part still some remains of the house of Sallust which was destroyed on that occasion. A harder fate befell the city in 456, when it was taken by the Vandals, who sacked it for fourteen days; but the buildings seem to have suffered little, the precious metals being the main object of the cupidity of these barbarians, as well as of the followers of Alaric. Theodoric and his immediate successors not only took the greatest care to preserve what remained, but even exerted themselves to restore the public buildings which had suffered or were beginning to decay. The population however rapidly decreased during the 5th century, and became impoverished, so that towards the end of the century the suburbs around Rome seem to have no longer existed, with the exception of that which had arisen between the northern extremity of the Janiculum and the Vatican. Rome was thus confined to the walls of Aurelian and their restoration by Honorius, and even within its precincts extensive districts were uninhabited. The most remarkable buildings of former days indeed still existed, but after the reign of Theodosius they were entirely neglected; and thus one after another they fell into decay and ruin.

Historical Sketch.—The history of Rome is not a fit appendage to a short topographical article: no more can be done here than merely enumerate a few of the chief dates and occurrences. Rome, founded by Romulus on the Palatine Hill, B.C. 753 or 752, was governed by kings in the interval between the year just mentioned and B.C. 510. The seven kings were—Romulus, B.C. 753-714; Numa Pompilius, 716-673; Tullus Hostilius, 673-641; Ancus Marcius, 641-616; L. Tarquinius Priscus, 616-578; Servius Tullius, 578-534; Tarquinius Superbus, 534-510. During the regal government, the history of which rests mainly on the authority of popular traditions, the foundations of the most valuable institutions of Rome were laid—the senate, military organisation, assemblies of the burghers (who had the power to accept or reject the laws passed by the senate), a respect for law, and a system of colonisation were established. At the close of the kingly period Rome was mistress of nearly all the tribes of Latium and of a part of the Sabine territory. In the territory of the Volsci, the first two Roman colonies, Signia and Circeii, were founded, though Ostia, founded by Ancus Marcius, is also sometimes called a Roman colony. On the Etruscan side of the Tiber, Rome was in possession of the Janiculum, which was probably fortified. From the first treaty of Rome with Carthage, which was concluded in the first year of the Republic in B.C. 509, we must conclude that the Romans had already formed important mercantile connections with foreign nations. (Polyb., iii. 22.)

The abolition of the kingly power and the establishment of the republic did not produce any other material change in the constitution of Rome. The plebeians derived scarcely any benefit from it, but the patricians extended their power, inasmuch as they appointed, in the place of a king, two magistrates, originally called Prætors and afterwards Consuls, who were proposed by the senate and appointed in the *comitia centuriata*. Patricians only were eligible to this and the other great offices of the state. With the exception of the office of high-priest (*pontifex maximus*), which was transferred to the *rex sacrificulus*, the consuls possessed all the rights and privileges as well as most of the insignia of the former kings; but their office was only annual, and upon its expiration they might be called to account for their conduct. On the termination of their office, they returned indeed to a private station, but as members of the senate they still retained some influence in the administration of the republic.

The principal event after the banishment of the Tarquins was the war with the Etruscans under Porsena, in which the Romans suffered very severely. The war with the revolted Latin cities followed (B.C. 500-496), and ended with the battle of the Lake Regillus, when the Romans again became masters of Latium. The contests between the patricians and the plebeians, who had never been allowed to exercise the rights conferred upon them by the constitution of Servius Tullius, broke out at the commencement of the Latin war, when they refused to take up arms. The struggle was afterwards embittered by disputes about the public lands taken from the conquered people which the patricians held in their exclusive possession. At last B.C. 493, the plebeians, exasperated by the oppression under which they lived, seceded from Rome, and took up a fortified and threatening position on the Mons Sacer. The senate in great alarm granted their demands: two, or according to others, five plebeian tribunes (*tribuni plebei*) were created to protect their order, and two other plebeian magistrates, called *ædiles*. The most important concession however was that which the plebeians shortly afterwards obtained, the right of summoning before their own *comitia* (*comitia tributa*) any one who violated the rights of their order, and in the year B.C. 471 the tribune Publilius Volero succeeded in procuring for the plebeians the right to elect their own magistrates without any interference on the part of the patricians, to deliberate and make laws in their own *comitia* (*plebiscita*), which indeed were not binding as *leges*, but still must have had a considerable influence, being the declared will of the commonalty. In B.C. 451-2 the laws of the Twelve Tables, the basis of Roman law, were promulgated. The *connubium*, or right of intermarriage with the patricians, was obtained by the plebeians in B.C. 445

through the tribune Canuleius, who also made an attempt to divide the consulship between the two estates. But the plebeians were not admitted to the consulship till B.C. 366, and between this time and B.C. 300, all the other great civil and religious offices were open to them.

During the long struggle between the patricians and the plebeians the arms of Rome were kept in constant activity by the wars with Fidense, which was destroyed in B.C. 426, and with the Æquians, who were defeated in B.C. 418 at the foot of Mount Algidus. The war with Veii lasted for several years, and in B.C. 396 this wealthy city was taken by M. Furius Camillus. The Gauls, in B.C. 390, completely defeated a Roman army on the small river Allia. They then advanced upon Rome, took and burned the city, and laid siege to the Capitol, but were induced, by an inroad of the Veneti into their own territory, to return home. Though the city was soon rebuilt, its weakness encouraged the Æquians, Volscians, and Etruscans to renew their hostilities; but they were conquered by Camillus. The Hernicans and Latins also endeavoured to shake off their alliance with Rome. The former, after a series of campaigns and reverses, were completely subdued in B.C. 306; while the Latins, induced by the repeated incursions of the Gauls, soon renewed their alliance with Rome.

The treaty with Carthage was renewed in B.C. 348, probably on account of the Greek pirates, who about this time infested the coasts of Latium. (Livy, vii. 27.) The great power which the Romans had gradually acquired and shown in the various contests with their immediate neighbours, now began to be displayed in the war against the Samnites, which lasted from 343 to 341 B.C., and ended in a treaty with Rome, whose power now began to raise apprehension throughout Italy. The Latins were the first who showed this feeling; a war with the Latins was the consequence, and a continuation of that against Samnium. The Romans were successful against both, and in B.C. 338 all Latium was subdued.

In the second Samnite war, which lasted from 326 to 315 B.C., a Roman army marched into Campania, Palessopolis fell in B.C. 326 by treason, and Neapolis opened its gates to the enemy. Apulia submitted to Rome in B.C. 318. The Etruscans, Umbrians, and Gauls now rose successively against Rome, and the Marsians, Pelignians, Æquians, and Hernicans made common cause with them. But the Romans subdued them all. The Samnites in the meanwhile entered into an alliance with the Etruscans, Umbrians, and Gauls, against Rome, and thus commenced their third war, which lasted from B.C. 295 to 290, when they were compelled by M. Curius Dentatus to make peace. All Latium, Etruria, Campania, Samnium, a great part of Apulia, and several other Italian nations now submitted to the overwhelming power of Rome.

The war with Pyrrhus and the Tarentines lasted from 281 to 275 B.C., and three years afterwards Tarentum surrendered to the Romans, and Rhegium also soon fell into their hands. The war with Tarentum made the Romans masters of the whole of the southern peninsula; and all Italy, from the Sicilian Straits to the river Maera in the north of Etruria, now recognised the supremacy of Rome in B.C. 265. Colonies, chiefly Latin, that is, colonies which had inferior rights to the Roman colonies, were established in various parts to ensure the submission of the conquered nations, and the Italian states and towns either received new constitutions or retained their old ones, modified according to the circumstances under which they had submitted to Rome. Some towns however, such as Capua, seem to have remained almost independent states.

The first Punic war lasted from 264 till 241 B.C. At its termination Rome had gained possession of Sicily and the adjacent islands; and Sicily became the first Roman province. In B.C. 238 the Romans took possession of Sardinia, and soon after Corsica was subdued. Between 233 and 222 B.C. the Cisalpine Gauls were subdued, Mediolanum taken, and colonies planted in Cremona and Placentia. A year after this event Istria was added to the Roman republic, and by B.C. 219, the Romans were masters of the whole coast of Illyricum.

The second Punic war, which was caused by the siege and capture of Saguntum by Hannibal, lasted from 218 till 202 B.C. This period is marked by the march of Hannibal across the Pyrenees into Gaul, his passage of the Alps, and his victories on the Ticinus, the Trebia, and the Lake Trasimene, the complete overthrow of the Romans at Cannæ (after which fortune forsook the great African leader, who was henceforth held in check by Fabius Maximus and Marcellus), the destruction of Hasdrubal's army on the Metaurus in B.C. 207, the invasion of Africa by Scipio, and the defeat of Hannibal at Zama, which closed the war (B.C. 202). To gain peace Carthage submitted to give up her fleet; to pay 10,000 talents, to retain only her possessions in Africa; to make no war without the consent of Rome; and to restore to Masinissa all his hereditary possessions.

Philip III., king of Macedonia, after the battle of Cannæ, had concluded a treaty with Hannibal. This led to the first Macedonian war, which lasted from B.C. 214 till 205, and was carried on with little vigour. A second war with Macedonia lasted from B.C. 200 till 197, and was terminated by the battle of Cynoscephalæ, gained by Quintus Flaminius, by which the power of Macedonia was broken, and Philip became a vassal of Rome. Soon after followed the war with Antiochus (B.C. 192), which was carried on in Greece and in Asia; the battle of Magnesia decided the victory, and the power of Syria was broken.

Perseus, the successor of Philip III. in Macedonia, who had inherited

his father's hatred of the Romans, declared war against them in B.C. 171. This war was at first very unfortunate for the Romans, but in B.C. 168 L. Æmilius Paulus decided the fate of Macedonia in the battle of Pydna.

The third Punic war lasted from B.C. 149 to 146, when the Romans razed Carthage to the ground (B.C. 146), and her territory became a Roman province under the name of Africa. Macedonia was next reduced to the form of a province; and the same fate befel Greece after the fall of Corinth in B.C. 146. The discontented Spaniards, headed by Viriathus, carried on war with the Romans for many years with varying success, from B.C. 148 till 140. After the death of Viriathus in the latter year the Romans penetrated as far as the western coast, but the natives nevertheless did not submit. Numantia, which offered the most determined resistance, was totally destroyed in B.C. 133. Spain then became apparently quiet, and Roman commissioners arranged the affairs of the country. Attalus, the last king of Pergamus, left, in B.C. 133, his kingdom as an inheritance to Rome; the disputes arising out of this gift led to the reduction of Asia into the form of a province (B.C. 129). How completely the old distinction between patricians and plebeians had disappeared during these incessant wars, may be inferred from the fact, that in B.C. 172 both the consuls, and in B.C. 131 both the censors, were plebeians. Ever since the wars of Hannibal, the number of plebeian senators had exceeded that of the patricians. The citizens were either exorbitantly rich or in absolute poverty. The illustrious families had almost monopolised the lucrative offices of the republic, and the small landowners, on account of the constant wars, had been compelled to neglect their fields, and in numerous cases had sold them to the nobles. Such reduced persons wandered about homeless, with their wives and children, and lived in extreme poverty. (Plut. 'Tib. Gracchus,' c. 9.) The only remedy was to provide this multitude of destitute citizens with lands, and to raise them to the station of an independent middle class. This was undertaken by the two brothers, Tiberius and Caius Gracchus, who proposed to relieve the people by an equitable distribution of the public lands and by the leading out of colonies. The aristocratic party gained the victory over the Gracchi, but it was gained by crime and bloodshed. Several regulations of the agrarian law were abolished, the nobles still extended their possessions by purchasing the smaller portions of the poor, and expelled the impoverished peasantry. The large estates of the nobles were cultivated by an enormous number of foreign slaves, whom the long wars of the Romans had brought into Italy. (Appian, 'Civil,' i. 27.)

Jugurtha, the usurper of the kingdom of Numidia, in B.C. 106 was brought to Rome in triumph, and C. Marius, the conqueror of Jugurtha, annihilated (B.C. 102) the whole body of the Teutones near Aquæ Sextis, and in the following year the Cimbri in the Campi Raudii. These barbarians had been hovering over the northern frontiers of Italy since B.C. 113, and had defeated several Roman armies sent against them.

The demand of the Italians to be admitted to the Roman franchise led (B.C. 91) to the bloody and destructive Social or Marsian war. The Italians, seeing that there was no hope of gaining their object, intended nothing less than to destroy Rome, to establish a new Italian republic with a senate of 500 members and two consuls, and to make Corfinium under the name of Italica its centre and capital. The Latins and Umbrians remained faithful to Rome, and obtained, together with some other places in Etruria, the Roman franchise by a Lex Julia. In the first campaign the Romans were unsuccessful, but Cn. Pompeius Strabo defeated the Italian allies at Asculum, which he took and destroyed (B.C. 89). The Italians gradually submitted, and received the franchise, and thus the great mass of the inhabitants of the peninsula became Roman citizens. The province of Gallia Transpadana received in the same year by the Lex Pompeia the Jus Latii, that is, those political rights which the Latins had possessed previous to receiving the full franchise; but did not obtain the Roman franchise till Julius Cæsar became dictator.

The war against Mithridates and the civil war between Marius and Sulla followed. The first Mithridatic war lasted from B.C. 87 to B.C. 84. After its conclusion Sulla returned to Italy, forced his way to Rome, and was made perpetual dictator (B.C. 82). In B.C. 83 the second Mithridatic war broke out, in which the Romans were defeated, and in B.C. 81 they concluded a peace. In B.C. 74 Mithridates commenced the third war against the Romans, which led to the complete subjugation of all Asia Minor, Syria, and Phœnicia. Other Roman generals in the meantime advanced into Mœsia as far as the Danube, and on the northern coast of the Euxine as far as the river Don and the Palus Mœotis, or Sea of Azof. In B.C. 63 Rome was saved by the watchful care of Cicero from the destruction with which the conspiracy of Catiline threatened it. Between B.C. 58 and B.C. 50 Cæsar completed the conquest of Gaul; and in B.C. 56, by the treaty of Luoca, the Roman world was divided among Cæsar, Crassus, and Pompey (first triumvirate); and when Pompey, as sole consul (B.C. 52), placed himself at the head of the republic, the civil war between him and Cæsar broke out which was decided in B.C. 48 by the battle of Pharsalus. Cæsar, who had now become dictator, defeated the remains of the Pompeian party, and then endeavoured to restore order in Italy; but he was assassinated in B.C. 44. His opponents, whose republican spirit had survived the republic, were unable to restore it; and in the

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following year a second triumvirate was formed by Octavianus, Antony, and Lepidus, whose object was the total destruction of the republican party. This object they pursued by proscriptions and a series of despotic and cruel measures, until they began to quarrel with one another. Their quarrels led to a new civil war, which ended in the battle of Actium, and placed Octavianus (Augustus) at the head of the Roman world. Thus ended the Roman republic.

The Roman republic at the time of its dissolution comprehended the following countries, which were for the most part administered as Roman provinces:—Italy and all the islands by which it was surrounded; all Gaul as far as the Rhine; nearly all Spain, Illyrium, Pannonia, Dalmatia, Greece with all the islands of the Ægean, Thrace, Mœsia (the Danube here formed the boundary): in Asia all the countries between the Caspian Sea, the Parthian empire, the Persian and Arabian gulfs, the Mediterranean and the Caucasus, that is, Colchia, Iberia, Armenia, Syria, Palestine, Phœnicia, nearly the whole of Asia Minor, the whole of the northern coast of Africa, Mauritania, Numidia, the territory of Carthage, Cyrenaica, and Egypt. In some of these countries however the power of Rome was not firmly established until the imperial period.

The imperial period comprises the interval from the accession of Augustus to the deposition of Romulus Augustulus, that is, from B.C. 30 to A.D. 476.

Augustus gradually concentrated in his own person all the great offices of the republic, though the officers themselves, mere shadows of former days, still continued to be appointed. He thus in effect acquired the sovereign power, being free from all responsibility. He had the right to raise armies, to impose taxes, to decide on peace and war; he had the command of all the legions, and the power of life and death over all Roman citizens, both within and without the city. The senate, after the removal of those whom Augustus had reason to fear, was filled up with individuals who were his mere creatures. Tiberius indeed restored to the senate part of its former power, but the more the influence of the soldiers increased the more that of the senate declined, which body, as a compensation for this loss, was made a high court of justice, which took cognizance of offences against the state or the person of the emperor. No provision was made for a regular succession; the first five emperors all belonged to the Julian and Claudian families. The succession depended upon the will of the actual emperor, who appointed his successor either by adoption or by giving him one of the titles, Cæsar and Princeps Juventutis; or by making him his colleague in the quality of tribune or proconsul. In cases where no person was designated the senate exercised the right of election. But this privilege was soon assumed by the soldiers, who proclaimed the emperors, and the sanction of the senate became a mere form. The numerous body-guards of the emperors (prætorians), who in their stronghold (prætorian camp) formed as it were a new Capitol, in effect possessed the sovereign power; and on some occasions they sold the empire to the best bidder. The numerous legions in the provinces too soon became acquainted with this secret of despotism, and availed themselves of it.

The Roman empire, notwithstanding its vast extent at the end of the republic, still continued to increase. Vindelicia, Rhætia, Noricum, Pannonia, and Mœsia were completely subdued, and made parts of the empire. The Danube was made the boundary in these parts, to secure the empire against the incursions of the barbarians. The subjugation of Spain was completed by the submission of the warlike Cantabrians. In Germany conquests were also made, but more with a view to secure Gaul than to acquire any new possessions in that country; and the Rhine may be considered as the frontier on that side of the empire. In the reign of Trajan the empire attained its greatest extent; Dacia, Assyria, Mesopotamia, Armenia, and Arabia were made Roman provinces; but some of these conquests were soon given up, and the Danube and the Euphrates became the boundaries of the empire. Britain and the southern part of Scotland had been made a province in the reign of Nero. But the internal weakness, resulting from the imperfect union of so many countries and nations, rendered it impossible to repel the incursions of the barbarians by whom the empire was harassed from about the close of the 4th century. During this period one country was lost after another, and Italy itself was invaded by the Huns under Attila (A.D. 452). In the year A.D. 476 Odoacer, an officer of the imperial guards and a Goth by birth, dethroned the last emperor Romulus Augustulus, and was saluted by his army King of Rome. The Roman senate implored his protection, and Zeno, the emperor of the East, raised him to the rank of a Roman patrician. Thus ended the Roman empire in the west.

Long before this event the necessity of dividing the unwieldy mass of the empire had been felt, and since the time of Diocletian a division had been made for the purpose of facilitating the administration. Constantinople, founded by Constantine A.D. 323, had become the capital of the eastern part of the empire; but it was not until after the death of the elder Theodosius (A.D. 395) that the division into the Eastern and Western empires became permanent: the two parts however were intended to form one whole. The line of demarcation between the two empires was the Danube, from a little above Pesth down to where it receives the Drave, then the small river Drinus (Drino), and a line drawn past the town of Scutari towards the great Syrtia, near the coast of Cyrenaica. All the countries east of this line

belonged to the Eastern empire, and those west of it to the Western empire. The capitals, Rome and Constantinople, had each its senate, with equal privileges; but the bond of union between the two empires was weakened by the course of events, and they soon began to feel jealous of each other. The emperors of the East contrived to avert the invasions of the barbarians, and to turn their attention to the West, which, being also more exposed to such invasions, was destined to fall first; the Eastern empire, which had the advantage of a more favourable position for its capital, and had also greater means and better armies, prolonged its existence for many centuries. And even after it had lost all its provinces, and was confined to a very narrow space, it nevertheless maintained itself in this wretched condition until the year 1453, when Constantinople was taken by the Turks under Mohammed II.

The following is a chronological list of the emperors of Rome:—

		A.D.			A.D.	A.D.
Augustus	. . . . .	B.C. 30—14	Maximianus	. . . . .	235—238	
Tiberius	. . . . .	A.D. 14—37	Gordianus	. . . . .	238—243	
Caligula	. . . . .	38—41	Philippus	. . . . .	243—249	
Claudius	. . . . .	41—54	Decius	. . . . .	249—251	
Nero	. . . . .	54—68	Trebonianus Gallus	. . . . .	251—253	
Galba, Otho, Vitellius	. . . . .	68—70	Valerianus & Gallienus	. . . . .	253—260	
Vespasian	. . . . .	70—79	Gallienus & Odenathus	. . . . .	261—268	
Titus	. . . . .	79—81	M. Aurelius	. . . . .	268—270	
Domitian	. . . . .	81—96	Aurelianus	. . . . .	270—275	
Nerva	. . . . .	96—98	Tacitus	. . . . .	275—276	
Trajan	. . . . .	98—117	Annius Florianus	. . . . .	276	
Hadrian	. . . . .	117—138	Aurelius Probus	. . . . .	276—282	
Antoninus Pius	. . . . .	138—161	Carus	. . . . .	282—284	
Marcus Antoninus	. . . . .	161—180	Diocletian & Maximianus	. . . . .	284—305	
Commodus	. . . . .	180—192	Constantius	. . . . .	305—306	
Pertinax	. . . . .	193	Constantine	. . . . .	306—337	
Julianus	. . . . .	193	Constantius	. . . . .	337—361	
Septimius Severus	. . . . .	193—211	Julianus	. . . . .	361—363	
Caracalla	. . . . .	211—217	Flav. Jovianus	. . . . .	363—364	
Macrinus	. . . . .		Valentinianus	. . . . .	364—378	
Elagabalus	. . . . .	218—222	Theodosius	. . . . .	378—395	
Alexander Severus	. . . . .	222—235				

Western Empire.

	A.D.	A.D.
Honorius	395—423
Joannes	424—425
Valentinianus	425—455
Maximus	455
Avitus	455—456
Majorianus	457—461
Libius Severus	461—465
Procopius Anthemius	467—472
Glycerius	473—474
Nepos	474—475
Romulus Augustulus	475—476

Eastern Empire.

	A.D.	A.D.
Arcadius	395—408
Theodosius II.	408—450
Pulcheria & Marcianus	450—457
Leo I.	457—474
Leo the Younger	474
Zeno	474—491
Anastasius I.	491—518
Justinus I.	518—527
Justinian I.	527—565

Odoacer, who as before stated deposed Romulus Augustulus A.D. 476, fixed his residence at Ravenna, and professed to govern Italy in the name of Zeno, emperor of the East. In A.D. 490, Odoacer after being repeatedly defeated by Theodoric, chief of the Ostrogoths, shut himself up in Ravenna, in which he was besieged for more than two years, during which all the rest of Italy submitted to Theodoric. At last Odoacer surrendered through famine, in February, 493. Theodoric made his entrance into Ravenna, and was received by the archbishop at the head of his clergy. At first he treated Odoacer with kindness, but he afterwards caused him to be put to death.

Theodoric obtained the investiture of the kingdom of Italy from the emperor Anastasius, fixed his residence at Ravenna, and founded the gothic dynasty in Italy, which lasted till 552, when Totila was defeated and slain at the battle of Tagina, in Umbria, by the imperial forces of Justinian commanded by Narses. During the wars of Justinian against Totila for the recovery of Italy, Rome was frequently besieged and occupied successively by Belisarius, Totila, and Narses. Narses soon after defeated Teias (one of the Gothic generals who had been elected king at Pavia) near Nucera in Campania; and from this time Rome and Italy were governed by Exarchs, who resided at Ravenna. Under the wise administration of Narses, Rome recovered from the long calamities that it had suffered during the Gothic war. It escaped the devastating incursion of a large party of Franks and Alamanni, who overran Italy to its southern extremity, but were defeated with great slaughter by Narses on the banks of the Volturnus, after which Narses returned in triumph to Rome with an immense booty. Narses after being deposed from his government at the instigation of the Romans, came at their invitation to reside in the city, and died quietly at Rome in 568, being then above 90 years of age.

The Exarch, having fixed their residence at Ravenna, made a considerable change in the administration of Italy. The annual consulship, which had been perpetuated from the time of the ancient republic, fell into disuse after the year 541. During the Gothic war, Basilius was the last consul appointed. But the distribution and the names of the provinces had remained the same as under Constantine,

and they were administered by consules and præsides. Longinus however abolished these magistrates, and instead of them sent an officer called Dux to each town or district, who was changed every year. Rome was not in this respect more privileged than the rest; it had its duke, or patrician, as he is sometimes called, who was sent from Ravenna. Hence the name of Duchy of Rome. Rome however retained its internal municipal administration and laws, and the clergy and bishop of Rome began to exercise a greater influence in temporal matters than they had done under the Gothic kings. [PAPAL STATES.]

The Longobards occupied a great part of Italy, but they never took Rome, although they threatened and besieged it several times during the two centuries that their power lasted. This remarkable fact may be partly explained by the circumstance of Rome being doubly protected by the presence of her bishop, who was highly venerated in all the west, and by the temporal jurisdiction exercised over it by the Greek emperor. The Longobards never formed a compact kingdom; they did not possess all Italy, as the Goths had; the eastern emperors retained a considerable part of the country, and their power, though distant, was still considered formidable.

A rupture between Luitprand and the Romans, brought on by the demand of the former for the surrender of a fugitive, and the devastation by the Longobards of part of the Roman duchy, induced Pope Gregory to send for support to Charles Martel, about the year 740, with presents and the keys of the sepulchre of St. Peter, and with an offer of transferring the allegiance of the duchy of Rome from the emperor to him, provided Charles would protect Rome against the Longobards. This was the beginning of the connection of the popes with the kings of France. On the death of Gregory, his successor, Zacharias, adopted a different course of policy, and, instead of applying for assistance from beyond the Alps, sent an embassy to King Luitprand, to beg of him to let the duchy of Rome have peace. Subsequently, Pope Zacharias had an interview with Luitprand at Orta, when the king received him with great honours, released all the prisoners made in the preceding war, and restored several towns and domains belonging to the duchy of Rome which he had occupied, but he gave them in writing as a donation to St. Peter. Pope Stephen succeeded Zacharias (753); after some useless remonstrances with Astolphus, the Longobard king, who demanded the submission of the duchy of Rome, the Pope then went to France, where he crowned Pepin, the son of Charles Martel, king; and at the same time pleaded his cause so well with Pepin against the Longobards that Pepin entered Italy with a large army. Astolphus shut himself up in Pavia. After a short siege a treaty was concluded, by which Astolphus promised to leave Rome in peace, and to restore the towns of the duchy which he had seized. Astolphus however broke his promise, and in the year 755 he besieged Rome and devastated its territory. Pepin, at the request of the Pope, again crossed the Alps. Astolphus retired to Pavia, and soon after concluded a new treaty, by which he engaged to pay a large sum of money, and not only to restore all that belonged to the duchy of Rome, but also Ravenna and the Exarchate to the see of St. Peter. The act of donation of the Exarchate, the Pentapolis, and the town of Commachio was made by Pepin. [PAPAL STATES.] In the following year, 757, Astolphus died, and Desiderius, duke of Istria, was proclaimed king of the Longobards. Desiderius refused to observe the stipulations of Astolphus, and retained several towns of the Exarchate. A fresh quarrel broke out between Desiderius and Pope Adrian I., who had applied for assistance to Charlemagne. Charlemagne passed the Alps and besieged Desiderius in Pavia. Desiderius surrendered in 774, and the kingdom of Italy passed under the dominion of the Franks.

Charlemagne, having assumed the iron crown of Lombardy, confirmed Pepin's donation to the Pope, who acknowledged him as patrician of Rome and his temporal superior. In the year 800 the sovereignty of Charlemagne over Rome was confirmed by Pope Leo III., who crowned him at Rome emperor of the West, with the title of Carolus I., Cæsar Augustus, a title which was acknowledged by Nicephorus, emperor of the East, who defined the limits between the two empires. Rome was nominally under the Carolingian dynasty till 883.

In the year 887 Charles the Fat was solemnly deposed, and in him ended the imperial dynasty of the Carolingians. A long period of confusion followed, during which there were many claimants for the throne of Italy. Otho of Saxony, king of the Germans, married Adelaide, widow of Lotharius, the late so-called king of Italy, at Pavia, and in the following year returned to Germany. He allowed Berengarius, who had succeeded Lotharius, to retain the crown of Italy as his vassal, after swearing fidelity to Otho in the presence of the court and army. Friuli and the March of Treviso were excepted, which Otho kept under his immediate dominion. Otho himself handed to Berengarius a sceptre of gold, in token of investiture. From this transaction arose the claims of the kings of Germany upon the kingdom of Italy. Otho soon after deposed Berengarius, and was himself elected king of Italy, and crowned in the church of St. Ambrose, at Milan, with the ancient crown and other insignia of the Longobard kings. He was immediately after crowned as emperor by Pope John XII. He swore to respect the authority of the Roman see, and not to encroach upon its temporal rights and possessions. He was acknowledged emperor, and his son as king of the Romans;

but the Pope remained lord of the Roman duchy as a great imperial feudatory, as in the time of the Carolingians. Rome, with the rest of Italy, paid nominal obedience to the emperors of Germany till 1278. Cardinal Orsini, being elected pope in 1277 by the name of Nicholas III., applied to Rudolph of Hapsburg, king of Germany, to define by a charter the States of the Church, and separate them for ever from those dependent on the empire. Rudolph defined by letters patent, dated May 1278, the States of the Church as extending from Radicofani to Ceprano on the frontiers of Naples, and from the Mediterranean to the Adriatic, including the former duchy of Spoleto, the March of Ancona, and the Romagna. He released the people of all those places from their oath of allegiance to the empire, giving up all rights over them which might still be settled in the imperial crown, and acknowledging the sovereignty of the same to belong to the see of Rome. This important document, which is found in Raynaldus ('Annales'), was confirmed by the electors and princes of the empire. Thus ended the former imperial authority over Rome and its territory; and the city and States of the Church have been since under the temporal government of the popes. [PAPAL STATES.]

ROMAGNA, ROMANDIO'LA, a name which was given in the middle ages to a tract of country north of the Apennines, extending along the coast of the Adriatic, from the river Foglia near Pesaro, which was the northern boundary of Picenum, or the March of Ancona, to the Scotenna, or Panaro, which flows half way between Bologna and Modena. This extent of territory corresponds to that of the modern Papal legations, Bologna, Ravenna, Ferrara, and Forli. The Po was its boundary on the north, and the Apennines of Tuscany on the south and west. Ravenna was the chief town. Pepin and Charlemagne bestowed this part of Italy on the Holy See, but the popes could not for a long time after enforce their political supremacy over it. Alexander VI. commissioned his son Cesare Borgia to conquer the country, which he effected, and Julius II. annexed it to the Papal states. Although the country has been long divided into administrative divisions styled legations, the general name Romagna continues in use, being applied more especially to the eastern part of the country, near the Adriatic, between Rimini and Ravenna, the inhabitants of which are called at Rome to this day 'Romagnoli.'

ROMAN APENNINES. [APENNINES.]

ROMANS. [DRÔME.]

ROME. [ROMA.]

ROME, U. S. [NEW YORK.]

ROME-DE-TARN. [AVEYRON.]

ROMFORD, Essex, a market-town and the seat of a Poor-Law Union, in the parish of Romford, is situated chiefly on the left bank of the Bourne brook, called also the river Rom, in 51° 34' N. lat., 0° 11' E. long., distant 17 miles S.W. by S. from Chelmsford, 13 miles E.N.E. from London by road or by the Eastern Counties railway. The population of the town in 1851 was 3791. The living is a vicarage in the archdeaconry of Essex and diocese of Rochester. The parish is under the management of a local Board of Health. Romford Poor-Law Union contains 10 parishes, with an area of 48,244 acres, and a population in 1851 of 24,607.

Romford is a place of considerable antiquity. The site of the Roman station Duroilitum, on the ancient road from London to Colchester, appears to have been at or near the present town. Being the centre of an important agricultural district, Romford markets and fairs are largely attended. On Monday there is a market for calves, on Tuesday one for hogs, and on Wednesday an important market for corn and cattle. In spring and summer great numbers of young calves are brought to market from Suffolk and the dairy districts of Essex. The annual fair, which is chiefly for horses, is held on Midsummer-day and the two following days. The church is a handsome new building in the decorated style, with a square tower. The Independents, Wesleyan Methodists, and Baptists have chapels, and there are National and Infant schools; schools connected with the Wesleyan Methodist and Baptist chapels; a literary and scientific institution, with a library and reading-room, and a savings bank. There is a large manufactory of agricultural implements. A county court and quarter sessions are held in the town.

ROMNEY MARSH, a liberty in the lathe of Shepway and county of Kent, which gives name to a Poor-Law Union. The union contains 19 parishes, with an area of 46,785 acres, and a population in 1851 of 5437. The tract of country called Romney Marsh is noticed under KENT.

ROMNEY, NEW. [KENT.]

ROMORANTIN. [LOIRE-ST-CHEZ.]

ROMSEY, Hampshire, a market-town, municipal borough, and the seat of a Poor-Law Union, in the parish of Romsey Infra, is situated in 50° 59' N. lat., 1° 30' W. long., distant 10 miles S.W. from Winchester, 73 miles S.W. from London by road, and 81 miles by the London and South Western railway. The population of the town of Romsey in 1851 was 2030. The borough is governed by four aldermen and 12 councillors, of whom one is mayor. The living is a vicarage in the archdeaconry and diocese of Winchester. Romsey Poor-Law Union contains 12 parishes, with an area of 27,373 acres, and a population in 1851 of 10,802.

Romsey stands on the left bank of the river Anton or Test, over which is a bridge. The town at one time possessed some extensy

manufactures, but since the application of steam to machinery, these manufactures have been removed to districts where coal is abundant. One flax-spinning mill and a paper-mill are in operation, worked by water-power. The town is lighted with gas. The parish church is a spacious cruciform structure. The exterior is chiefly of Norman architecture; the central portion of the interior, the transepts, and the sides of the chancel are also Norman; the west end of the church is early English. The church formerly belonged to an abbey of Benedictine nuns, founded in the reign of Edward the Elder. The Wesleyan and Primitive Methodists, Independents, Baptists, and Sandemanians have places of worship. There are National, British, and Infant schools; an endowed school for 18 boys; an industrial school for girls, maintained by Viscount Palmerston; a literary and scientific institution; a reading society, and a mutual improvement society for young men. There are in the town a town-hall; an audit-house, supported on piers, with an open space below for the persons attending the market; a small borough jail; and some almshouses. The market is held on Thursday; fairs are held on Easter Monday, August 26th, and November 8th.

RONALDSHA. [ORKNEY ISLANDS.]

RONCESVALLES, or RONCEVAUX. [PYRENEES, BASSES.]

RONDA. [GRANADA.]

RONSDORF. [DUSSELDORF.]

ROQUEFORT. [AVEYRON.]

ROQUEMAURE. [GARD.]

ROQUEVAIRE. [BOUCHES-DU-RHÔNE.]

RORASS. [TRONDHEJEM.]

ROSANS. [ALPES, BASSES.]

ROSARIO. [MEXICO; NEW GRANADA.]

ROSAS. [CATALUÑA.]

ROSBERCON. [KILKENNY.]

ROSCOFF. [FINISTÈRE.]

ROSCOMMON, an inland county in the province of Connaught, Ireland, is bounded N. by the counties of Sligo and Leitrim; E. by Leitrim, Longford, and Westmeath; S. by King's County and Galway; and W. by Galway and Mayo. It lies between 53° 17' and 54° 8' N. lat., 7° 50' and 8° 47' W. long. Its greatest length from north to south is 60 miles, from east to west 40 miles. The area is 949 square miles, or 607,691 acres; of which 440,522 acres are arable, 130,299 acres uncultivated, 6732 acres in plantations, 768 acres in towns, and 29,370 acres under water. The population in 1831 was 249,613; in 1841 it was 253,591; in 1851 it was 173,417.

Surface, Hydrography, and Communications.—The county has an irregular outline. Near the centre it suddenly contracts southward to less than half its greatest breadth, extending in a narrow strip between the rivers Suck and Shannon. Northward the area gradually diminishes till it terminates in a breadth of three miles. The surface slopes towards the Shannon, and lies within the great plain of Ireland. It consists for the most part of bold undulations. In the southern division a series of elevated ridges, separated by alluvial flats, divide into two ranges, the one skirting the shore of Lough Ree, the other the left bank of the Suck. At a distance of from two to four miles from the Shannon, the surface rises into the Slieve Bawn range, which reaches at its southern extremity an elevation of 857 feet. Towards the opposite verge of the county the surface is generally level. The only considerable elevation in this district is Slieve Aalwyn, which rises between Castlereagh and Ballinlough to a height of 497 feet. The highest part of the county is in the north, where the Curlew Hills on the Sligo border near Boyle have an altitude of 868 feet; and the Braulieve Mountains, 1817 feet high, and Slieve Curkagh, 1098 feet high, extend from Sligo and Leitrim into the district west from Lough Allen.

The principal rivers are the Shannon and the Suck, which form about two-thirds of the whole boundary line of the county. The Shannon, five miles from its source in the county of Leitrim, enters Lough Allen, about the middle of which is the northern limit of Roscommon. From Lough Allen it flows along the eastern boundary with a winding course and several expansions, forming the chief lakes of Roscommon, to the southern extremity of the county, where it receives its chief tributary the Suck. The course of the Shannon along the border of Roscommon is about 75 miles in length, with a fall of less than 40 feet, or about six inches to a mile. It is navigable throughout, except in a few places where rapids and shoals are passed by canals. [SHANNON.] The Arigna and the Boyle are tributaries of the Shannon. The Suck rises within the border of Mayo county, flows eastward to the town of Castlereagh, where it bends to the south, and then runs south-eastward to the western boundary, which it follows, with an interval of about five miles, till it unites with the Shannon. Its course in all is about 60 miles long. It is navigable for flat-bottomed barges to Ballinaloe, about 10 miles from the Shannon.

The principal lakes are the several expansions of the Shannon. Lough Allen, the lower half of which borders the county, lies north and south about eight miles long by three or four miles broad, and about 160 feet above sea-level. Its shores are well-wooded and rise gently towards the fine mountain scenery in the back-ground. Between Lough Allen and Lough Ree, are Loughs Corry, Tap, Boderig or Bodarg, Sconnall, and Forbes. These are of various sizes, and some of them very irregular in outline. Lough Ree, next to Lough Derg, the largest of all the expansions of the Shannon, reaches within two

miles of the town of Athlone, extending 16 miles from north to south, with an extreme breadth of 7 miles. The depth of water is from 20 to 30 feet, sinking in some places to 120 feet. The shores nowhere rise higher than 250 feet above the surface of the water, and being shallow and stony are unfavourable for landing. Numerous shoals render the navigation difficult. There is not much wood along its banks, and not a village is visible from the water, but the lake is studded with islands, which in many places render the scenery picturesque. Numerous pleasure-boats are kept on the lake. In the north Lough Skean and Meelagh, and in the line of the Boyle River Lough Gara, which is five miles in length and breadth, Lough Key or Rockingham Lough, and Lough Oakport, all communicate with the Shannon, and are remarkable for their beautiful and picturesque scenery. There are a number of smaller lakes in the county. In many parts of the limestone tracts are temporary lakes, called turloughs, which are filled with water in winter, but are usually dry in summer, being drained off by fissures in the rock as the vegetable matter that stopped them decays with the progress of the season. They yield excellent crops where the bottom is grassy, and early enough left dry.

The Dublin road to Galway crosses the county between Athlone and Ballinasloe. The road from Dublin to Sligo sends one branch northward, which passes from Drumsna to Jamestown, and then from Carrick north-eastward by Boyle; and another through the centre of the county by Tarmonbarry to Strokestown, and thence by Elphin to join the former at Boyle. From Strokestown the Dublin road runs westward through Tusk and Frenchpark to Ballina. Roads run from all parts of the county to the various ports on the Shannon. The Shannon navigation extends along the eastern boundary, penetrates to the interior by the Boyle branch to the vicinity of that town, and by a branch to Strokestown, and touches the county at Ballinasloe by a continuation of the Grand Canal, thus connecting it in all directions with the traffic down the river to Limerick, and along the Grand and Royal canals to Dublin. The Midland Great Western railway from Dublin to Galway passes between Athlone and Ballinasloe.

Geology, Mineralogy, &c.—The county in its geological structure forms a continuation of the central limestone district of Ireland. The upper limestone appears to some extent in beds of a gray colour, abounding with fossils. The argillaceous limestone or calp occupies a great proportion of the county, and is in many places blended with Lydian stone. The lower beds are generally of the black crystalline limestone. In several districts sandstone protrudes through the limestone. It is quarried near Frenchpark in thin layers, which are used as a substitute for roofing-slate. West from Castlereagh, an area of some miles is occupied by yellow sandstone. Old red-sandstone forms the greater part of the Slieve-Bawn range and of the Curlew Mountains; from the latter it extends across the county in a belt of some breadth along the valley of the Boyle River. The Brulieve and Slieve-Curkagh groups belong to the coal measures, and form part of the great coal district extending over the highlands divided by Lough Allen. These two groups consist of shales and sandstones supported by the limestone, with three beds of coal resting on beds of millstone grit, from which good ironstone is obtained. The coal answers well for smelting iron, and was used at the Arigna iron-works within the county. Only small quantities of the coal, which is slightly bituminous, are now raised for domestic use. Good bricks are made from the fire-clay of the coal-field. Pipe-clay is found in the county, also potters'-clay, from which coarse earthenware is manufactured. Limestone suitable for building is quarried.

Climate, Soil, and Produce.—The climate is comparatively cold and moist, and the crops are late in coming to maturity. The limestone districts, except the intervals of bog and marsh, are covered with fertile soils, which consist in some places of a rich deep loam. The central portions consist chiefly of natural pastures, which are the richest in Connaught, extending, under the name of the Boyle Plains, over the undulating country bounded by Boyle, Castlereagh, Roscommon, and Strokestown. The heights between the Suck and the Shannon have a light soil too shallow in many places for the plough, but clothed with excellent pasture for sheep. Some portions of the red bog along the rivers have been reclaimed; the mountain bogs are wet and spongy, but interspersed with dry heathy moors. The employments of the county are mainly agricultural, and grazing is most generally and successfully attended to. The tillage farms are for the most part small, and the modes of culture defective. The larger farms are more skilfully managed, and better methods are coming into use. The grazing farms are generally larger, and in a much better condition. The sheep are much superior to those reared in the neighbouring counties. The favourite breed is a cross between the Leicester and the old large Connaught breed. The long-horned Leicester is the most common breed of black cattle reared for the market. There are few large dairy-farms, but a considerable quantity of butter is made in all parts of the county.

The linen manufacture, which was carried on to some extent, has declined. Coarse woollen stuffs are made by the wives and daughters of the farmers. There are small manufactures of brick, earthenware, and tobacco-pipes.

In 1853 there were 138,565 acres under crop, of which 1338 acres grew wheat; 61,951 acres, oats; 730 acres, barley, bere, rye, peas, and beans; 36,124 acres, potatoes; 4900 acres, turnips; 2638 acres, mangel-

wurzel, carrots, and other green crops; 535 acres, flax; 30,299 acres, meadow and clover. In 1841 there were in plantation 8093 acres growing oak, ash, elm, fir, beech, mixed timber, and fruit. In 1852 on 19,610 holdings, there were 8992 horses, 5558 mules and asses, 84,880 head of cattle, 110,117 sheep, 22,388 pigs, 12,291 goats, and 260,767 head of poultry. The total value of the live stock here enumerated was estimated at 794,167*l*.

Divisions and Towns.—The county is mainly in the diocese of Elphin, with small portions in the dioceses of Ardagh, Tuam, and Clonfert, and contains 58 parishes. It is divided into 9 baronies—Athlone, Ballintober (north and south), Ballymoe, Boyle, Castlereagh, Frenchpark, Moycarn, and Roscommon. The principal towns are—ROSCOMMON, BOYLE, part of BALLINASLOE, part of ATHLONE, CASTLEREA, ELPHIN, and STROKESTOWN, which are noticed under their respective titles. The following are some of the smaller towns and more important villages, with the population of each in 1851:—

Frenchpark is a small market-town, situated on the Strokestown and Ballina road, about 21 miles N.N.W. from Roscommon. It consists of two straggling streets intersecting each other, and contains a few substantial houses. It has a Roman Catholic chapel, a court-house, a new market-house, and a school, partially endowed. A manor court is held in the town. Fairs are held on May 21st, July 12th, and September 21st. Thursday is the market-day.

Keadue, population 206, a post-town, in the barony of Boyle, is situated on the road from Leitrim to Sligo, 35 miles N. from Roscommon. It contains a Roman Catholic chapel, a court-house, a new market-house, a dispensary, one or two endowed schools, and the ruins of the ancient parish church, in the burial-ground of which Carolan, the last of the Irish bards, who died in 1738, was interred. There is a weekly market, and fairs are held eight times a year.

Athleague, population 331, a village 5 miles S. by W. from Roscommon, on the river Suck, where it is divided into several channels, crossed obliquely by a chain of low bridges, with a connecting causeway. The place consists of a long street running from the end of the causeway along the right bank of the river, with another rising at right angles to it up the elevated bank. There are a few neat houses in the outskirts, but the village has not many buildings better than cabins. It contains a decayed parish church, a Roman Catholic chapel, a dispensary, a constabulary barrack, and some large flour-mills and malt-houses, which have gone out of use. Fairs are held on July 11th and September 24th. **Knockcroghery**, population 232, is pleasantly situated on a rising ground, 5 miles S.E. from Roscommon by the Athlone road, and consists of a single street of well-kept cabins, with a few better buildings. It contains the parish church, which has school-houses connected with it. A number of the inhabitants are employed in the manufacture of tobacco-pipes, for which there are eight kilns in the village. Fairs are held on May 26th, August 21st, and October 25th, the last being a great sheep fair. **Loughglynn**, population 265, is situated on the south shore of Lough Glynn, and on the Castlereagh and Foxford road, 22 miles N.W. from Roscommon. It contains some good houses, a Roman Catholic chapel, and a dispensary. Fairs are held four times a year. **Mount Talbot**, a neat village on the Suck River, 7 miles S.S.W. from Roscommon, has a parish church and a Roman Catholic chapel. The river is here crossed by a bridge of 12 arches. Talbot House, the seat of the Talbot family, is a fine old castellated mansion adjacent to the village. Fairs are held four times a year. **Rusky**, or **Roosky**, population 246, a village situated on the Shannon, and on the Dublin and Sligo road, 22 miles N.E. by N. from Roscommon, is partly on the Leitrim side, but chiefly on the Roscommon side of the river, which is crossed by a bridge of 9 arches. A rapid in the river is here passed by a canal a quarter of a mile in length. Petty sessions are held monthly. **Tusk**, population returned with that of the parish, was formerly an incorporated town returning two members to the Irish Parliament, but now consists of a few cottages, a school-house, and a constabulary barrack. It contains the ruins of a castle built by O'Connor Roe in 1406, and the church walls, two pointed arches, and other remains of an abbey supposed to have been founded in the same century.

The county returns two members to the Imperial Parliament. The county jail is at Roscommon, where the assizes are held. Quarter sessions are held at Roscommon, Athlone, Boyle, Castlereagh, and Strokestown. Petty sessions are held in 19 places. The county infirmary is at Roscommon. The district lunatic asylum for Connaught, to which the county is entitled to send 40 patients, is at Ballinasloe. There are dispensaries in 16 places. A savings bank is established at Boyle. In September 1852 there were 102 National schools in the county, attended by 6229 male and 5883 female children.

History and Antiquities.—The Auteri, a people mentioned by Ptolemy, first appear in history as the possessors of this part of Ireland. At a later period it was occupied by various septa, of which the principal were the two branches of the O'Conors—the O'Conors Roe or Ruadh (red), and the O'Conors Don or Dhunne (brown), the Madermots, the O'Dalys, and the O'Kellys.

Seven years after the Anglo-Norman invasion the county was attacked by Miles de Cogan, one of the English adventurers, who was joined by Murrough, son of Roderic, king of Ireland, at the head of a body of malcontents. The natives, by driving away their cattle and

laying waste the country, exposed De Cogan and his army to great danger from famine, and compelled them to retreat. In 1204 the county was ravaged by William de Burgo Fitz-Aldelm, lord of Limerick; in 1216 the castle of Athlone was erected to command the ford of the Shannon; and in 1268 that of Roscommon was built to secure the quietness of the county. In 1315 Richard de Burgo, earl of Ulster, and Phelim O'Connor, prince of Connaught, advanced from Roscommon to repel the invasion of the Scotch under Edward Bruce; but O'Connor entered into a secret treaty with Bruce, and retired to defend his own territory against the usurpation of his kinsman Roderic, whom with the aid of the English he defeated and slew. Having then avowed his alliance with the Scotch, he was attacked and completely defeated at Athenry in Galway by the English under William de Burgo, the earl's brother, and Sir John Bellingham. This victory broke the power of the O'Conors. Meanwhile the inheritance of the De Burgos was conveyed by marriage to Lionel, duke of Clarence, son of Edward III., whose descendants came to the throne in the person of Edward IV. In the reign of Elizabeth, Connaught was divided into counties, and the county of Roscommon into baronies. The O'Conors remained loyal during the troubles of Elizabeth's reign, but in the rebellion of 1641 the O'Connor Don took part with the Ulster insurgents after they had made themselves masters of the county. At the close of the war his estates, with those of other chiefs, were confiscated and divided among English and Scotch adventurers. At the restoration however he recovered the greater part of his property, and his descendants are among the few native Irish families who retain their lands.

The most numerous antiquities of the county are the raths, or hill-forts, of which nearly 500 have been reckoned. They are found upon natural eminences, and are formed generally of earth and hurdles, but sometimes of wooden walls, resting on a foundation of earth, and inclose the dwelling-place of the chieftain and his family. They are regarded with reverence, and left in most cases undisturbed by the plough. At Oran, between Roscommon and Castlereagh, there is a portion of a round tower 12 feet high, built of limestone in regular courses, with finely-cut and close-fitting stones. Near Lough Glynn are the ruins of a fort of unknown antiquity. The massive walls and polygonal towers of Ballintubber Castle, the ancient stronghold of the O'Connor Don, are in tolerable preservation. Other feudal remains are, those of Roscommon Castle, the keep of Athlone Castle, the ruins of a small castle on Castle Island in Lough Key, and those of Coothe Hall, a fortified mansion of the middle ages, between Lough Key and the Shannon. The principal ecclesiastical antiquities are the ruins of Boyle, Roscommon, Tulak, and Clonshanville abbey. There are numerous remains of old churches, inclosed within cemeteries still in use.

ROSCOMMON, Ireland, the chief town of county Roscommon, and the seat of a Poor-Law Union, is situated near the centre of the county, on the road from Lanesborough to Tuam, in 53° 38' N. lat., 8° 8' W. long., 96 miles W. by N. from Dublin by road. The population of the town in 1851 was 3364, besides 1259 inmates of the Union workhouse. Roscommon Poor-Law Union comprises 18 electoral divisions, with an area of 114,056 acres, and a population in 1851 of 34,046. An abbey was founded here for the order of Preaching Friars, about 1257, by O'Connor, king or prince of Connaught; and a few years after a strong castle was built by Sir Robert de Ufford, one of the early English adventurers. Of both the abbey and the castle there are considerable remains; the castle is on the north side of the town, and the abbey church on the south side. The interior of the church is still used as a burial-ground. Roscommon sent members to the Irish Parliament, but was disfranchised at the Union. In the centre of the town is the old jail, a building situated on the summit of the eminence on which the town stands, but now disused as a prison. The parish church has been lately enlarged. The old court-house has been converted into a Roman Catholic chapel. There are two national schools. In the town are a new court-house, a new jail, and the county infirmary. Coarse pottery-ware is manufactured, and friezes, coarse flannel, and woollen stuffs are woven. On Saturday is held a market, at which large quantities of grain are sold, to be shipped on the canal at Lanesborough. The assizes for the county, quarter and petty sessions, and a monthly manor court, are held in the town. Fairs are held four times a year.

ROSCREA, county of Tipperary, Ireland, a market-town and the seat of a Poor-Law Union, is situated on a feeder of the Lower Brosna River, and on the Dublin and Limerick road, in 52° 57' N. lat., 7° 48' W. long., distant by road 19 miles E. by N. from Nenagh, 94 miles S.W. by W. from Dublin. The population in 1851 was 3496, besides 641 inmates of the workhouse. Roscrea Poor-Law Union comprises 23 electoral divisions, with an area of 118,488 acres, and a population in 1851 of 33,442. The town is of great antiquity, having arisen around a monastery which was founded in 620. In the reign of John a castle was erected in the place as a defence against the Irish. Several of the streets are wide and contain some good houses. The town contains the parish church, erected in 1812; places of worship for Wesleyan and Primitive Methodists, Quakers, and Roman Catholics; a National school, and others partly endowed; and a savings bank. It has also a court-house and a market-house, a fever hospital, dispensary, Union workhouse, bridewell, and infantry barracks.

Ormond Castle now forms a military store-house. An ancient round tower, 80 feet high, and having a projecting roof, stands in the town. The entrance to the churchyard is the gable and porch of the abbey of St. Cronan, with a full-length figure of the saint. The steeple of a Franciscan priory, founded in 1499, forms the belfry of the Roman Catholic chapel. The town has a small manufacture of coarse woollen cloths. There is a considerable sale of agricultural produce at the weekly markets. Quarter and petty sessions are held. Fairs are held seven times a year.

ROSEAU. [DOMINICA.]

ROSEHEARTY, Aberdeenshire, Scotland, a fishing village and a burgh of barony, in Pitaligo parish, is situated on the Moray Frith, 4 miles W. from Fraserburgh, and 46 miles N. from Aberdeen by road. The population of the burgh in 1851 was 844. It consists of several small streets, mostly running parallel with the beach. The parish church is a short distance inland, with a handsome school-house adjacent. In the village are a Free church, a United Presbyterian church, and a female school. The harbour affords convenient shelter to fishing-boats, and admits vessels of 70 tons burden. The inhabitants are chiefly engaged in fishing. From July to September there is an active herring fishery, employing from 40 to 50 boats and several sloop. In spring a number of boats go to the island of Tyree for the cod and ling fishery, and return by Glasgow, exchanging their fish for coals. Fish are cured in the village for the Glasgow, Edinburgh, and London markets. Boat-building is carried on. Fairs are held on the first Tuesday of May, July, and October.

ROSENAU. [HUNGARY.]

ROSETTA, or EL RASCHID, a town and port of Lower Egypt, is situated in 31° 25' N. lat., 30° 28' E. long., on the left or west bank of one of the principal branches of the Nile, and about four miles from its mouth. The country around Rosetta is a complete garden. The town contains several large mosques; the streets, which are exceedingly narrow, not more than two yards wide, lie parallel to each other in a line with the river, and are irregularly intersected by others which are shorter. Between the houses and the Nile there is a wide space, which is the promenade of Rosetta. The houses, which are built of a dingy red brick, are two or three stories high; the bazaars are narrow, dirty, and dark. Rosetta formerly carried on a considerable trade both with Europe and the Levant, and at one time its population amounted to 25,000 persons, but the opening of the Mahmoudieh Canal, connecting Alexandria with the Nile, has deprived the town of nearly the whole of this traffic, though it still has many thriving manufactories for sailcloth, leather, and iron, with which it supplies the dockyards at Alexandria. The population now does not exceed 4000. In 1798 the French took Rosetta, and in 1807 it was besieged by the English. Here was found the 'Rosetta Stone,' now in the British Museum.

ROSHAN. [BADAKSHAN.]

ROSHEIM. [RHIN, BAS.]

ROSLIN. [EDINBURGHSHIRE.]

ROSOY. [AISNE.]

ROSS, Herefordshire, a market-town, and the seat of a Poor-Law Union, in the parish of Ross, is beautifully situated on the left bank of the river Wye, in 51° 54' N. lat., 2° 33' W. long., distant 14 miles S.S.E. from Hereford, and 120 miles W.S.W. from London. The population of the town of Ross in 1851 was 2674. The living is a rectory in the archdeaconry and diocese of Hereford. Ross Poor-Law Union contains 30 parishes and townships, with an area of 55,568 acres, and a population in 1851 of 15,502.

The town of Ross has a neat and interesting appearance; it is lighted with gas, and paved. The town-hall, a building of some antiquity and interest, is in the centre of the town. The parish church is believed to be of the date of 1816. The church is chiefly noted for its fine spire, alluded to by Pope in connection with John Kyrle, 'the Man of Ross.' The spire has been several times struck by lightning. From the floor of Kyrle's pew in the church three elm-trees spring up. In the church is a monument with an inscription to the memory of John Kyrle. The Wesleyan Methodists, Baptists, Independents, and Quakers have places of worship. There are National and British schools, a Blue-Coat school, a mechanics institution, a savings bank, and a dispensary. The market-day is Thursday. Fairs are held six times in the year. A county court is held in the town. A railway intended to connect Gloucester with Hereford through Ross, has been partly constructed. Ross is much resorted to by tourists.

ROSS, or ROSSCARBERRY, county Cork, Ireland, a market-town, and the seat of a diocese, is situated on a rocky eminence at the head of Ross Bay, in 51° 35' N. lat., 8° 59' W. long., distant by road 39 miles S.W. from Cork, and 197 miles S.W. from Dublin. The population in 1851 was 1044. The cathedral is an old building several times altered. A modern tower, with a stone spire 50 feet high, rises from the west end. There are a Roman Catholic chapel, a court-house, a market-house, some corn-stores, a dispensary, and a bridewell. Many of the inhabitants are employed in weaving. A market is held on Wednesday. Fairs are held on September 19th and December 19th. Some remarkable excavations, containing regular apartments, have been at different times laid open in the neighbourhood of the church.

Of the see of Ross nothing certain is known till after the invasion.

In the reign of Elizabeth it was united to the see of Cork. It now forms part of the united dioceses of Cork, Cloyne, and Ross. The chapter consists of a dean, archdeacon, precentor, chancellor, and treasurer, with five prebendaries. The diocese contains 23 benefices. The cathedral church and bishop's residence are in Cork city.

ROSS and CROMARTY SHIRES, two counties in the north of Scotland, so intimately connected politically and geographically, that it is necessary to treat of them together. Ross comprehends a large area on the mainland, and includes the island of Lewis. [HEBRIDES.] Cromarty is composed of a number of detached portions, either interspersed among the inland parts of Ross or lying along its border. Ross is bounded N. by Sutherland, E. by the North Sea, S. and S.E. by Inverness-shire, and W. by the Western Ocean; it lies between 57° 8' and 58° N. lat., 3° 55' and 4° 52' W. long. The two counties include several small islands, the Summer Islands, Martin, Eilan-Clearach, Longa, the Croulin Islands, &c., off the western coast. Lewis is to the north-west of the mainland part of the county: the distance to its nearest point across the Minch is about 25 miles. Lewis is 39 miles long from north to south, from the northern promontory, called the Butt of the Lewis, to the border of Harris; and 31 miles broad from east to west: its coast-line is very irregular. The islands of Bernera and Scarpa lie close to Lewis on the western side. The Shiant Isles are a group of small islands or rocks between Lewis and the Main, but much nearer Lewis. The southern portion of Lewis, called Harris, belongs to Inverness-shire. The area of the united counties is 3151 square miles, or 2,016,375 statute acres. The two counties unite in returning one member to Parliament. They form one sheriffdom. The population of the united counties in 1841 was 78,685; in 1851 it was 82,707.

Surface, Coast-Line, and Islands.—A general description of the district, of which Ross and Cromarty form a part, is given under GREAT BRITAIN: 'Scotland, north and west of Glenmore.' It is sufficient here to notice that, except the two peninsulas formed by the three friths Dornoch, Cromarty, and Moray, and the parts immediately adjacent to them, it consists of mountains irregularly grouped, with deep intervening glens or ravines. Ben Wyvis is 3720 feet above the level of the sea; Kea Cloch, near Little Loch Broom, 3600 feet; Ben Derag, one of the Ben More Hills, near the head of Loch Broom, 3551 feet; Ben Lair, near Loch Maree, 3000 feet; Ben Attow, on the border of Ross-shire and Inverness-shire, is said to be nearly 4000 feet. Dornoch Frith is about 10 miles across at its entrance between Tarbet Ness and Brora. Moray Frith has been already described. [MORAY FRITH.]

The principal inlets on the western or Atlantic coast are, Loch Enard, at the north-west extremity of the two counties; Loch Broom, Little Loch Broom, Loch Greinord, Loch Ewe, Loch Gaisloch, Loch Torridon, Loch Carron, with Loch Kishorn, which is a branch of it; and Loch Alah, with its branches, Loch Ling and Loch Duich. Loch Broom and Loch Carron extend about 15 miles inland, but are both narrow. Loch Greinord is about 4 miles across at the mouth.

The principal inlets on the coast of Lewis are, Loch Bernera, Loch Roig, and Loch Resort on the west side; Loch Tua, Loch Luerboest, Loch Shell, and Loch Seaforth on the east side. Lochs Bernera and Roig are branches of one inlet, 9 miles across at the entrance, and extending 9 miles inland: in the middle of it is the island of Bernera (5 miles long from east to west, and 3 miles wide), and a number of smaller islands. The headlands of Lewis are, the Butt of Lewis; Tiompan Head, at the extremity of the peninsula which forms the east side of Loch Tua; and Gallan Head, at the south side of Loch Roig. Lewis is mountainous; the peaks form a range extending north and south, with lateral branches. The Barvas Hills, near the centre of the island, are 780 feet high; and Suaneval, on the western side, between Loch Roig and Loch Resort, 2700 feet.

Hydrography and Communications.—There are no large rivers. The Oikel rises at the foot of Ben Mohr in Sutherlandshire, and flows 26 miles along the border of the county till it unites with a stream from Loch Shin in Sutherlandshire. It then expands into a narrow lake five miles long, called the Kyle, which opens into Dornoch Frith. The Repath Water and Carron Water are one stream 24 miles long, which joins the Kyle at its lower end. Loch Monar, five miles long by one mile broad, is drained by a stream which belongs to Inverness-shire. Loch Glass, five miles long, and many other lakes, most of them very small, are drained by streams flowing into the friths of the eastern coast. Loch Maree, the largest fresh-water lake in the counties, extending 12 miles in length, and 2 miles or 2½ miles across in the broadest part, is drained by the Ewe, which flows into Loch Ewe. Lewis abounds in lakes; but they are all small, except Loch Langavat, which extends in length nearly 10 miles from north to south, between Loch Seaforth and Loch Resort.

The two counties have very few roads. The greater part of them, including those of chief importance, are on the east side, and lead to different places farther north. One leads near the coast from Inverness, by Fortrose, Cromarty, and Tain, to Dornoch, Wick, and Thurso, the communication being made in several places by ferries over the lochs and friths. Another road from Inverness to Wick and Thurso runs more inland, passing round the heads of Loch Beaulie and the Frith of Cromarty, and through the town of Dingwall, which is at the head of Cromarty Frith: it crosses into Sutherlandshire by Bonar

Bridge, which is thrown over the Kyle at the head of Dornoch Frith. There are several roads communicating between these two. A road from Dingwall leads across the county through Strathbrann to Loch Carron, a distance of 49 miles, sending off various branches. The road from Inverness to the Isle of Skye, with a branch to Loch Alah and Loch Carron, runs through Rhiabuaie and Glen Shiel, in the southern parts of the county of Ross; and that from Dornoch and the east coast to Loch Assynt just passes through the northern part of the same county.

Soil and Agriculture.—The arable land of the two counties is almost entirely confined to the eastern part, comprehending the two peninsulas—the Black Isle, between Loch Beaulie and Cromarty Frith; and Easter Ross, between the Cromarty and Dornoch friths, together with the comparatively low and level tract immediately adjacent to these. The central and western parts are rugged and mountainous, interspersed with lakes and narrow glens that afford pasture for sheep and black cattle. Within the last half century great improvements have been made in the system of agriculture. Besides the grain consumed in the counties, a large quantity is annually exported to London, Leith, Liverpool, &c.; and a large portion is used in the manufacture of whisky, there being several extensive distilleries.

The soil in Black Isle is various, and much of it poor. The cultivated portion consists chiefly of clayey loam, good black mould, and sandy loam. In Easter Ross there is a considerable extent of clayey loam and light sandy soil. Around Dingwall the soil is clayey. Turnips are grown equal in quality to those of more southern counties. The crops are clean, and for the most part rich. The houses of the principal farmers are commodious, and the cottages of the peasantry are in general good.

Cheviot sheep, and the best breeds of cattle from the West Highlands and from Ayrshire, have been introduced. Considerable attention has also been paid to the breed of horses. The native breed of cattle is hardy and compact, adapted to the climate.

The western side of the county, where it has not been thrown into large sheep-farms, is occupied by a poor class of tenants. They have some arable land, in which potatoes, barley, and oats are raised; but the country generally is an open waste. The houses of the peasantry are very poor; some are built of turf, others with stone, with or without mortar, and have a roof of turf with heather or fern above it. They have no chimneys; the fire of peat or turf being kindled against the wall, or on a stone in the centre of the room, the smoke escapes as it can, by roof, door, or windows, which last have wooden shutters. Along the coast the peasantry are much engaged in the herring fishery.

There are stone-quarries in some parts of the two counties, but their products are comparatively unimportant. Limestone is wrought, but there is no coal. The herring-fishery is carried on along the eastern shore, and the salmon-fishery in the rivers and estuaries of the coast.

Divisions, Towns, &c.—The two counties are divided into 33 parishes, two of which extend into the adjacent counties. The parishes are within the ecclesiastical jurisdiction of the synod of Ross. There are four royal burghs, namely, CROMARTY, FORTROSE, DINGWALL, and TAIN; and one burgh of barony, STORNOWAY, in Lewis.

Dingwall, a royal burgh and market-town, and the county town of the united counties, lies at the south-western extremity of Cromarty Frith, 23 miles N.W. from Inverness by a circuitous road, and 166 miles N.W. from Edinburgh. The population of the burgh in 1851 was 1990. The town is governed by a provost and 14 councillors, two of whom are bailies, and unites with Cromarty, Dornoch, Kirkwall, Tain, and Wick in the return of one member to Parliament. Dingwall was made a royal burgh by Alexander II. in 1227. Some traces remain of the ancient castle of the earls of Ross. The church is a commodious building; near it is a pyramidal obelisk 57 feet high and 6 feet square at the base, erected on a large artificial mound by a former earl of Cromarty to mark out the burial-place of himself and his family. The town-house, a curious old building with a spire, is near the centre of the town; and there are besides, a Free church, an Episcopal chapel, and a small jail. A short canal from the frith enables vessels to come quite up to the town.

Tain, a royal burgh and market-town, lies on the southern shore of Dornoch Frith, 47 miles N. from Inverness by the road. The population of the burgh in 1851 was 2049. The burgh is governed by a provost and 14 councillors, two of whom are bailies; and unites with Cromarty, Dornoch, Dingwall, Kirkwall, and Wick in the return of one member to Parliament. Tain had its earliest charter from James VI. It was early celebrated for a chapel of St. Duthac, bishop of Ross, which had right of sanctuary. The town is irregularly built, but the streets have been improved of late years, and new and handsome houses erected. There are a large parish church, a Free church, and a chapel for United Presbyterians; a handsome academy, erected by subscription in 1813; a parochial and a burgh school; a reading- and news-room; a good town-house; and a prison. The ruins of St. Duthac's chapel, east of the town, are of granite, and are remarkable for the strength and simplicity of their architecture. A church, also dedicated to St. Duthac, and now deserted, stands in the centre of the town. The ruins of an old prison tower with five spires are in the town. There are an iron-foundry, a carding-mill, and a dye-work. Salmon-fishing is carried on in the frith.

Stornoway, a burgh of barony and sea-port, and the only town in Lewis, is situated at the head of a bay on the east side of the island, in 58° 13' N. lat., 6° 20' W. long. The population of the town in 1841 was 1354; in 1851 it was 2391. Stornoway was founded by James I. for the purpose of introducing civilisation into the Highlands. The houses are good, with slate roofs. There are a custom-house, a court-house, a jail, a branch bank, and an assembly-room. In addition to the Established church, there are a Free church and an Episcopal chapel. The town is lighted with gas. The principal employment of the inhabitants is fishing. Agriculture has considerably improved of late years. The harbour is good and well sheltered, and is capable of containing 300 vessels of any tonnage. Those belonging to the port are 56 in number, with a tonnage of 2608. During 1853 there entered the port 119 sailing-vessels, tonnage 5463, and 88 steam-vessels, tonnage 15,864; and there cleared 60 sailing-vessels, tonnage 2508, and 89 steam-vessels, tonnage 16,063. Attached to the harbour is a patent slip. There are several schools and a circulating library. On an eminence overlooking the town is a splendid mansion, in the castellated style, lately erected by Sir J. Matheson, the proprietor of the island.

Invergordon, population about 1100, about 14 miles N. by E. from Dingwall, is a small sea-port, from which cattle are sent to London. Considerable quantities of grain are also shipped at the port. The steam-vessels plying between Inverness and Leith and Inverness and London call regularly at Invergordon. Boat-building is carried on. *Nigg*, population of the parish 1457 in 1851, on the north side of the entrance to Cromarty Frith, opposite Cromarty town, possesses a parish church, a Free church, and a chapel for United Presbyterians, in all of which service is conducted regularly or occasionally in Gaelic. Many of the population are engaged in fishing. Two ancient monumental stones are at Nigg and at Shandwick, in the parish. *Strathpeffer*, a village which has recently arisen in connection with a mineral spa in the valley of Strathpeffer, a short distance W. from Dingwall. Visitors resort to the place from May to October for the purpose of drinking the mineral-waters. Near the spa is a fine ancient mansion, formerly the seat of the earls of Cromarty.

History, Antiquities, &c.—In Kincardine and Fearn parishes are several circles and standing stones; and on the eastern shore of Loch Roig, in Lewis, are the almost perfect remains of a circle of rough stones. There are cairns in different places on the summits of hills. In several parts of the counties are duns, or dounes (or Picts' houses, as they are termed); and also stone coffins, vitrified ruins, and stone obelisks. The earliest separate history of Ross shows it to have been an earldom, which was united with the lordship of the isles by the marriage of a lord of the isles with the daughter of the earl. In 1476 the earldom of Ross, the lands of Knapdale and Kintyre, and the shrievalty of Inverness and Nairn, were annexed to the crown, in return for which the Earl of Ross was created a peer of Parliament. During this period Ross gave title to a bishopric, erected by David I., king of Scotland; the cathedral was at FORTROSS.

There are several remains of the feudal period in Ross-shire. Lochlin Castle, on an eminence 6 miles E. from Tain, consists of two square towers 60 feet high, with large turrets raised upon the towers. Craighouse Castle, on the southern shore of Cromarty Frith, is an ancient tower of five stories. The castles of Killcoy and Redcastle are on the shore of Loch Beaulu. Some ruins of Cadbole Castle are on the east coast, between Cromarty and Moray friths, and of Donan Castle, on the shore of Loch Alsh, on the west coast. There are also some ecclesiastical ruins. Lochlin (or Fearn) Abbey is near Lochlin Castle, east of Tain; and there are the ruins of a number of ancient chapels in Lewis, especially of St. Mulvay's chapel, in the north part of the island.

Religious Worship and Education.—According to the Returns of the Census in 1851, there were then in the two counties 88 places of worship, of which 43 belonged to the Free Church, 35 to the Established Church, 5 to the Episcopal Church, 2 to United Presbyterians, and one each to Independents, Baptists, and Roman Catholics. The number of sittings provided in 75 of these places of worship was 44,644. Of day-schools there were 167, of which 143 were public schools, with 9379 scholars, and 19 were private schools, with 600 scholars. There were 70 Sabbath schools, with 5243 scholars; and one evening school, with 22 scholars. The Tain and Easter Ross Mechanics Institution had 173 members in 1851, and 633 volumes in its library.

Savings Banks.—In 1851 the county possessed two savings banks, at Dingwall and Tain. The amount owing to depositors on November 20th 1853 was 6323l. 9s. 1d.

ROSSANO. [CALABRIA.]
ROSSLEA. [FERMANAGH.]
ROSSTREVOR. [DOWNSHIRE.]
ROSTOCK. [MECKLENBURG.]
ROSTOV. [KATELINORLAV.]
ROSTOW. [YAROSLAV.]

ROTHBURY, Northumberland, a market-town and the seat of a Poor-Law Union, in the parish of Rothbury, is situated in 55° 18' N. lat., 1° 54' W. long., distant 32 miles N.N.W. from Newcastle, and 804 miles N.N.W. from London. The population of the township of Rothbury in 1851 was 895. The living is a rectory in the archdea-

conry of Lindisfarne and diocese of Durham. Rothbury Poor-Law Union contains 71 townships, with an area of 159,168 acres, and a population in 1851 of 7,431.

Rothbury occupies a pleasant retired spot in a valley on the left bank of the Coquet, and consists chiefly of three wide and airy streets, which contain many well-built houses. The parish church is a fine old cruciform structure. The Free Grammar school and the Free school for girls were endowed by Dr. Thomlinson, formerly rector of the parish; the number of scholars at the grammar-school in 1854 was 62. In the market-place is a cross. The market on Friday has almost fallen into desuetude. Fairs for horses, cattle, and sheep are held on the Friday in Easter-week, Whit-Monday, October 2nd, and November 1st. A county court is held. On the summit of a hill on the right bank of the Coquet, is Whitton tower, one of the ancient borderers' strongholds, now converted into the rectory, and surrounded with plantations. In summer Rothbury is resorted to by invalids.

ROTHENBURG. [HESSE-CASSEL.]

ROTHER, RIVER. [SUSSEX; YORKSHIRE.]

ROTHERHAM, West-Riding of Yorkshire, a market-town and the seat of a Poor-Law Union, in the parish of Rotherham, is situated on elevated ground on the right bank of the river Don, in 53° 26' N. lat., 1° 20' W. long., distant 48 miles S. by W. from York, 159 miles N.N.W. from London by road, and 172 miles by the North-Western and Midland railways. The population of the town of Rotherham in 1851 was 6325. The living is a vicarage in the archdeaconry and diocese of York. The government of the town is chiefly in the hands of 12 feoffees. Rotherham Poor-Law Union contains 27 parishes and townships, with an area of 50,591 acres, and a population in 1851 of 33,082.

Rotherham is a place of some antiquity. The station 'Ad Fines,' on the great road from Little Chester to Castleford, is fixed by the best authorities at Temple Brough about a mile from the town. Rotherham probably originated early in the Saxon period. The church at Rotherham was then the only ecclesiastical edifice in an extensive district. A weekly market and an annual fair were held here before the Conquest; the Saxon lord of the manor had his corn-mill; and these were sufficient, with its ecclesiastical superiority, to render Rotherham a place of some importance. In 1307 Edward I. granted the town another market and a second fair. The parish church, a very handsome edifice in the early English style, with a highly-enriched central tower and spire, was built in the reign of Edward IV. There are chapels in the town for Wesleyan and Primitive Methodists, Independents, Baptists, Roman Catholics, and Unitarians. The Grammar school, which has a small endowment, had 40 scholars in 1853. The Feoffee's school, built in 1776, for 28 boys and 20 girls, has an endowment of about 100l. a year. There are also National schools. A college for the training of young men for the ministry in the Independent connexion, had 13 students in 1854. The town possesses a dispensary, a subscription library, a news-room, a literary and mechanics institution, and a savings bank. Archbishop Rotherham, a native of the town, in 1482 founded a college for a provost, three fellows, and six scholars. It was suppressed in the reign of Edward VI.; some remains of it still exist and are used as an inn. The bridge-chapel on the Don has been long used as the town jail. The town is lighted with gas, well paved, and has a good supply of water. Rotherham is united with Masborough on the left bank of the Don by a handsome stone bridge of five pointed arches. The court-house, in which the Midsummer quarter sessions are held, was built by the county in 1827. A county court is held.

Extensive beds of coal, of a quality suitable for manufacturing processes, exist in nearly every part of the parish, and iron-ore is also abundant. In 1746 the Messrs. Walker established a work for the manufacture of cast-iron goods of all kinds; and at the large establishments which originated in their enterprise, great part of the cannon used in the navy during the American and French wars was cast. Masborough is now the more strictly manufacturing part of the town, of which it may be said to form a part. There is an extensive brass-foundry. Glass, earthenware, starch, soap, naphtha, and pyroligneous acid, are largely manufactured. Malting is carried on, and there are two breweries. Vessels of 50 tons burden are occasionally built in yards adjoining the river Don. There is a flax-mill. The markets for corn and cattle are held on Monday: on every alternate Monday the cattle-market is one of the largest in the north of England. On Friday a market is held in a covered stone building in the market-place for butter, poultry, and eggs. Fairs for horses and cattle are held on Whit-Monday and December 1st; and a statute fair in November. The Don is connected with the Trent by the Stainforth and Keadby Canal.

ROTHERHITHE. [SURREY.]

ROTHERSAY, Scotland, a royal burgh in the island of Bute, and the chief town of Bute County, 52 miles W. from Glasgow, in 55° 51' N. lat., 5° 2' W. long. The population of Rothersay was 7014 in 1851. The town is governed by a provost and 17 councillors, three of whom are bailies.

Rothersay owes its origin to a castle erected about 1098, by Magnus, king of Norway. Robert III. made Rothersay a royal burgh, and James VI., in 1585, further augmented its municipal privileges. It was repeatedly taken and plundered by the English, the Norwegians,

and the lords of the isles. It was occupied by the Duke of Argyle in 1685.

The town stands on the east side of the island, at the bottom of a small bay. It has been much enlarged along the shore on each side of the bay by the addition of villas and lodging-houses for visitors, who resort here in summer for bathing. The ruins of Rothesay Castle stand in the middle of the town. The town-hall and county buildings, and the prisons for the county, are adjacent to the castle. There are two churches of the Establishment, three Free churches, and chapels for United Presbyterians, Reformed Presbyterians, and Episcopalians. The town is lighted with gas and possesses baths and wash-houses. Close to the parish church are the ruins of the ancient church of St. Mary, once the cathedral of the bishopric of the isles; the walls of the choir, and one or two ancient monuments, are standing.

There are a cotton spinning-mill and three power-loom factories, boat-building yards, and several cooperages in the town. The herring fishery is carried on. The harbour is used chiefly by the steamers which ply between Glasgow and Loch Fyne. There are a Parochial school, a Charity school, and several Congregational schools; a savings bank; a public library; and two reading-rooms. *Port Bannatyne*, a village in the parish, about 2 miles N. from Rothesay, has several small vessels engaged in the herring fishery. It is frequented in the summer by bathers.

ROTHLEY. [LEICESTERSHIRE.]

ROTHWELL. [NORTHAMPTONSHIRE.]

ROTONDA. [BASILICATA.]

ROTTERDAM, the capital of the Dutch province of South Holland, and now perhaps the most commercial town in the Netherlands, is situated in 51° 55' N. lat., 4° 29' E. long., on the right bank of the Maas, about twenty miles from the mouth of that river, and has about 90,000 inhabitants, of whom about 4000 are Jews, 25,000 Roman Catholics, and the remainder Protestants of different sects. It is in the form of a triangle, the base of which, about a mile and a half in length, extends along the Maas. It derives its name from the little river Rotte, which runs through the middle of the city, and falls into the Maas. The town is surrounded by a moat, and has six gates towards the land and four towards the river. The part called the Binnenstad ('inner town') has many narrow streets, and is separated by the High-street (Hoogstraat) which is built along the dyke that embanks the river, from the outer town (Buitenstad), which contains fine houses, and is intersected by numerous canals by which the largest merchantmen can come up and unload at the very doors of the warehouses. Along the Maas are many fine quays, the handsomest of which, called the Boortjes, consists of a long row of stately houses facing the river, with a broad and deep canal in the rear, parallel to the river. Rotterdam is connected by canal with Helvoetals, and by electro-telegraphic wires and railways with the Hague, Amsterdam, and Antwerp. The cathedral of St. Lawrence contains the tombs of De Witte, and several other admirals. This church, the statue erected to Erasmus (a native of the town) in the market-place, and the dock-yards are the chief objects of attraction in the town. There are also many churches and chapels of the Dutch and Scotch Calvinists, French Protestants, Baptists, and Roman Catholics, a synagogue, &c. British residents are numerous at Rotterdam, and for their accommodation there are three chapels—one for members of the Church of England, one for members of the Church of Scotland, and one for Independents. The Exchange is larger and handsomer than that of Amsterdam. The other principal buildings are the new town-house, the Admiralty, the Academy, the Dutch theatre, the magazines of the East India Company, and some manufactories. The commerce of Rotterdam extends to all parts of the world, and embraces almost every kind of produce and manufacture. Steamers ply regularly to Düsseldorf, Antwerp, London, Hull, &c. The imports and exports consist of similar items to those of Amsterdam. The annual value of the imports has been roughly estimated at 10 millions sterling, the exports at about 7 millions. Rotterdam contains many valuable collections of works of art, an academy of sciences, a public library, a central prison, many schools, and charitable institutions.

ROTTERDAM, NEW, one of the islands which constitute the group of the Friendly or Tonga Islands, is situated in 20° 15' S. lat., 174° 48' W. long. It was discovered by Tasman (1643), and named New Rotterdam, but it is now better known by the native name *Annamooka*, or *Namooka*. The island is about twelve miles in circumference, and in the middle there is a lagoon which is a mile and a half across. The island is low, and surrounded by a sea with regular soundings. [FRIENDLY ISLANDS.]

ROTTL. [SUNDA ISLANDS.]

ROUBAIX. [NORD.]

ROUEN, a large seaport-town in France, capital of the department of Seine-Inférieure, is situated on the right bank of the Seine, 85 miles by railway N.W. from Paris, in 49° 26' 29" N. lat., 1° 5' 40" E. long., 71 feet above the level of the sea, and had 91,512 inhabitants in the commune at the census of 1851. Rouen occupies the site of the ancient *Rotomagus*, capital of the Celtic *Veliocasses*. Under the empire it was the chief town of *Lugdunensis Secunda*. It was taken and plundered by the northmen in A.D. 841 or 842, and it became their capital by virtue of the treaty between Rollo and Charles the Simple. It continued to be the residence of the dukes of Normandy

till William the Conqueror made the conquest of England. [NORMANDIE.] After the murder of Prince Arthur at the instigation of John in 1204, the city was taken after a siege by Philippe Auguste, king of France, and annexed with the rest of the duchy to the crown of France.

From this time Rouen was subject to the kings of France till 1418-19, when it was besieged by the English under Henry V. The town was resolutely defended by a small garrison of 4000 men, under their gallant commander Alain Blanchard. As the town militia mustered 15,000 men, the population of Rouen at the time may be estimated at not less than 50,000 or 60,000. Famine at last compelled the garrison to surrender, and Henry V. tarnished the fame of his victory by the execution of the gallant Blanchard. For thirty years after this Rouen remained in the hands of the English, who here in 1431 burnt the heroic Joan of Arc in the square since called from her, the *Place-de-la-Pucelle*: the spot is marked by a fountain surmounted by a statue of the Maid of Orléans. In 1449 the city was recovered by the French, under Charles VII. In 1562 the Huguenot party succeeded in seizing the town, almost without resistance, and committed great excesses. On October the 26th of the same year it was taken, after a siege, by the Duke of Guise, who gave it up to pillage for eight days. The massacre of St. Bartholomew extended to this town, but the humanity of the governor somewhat checked the excesses. In 1593 the city was taken by Henri IV. after a siege of eight months.

The city stands on the right or north bank of the Seine. Its form approximates to an oval, defined by the boulevards, which form a line of street adorned with trees, and occupying the site of the ancient walls, except on the side of the river, where the city is bounded by a line of quays. Separated from the city by the boulevards are the faubourgs—Cauchoise on the west, Bouvreuil on the north-west, Beauvoisine on the north, St-Hilaire on the north-east, Martainville on the east, and Eauplet on the south-east. South of the city, from which it is separated by the Seine, is St-Sever, the most important of the suburbs. Opposite the central part of the city the river was formerly crossed by a floating bridge supported by 19 barges. Just below this may be seen, at low-water, the ruins of a stone bridge, erected in the 12th century by the empress Matilda, daughter of Henry I. of England, and carried away by a flood in 1564. Opposite to the upper and lower parts of the city and suburbs are two long islands—the upper called *Ile-de-la-Croix*, or *Ile-de-la-Mouque*; the lower, the *Ile-du-Petit-Gay*. Between these islands is the harbour for seaborne vessels. At the western or lower end of the *Ile-de-la-Croix* the river is crossed by a stone bridge, divided into two parts by the point of the island. On the point of the island between the two parts of the bridge is a circular area adorned with a column. A suspension-bridge also crosses this part of the river, connecting the city with the suburb of St-Sever. Above the stone bridge, on the east side of *Le-Croix* islet, lie the large river craft and small steamers that ply to Paris. Two small rivers, the Robec and the Aubette, traverse the eastern part of the suburbs and city by artificial channels, and flow into the Seine near the stone bridge. On the east side of the city, between the Seine and the Aubette, rises Mount St-Catherine, a bold eminence 380 feet high. On the left bank of the Seine, along which it extends for about a mile from the south end of the stone bridge, is the principal public walk, *Le-Grand-Cours*, planted with four rows of fine elms.

Rouen being an old town is in general badly built. The houses for the most part are built of lath-and-plaster, the timbers uncovered and painted red or black, the plaster frequently coated with small gray slates. Many of these old houses however are highly picturesque and distinguished for their rich carvings and old quaint gothic ornaments. In general they are very tall and very narrow, which adds to the singularity of their appearance; but mixed with these are other houses of white brick or stone, and really handsome. The frequent rains, by cleansing the streets, render the town less unhealthy than it would be; and beneficial changes introduced of late years have contributed to the same result. The broad quays, with the river covered with craft of all sizes, from the light skiff to vessels of 300 tons burden in front, and a line of warehouses behind, form at once the busiest and most agreeable part of the town. On the western side of the city and suburbs are some handsome straight streets lined with good stone-houses. The squares and other open spaces are numerous, but for the most part very irregularly laid out; the *Champ-de-Mars*, adjacent to the eastern boulevards, and the *Place-du-Boulingrin*, used for the cattle and horse market, adjacent to the northern boulevards, are of more regular form. The *Place St-Ouen*, or *Place-de-l'Hôtel-de-Ville*, is large, and planted with trees.

The cathedral, the most remarkable building in Rouen, is a noble gothic edifice, cruciform, with two towers at the extremities of the west front, and a lofty tower and spire over the intersection of the nave and transepts. The interior, which is lighted by 180 magnificent painted glass-windows, has a total length of 434 feet, and a width of 104 feet; the height of the nave is 90 feet, that of the aisles 45 feet; the transept, each end of which is lighted by a magnificent rose window, is 175 feet long; at its intersection with the nave four massive pillars support the lantern tower, on which rests a beautiful pyramidal cast-iron spire, the summit of which is 433 feet above the

pavement. The west front, which opens upon a spacious close, is about 170 feet wide; the towers by which it is flanked are of dissimilar architecture, though of nearly equal height (245 feet). The summit of the west front is crowned by a range of open screens, with the lightest and most elegant tracery. There are three deep doorways in the front; the central, which is the largest, projects like a porch before the others, and is surmounted by a pyramidal canopy of open stone-work, partly concealing the great rose-window behind. The northern tower of the western front, called the tower of St-Romain, is one of the oldest portions of the church. The southern tower is of a very rich pointed architecture, and was built in 1599 by Cardinal D'Amboise. The interior of the cathedral contains 25 chapels, including the Lady-Chapel at the end of the choir, and many interesting monuments, including those of Rollo and his son, William Longue Epée. The monuments of Henry the younger, son of Henry II.; of his brother Richard Cœur-de-Lion (whose heart was buried here); of Charles V. of France; of John, duke of Bedford, and others were destroyed by the Huguenots. The heart of Cœur-de-Lion was discovered in 1838, and is now deposited in the sacristy. The library was plundered during the Revolution; the staircase of the room which contained it is remarkable for its delicacy and beauty. The extensive palace of the archbishop, adjoining the cathedral, contains some good paintings.

The abbey church of St. Ouen, the noblest gothic edifice in Rouen, was rebuilt in the 14th century. It is a cruciform building, with a central tower and two western towers, which jut out diagonally from the angles of the western front, and were intended to be connected by a porch of three arches, extending along the lower story of the western front: the towers were for a long time raised only to about fifty feet. The lightness and purity of the architecture; the flying buttresses, with crocketed pinnacles and unusually lofty shafts; the beautiful south porch; the large rose or circular windows; the balustrade of varied quatrefoils round both the body of the church and the aisles; the painted windows, the whole of which have been preserved; and the rich central tower, 296 feet high, and terminated by an octagonal crown of fleurs-de-lis, entitle this church to the highest admiration. Its dimensions are little inferior to those of the cathedral itself. This splendid church was completely restored at the expense of the nation in 1852. There are in all 14 Catholic churches, several of Roman architecture. Under the choir of the church of St-Gervais there is a crypt which is said to be 16 centuries old; this church, situated in the Cauchoise suburb, belonged to the abbey of St-Gervais, in which William the Conqueror died.

The Palais-de-Justice, or court-house, a gothic structure built in the 15th century for the Parliament of Rouen, forms three sides of a quadrangle, of which the fourth side consists of an embattled wall and a gateway of elaborate architecture. In the Place-de-la-Pucelle is an hôtel ornamented with bas-reliefs, representing the interview of Henry VIII and François I. in the Field of the Cloth of Gold. There are a town-hall, formerly part of the abbey of St-Ouen, a clock-tower, some remains of the ancient castle, and a few fragments of the town-wall. In apartments in the town-hall are kept the public library of about 40,000 volumes, and a collection of paintings. The Martainville barracks, in the square of the Champ-de-Mars, has an imposing front; the Hôtel-Dieu, or great hospital, is spacious and airy; and the Halles, or covered markets, are considered to be among the finest in France. They surround on three sides one of the public squares, and form several conveniently-arranged and extensive apartments. The Mercury Hall, or Halle-des-Rouenneries, is 295 feet long by 55 feet wide; the corn-market is still larger. These halls occupy the site of the old castle, the scene of Prince Arthur's murder. A considerable number of handsome fountains are distributed through the streets and squares of the city. Among other structures of the town may be mentioned the archiepiscopal palace, near the cathedral; the custom-house and consular buildings, on the quays; and the theatre, barracks, and Bicêtre prison. Among the more recent buildings, the railway terminus, on the left bank of the river, by which trains from Paris reach Rouen, and the terminus on the right bank, from which the railways to Havre and Dieppe diverge, deserve special mention. Opposite the custom-house a statue of Boieldieu (who was a native of the town) was erected a short time ago.

Rouen ranks next to Lyon among the manufacturing towns of France; it is the principal seat of the cotton manufacture. The spinning-machines are driven by water or by steam power. Hand-weaving is also actively carried on. One large class of the productions of the town is known by the name of 'Rouenneries,' which comprehend chiefly checked and striped cottons for women's dresses. Nankeens are manufactured to a great extent. Kerseymeres also are manufactured. Dyeing cottons and woollens, calico-printing, and bleaching by chemical processes are carried on to a considerable extent. To the above manufactures may be added dimities, muslins, lace, bed-ticking, woollen hosiery, silk and cotton-velvet, shawls, handkerchiefs, fabrics of mingled silk and cotton, ropes, blankets, flannel, hats, combs, preserved meats, liquors, soap, chemical products, paper, haberdashery, steam-machinery and mill-work, shot, sheet lead, cotton- and woollen-yarn, &c. There are also numerous sugar-refineries, bleach-works, tan-yards, ship-yards, breweries, saw-mills, copper- and iron-foundries, &c.

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The western part of the city is the mercantile part; the centre is chiefly occupied by retail traders; and the eastern part is inhabited by the manufacturing population. The Faubourg-St-Sever is also occupied by persons engaged in manufactures. In the northern part of the town, and in the Faubourg-Cauchoise, on the western side, the gentry and persons not engaged in business chiefly reside. Ship-building is carried on along the bank of the Seine. Above 100 vessels, including steamers, belong to the port. The industrial products of Rouen are shipped to all parts of the world; and its commerce is said to be largely on the increase. The entries into the harbour for sea-borne vessels in 1848 numbered 1695, and in 1849, 1972; the total arrivals and departures in 1852 numbered 6215 vessels, carrying an aggregate burden of 541,855 tons, and 37,724 men.

The river (which opposite Rouen is 1000 feet wide and 36 feet deep) forms a commodious port, divided by the stone bridge into two parts, the upper devoted to the large boats which convey goods to Paris and other places higher up the river, the lower part to sea-borne vessels. The direct distance of Rouen from the sea is about 45 miles, but the length of the navigation is almost twice that distance. The influence of the tide is sensibly felt at Rouen, and vessels of 250 or 300 tons can get up to the town. The ready communication of Rouen with the capital and with other towns, by the navigation of the Seine and by railroads, has made it a place of considerable trade, independently of its manufacturing population. The articles of trade are wine, brandy, cider, corn, fruits, grocery, raw products used in the manufactures of the town, dye-stuffs, drugs, timber, iron, slates, pitch, tar, &c.

Rouen, besides being the capital of the department, is the seat of an archbishop, of a High Court of justice for the department of Eure and Seine-Inférieure, of tribunals of first instance and of commerce, of a council of prud'hommes, and of the head-quarters of the 2nd Military Division. The archbishop's diocese comprehends the department of Seine-Inférieure; his suffragans are the bishops of Bayeux, Evreux, Sées, and Coutances. The city also has a mint, a custom-house, two seminaries for the priesthood, a school of medicine, a college, museums of natural history and natural philosophy, schools of painting, sculpture, architecture, and navigation, a botanical garden, and an academy of science and art. Among the other institutions are four hospitals, including one for the insane and one for foundlings, a bank, a savings bank, public baths, and two theatres. Corneille was born in Rouen in 1606.

ROUERQUE. [AVEYRON.]

ROUFFACH. [RHEN, HAUT.]

ROUGÉ. [LOIRE-INFÉRIEURE.]

ROUJAN. [HÉRAULT.]

ROULERS. [FLANDRES, West.]

ROUMELIA. [RUM-ILL.]

ROUNDSTONE. [GALWAY.]

ROUSSILLON, an old province of France, coinciding with the present department of PYRÉNÉES-ORIENTALES. It obtained its name from the town called by the Romans Ruscino, the site of which is marked by an ancient tower now called Castell or Tour de Roussillon, near Perpignan. After the decline of the Roman sway in Gaul the country came successively into the hands of the Visigoths, the Saracens, and the Franks, and was for a long time governed by independent counts of its own. In 1173 the last of these counts bequeathed Roussillon to the kings of Aragon, who held it till the 17th century, when the French took possession of it. By the treaty of the Pyrenees in 1659, Roussillon was finally ceded to France.

ROVATO. [BRESCIA.]

ROVIGNO. [ISTRIA.]

ROVIGO, a province of Austrian Italy formerly included in the territory of the Republic of Venice, is bounded N. by the province of Padua, from which it is divided by the Adige, E. by that of Venice, W. by the provinces of Verona and Mantova, and S. by the papal province of Ferrara, from which it is separated by the Po. The length of the province of Rovigo is 35 miles from east to west, and its greatest breadth is about 15 miles. The area is 428 square miles, and the population in 1851 was estimated at 153,788. The surface is flat, and crossed by various canals, which communicate with the Po and the Adige. The chief products are corn, rice, hay, hemp, pulse, and flax.

The principal towns are the following:—*Rovigo*, the capital of the province, a bustling modern town, with about 7000 inhabitants, a collegiate church, a government house, a cathedral, and a chapel dedicated to the Blessed Virgin, in which are some good paintings. The Bishop of Adria resides in Rovigo. [ADRIA.] *Badia*, a small town, with a manufactory of fine pottery, and about 4000 inhabitants. *Lendinara*, 9 miles W. from Rovigo, on the Adigetto, has about 5000 inhabitants.

ROXBURGHSHIRE, Scotland, an inland county, situated on the south-eastern border, is bounded N. by Berwickshire, E. and S.E. by Northumberland, S. by Cumberland, S.W. by Dumfriesshire, W. by Selkirkshire, and N.W. by Edinburghshire. It lies between 55° 5' and 55° 40' N. lat., 2° 18' and 3° 10' W. long. Its form is very irregular: its greatest length from north-north-east to south-south-west is about 40 miles; its greatest breadth at right angles to the length is 28 miles. Its area is 720 square miles, or 460,938 acres, of which about one

half is under the plough, and the remainder is hill pasture, moor, or meadow. The population in 1841 was 46,025; in 1851 it was 51,642. The county returns one member to the Imperial Parliament.

Surface, Hydrography, and Communications.—The whole surface of the county is undulating and diversified, but in the northern and central parts the hills are of less elevation than along the English and Dumfriesshire borders. A range of lofty hills extends along the border of Northumberland, to which the general designation of Cheviot Hills is sometimes given. The Carter Fell (2020 feet), the Peel Fell, and Lauriston Crag form part of this range. From the head of the Jed Water the range of hills turns westward and runs through the county into Dumfriesshire, separating the basin of the Tweed from Liddesdale and Eskdale. From each side of the range, hills irregularly grouped overspread a wild pastoral district drained by the upper waters of the Teviot on the one side and the Liddel on the other. In the separating range are Windburgh Hill (2000 feet) and Wisp Hill (1830 feet). In Liddesdale (the country drained by the Liddel) are Peel Fell, the Lauriston Hills, and Mildenwood Hill (2000 feet). In the northern part of the county are the Eildon Hills (1864 feet); and on the banks of the Teviot, near the centre of the county, are Ruber's Law (1419 feet) and Dunian (1120 feet) on the south side, and the Minto Crags (721 feet) and Minto Kame on the north.

The county belongs almost entirely to the basin of the Tweed, which first touches the border of the county at the junction of the Ettrick Water; that part of its course which belongs to Roxburghshire may be estimated at 30 miles. It is valuable for its salmon fishings. The principal affluent of the Tweed is the Teviot, which flows through the county in nearly its whole extent, giving to the greater portion of it the name of Teviotdale. It drains nearly the whole county, receiving the Slitrig, the Rule, the Jed, and the Kail from the Northumbrian border, and the Borthwick water and river Ale from Selkirkshire. The Ettrick, the Gala, the Leader, the Eden, and other small affluents of the Tweed have part of their course in this county. Liddesdale is drained by the Liddel and its tributary the Hermitage. It receives the other streams of Liddesdale, and joins the Esk, which falls into the Solway Frith. The whole course of the Teviot is beautiful; it flows along the bottom of a spacious open valley, the sides of which often rise to a considerable height, and its banks are adorned with numerous mansions. Above Hawick the valley is narrower, and becomes pastoral rather than agricultural. None of the streams are navigable, except for ferry-boats.

The roads in Roxburghshire are very good. Several roads from London to Edinburgh pass through this county. One through Wooler just crosses the north-eastern part through Kelso; another, branching from this at Morpeth, passes through Jedburgh and St. Boswell's; and a third, through Penrith and Carlisle, crosses the western side of the county through Dryden and Hawick to Selkirk. A road from Hawick follows the valley of the Teviot, and then of the Tweed, through Kelso to Berwick. The Edinburgh and Hawick railway traverses part of the county. A branch from the York, Newcastle, and Berwick line joins the Edinburgh and Hawick line near St. Boswell's Green.

Geology, &c.—The eastern side of the county is chiefly occupied by the formations of the red-marl or new red-sandstone group, the western side by the grauwacke rocks; the Cheviot or border hills are chiefly of trap formations, and with Liddesdale, form an extension of the Northumberland coal-measures. The predominant rock of the red-marl formation is a sandstone, commonly red but sometimes white. It frequently occurs in strata of considerable thickness, and is employed in building, for which purpose both the red and white varieties are quarried. It more commonly however occurs in thin horizontal beds, which are soft, brittle, and easily decomposed. No coal is dug in the county. The trap formations of the border hills comprehend greenstone, basalt, trap tuff, amygdaloid, and especially a felspar porphyry of reddish-brown colour. In the red-sandstone districts, trap rocks are frequent. Limestone is procured in some parts of the county, but it is neither good nor abundant.

Soil and Agriculture.—The soil in the western parts of the county, where the predominant rock is grauwacke, is generally thin, cold, and clayey, but capable of improvements by underdraining, and of producing good though late white crops. The red-sandstone district, where the sandstone is finer grained, and more clayey and adhesive, is marked by a deep rich red soil producing its harvest rather early; but where the sandstone is more siliceous and loose, the surface is covered with a barren sand. The trap and porphyry district is usually covered by a loose, light, warm, and dry soil, except in the bottoms, where there is commonly a deposit of rich strong clay loam. The highest parts of the trap district afford fine sheep-pasture. The arable land, from the great improvements which have taken place of late years by the introduction of the drill turnip husbandry, the use of manures, better draining, and the intermixture of the feeding and grazing of live stock with tillage, is exceedingly fertile. On the larger farms the inclosures contain from twenty to forty acres. The number of sheep annually raised has greatly increased since the beginning of the century, considerable attention having been shown both to the breeding and the feeding of them. The Cheviots are put on the hill-pastures, and the Leicester, or long-wooled, on the lower grounds. The Teesdale, or short-horned, is the common stock of cattle; but the

Ayrshire and the Highland breeds are also kept, the breeding of cattle being much attended to.

Divisions, Towns, &c.—This county is divided into 30 parishes, of which 5 are partly in other counties. There are 4 divisions of the county, namely, the districts of Melrose, Hawick, Jedburgh, and Kelso. Its popular division into Teviotdale, Liddesdale, &c., has been mentioned above. It contains 5 market-towns:—JEDBURGH, the county town; HAWICK and KELSO, described under their respective heads; Castletown and Melrose, which we notice here.

Castletown, or Newcastle, a market-town in the southern part of the county, had a population in 1851 of about 1030. The castle is a massive border tower, or fortress, nearly 100 feet square. The town consists of two long parallel streets, which are lined with neat new houses, on the right bank of the Liddel. The old village of Castletown (so called from a border fortress now demolished) was situated higher up the vale.

Melrose, a burgh of barony, is situated on the right bank of the Tweed, 36 miles S. from Edinburgh, and 13 miles N.W. from Jedburgh. The population of the town in 1851 was 966. It appears to have been the seat of a religious community in the time of the Saxon heptarchy. In 1138 David I. of Scotland founded here a Cistercian abbey, the ruins of which yet remain. They are chiefly of the abbey church, which was cruciform; the length of the nave and choir was 258 feet, the breadth 79 feet; the length of the choir alone about 50 feet; the length of the transept was 130 feet, the breadth 44 feet. The walls of the nave, choir, and transept are standing, and part of the central tower. The shaft of an ancient cross in the centre of the village is surmounted by the crest of the earls of Haddington. The town of Melrose consists of a central triangular space, with streets diverging from it. The place has an air of antiquity, and some of the houses have in their walls stones with inscriptions derived from mediæval times. The parish church is on an eminence west of the town. There are a Free church, and United Presbyterian and Episcopal chapels; several schools, a library, and a savings bank. A suspension-bridge crosses the Tweed for foot-passengers and single horses. The only manufacture is that of woollens, in connection with the manufactures of Galashiels.

The following villages may be noticed: the populations are those of the parishes in 1851:—

Ancrum, population 1554, is on the right bank of the Ale Water, 4 miles N.N.W. from Jedburgh. The battle of Ancrum Moor was fought in 1645 on a field about a mile and a half north from the village. Near Ancrum are several caves hewn out of the rock on the bank of the river. The remains of a British fort are near the village. In the centre of the village green is an ancient cross. *Denholm,* population of the parish of Cavers 1496, on the right bank of the Teviot, 5 miles N.E. from Hawick, is a thriving village, dependent chiefly on the stocking manufacture carried on at Hawick. There are a Free church, a chapel for Independents, a subscription library, a free library which contains about 1000 volumes, and a parochial school. Of the old baronial castle of the Douglasses, the former sheriffs of Teviotdale, which was of considerable strength and importance, there are now no remains. The town of Cavers was destroyed by the English in 1596. *Leseddes,* population of St. Boswell's parish 884, is pleasantly situated on the right bank of the Tweed, 5 miles S.E. from Melrose. Of the ancient village of St. Boswell's there are now no remains. Besides the parish church there is a Free church. An extensive fair for sheep, cattle, horses, linen, pedlery, &c., is held on St. Boswell's Green on July 18th. *Lillicleaf,* population 798, about 9 miles W. by N. from Jedburgh, possesses a parish church, a chapel for United Presbyterians, a parochial school, and a library. In the times of border warfare there were in the village and vicinity several forts or peels; of these the remains of 14 existed till within the last century. There still remain small portions of one or two of the towers. *Morbattle,* population 997, about 10 miles S. by E. from Kelso, on the Kail or Kail Water, a feeder of the Teviot, contains some good houses. Besides the parish church there are a Free church, a chapel for United Presbyterians, a parochial school, and a parish library. *Roxburgh,* population 1141, is on the left bank of the Teviot, 4 miles S.S.W. from Kelso. The ancient town of Roxburgh, formerly the county town, was at one time the fourth in point of importance of the towns of Scotland; but scarcely any remains of it now exist. The houses were mostly of wood. The ruins of the celebrated castle of Roxburgh are a short distance west from the site of the old town. *Kirk Yetholm* and *Town Yetholm* are burghs of barony in the parish of Yetholm, which had a population in 1851 of 1362. The villages are situated near the border of the county and of Scotland, about 8 miles S.E. from Kelso. Two annual fairs are held in each of the villages. Besides the parish church there are chapels in Town Yetholm for the United Presbyterians and United Original Seceders. Kirk Yetholm is remarkable as the head-quarters of a community of gipsies which has been settled here for about 160 years.

History and Antiquities.—Of prehistoric nations, cairns, barrows, tumuli, and other sepulchral memorials, have been found in different parts of the county. Standing stones, some of them arranged in circles, are found; and the Eildon Hills and other eminences are crowned with forts. On the conquest of this part of the island by the Romans the county was comprehended in the province of Valentia,

and Roman roads were carried across it. Some stations were formed by occupying the ancient forts or hill-camps of the natives, and strengthening and adapting them by Roman skill and labour. The camp on the Eildon Hills was thus occupied. A chain of Roman posts may be traced by their existing remains. One of the roads, a continuation of Watling-street, may be traced from the Northumbrian border across the county near Jedburgh and Melrose, in the direction of Lauder. Coins, vessels of copper and brass, and other Roman antiquities, have been discovered.

On the departure of the Romans this county was attacked by the Angles. The construction of the Catrail, or line of defence, formed of a ditch 26 feet broad, with a rampart 10 feet high on each side of it, extending from near Galashiels in Selkirkshire to Peel Fell on the border of Northumberland, and stretching 18 miles through this county, is attributed to this period. Jedburgh Castle was erected in the time of David I. Roxburgh Castle was of as early a date, and at one time of greater importance. Hermitage Castle, near the village of Castletown, was built during the reign of Alexander II. (1214-49); and in following years, but especially after the aggressions of Edward I., arose various castles, towers, and peels, of which many ruins now exist. The ecclesiastical ruins, Kelso, Jedburgh, and Melrose abbeys, have been noticed already. There are remarkable caves at Jedburgh, Roxburgh, and Ancrum, which appear to have been used as habitations, possibly as temporary retreats during the border wars. There are some remarkable remains of walls in Ancrum parish, forming a quadrangle, inclosing an eminence above which they rose; they are called the Malton Wall, and are supposed to be the remains of a building belonging to the Knights of Malta. Smallholm Tower is so conspicuous as to form a landmark for seamen entering Berwick harbour.

Roxburghshire appears to have been early established as a county. The Sheriff of Roxburgh is mentioned in the reign of Alexander I. and David I. When Edward I. seized Scotland he placed this county under military administration. Robert Bruce and Douglas took Roxburgh Castle in 1313, and restored the former administration by a sheriff. The office of sheriff afterwards became hereditary in the Douglas family, and continued so until the abolition of hereditary jurisdictions. Roxburgh Castle was taken from the English in 1460 by Mary of Gueldres, widow of King James II., who had fallen during the siege. The calamities of war ruined the town of Roxburgh, which had in the reign of David I. been a royal residence and the county town. On its downfall Jedburgh became, and has continued to be, the county town.

Statistics: Religious Worship and Education.—According to the Returns of the Census in 1851 there were 87 places of worship in the county, of which 35 belonged to the Established Church, 17 to the United Presbyterian Church, 16 to the Free Church, 9 to Independents, 4 to Episcopalians, 3 to Baptists, 2 to Original Seceders, and 1 to Roman Catholics. In 67 of these places of worship the number of sittings provided was 28,259. There were 74 public day schools with 6130 scholars, and 32 private day schools with 1574 scholars. Of Sabbath schools there were 77, with 4473 scholars. Of evening schools for adults there were 3, with 136 scholars. There were 2 literary institutions in the county, with 188 members, and possessing 1080 volumes in their libraries.

Savings Banks.—In 1853 the county possessed two savings banks at Jedburgh and Kelso. The amount owing to depositors on November 20th 1853 was 31,525*l.* 19*s.* 10*d.*

ROXBURY. [MASSACHUSETTS.]

ROYBON. [ISÈRE.]

ROYDON. [ESSEX.]

ROYE. [SOMME.]

ROYÈRE. [CRUZE.]

ROYSTON, Hertfordshire, a market-town, and the seat of a Poor-Law Union, chiefly in the parish of Royston (a part of the parish and town being in Cambridgeshire), is situated in 52° 3' N. lat., 0° 2' W. long., distant 20 miles N. by E. from Hertford, 38 miles N. from London by road, and 45 miles by the Great Northern and Eastern Counties railways. The population of the entire parish of Royston in 1851 was 2061. The living is a vicarage in the archdeaconry of St. Albans and diocese of Rochester. Royston Poor-Law Union contains 29 parishes and townships, with an area of 60,440 acres, and a population in 1851 of 19,764.

Royston is situated in a bottom surrounded by chalk downs. The market-house is a modern building. The church was formerly the conventual church of a priory of the regular canons of St. Augustine. There are two chapels for Independents and one for Unitarians; National, British, and Infant schools; a girls working school; and a mechanics institute, with a library. A county court is held. The principal business is malting; a large corn trade is also carried on. There are a brewery and some lime-burning works. The market is on Wednesday. Five fairs are held in the course of the year.

In the town was discovered in 1742 a curious bell-shaped subterranean cavern, supposed to have been a hermitage, 80 feet high and nearly 20 feet in diameter, cut out in the solid chalk, and ornamented with rude carvings of sacred subjects.

RUABON. [DENBIGHSHIRE.]

RUDOLSTÄDT. [SCHWARZBURG.]

RUGBY, Warwickshire, a market-town and the seat of a Poor-Law

Union, in the parish of Rugby, is situated on an eminence near the left bank of the river Avon, in 52° 22' N. lat., 1° 15' W. long., distant 16 miles N.E. by E. from Warwick, 83 miles N.W. from London by road, and by the North-Western railway. The population of the town of Rugby in 1851 was 6317. The living is a rectory in the archdeaconry of Coventry and diocese of Worcester. The parish is under the management of a Local Board of Health. Rugby Poor-Law Union contains 41 parishes and townships, with an area of 80,755 acres, and a population in 1851 of 23,477.

Rugby had a castle in the middle ages, of which only the earth-works remain. The town is lighted with gas and paved. The importance of Rugby is chiefly derived from its grammar-school, founded in 1567 by Lawrence Sheriff, a shopkeeper in London, who was a native of the locality. The school buildings include a quadrangle, inclosing a court 90 feet long by 75 feet wide, bounded on three sides by open cloisters. The buildings are in the Elizabethan style, of white brick, with the angles, cornices, and dressings to the openings and windows, of Attleborough stone. The chapel contains the monuments of Dr. James, formerly head-master, under whom the school first rose to great eminence; of Dr. Wool, one of his successors in office; and of the late Dr. Arnold, under whose mastership, in more recent times, the celebrity of the school was considerably augmented. The school, which was attended in 1854 by 400 boys, is under the care of a head-master and 12 assistant-masters, and has 21 exhibitions of 60*l.* per annum, each tenable for seven years. The endowment is estimated to produce 5000*l.* per annum. Attached to the school is a fine play-ground of eight acres. Rugby parish church possesses little architectural interest; it has a square western tower. St. Matthew's church was built and endowed in 1841; a new church dedicated to the Holy Trinity, has just been erected. The Wesleyan Methodists, Baptists, and Roman Catholics have places of worship. There are also the Elborow school, founded in the 18th century by Richard Elborow, Esq.; the Parochial schools, built in 1830; an Infant school; a literary institute, founded in 1847; a savings bank; a college for the instruction of the deaf and dumb belonging to the higher ranks of life; and two ranges of almshouses.

Rugby holds an important place in the system of railway communication, being the point of junction of several lines of railway. The London and North-Western, the North-Midland, the Leamington and Warwick, the Trent Valley, and the Rugby and Stamford lines meet here. The North-Western station is very extensive, and has recently been enlarged by additional buildings. An iron-foundry gives employment to some of the inhabitants. Saturday is the ordinary market-day; a corn-market is held on Tuesday. There are 18 horse and cattle fairs in the course of the year, one of which, held in November, lasts for eight days. There are two cheese and wool fairs. A county court is held in Rugby. The Oxford canal passes near the town.

RUGELEY. [STAFFORDSHIRE.]

RUGEN, an island in the Baltic belonging to Prussia, is included in the government of Stralsund and province of Pomerania. It has an area of 388 square miles and a population of about 35,000. It is separated from the continent by a strait a mile broad. Its sides are deeply indented by the sea in various directions, so that the island resembles a number of peninsulas united by a comparatively small nucleus in the centre. On the east side the peninsula of *Jasmund* is connected with the nucleus by a steep ridge called *Prora*, and by a long, narrow, and high wall of flint, granite, and porphyry boulders. In this peninsula is the *Stubbenitz*, a considerable beech-forest, containing the *Berg*, or *Black Lake*, an oval spot surrounded with a high wall, which is believed to be the place where the goddess *Hertha* (Earth) was worshipped. (Tacitus, 'Germ.,' c. 40.) The whole island abounds in grotesque and romantic scenery. On the west it is level, but rises in the interior, and the northern coasts consist in general of rugged steep chalk cliffs. One of the most considerable eminences in the island is *Mount Rugard*, on which the residence of the princes formerly stood. On the north point of *Jasmund* is the *Stubbenkammer*, a lofty chalk cliff, which rises perpendicularly (565 feet) from the sea in the most irregular forms: a flight of 600 steps cut in the rock leads down from the highest part of it to the strand. *Jasmund* is connected by a narrow strip of alluvial soil with the peninsula of *Wollow*, a level tract with a rich soil, terminating in the promontory of *Arkona*, the most northern point of Germany. Large tumuli (called *Hünengräber*) are seen in several parts. The island is tolerably fertile, and produces much corn. The number of cattle is considerable, and the fisheries productive. *Bergen*, the capital of the island, has about 3000 inhabitants. Rugen is much visited for its beautiful scenery, and for sea-bathing. This island was ceded to Prussia by Sweden in 1815.

RÜGENWALDE. [CÖSLIN.]

RUGLES. [EURR.]

RUHBORT. [DÜSSELDORF.]

RUM CAY. [BAHAMAS.]

RUM, Island of. [ARGYLESHIRE.]

RUM-ILL, or ROUMILI ('Country of the Romans'), a name originally given by the Turks to the territories which they wrested from the eastern emperors. Hence Asia Minor is known in all eastern countries by the name of Rum, or Roum. In the course of time the term

Roumili was specially applied to the whole country that lies south of the Danube and the Save, to the north of Greece, and between the Adriatic and the Black and Ægean seas; so that it comprised Macedonia, Thrace, Albania, Bosnia, Servia and Bulgaria. Bulgaria is now divided into the Eyalets of Silistré, or Silistria, Widin, and Nich (Niassa); Thrace, or the greater part of it, forms the Eyalet of Edirné, or Adrianople; Syrp, or Serbia, is nearly independent of Turkey; the Eyalet of Bosna includes Bosnia and Turkish Croatia; the southern part of Macedonia forms with Thessaly the Eyalet of Selanik, or Saloniki; the north-eastern part of Albania, with some adjacent districts, form the Eyalet of Uskub, whilst the south part belongs to the Eyalet of Yania, or Joannina; and the remainder of the territory as above indicated, and consisting of eastern Albania and the western part of Macedonia, forms the present Eyalet of *Roum-ili*.

The face of the country, which is described in the articles on ALBANIA and MACEDONIA, is traversed by ramifications of the Balkan Mountains, which inclose many fertile plains and valleys. The climate is in general mild and salubrious. Cotton, wine, oil, and tobacco are the chief products. There are extensive pastures on which large numbers of sheep are bred. The principal rivers are the AXIUS, the MARITZA, and the *Haliacmon*, now the *Vistritza*, and in its lower course *Inje-Kara*, which flows partly from the Lake Kastoria, so named from the fortress of *Kastoria*, which is built on a peninsula in the lake on the site of the ancient *Celstrum*. Its course is winding, but generally to the south of east, and it enters the Thermaic Gulf. In ancient times the *Haliacmon* was joined by the *Lydias* (the modern *Karasamak*), which is the outlet of the Lake of Pella, but now the *Lydias* is a feeder of the *Axius*. The banks of the *Haliacmon* are lined with dykes to save the adjacent country from inundations. Both the river and the lake of *Kastoria* (which is six miles long and four miles wide) are famous for a fish named *Guliani*, which grows to enormous dimensions.

The present Eyalet of *Roum-ili* comprises the livas of *Monastir* and *Ghiustendil*. *Monastir* includes the south-west of Macedonia. The capital *Monastir*, called also *Bitolia*, near the site of the ancient *Heraclæa*, not far from the banks of the river *Erigonus*, an affluent of the *Axius*, and on the borders of Albania, is a considerable town, with about 15,000 inhabitants. *Ghiustendil*, embraces the northern part of Macedonia and the east of Albania. It has some rich copper- and iron-mines. The head town *Ghiustendil* is situated on the slope of a hill at a short distance from the right bank of the *Kara-su*, or *Struma*, in 42° 18' N. lat., 22° 5' E. long., and has about 10,000 inhabitants. The town, which is surrounded by an old wall flanked with towers, contains a bazaar and sulphurous baths. A Greek bishop resides in it. [TURKEY; ALBANIA; MACEDONIA; THESSALY.]

RUNCORN, Cheshire, a market-town, and the seat of a Poor-Law Union, in the parish of Runcorn, is situated on the left bank of the river *Mersey*, near its junction with the *Weaver*, in 53° 20' N. lat., 2° 44' W. long., distant 17 miles N.N.E. from *Chester*, 187 miles N.W. from London by road, and 182 miles by the London and North-Western railway. The population of the town of Runcorn in 1851 was 8049. The living is a vicarage in the archdeaconry and diocese of *Chester*. Runcorn Poor-Law Union contains 37 parishes and townships, with an area of 45,776 acres, and a population in 1851 of 25,797.

Runcorn is a place of considerable antiquity. The town was of little consequence in modern times, previous to the formation of the Duke of Bridgewater's Canal. It now possesses some manufactures and a considerable amount of trade. Iron-foundries, corn-mills, collieries, slate- and stone-quarries, shipbuilding-yards, soap-works, and works for distilling turpentine, employ many of the inhabitants. The Duke of Bridgewater's Canal, the *Mersey* and *Irwell* Canal, and the North-Western railway, which has stations on both sides of the river, afford facilities for the conveyance of passengers and traffic. Runcorn is a favourite resort of sea-bathing visitors in summer. The town is lighted with gas. The town-hall, a neat structure of recent erection, contains a subscription news-room. There is also a bride-well. A county court is held. The parish church is a handsome new building. Holy Trinity church, built in 1838 of red-sandstone, has a low tower. The Wesleyan Methodists, Independents, Baptists, the Countess of Huntingdon's Connexion, and Roman Catholics, have places of worship. There are National, British, and Infant schools, and a savings bank. Friday is the market-day; fairs are held on the last Friday in April and the last Friday in October.

RUNN. [COTCH; HINDUSTAN.]

RUNNIMEDE. [SURREY.]

RUPPIN, NEW. [BRANDENBURG.]

RÛREMONDE. [LIMBURG.]

RUSH. [DUBLIN, County of.]

RUSHDEN. [NORTHAMPTONSHIRE.]

RUSHVILLE. [INDIANA.]

RUSSIA. *The Russian Empire* extends over the north-eastern part of Europe, over the whole of Northern Asia, and the north-western coast of North America. It consists of Russia-in-Europe, properly so called, in which term Poland and Finland also are comprised; the Caucasian Territories, which comprise the countries between the Black Sea and the Caspian; Asiatic Russia, in which are included the four governments of *Tobolsk*, *Tomsk*, *Jeniseisk*, and *Irkutak*, and some

other districts of eastern and western Siberia; and some settlements on the north-west coast of North America. The area and population of the whole empire, according to official statements made in 1846, are as follows:—

	Area in Square Miles.	Population in 1846.
European Russia . . .	2,091,891	60,604,702
Asiatic Russia . . .	4,723,185	2,937,000
American Russia . . .	370,300	61,000
Caucasian Provinces . . .	66,083	2,648,000
Total . . .	7,362,959	66,250,702

Baron Haxthausen, in his recent work upon Russia, states the population in 1852 to be 69,660,146. In respect of religion about 50,000,000 belong to the Greek Church, 7,000,000, chiefly Poles, are Catholics, and about 3,000,000 are Protestants; the rest are Mahomedans, Buddhists, and heathens.

The present article, while in some points of view it relates to the whole of the vast empire, comprises briefly the physical geography of European Russia only; under the heads of SIBERIA, GEORGIA, ALTAI MOUNTAINS, KAMTOHATKA, AMUR, and BAIKAL, the surface of the rest of the empire is described; while under the names of the great administrative divisions of the empire, the physical features, products, towns, &c. of all the provinces, are noticed in detail in the present work.

European Russia comprehends the north-eastern portion of Europe, extending from 43° to 71° N. lat., 20° to 63° E. long. It is divided from Asia by the Ural Mountains, which begin on the peninsula that lies opposite the island of *Nova Zembla*, east of the Strait of *Waigatz*, and extend in a southern direction to 54° N. lat., where they divide into three ranges. From this point, the river *Ural*, which rises between the two most eastern ranges, forms the boundary-line until it falls into the *Caspian Sea*. From the mouth of the river *Ural* the boundary runs along the north-western shore of the *Caspian Sea* to the embouchure of the river *Kuma*. At this point begins the southern boundary-line, which runs along the course of that river to 45° E. long., and then nearly north to the river *Manytch*, whose course it follows to 41° 30' E. long., whence it continues nearly due west to the *Sea of Azof*, and chiefly along the course of the river *Ieia*. The sovereignty of Russia has been acknowledged by most of the countries on each side of the *Caucasus*, between the *Black Sea* and the *Caspian*, as far south as the *Kur* and the *Araxes* [CAUCASUS, GEORGIA, &c.], and though the territories west of the *Caucasus* are considered to belong to Europe, yet they have not as yet been included in European Russia. The remainder of the southern boundary is formed by the *Sea of Azof*, the Strait of *Yenikalé*, and the *Black Sea*. Near its western boundary Russia extends to the banks of the *Danube*, which forms the boundary between it and Turkey as far as the mouth of the river *Pruth* (near 28° E. long.). The *Pruth* divides Russia from *Moldavia* nearly to its source in the *Carpathian Mountains*; further north between *Austrian Galicia*, *Silesia*, and *Prussia*, there is no natural boundary. On reaching the Baltic the boundary-line of the empire towards the west runs round the Gulfs of *Riga* and *Finland*, and up the Gulf of *Bothnia* to its northern extremity (66° N. lat.). Farther north it touches *Sweden* and *Norway*. From *Sweden* Russia is partly separated by the lower course of the river *Tornea*, and farther north by its affluent the *Munio*. The boundary between Russia and *Norway* is partly formed by the watershed between the Gulf of *Bothnia*, and partly by the course of the river *Tana*. A small part of *Norway* extends east of the river *Tana*. On the north Russia is washed by the *Arctic Ocean*, which here forms the extensive gulf called the *White Sea*.

Surface.—The whole surface of Russia may with propriety be considered one extensive plain. If the Ural Mountains, which extend along its eastern border, and a mountain tract in the *Crimea* [CRIMEA] be excepted, there is not in this immense extent of country an eminence which rises more than 500 feet above its base, or more than 1100 feet above the sea-level. The watershed which divides the rivers that flow to the *Arctic Ocean*, the *Baltic*, the *Black Sea*, and the *Caspian Sea*, is not formed by mountains, but by tracts of elevated ground, the summits of which extend in wide and nearly level plains, and whose declivities form long and generally imperceptible slopes. The plains themselves are covered either with bogs and swamps or with forests, and in other parts they are dry and woodless tracts called steppes.

Almost on the banks of the river *Bug*, which used partly to separate *Poland* from *Russia*, between 51° 30' and 53° N. lat., there is a flat plain, the watercourses on which have too little fall to carry off the accumulated water. The whole plain is nearly a continuous swamp, and covered with fir-trees. It contains the sources of several affluents of the *Dnieper* and *Vistula*. On both sides of 52° N. lat. it extends from 24° to 30° E. long., a distance of 240 miles, and renders the country on both sides of the river *Pripecz* almost impassable. This portion of the watershed is called the *Swamps of Pinak* and *Ratnor*. The swampy ground extends farther north, between the affluents of the *Niemen* and *Dnieper*, to 55° 30' N. lat., and terminates on the banks of the *Düna* between *Polotak* and *Drooya*. In these parts how-

ever the swamps are only from 100 to 50 miles in width, and are frequently interrupted by tracts of drier and more elevated land. East of the northern extremity of these swamps, between 54° 30' and 55° 30' N. lat., there is a more elevated country with a very broken surface, and containing numerous rocky hills, between which many lakes occur. From this elevated tract, which separates the upper courses of the rivers Dnieper and Düna, the watershed extends northward over the eastern portions of the governments of Vitepsk and Pskow, where it descends in low ridges to the lakes of Peipus and Ilmen. The most elevated part of it probably attains 1000 feet above the sea, as the town of Mojaik on the Moskwa is more than 700 feet above it. The watershed hitherto noticed divides the rivers that flow into the Baltic from those which run into the Black Sea. At this point however it divides, and forms two watersheds, of which one runs north-east between the watercourses that fall into the White Sea and those which run into the Caspian Sea, and the other runs south-east between the rivers which flow to the Caspian and those which fall into the Black Sea.

The north-eastern watershed begins in the hilly region of Valdai, which contains the source of the Volga, the largest river of Europe. It lies contiguous to the region just described, beginning on the west between the sources of the river Pola, which falls into Lake Ilmen, and extending north-east to the river Msta. In this direction it occupies hardly more than 90 miles, but extends from north-west to south-east, between Novgorod and Vichnei-Volotshok, more than 120 miles. The country rises from the north-west and south-east with a gradual slope, and at the town of Valdai attains an elevation of about 870 feet. On the most elevated portion of it there are steep and rocky hills, but of little elevation above their base; the highest of them, the Popova Gora, according to Humboldt, does not exceed 984 feet above the sea-level. As this region was formerly covered with a continuous forest, it is also known by the name of the forest of Volkhonak. From the banks of the river Msta the watershed extends northward towards the isthmus which divides the great lakes of Ladoga and Onega, but it does not reach it, as it turns again to the north-east, and remains about 20 or 25 miles from the southern extremity of Lake Onega, running between its banks and the Lake of Bielo Osero. Having passed between these lakes, it suddenly turns to the south, and approaches the banks of the Volga (40° E. long.) within about 60 miles. Between the river Msta and 40° E. long. the watershed seems to be much lower than on the hilly region of Valdai, as is proved by the facility with which canals have been made across it to unite the rivers which fall into the Lake of Onega or into the Dwina with the affluents of the Volga. The more elevated tract, with its very gradual slopes, does not seem to exceed 20 miles in width, and is entirely covered with forests. From 40° E. long. the watershed extends eastward near 59° N. lat., between the affluents of the Dwina and those of the Volga, to 50° E. long., whence it declines to the north-east and reaches the Ural Mountains in 61° 30' N. lat., 59° E. long., between the sources of the rivers Petschora and Kolva; the latter is a branch of the Kama, an affluent of the Volga. The whole region east of 40° E. long. is covered with interminable forests of pines and firs, and nearly uninhabited. This large tract of country is called by some geographers 'uwalli.'

The south-eastern watershed begins likewise in the elevated hilly region which separates the upper courses of the Düna and Dnieper, and runs for some distance close to the banks of the last-mentioned river, so that the river Moskwa, which originates in these parts, runs eastward to the Oka, an affluent of the Volga. It continues in a nearly southern course from 55° to 52° 30', and up to 53° 30' N. lat., seems to consist of a broad-backed swell, which is covered with forests. Between 53° 30' and 52° 30' N. lat. it expands in wide and nearly level plains, which occupy perhaps 100 miles in breadth, and extend over the central provinces of Russia eastward up to the banks of the Volga, between 52° and 53° 30' N. lat. These plains do not probably rise more than 800 feet above the sea-level, and are chiefly woodless, though in some of the numerous depressions trees of stunted growth are frequent. Where the watershed approaches the banks of the Volga, in the southern districts of the government of Simbirsk, it forms an elevated ridge, but small in width, which runs eastward, and compels the river to make a bend at Samara (near 53° N. lat.). On the eastern bank of the river a similar ridge rises, which incloses the river Sock, and continues in an easterly direction until it joins the Obstahei Sirt, or western branch of the Ural Mountains, near 56° E. long. That portion of the ridge which lies east of the Volga consists of sandy hills almost without vegetation, and partakes largely of the nature of the steppes which lie south of it. This watershed incloses the wide basin of the upper course of the Volga on the south, and divides it from the rivers which run southward and unite with the Dnieper and the Don.

Besides these two lines of watershed which cross Russia from west to east, there is in the southern provinces an elevated tract, the base of which is granite, and which traverses it in the same direction, but does not form a watershed, being broken through by several large rivers. At its western extremity it is connected with the eastern offsets of the Carpathian Mountains, which extend over the north-western portion of the government of Kisheneff, or Bessarabia, and advance as far south as the town of Kisheneff. From these ridges

the elevated tract extends eastward, occupying on the banks of the river Dniester the whole space between Yampol and Dubossary, and rendering this part of the river unfit for navigation by forming rapids and falls. Farther east, on the banks of the Bug, it occurs near Olviopol, and on those of the Ingool, an affluent of the Bug, between Yelisavetgrad and Bobrinetz. It continues eastward to the Dnieper, which is compelled by it to make the great bend eastward between 47° and 49° N. lat., and in which it produces the Poroges, or twelve waterfalls of Ekaterinoslav. From this place it declines more to the south, and extending along the banks of the Konakaya, an affluent of the Dnieper, it approaches the Sea of Asof, where it terminates on the banks of the river Berda.

Soil.—Russia has a much greater variety of soil than any other country of Europe. Some very extensive tracts are hardly more adapted for agriculture than the great African desert; while others in fertility may be compared with those countries without the tropics which are most favoured by nature. In taking this survey of Russia, we begin from the north-east.

Between the northern portion of the Ural Mountains on the east and the river Mezen on the west, is the region of the 'tundras,' which extends from the coast of the Arctic Ocean to 64° N. lat. It is mostly a plain covered with moss, which for eight or nine months is frozen, and the remainder of the year is so saturated with water as to be impassable. In some places bushes occur, which bear berries. The few inhabitants live on fish, which is very plentiful in the rivers, and clothe themselves with the skins of wild animals. For furred skins, their only article of traffic, they obtain small quantities of corn, which is brought from the countries south of the 'uwalli' down the river Petschora.

To the south and west of the tundras extends the largest forest in Europe, if not on the whole globe. This region occupies the country on both sides of the upper course of the Petschora, and all those which lie within the basin of the Dwina and its great branches the Sukhona and Vychedga. According to official statements, it covers 150,000 square miles. It consists chiefly of different kinds of pines, with some firs, larch, and birch. A few cultivated spots produce rye, barley, oats, peas, hemp, and flax. But as the summer is very short, and, during this season the weather very unsettled, fogs and rain being very frequent, the crops frequently fail. Hard frost continues from the end of October to the end of April. The scanty population is mostly occupied in bringing the produce of the forests to Archangel. This region extends westward to the river Onega, and southward to the uwalli, the northern declivity of which, chiefly occupied by swamps, but well wooded, belongs to it. It comprehends the western portion of the government of Archangel and the whole of Vologda.

West of the river Onega begins the region of rocks and lakes. It extends over the immense tract which lies between the gulfs of Finland and of Bothnia on the west and south and the White Sea on the north-east. This region extends from east to west about 500 miles, and from south to north more than 400 miles. It has a much more broken surface than any other portion of Russia of equal extent. The northern portion, as far as 65° 30' N. lat., is level; at least it does not contain any continuous ridges of hills; and here the watershed is found to rise gradually, but not to a great elevation. Near 65° 30' N. lat., 30° E. long., a ridge of hills (Masielka Mountains) rises, which runs south to 64° N. lat., where it divides into two ridges, of which that which runs east divides the waters that fall into the White Sea from those that run to the lakes of Ladoga and Onega. After having passed the last-mentioned lake at a short distance, it approaches the banks of the Onega River, and then turns to the south-west, and terminates in that direction not far from the south-eastern shore of the Lake of Onega. It consists chiefly of sand-hills; but in some parts granite appears, and in such places the declivity is steep. The ridge which runs westward is mainly composed of granite, but it is of considerable elevation, and grows lower as it approaches the Gulf of Bothnia, sinking down to the level ground at a considerable distance from the shores. The country surrounded by these two ridges, by the gulfs of Bothnia and Finland, the river Neva, the Lake of Ladoga, the river Swir, and the Lake of Onega, has a rocky sub-soil, and in many places the rocks rise above the surface and constitute hills. They never form an extensive mass, but only low and narrow ridges, which alternate with wide and deep depressions, the greater part of which are filled up with lakes. It is supposed that one-fourth of the surface is covered with water. The general surface of the country appears to be lowest towards the east, north of the Lake of Ladoga, where it probably does not attain 200 feet above the sea-level, and is less interspersed with rocks and lakes; but in approaching 30° E. long. it rises considerably. The country west of this meridian is described under FINLAND.

That portion of Russia which lies north of a line drawn from Uleaborg to the extremity of the Gulf of Kandalaskaya comprehends Russian Lapland, which is described under LAPLAND. According to meteorological observations taken at Enontekis, in Russian Lapland (68° 30' N. lat.), the mean annual temperature does not exceed 27° Fahr.; that of the winter is 0°, of the spring 25°, of the summer 55°, and of the autumn 26½° Fahr.

On the southern coast of the Gulf of Finland, the shores are composed of limestone, and rise abruptly from the sea like a wall to an

elevation of 60 to 180 feet. From this elevated coast, the country extends in a level plain from 30 to 40 miles southward, and then descends to the plain of Livonia by a gradual slope. The surface of the plain is covered with a layer of mould of indifferent fertility, producing moderate crops of rye and barley. A part of the plain is covered with woods, consisting commonly of birch, but frequently intermixed with poplar and lime-trees; the last-mentioned trees constitute, in some places, extensive forests. The plain is furrowed by watercourses, which lie many yards below the surface, and the rivers which flow in them have a very rapid course, so as to be unfit for navigation, at least in several places. There are no swamps in this region, but farther west there are many. [COURLAND; ESTHONIA.]

Though both the northern and southern shores of the Gulf of Finland are elevated and rocky, the country that surrounds its innermost recess on both sides of the river Neva forms a depression which extends round the southern shores of the Lake of Ladoga, and continues to the southern extremity of that of Onega. Towards the south it reaches, near 59° N. lat., the hilly tracts that branch off from the table-land of Valdai. A moderately thin layer of mould covers a subsoil of rock. The surface is level and very swampy, and though the soil is not devoid of fertility, great labour is required for its successful cultivation. Though situated in the immediate vicinity of one of the largest and most populous towns of Europe, only a very small proportion of the surface of this region is under cultivation, and about 20 miles from St. Petersburg the forests commence, which occupy nearly the whole of the country. The forests consist almost solely of fir and birch. Immense boulders of granite are dispersed through these forests. The mean annual temperature of St. Petersburg is only 37°; the mean of the winter is 16°, of the spring 32½°, of the summer 50°, and of the autumn 37½°. The mean annual quantity of rain which falls in that city is between 17 and 18 inches; but it must be remembered that vast quantities of snow fall in the winter.

The table-land of Valdai and the elevated tract which extends from the river Msta to the lake Bjelo-Osero (both these countries surround the plain above noticed on the south and south-east) were formerly covered with extensive forests of elm, birch, and poplar, the greater part of which have been cleared. The surface is undulating, and the rocky eminences which rise on it only attain a height of 100 to 200 feet above their base. Grain succeeds very well, and crops are abundant; but a great part of the produce is used for the maintenance of horses, which are in great request, as several well-frequented roads and three lines of canal traverse this region. The elevated and broken region which is contiguous to the table-land of Valdai on the west, and occupies the greater part of the governments of Pakow and Vitepsk, is similar in its natural features, but the surface exhibits greater variety, lakes being very numerous.

A ridge of elevated ground of considerable width commences on the banks of the Düna near Düna, not far from which town the last rapids in the river occur. It extends northward on both sides of 27° E. long., and terminates on the shore of Lake Peipus south of Dorpat. Its average elevation is about 600 feet above the sea, but in some places there are hills which are from 300 to 500 feet higher. This sandy and sterile ridge separates the elevated table-land of Vitepsk and Pakow from the low plain of Livonia, which extends westward from it to the shores of the Gulf of Riga. The eastern portion of this plain, east of 26° E. long., is in general undulating, but in many places contains hills 400 or 500 feet high. In this tract the soil is chiefly loamy, and has a considerable degree of fertility. In the forests the birch prevails. To the west of 26° E. long., the country is nearly a level, with the exception of the southern districts between the Düna and the river Aa, where there are some hills. The soil of the level portion of the plain is much less fertile, it yields however grain, hemp, and flax. The forests consist mostly of pine, and occupy a considerable portion of the level ground. It terminates on the sea with a low, flat, and sandy shore.

The large tract of country which extends from the Düna southward, having the swampy region on the east, and terminating in the great swamps of Pinak and Ratnor, is traversed from north to south by a series of table-lands, which occupy extensive tracts between the Düna and Vilia (an affluent of the Niemen), the Vilia and the Niemen, and the last-mentioned rivers and the Bug, and extend eastward to the swamps. The more elevated portions of these table-lands are from 400 to 800 feet above the sea-level; the soil is sandy and dry, covered with pine-forests, which supply the best pine-timber in Europe. This timber is floated down the affluents of the Niemen, and shipped from Memel. On the southern table-land, between the Niemen and the Bug, near the sources of the river Narew, and contiguous to the swamps of Pinak and Ratnor (between 52° 29' and 52° 51' N. lat., 23° 40' and 24° 30' E. long.), is the forest of Bialovisa, which occupies more than 700 square miles, and contains oak, fir, and pines of immense size. It is the only place where the *Urus* is still found in Europe. The lower countries along the banks of the rivers have a tolerably fertile soil, consisting of loam and sand, intermixed with alluvial mould, the deposit of the inundations of the rivers. They produce wheat, rye, barley, oats, buckwheat, and millet. Cattle are not abundant, owing to the want of meadows. Horses are numerous, but of small size. The climate of this region is much colder than that of the countries along the Baltic under the same parallel. Even in the southern districts the

mean annual temperature does not exceed 42°. The winter is long and severe; the spring short and late. The summer is extremely variable; the difference between two days frequently amounting to 20 degrees and more. The heat is sometimes insupportable, but is soon followed by a cold wind. Fogs are very frequent in this season. Autumn is the most agreeable season, when the days are dry and warm; but the nights are chilly. West of the region just noticed lies the territory of Poland, which is described in a separate article. [POLAND.]

The basin of the Volga occupies about 650,000 square miles, and is equal in extent to three times the area of France. It constitutes the most important, and, generally speaking, the most fertile portion of the empire. The upper basin of the Volga comprehends the governments of Twer, Yaroslav, and Kostroma. The source of the river is 910 feet, the town of Twer 390 feet, and the town of Nishnei-Novgorod, at the lower extremity of this part of the basin, 230 feet above the level of the sea. [VOLGA.] To this region belongs a great part of the southern declivity of the uwalli. Between Yaroslav and Kostroma, the declivity of the uwalli terminates about ten or twelve miles from the Volga, but farther east at a greater distance. Between it and the river there is a level plain. The forests, which consist mostly of pines, occupy less than half the surface of this slope. The remainder is partly covered with morasses and moors, and partly with heaths, here and there interspersed with tracts of sand. It is only along the watercourses that cultivable tracts of moderate extent and fertility occur. The plains along the Volga above and below Twer yield wheat, rye, barley, oats, hemp, and flax: and on their borders are forests of oak, birch, ash, alder, poplar, fir, and pine. Farther down the land is less fertile, and as the climate seems to be more severe, hemp and flax, rye and barley, constitute the principal objects of agriculture. Forests, chiefly of pine, are rather numerous. West of Kostroma however, where the plains increase in width, the soil is almost exclusively covered with sand, which produces few trees, and is only partially cultivated. In a few depressions there are meadows, but it is in general a very poor tract.

South of this portion of the basin of the Volga lies that of its affluent the Oka, which in some places extends to 52° N. lat., and is on an average 260 miles from north to south. Not far from the banks of the Volga, the country south of it rises to an elevation of from 50 to 100 feet, generally with a steep ascent, but in several places with a long gentle slope. The country which hence extends southward is an undulating plain interspersed with a few hills of moderate elevation and gradual declivities. The general level of the surface rises very slowly, as the town of Moscow is only 416 feet above the sea, or only 26 feet higher than Twer, and no part of the intervening country much exceeds 600 feet; but towards the west it rises higher. The soil, which near the Volga is of indifferent quality, improves towards the south and east. In the government of Moscow it is fertile, but still more so in those of Kaluga and Tula, and a part of Orel. But on approaching the watershed in Orel, the soil, though clayey, is very dry, and partakes of the nature of the steppes which lie towards the Black Sea. The country to the west of Moscow has also a less fertile soil, but east of Moscow, in the governments of Vladimir, Riasan, and the northern districts of Tambow, the soil improves still more than it does towards the south. The rivers which intersect this extensive region run in narrow valleys from 50 to 100 feet below the surface of the plain. The river bottoms are chiefly covered with sand, and sterile; in a few places only there are meadows. The heights which inclose these valleys are steep. Forests are rare in the countries south of Moscow, but in the eastern districts they occur at certain intervals between the well-cultivated fields, and consist of birch and fir, among which there are many tall oaks. The climate of Moscow may be considered as representing the climate of all this region, as the districts farther south are more elevated. The mean annual temperature is 39°, that of the winter 13°, that of the spring 39½°, that of the summer 62°, and that of the autumn 40°. The number of rainy days is 205 in the year, but the quantity of rain is small. A great depth of snow however falls during the winter.

The middle basin of the Volga extends from the mouth of the Oka downwards to the ridge of Samara, and comprehends the four governments of Nishnei-Novgorod, Pensa, Casan, and Simbirsk. It contains the most fertile part of the basin of the Volga, and perhaps of all Russia. The most fertile portion of it lies on the west of the river. Along its banks there is an acclivity from 300 to 600 feet above its lowest level; and the country at the back of this acclivity does not descend, but stretches out on an undulating level, here and there rising into hills covered with excellent soil. It produces abundance of wheat, rye, spelt, barley, buckwheat, and millet. Horses and cattle are numerous, but of small size. Sheep are very abundant, especially the broad-tailed kind. Oak is the most common kind of wood; birch and lime-trees are also numerous; fir is of stunted growth and unfit for timber. The region east of the river is not quite so fertile, but still it supplies rich crops, and is remarkable for the extensive forests of oak which occupy the higher grounds. These higher grounds are divided from the banks of the river by a low tract of from 4 to 6 miles or even 8 miles in width, which is partly covered with swamps, but partly supplies good pasture. The mean annual temperature of Casan is 37½°. The mean temperature of the autumn is 33°, of the winter 10°, of the summer 65°, and of the spring 42°.

To the north and east of this portion of the basin of the Volga extends that of its largest affluent, the Kama, which comprehends an area of about 200,000 square miles. As this basin lies contiguous to the Ural Mountains, the country adjacent to the range is traversed by a few offsets of that chain. But the country lowers rapidly to the westward. The town of Perm, hardly seventy miles distant from the great range in a straight line, is only 576 feet above the sea-level. Along the rivers there are valleys, or rather depressions, from 10 to 20 miles wide, and between these depressions there is a swell of elevated ground from 200 to 400 feet above the valleys, the highest part of which is a level or undulating plain, equal in width to the adjacent depressions. The higher portions of the country are entirely covered with forests of pine, oak, and lime-trees. A great part of the lower country is also wooded, but extensive tracts have been cleared, and yield rye, barley, and oats. In a few places wheat is cultivated. The basin of the Kama contains the richest mines of iron and copper in Russia, and immense quantities of salt are extracted from salt-springs. In this region platinum has been found.

The lower course of the Volga traverses an immense steppe or desert, which not only extends over the whole of the lower basin of the river, but stretches out eastward to the banks of the river Ural, along the course of which it extends from its mouth to the place where it issues from the valleys of the Ural Mountains. On the shores of the Caspian Sea the steppe extends from the mouth of the Ural to that of the Kuma. But the greater part of the country between the Kuma and the upper course of the Manytch on the north, and the base of the Caucasus on the south, is a steppe of the same kind. The western border of this immense desert lies close to the right bank of the Volga. About 52° 30' N. lat., or where the ridge of the hills of Samara is broken through by the Volga, there begins on its right bank an elevated tract, running at an elevation of 300 to 500 feet above the lowest level to the point where the Volga turns to the south-east (48° 30' N.). The elevated ground does not cease at the bend of the Volga, but continues to advance southward along the left bank of the river Sarpa, an affluent of the Volga, which runs from south to north. Near the place where the Sarpa originates, the elevated ground, which has the form of a low mountain ridge, between 51° and 46° N., is gradually lost in the plain which extends north of the river Manytch. The steppe thus confined, as far as it belongs to Russia, contains an area of about 336,000 square miles. The whole of this region is unfit for cultivation, and supplies only scanty pasture for the herds of the wandering tribes which inhabit it. That part of it which lies west of the Volga is called the Kumanian steppe. This portion is not level; the surface consists of gentle swells of a roundish form, so that the view seldom extends over many miles. The soil consists almost entirely of a yellow clay, and rarely of sand: it is impregnated with salt; and pits, or small salt-lakes, are common. Vegetation is confined to a few plants, such as wormwood, saisoia, and a coarse grass which grows in tufts several feet apart; between these the yellow soil is without any vegetation. The shore of the Caspian Sea between the mouths of the Volga and those of the Kuma is very low to a distance varying between 20 and 40 miles from the sea. It is inundated when a strong south-easterly wind happens to blow for some time, and vessels are sometimes driven on the sand-hills which rise on the west of this level tract. [CASPIAN.] At the back of these hills there are extensive salt-lakes, which once evidently formed part of the Caspian before the sand-hills existed. Among these salt-lakes those called Solenóé Khaki are very remarkable. They occupy a depression from 12 to 15 miles in width, with a very swampy surface, over which the salt-lakes are dispersed. In this tract the river Manytch originates: it runs nearly due west for about 60 or 70 miles, and then enters an arid plain of moderate width, which extends westward to the mouth of the Don and Sea of Azof, and is inclosed on the south and north by more elevated land. There are strong grounds for supposing that this level tract was once covered by a strait which connected the Black Sea with the Caspian. The number of Kalmuks who find on the Kumanian steppe pasture for their numerous herds, consisting of camels, black cattle, horses, sheep, and goats, is estimated at 20,000 tents or families, besides a considerable number of Cossaks, who possess portions of it. The wild animals, which abound in the steppes, are horses, antelopes, foxes, wolves, and the jerboa. The Kirghis steppe, east of the river Ural, presents similar features to the great Russian steppe just noticed; and it is highly probable that the whole region, as far as the Lake of Aral, was once covered by a salt sea. The Obetshei Sirt, which forms part of the northern boundary of the steppe, is connected at its eastern extremity with the most western ranges of the Ural Mountains, near 52° N. lat., whence it extends westward to the point where the river Ural turns southward. The elevated ground continues westward until it reaches the Volga opposite Kamyshin, between 51° and 52° N. lat. The Obetshei Sirt rises with a gentle declivity about 500 feet above the steppe, which extends along its southern side, and is considered by Pallas to be the ancient coast-line of the sea, when the waters of the Caspian covered the whole plain south of it. It differs considerably from the steppe itself, the soil containing a considerable portion of black mould and being covered with grass.

Near the western extremity of the Obetshei Sirt, not far from the town of Kamyshin, begins the Naryn, an elevated tract of sand, which

runs in a south-east direction through the great steppe, south of the Obetshei Sirt, and terminates not far from the shores of the Caspian Sea. Its length is above 800 miles, and it varies in width from 30 to 100 miles. The surface is covered with hills varying from 12 to 30 feet in height; they lie generally in groups close together, and consist of fine white sand intermixed with broken shells and decomposed lime, and are quite destitute of vegetation; but it is remarkable that a few feet below the surface spring-water is always found among these hills, and in some of the depressions many rare plants grow. On the west of the Naryn extends the worst part of the steppe. It appears that a great depression occurs here containing numerous salt lakes, which begin on the north with the lake of Elton, about 70 miles south-west of Kamyshin, and extend parallel to the Naryn, south-eastward to the shores of the Caspian. In some parts there are hills covered with gypsum, and consisting of great masses of rock-salt. Salt however can be obtained with less expense from the lakes. Immense quantities of salt are obtained from the lake of Elton, which, near 49° N. lat., 46° 40' E. long, is 12 miles long, with a width of nearly 10 miles. The surface of the lake is covered with a thick layer of salt, like ice. The salt is transported to Saratov, where many millions of cwts. of salt are usually stored. Between the series of salt lakes which have been already noticed, and the banks of the Volga, is a tract of sandy hills similar to the Naryn, but of less extent. The vegetation of this tract is very scanty, but there are some spots which supply pasture. It has no permanent watercourses.

That part of the steppe which lies east of the Naryn appears to be less sterile than the country just described. Here the yellow clay is more intermixed with sand, and more fit for supporting vegetation. But the soil is also impregnated with salt; and saline plants, with short wormwood, are the vegetation most frequently met with. Three rivers traverse it from north-west to south-east; two of them, the Lesser and Greater Usen, fall into the salt lake Kamysh Samara. The third river, called Kuahum, falls into the lake of Zagan, or Zagan-Nor. The bottoms in which the Usen run are one or two miles wide. They are covered with poplars, willows, wild olive-trees, and tamarisk shrubs, and constitute the only wooded tracts in the whole extent of the steppe.

Though the Ural River is considered as the boundary-line between Russia and the Kirghiz country, the Russians consider two localities on the Asiatic side of the river as belonging to them, the rock-salt mines of Ilek and the salt lake of Inderkoe. The first are about 80 miles west-by-south from the town of Orenburg. The salt lake of Inderkoe, which is near 49° N. lat., about 8 miles from the eastern bank of the Lower Ural, is about 55 miles in circumference. Its surface is covered with such a thick layer of salt that, according to Pallas, it may be crossed by a man like a sheet of ice.

No country on the globe is subject to a greater diversity of heat and cold than this steppe, especially the eastern part. The Ural, notwithstanding its rapid current in its upper course, is covered with ice at the end of October or the beginning of November, and it does not break up before the middle of April. During this season the frost is continuous and intense. The thermometer generally sinks 15° below zero, and continues so for several weeks together, and sometimes it descends to -30° and -35°. During this time a considerable quantity of snow falls, but it does not cover the ground, being carried over the plain by violent whirlwinds, which cause it to accumulate in certain places. The spring is very short. In the middle of May the heat begins to be oppressive in the daytimes. In June and July the thermometer rises to 100°, and at Orenburg it sometimes attains 110°. The heat is generally attended with a total want of rain, and a southern wind which dries up the water of the lakes, and converts them into swamps. The nights however are cool. In September the heat decreases rapidly, and soon afterwards night-frosts become frequent. In this season rain is rather common.

That portion of Southern Russia which lies west of the lower basin of the river Volga extends along the coast of the Black Sea as far west as the Danube and Pruth. It terminates southward with the peninsula of the Crimea, which contains a mountainous and very fertile and also a level region; the latter exactly resembles the great steppe lying west of the lower course of the Volga. [CRIMEA.] The country which extends from the shores of the Putrid Sea northward between the Dnieper on the west and the river Moloshnya on the east, as far north as 47° N. lat., is likewise a salt steppe; the waters of the lakes as well as those of the small rivers being slightly impregnated with salt. It is not however level, but the surface consists of an alternate succession of elevations and depressions. The higher land has a soil consisting of reddish clay, which is very barren. In the lower tracts the soil is an intermixture of black mould and sand, and mostly covered with grass, which supplies tolerable pasture. The most western portion, extending between the Gulf of Perekop and the estuary of the Dnieper, is a sandy waste, which is entirely barren and uninhabited.

North of this country there is a steppe of somewhat different character. It comprehends the whole country south of the granite tract that traverses Russia from east to west, from the banks of the Don and the Erwla (its confluent, which joins it at its most eastern bend) to the Pruth, with a width varying between 80 and 120 miles. This tract also may be included within the steppe, being similar in soil

and climate, and only differing from it in the form of its surface, which is more hilly. Towards its eastern extremity, near 40° E. long., between the town of Voronez and the Manytch River, the width of this region is near 300 miles; but towards the west it grows narrower, and from 33° E. long. westward it does not exceed 150 miles. Its length from east to west is 900 miles, and the area is about 180,000 square miles. Want of wood and of water are its characteristic features. It is considerably more elevated than the low steppes near the Caspian Sea, and not impregnated with salt except between the mouths of the Dniester and the Danube, where a low marshy tract extends some distance from the sea. Towards the south and east the surface is mostly a dead level, with the exception of narrow tracts along the water-courses, which are inclosed by steep acclivities. These bottoms have a fertile soil consisting of black mould, and yield good crops. The higher and level grounds have an extremely hard clayey soil unfit for cultivation. In spring they are covered with a fine turf, and supply good pasture for cattle and horses. Much grass is also cut for fodder. A weed called 'burin,' and dried dung, are used for fuel. Within the granitic tract the surface is more broken, and contains many tracts fit for agricultural purposes. The summer is dry and hot; rain is rare; the thermometer rises from 90° to 100°. In autumn and winter whirlwinds are frequent; a considerable quantity of snow falls, but it is swept by the winds from the plains, so that the country derives very little advantage from it. From December to February the thermometer frequently sinks to 25° and 30° below zero. The spring and autumn are of short duration.

The country north of this extensive steppe may be divided into two regions. The western lies on both sides of the middle course of the Dnieper. On the west of the river it extends from the northern border of the steppe (between 48° and 49° N. lat.) to the great swamps of Pinak and Ratnor (near 52° N. lat.), and comprehends the governments of Podolia, Volhynia, and Kiev. On the east of the Dnieper it comprehends the government of Pultava, the greater part of that of Tchernigow, and the western parts of Charkow and Kurak. It is designated by the general name of the *Ukraine*. The surface of this region is chiefly undulating, but in many places it extends in level plains. The soil mostly consists of a black mould, here and there interspersed with sandy tracts. The fertility in general is considerable, and in some parts, where loam is mixed with the mould, it is very great. Here the forests principally consist of oak. The eastern portion of the region lies within the basin of the Don, between its upper affluents, and comprehends the eastern portions of Charkow, Kurak, and Orel, the whole of Voronez, and portions of Tambow and Saratov. It appears to be more elevated than the western region; wood and water in many parts are scarce. The soil consists of a mixture of clay and sand, and is not without a certain degree of fertility, though on the higher parts there are considerable tracts of sterile land. On the lower ground however cultivation is general, and the wheat which is grown here is of excellent quality. Though the difference of temperature in summer and winter is considerable, it is much less than in the steppe farther south. Here also the rains are much more abundant in the western region. The scarcity of rain in summer in the eastern region is one of the causes to which its smaller degree of fertility is ascribed.

Rivers and Lakes.—The principal rivers are noticed in the articles DWINA, VOLGA, DUNA, NIEMEN, DNEPER, DNIESTER, DANUBE, DON, VISTULA, and URAL. As Russia is a level country, the rivers present a greater line of inland navigation than those of most other countries. But all the rivers are not equally fit for navigation. Those which fall into the Gulf of Finland, or into the lakes of Ladoga and Onega, from the north, though they bring down a great volume of water, are unfit for navigation, owing to the numerous rapids and cataracts. The rivers which join the gulf and the lakes from the south generally present some impediments to navigation in their upper course; this is also the case with the Duna, which falls into the Baltic, while the Niemen is navigable in all its extent, nearly to its source. In the Dwina there is no impediment to navigation; and the principal river and all its branches may be ascended to a short distance from the places where they originate. The Volga has the longest line of navigation, as it flows more than 2000 miles, and in this course has no cataracts, rapids, nor whirlpools. It becomes navigable about 20 miles from its source in Lake Seliger. Its northern affluents are navigable to an equal extent, but the southern much less so, on account of the small quantity of water which they bring down. The rivers which fall into the Black Sea are much less adapted for the transport of merchandise. Besides their comparatively small volume of water, owing to the scarcity of rain and snow, and the shallowness of their beds, their course is interrupted by rapids and cataracts, where they break through the granitic tract which traverses Southern Russia. The Volga and its feeders, the Danube and the Caspian, are navigated by Russian steamers. Steamers ply on the Volga between Twer and the Caspian.

Lakes are very numerous in certain parts of the empire, especially in the north-west and south-east. Almost all the lakes which occur in the salt steppes that surround the Caspian on the north, as well as in those of the Crimea and the Nogay steppe, which lies north of the peninsula, are salt lakes, and salt might be obtained from all of them. There are very few lakes in the interior of Russia, and they are all small; but those of the countries surrounding the Gulf of Finland

are very numerous. [FINLAND.] To the south of that gulf a very great number of lakes is dispersed over the country. The largest is the lake of Peipus, or Pskow [LIVONIA]; its outlet, the river Narowa, though deep, has a very rapid course, and forms a short distance above the town of Narva, a cataract 18 feet high, by which the navigation is entirely interrupted.

The country which extends between the innermost recess of the Gulf of Finland, and that bay of the White Sea which is called the Gulf of Onega, contains the largest lakes in Russia and in all Europe, the Ladoga and the Onega: the Lake of *Ladoga* is the largest. In length from north-west to south-east it is nearly 120 miles, and its greatest width is 70 miles. It covers an area of more than 6500 square miles. A few rocky islands occur along its north-western shores, but none in the main body of the lake. The depth varies greatly. In some places it is stated to amount to nearly 150 fathoms, which considerably exceeds the greatest depth of the Baltic, but in others it is shallow, and not deep enough for large vessels. The waters of a very extensive country unite in this lake. The Lake of *Onega*, which is nearly at an equal distance from the Lake of Ladoga and the Gulf of Onega, is more than 120 miles long, with an average width of nearly 40 miles. The area is about 4895 square miles, including the island of Klimez Koj, which contains an area of 42 square miles. Its depth is generally 80 to 100 fathoms. Along the shores there are numerous rocky islands, but the main body of the lake is free from them. The waters of this lake are discharged into that of Ladoga by the *Svir* River, which is about 120 miles long, and flows through a low and swampy country overgrown with thick forests. This river is navigated by large river boats. The surplus of the waters collected in the Lake of Ladoga is carried to the Gulf of Finland by the *Neva*, which flows more than 40 miles measured along the windings of the river, and after dividing near and in St. Petersburg into four arms, reaches the Bay of Cronstadt. Its width varies between 100 and 200 fathoms, and its depth is commonly 3 fathoms or more, so that large river-vessels and steamers can navigate it. A shoal about the middle of its course near Pella is avoided by a short canal. The river is covered with ice from the end of October to the end of April. The lakes Bjelo-Ozero, and Ilmen, which lie in the same depression, are noticed under NOVGOROD.

Canals.—The navigability of nearly all the Russian rivers to a very short distance from their sources, and the very moderate height of the elevated tracts, which divide the river systems from one another, above the level of the rivers that originate in them, facilitate more than in any other country the making of canals and the establishment of a continuous water-communication in the interior of the empire. Peter the Great perceived the advantages of such a water-communication, and he planned nearly all the canals which have been executed since his time, and some of them were even finished in his reign.

It has been already observed that those rivers which originate south of 55° N. lat., are much less adapted for navigation in their upper courses than those which have their sources farther north, owing to the dryness of the climate. When attempts were formerly made to unite the southern rivers (the Don, the Volga, the Dnieper, &c.) by canals, this circumstance does not appear to have been known, or at least not to have been considered as an obstacle to the enterprise. All the canals which were undertaken in these districts however have failed because there is no water to feed them.

On the contrary, all the canals which have been made in the northern provinces have succeeded completely. The three most important constitute a water communication between the Volga and the lakes of Onega and Ladoga, and consequently with the Neva and St. Petersburg. The most famous and most frequented of them is the canal of *Viahnei Volotshok*, near 57° 40' N. lat., 34° 30' E. long., by which a direct water communication is opened between St. Petersburg and Astrakhan, a distance of 3200 miles; yet the canal does not exceed 3 miles in length. It unites the Twerza, a feeder of the Volga, with the Lake of *Matino*, which is about 8 miles long, but hardly a mile wide, and from which the river *Msta* flows into the Lake of *Ilmen*. To obviate the danger incurred by vessels exposed to the storms so prevalent on Lake *Ilmen*, a canal has been made from a point about a mile above the embouchure of the *Msta* to the *Volchow*, along the northern shore of the lake. This canal, which is nearly 6 miles long and from 12 to 14 fathoms wide at its upper level, is called the Canal of *Novgorod*, as it terminates in the vicinity of that town in the *Volchow*. Though the actual extent of the canals on this line of water communication amounts only to 9 miles, the works executed in rendering the connecting rivers navigable are very extensive, and have cost large sums. With the exception of the canals in the interior of China, there is probably no canal in the world which is more navigated than that of *Viahnei Volotshok*. The produce of the mines of *Perm* and *Ekatarinburg*, of the rich country and the oak-forests between *Nishnei-Novgorod* and *Sibirsk*, and of the whole basin of the *Oka*, reaches St. Petersburg and the Baltic by the Volga and this line of navigation. The canals and rivers on this line are free from ice from the middle of April to the end of October.

The second line of water communication is formed by the *Tikhvina Canal*, near 59° 25' N. lat., 34° 20' E. long. This line of navigation begins in the Volga at the mouth of the *Maloga*, north of 58° N. lat., and near 38° 30' E. long. It ascends the last-mentioned river

to its most northern bend, where it is joined by its large affluent the Chagoda or Chagodocha: it then follows the last-mentioned river to its junction with the Somino, which rises in the lakes of Somino and Eglino. The Lake of Eglino is united by the Tikhvina Canal with the small Lake of Lebidini, which is the source of the river Tikhvinka. The Tikhvinka runs westward into the Sias, which falls into the Lake of Ladoga a few miles east of the embouchure of the Volchow. The canal itself is only 5 miles long and 36 feet wide at its upper level. A few cuts have been made in the Somino and Tikhvinka, but their length does not exceed 4 miles.

The third line of water communication traverses the two lakes of Onega and Bjelöš Ozero. The Kowsha, a navigable river which rises in Lake Kowshö Ozero, falls into the Lake Bjelöš Ozero from the north-west. Some miles west of the Lake Kowshö are the sources of the river Vytegra, a feeder of Lake Onega. Between these two rivers is the Lake of Matko, whose waters, with those of the Kowshö, are used to feed the locks of three short canals, whose length, taken together, does not exceed 8 miles. These canals are named the Mary Canals, in honour of the empress Mary (wife of Paul), who paid the expense of the undertaking. The river Chekana, which issues from the Bjelöš Ozero and falls into the Volga above Rybinak, contains some rapids, which are avoided by a cut 12 miles long near the town of Tchereponetz. The Tikhvina and Mary Canals can only be navigated from the end of April to the middle of October.

As these three systems of inland navigation traverse the lakes of Ladoga and Onega, and the barges were originally obliged to pass over them, heavy losses of property were frequently incurred by the barges being swamped during the gales to which the lakes are subject. To avoid this dangerous navigation, canals have been made along the southern shores of the lakes. The most western canal, called the Ladoga Canal, unites the river Volchow with the Neva; it is nearly 70 miles long, from 10 to 14 fathoms wide, from 4 to 7 feet deep in summer, and from 7 to 10 feet in spring. Steam-engines are used in some of the locks in this canal, which was finished in 1733. When the Tikhvina Canal was made, this line of navigation was extended farther east by the Sias Canal, which runs along the southern banks of Lake Ladoga to the mouth of the river Sias, and is nearly 7 miles long, 8 fathoms wide, and 5 feet deep. To obviate the danger which the barges passing through the Mary Canals might encounter in navigating Lake Onega, the Onega Canal was undertaken, which begins in the river Vytegra, about 10 miles from its mouth, and runs westward to the lake. It is about 14 miles long, 12 fathoms wide, and in general 7 feet deep. From the embouchure of the Swir to that of the Sias, where the Sias Canal begins, a canal was completed in 1810, which is about 28 miles long and from 13 to 22 fathoms wide; its lowest level is 7 feet below the surface of the Ladoga. It is called the Swir Canal, and has no locks. Thus a line of canals surrounds the southern extremity of the Lake of Ladoga, from the mouth of the Swir to the place where the Neva issues from the lake. The whole line is somewhat more than 100 miles long.

The Lake of Bjelöš and its outlet the river Chekana have recently afforded the means of uniting by one system of canals (Alexander Canal) the river Dwina and Archangel with the river Volga and with the city of St. Petersburg. This line of canals begins in the Chekana, about 20 miles below its efflux from the lake, near the town of Kirilow, whence it runs eastward through several small lakes to the river Porosowina, which falls into the Lake of Kubinskoš. The last-mentioned lake is the source of the river Sukhona, the principal branch of the Dwina, which is navigable for large barges from the place where it leaves the lake. The whole line between Kirilow and the Lake of Kubinskoš does not much exceed 40 miles. This navigation, which was completed in 1828, is of great importance for the transport of timber, the produce of the extensive pine-forests on both sides of the Sukhona.

In the year 1825 was commenced the Moskwa and Volga Canal, which begins on the Volga, at the mouth of the river Dubna, about 40 miles below Twer, ascends the Dubna to its confluence with the Sestria, and then the latter river to the vicinity of the town of Klin. At Klin the canal begins which leads to the Lake of Gulzino, which constitutes the summit level, and where a reservoir is formed which covers about four square miles. From this lake the vessels pass by another canal to the river Istra, which passes near Voakresenk, and falls into the river Moskwa about 26 miles above the city of Moscow. Near 61° N. lat. a canal (Catherine Canal) unites the Vycheгда, one of the principal branches of the Dwina, with the Kama, which is the largest affluent of the Volga, by forming a water communication between two rivers called the Northern and Southern Keltma. The river Düna is united to the Dnieper by the Bereainakof Canal, which joins the Oola, an affluent of the Düna, to the Berezina, a tributary of the Dnieper. The river Niemen is united to the river Dnieper by the Oginsky Canal, which forms a communication between the river Szczara, a tributary of the Niemen, and the Yasolda, an affluent of the Pripeck, or Pripetz: the last-mentioned river traverses the swamps of Pinsk and Retnor, and falls into the Dnieper. A communication between the Vistula and the Dnieper exists by means of the Pins Canal, which unites the river Mookhavoie (which joins the Vistula at Brzecz Litewski) and the Pripeck.

Climate.—The fact that the intensity of cold in Europe increases

from west to east, is illustrated by the climate of Russia. While the mean annual temperature of the western coast of Norway as far north as North Cape is always above 32° Fahr., or the freezing-point, in a considerable portion of the most northern part of Russia the mean annual temperature is below 32°. This is the case with the whole of Russian Lapland as far south as 66° N. lat., and also the whole country drained by the rivers Pechora and Mезen. But this severity of climate does not prevent the growth of trees; along the upper courses of both rivers forests of considerable extent occur. But where the mean annual temperature does not exceed 25° or 26°, which is the case near the mouths of both rivers, a shrub a few inches high is rarely met with. Yet on the peninsula of Kola, where the mean annual temperature is certainly below 32°, barley is cultivated, and generally comes to maturity. This part of Russia may be called the Arctic Region.

South of this lies the Cold Region, in which the mean annual temperature varies between 32° and 40°. The southern limit of this region begins on the shores of the Baltic, on the Gulf of Riga, about 58° N. lat., and runs hence east-south-east to the confluence of the Moskwa and Oka, near 55° N. lat., whence it continues in the same direction towards the southern extremity of the Ural Mountains, terminating south of Uralak on the river Ural, near 51° N. lat. The winter in the northern districts lasts from seven to eight months, and in the southern districts from five to six months. The Neva is generally covered with ice from the 27th of November to the 19th of April. The quicksilver sometimes freezes at Ploetow, in the interior. Both spring and autumn are short, and the passage from cold to heat, and vice versa, is rather rapid. But in summer the heat is for two or three weeks very great. The thermometer then rises to 86°, and even 90°. In the interior both the heat and the cold are greater than on the coast. At Casan the thermometer in winter generally descends to 28° below zero, and in summer it rises to 95° and 96°. The aurora borealis is frequently seen, especially in March, June, July, and September.

The Temperate Region extends over the southern provinces as far north as the line above mentioned. Its mean annual temperature varies between 40° and 50°, but in the Crimea and in the country between the Dniester and Danube it rises to 54° and 56°. This region is distinguished by severe though short winters, and by long and very hot summers. Night-frosts are frequent in October and November, but continual frost does not set in before the middle of December, and it lasts to the middle or end of February. West of the Don the frost is often interrupted by a few days' thaw. The frost is intense while it lasts, the thermometer generally sinking in the western districts to 12° below zero, and in the eastern districts to -20°. From the end of February the cold becomes more moderate, but the weather continues to be raw; and there are night-frosts during the north-east winds, which at that season are the most frequent. In the middle of May however a sudden change takes place. In a few days the heat increases to such a degree as to become oppressive. In June and July it still continues increasing until the thermometer rises to between 90° and 100°. From the middle of August however the heat rapidly decreases, and in September night-frosts sometimes occur. In the hot season south-east and east winds are prevalent. The countries which border on the Baltic and on the White Sea have a wet climate, and rain is frequent all the year round: in winter a vast quantity of snow falls.

Productions.—Russia produces a considerable surplus of grain for exportation. Rye is the great corn crop, which, except in the steppes and the Arctic Region, may be grown in all parts of the empire. The greatest quantity is produced between the cataracts of the Dnieper on the south and the river Volga on the north, but the cultivation extends to the mouth of the Dwina, 65° N. lat. It does not always ripen north of the Volga, owing to the shortness of the summer and the moisture of the atmosphere; and it is generally necessary to dry the grain in buildings constructed for that purpose. The cultivation of barley extends to 67° N. lat. Oats do not succeed north of 62° N. lat. In some provinces which have a poor soil, and in the districts through which the great roads and lines of inland water-communication run, the cultivation of oats is very extensive. Wheat is the principal object of agriculture in the fertile tracts along the rivers in the southern districts, but especially in the Ukraine; farther north it is less grown, though it succeeds as far north as 58° or 59° N. lat. Millet is extensively grown in the elevated country which surrounds the upper course of the Oka, Don, and Desna, and in some other districts south of 55° N. lat. In Southern Russia maize is cultivated south of 48° N. lat.

Flax and hemp are more extensively grown than in any other country in Europe. Along the river Don, and even on the steppes of the Volga near Sarepta, flax and hemp are found in a wild state. They succeed as far north as 65° N. lat., and both, together with hemp-seed and flax-seed, constitute important articles of export from Archangel, St. Petersburg, Riga, and the Sea of Azof. Tobacco is much cultivated in the Ukraine.

The climate of Russia is not favourable to the cultivation of fruit-trees. With the exception of wild cherries and some bad apples, no fruits grow north of 56° N. lat. Other fruits are imported from foreign countries. Pears and plums are only grown to any extent south of 53° N. lat. In the most southern districts there are peaches, apricots, quinces, mulberries, and walnuts; and in the extensive

orchards of the Crimea there are also almonds and pomegranates. Grapes are chiefly cultivated in the districts along the lower course of the Don, on the Volga above Sarepta, and in the Crimea. The wine is generally ill made and of inferior quality, but the produce of the vineyards on the Don, called Donish wine, is said to be hardly inferior to French champagne.

Kitchen-gardens are not much attended to. Potatoes, several kinds of cabbages, turnips, and carrots however are extensively grown; and in some places cucumbers, pumpkins, and radishes. Melons, and especially water-melons, are very abundant in the hot and dry countries near the steppes. Asparagus grows wild in the southern districts. Hops are found wild, but they are also cultivated. Liquorice thrives luxuriantly on the banks of the Volga in the government of Astrakhan; it is taken to Astrakhan, where the juice is expressed, and considerable quantities of it are exported. Soda is obtained from different kinds of *Salsola* that grow in the steppes.

The forests constitute one of the principal sources of wealth to Russia, and their produce, consisting of timber, fire-wood, tar, pitch, ashes, pearl-ash, and potash, is exported to a large amount. About three-fourths of the countries between 65° N. lat. and the course of the Volga as far east as its great bend near Casan, are covered with forests. In all these countries only pine, fir, larch, alder, and birch are found, with a few lime-trees; ash-trees are rare. From these countries is derived the greatest part of the produce of the forests which goes to foreign markets. The central provinces have hardly as much wood as is required for fuel and for manufacturing purposes. In some parts even fire-wood is dear and scarce. West of the Dnieper extensive forests occur on the banks of the Niemen and in the swamps of Pinsk and Ratnor. They chiefly consist of pine- and fir-trees, but birch- and lime-trees are also common, and in some parts these are the prevalent kinds. South of the swamps of Pinsk and Ratnor there are some forests of beech, and this is the only part of Russia where that tree is abundant. The great forests to the east of the central provinces occupy a large part of the governments of Perm, Viatka, Casan, Nischnei-Novgorod, Pensa, and Saratov. They consist mostly of pine, fir, larch, alder, and birch in Perm and Viatka; but in the other governments, of oaks, lime-trees, elms, and ash. The southern provinces of Russia are quite without trees. The oak-tree is most common between 53° and 56° N. lat. Near the Ural Mountains it is not found north of 57° N. lat., but farther west it extends to 59° N. lat., and a few trees are even found in Finland north of 60° N. lat.

The domestic animals of England are found in Russia, with the exception of rabbits. Horses are very numerous, and of various breeds. Those in the northern provinces are rather small, but the central and southern districts have large breeds. Those of the Cossaks, Kalmucks, and Kirghiz, which pasture in the steppes, and become almost wild, are distinguished by their power of sustaining the greatest fatigue with very scanty food. There are also a few wild horses in the steppes. Black cattle is abundant, as is evident from the immense quantities of tallow and hides which are exported, though the domestic consumption of both articles is very great. Sheep are still more numerous; and the breed has been improved by crossing with the Merino and Saxon sheep. In general however the wool is of an indifferent quality. During the winter sheep-skins form the common dress of the peasantry. In the southern steppes there are some peculiar breeds of sheep, among which the Kirghiz breed with the large bushy tail is the most remarkable. Their wool, when full grown, is short and coarse, but the lambs have a fine and beautiful fleece. Goats are more numerous in Russia than in other countries of Europe: the skins are used for making morocco leather. Hogs are generally reared, except in the steppes: they are most numerous in the countries where there are oak-forests, and in the western provinces, from which a great number of hams and much bacon is sent to other parts of the empire. The nomadic tribes which wander about in the steppes keep a great number of camels: some rich proprietors have more than 1000 head. In the government of Astrakhan buffaloes are kept. Fowl, geese, and ducks are abundant. Reindeer are only kept north of 66° N. lat.

Among the wild animals of Russia are the bison (*Urus*), which still exists in the forest of Bialoviza, near the source of the Naraw; and in the northern forests elk, deer, hares, and wild hogs, bears, gluttons, badgers, wolves, foxes, martens, polecats, weasels, ermines, otters, squirrels, and marmots. In the steppes there are wolves, foxes, and wild hogs; also wild asses, saiga antelopes, konsaks, and the dipus jerboa.

Nearly all kinds of birds which are met with in England occur in Russia, and also the capercaillie and pelican: the last however lives only on the shores of the Black Sea and the Caspian.

Fish is very plentiful in the rivers as well as in the White Sea and along the coasts of the Arctic Sea, but it is less abundant in the Baltic. The fish which are chiefly taken in the White Sea are had-dock, cod, herrings, and the omul, a kind of salmon. In the Polar Sea, especially along the coasts of Nova Zembla, the whale, the walrus, narwhal, seal, dolphin, white fish, and some other kinds are caught. The most important fisheries in Russia are those of the Volga, the Ural, and the Sea of Azof. [ASTRAKHAN; AZOF.] The fish is sent to all parts of the empire, but is not exported to any large amount. Isinglass and caviare are sent to foreign markets.

Serpents and lizards are common only in the steppes. Swarms of locusts occasionally infest the countries that border on the steppes. Among the noxious insects are scorpions, millipedes, tarantulas, and the scorpion-spider. Bees are found wild in most of those provinces which have large forests, but they are also reared in other parts of the empire, especially by the Mordwi. Though the consumption of wax is very great in the churches, Russia still exports some wax. The honey collected in the districts where forests of lime-trees exist is highly valued, and fetches a good price. The mulberry-tree thrives well in the southern provinces, and the silk-worm also succeeds, but the manufacturers of Moscow and other parts of the empire obtain their chief supply of raw silk from Persia.

Geology and Mineralogy.—The successive primæval deposits extend over European Russia in regular sequence, and in an unaltered state. Hence, though the surface presents only a monotonous and undulating surface, chiefly occupied by accumulations of mud, sand, and erratic blocks, the framework of the country wherever it can be detected exhibits a clear ascending series belonging to the Silurian period. The oldest deposits have been only partially hardened since they were accumulated at the bottom of the sea, and have been elevated in low plateaus that have undergone no change or disruption. The general order of the older strata has been singularly exempted from all intrusion of every description of plutonic or volcanic rocks. The old deposits consist of slightly coherent mud, marl, and sand, in strata deviating but little from horizontality, and are proved to belong to the same geological period as some of the hard slaty mountains of North Wales. In the Ural chain where there are numerous eruptive rocks (porphyry, greenstone, sienite, granite, and serpentine), the soft primæval strata so prevalent in other parts of European Russia have been converted into metamorphous rocks, crystalline schists, limestone, and quartz.

In a large portion of the country, however, west of the Ural chain, comprising the greater part of the governments of Perm, Orenburg, Casan, Nischnei-Novgorod, Yaroslav, Kostroma, Viatka, and Vologda, constituting an area twice the size of France, the older sedimentary strata are overlaid by widely diffused masses of Permian rocks which contain fauna and flora essentially palæozoic (the genera being the same as those of the coal period, but the species with a few exceptions different), and constitute the true termination to the long palæozoic period. These Permian deposits are of varied mineral aspect; they consist of grits, sandstones, marls, conglomerates, limestones, sometimes inclosing great masses of gypsum and salt, and are also much impregnated with copper, and occasionally with sulphur. They are flanked on the west, east, and north by the upper members of the carboniferous rocks, but with little or no coal. Limestones interstratified with much gypsum prevail towards the base. In some parts of the region salt springs occur rising, it is supposed, from masses of rock-salt in older palæozoic rocks; but in the steppes south of Orenburg, the mineral is subordinate to the true red Permian deposits. Salt-beds range up to the foot of the older palæozoic and crystalline rocks of the South Ural Mountains to the east of Orenburg.

These Permian strata as above hinted at contain many varieties in their contents and relations. Along certain portions of the west flank of the Ural chain they occur in almost apparent conformity to the carboniferous rocks; all the strata, whether carboniferous or Permian, have been raised up and thrown off sharply towards the west. At Sergiefsk and on the banks of the Sok in the basin of the lower Volga, magnesian limestone and marl are surmounted by gypsum, copper ore, and native sulphur, with sulphureous and asphaltic springs in the middle masses, whilst other marlstones and white limestones form the summit. Near Kazan huge masses of gypsum, rising high above the level of the Volga, are surmounted by limestone cliffs, and the latter by red, green, and white marls. In the central tracts, between the Ural Mountains and the Volga, the limestone in some tracts assumes a definite horizon, and is underlaid by coarse grits; it is repeated also at various levels in a succession of beds interlaminated with sandstones, and yellow, white, and greenish marls, occasionally containing plants and small seams of impure coal—the whole being surmounted by red grits and conglomerates with copper-ore.

In some of the Polish governments the younger secondary and tertiary deposits are so widely spread that the palæozoic rocks rise only in small patches to the surface. Around Kielce a nucleus of Devonian rocks with much limestone, and charged with characteristic fossils, is followed by carboniferous limestones and by thick-bedded coal-seams, over a small district that extends into the coal tracts of Silesia. In consequence of the high antiquity of the Silurian strata, which prevails so widely in Russia, there is little or no coal. What seams are known to exist are mere streaks, and of bad quality. The only coal deposits of any importance are those of Kielce and the Donetz coal-field, which lies between the Dnieper and the Don, about 100 miles from the Sea of Azof, in a rugged dislocated tract, where the seams mostly of anthracite are thrown up at different high angles, so as to be difficult to work.

In southern Siberia there is a great extension of the younger palæozoic deposits, which extend also to the Altai Mountains, whilst in north-eastern Siberia such rocks have been traced even to the Sea

of Okhotsk. [SIBERIA.] The geology of the Ural Chain is given under URAL MOUNTAINS. (Murchison, 'Siluria')

Russia is rich in minerals. Gold occurs near the Gulf of Onega, and also on the western declivity of the Ural Mountains [URAL MOUNTAINS]; but the chief gold-mines of Russia are on the eastern or Siberian side of the Ural Mountains. Platinum was discovered on the western declivity of the Ural in 1823, and six mines are successfully worked near 57° 40' N. lat. No silver is found in European Russia, though it occurs in Siberia. But the greatest mineral wealth of Russia consists in its mines of copper and iron. Both these metals frequently occur on the western declivity of the Ural Mountains, from 55° to 60° N. lat., and they are worked in many places. The government of Perm, where the mines are most extensively worked, has 200 mines of different kinds in operation, more than 7300 furnaces, and above 180,000 men directly or indirectly employed in different branches of metallurgy. The mines belong, some to the crown, some to private persons. The governments of Viatka and Orenburg are also important mining districts. Iron-ore occurs also on the southern declivity of the Uwalli, and on the table-land which extends about the sources of the rivers Oka, Don, and Desna. It is there found in the clay in layers, and sometimes only in lumps. Frequently it occurs in bogs and morasses. The extensive manufactures of Tula hardly use any other iron. Quicksilver, arsenic, nickel, cobalt, antimony, and bismuth exist in several places.

Salt is an important article. Besides the vast sources for the supply of this article before mentioned, the salt-formation extends along the western declivity of the Ural Mountains, to the source of the Kama, and thence westward on both sides of the Uwalli. In all these districts salt is made from numerous salt-springs. The greater number of these salt-manufactures are contained in the governments of Perm and Viatka; but several of them occur farther west. Salt is imported into the Baltic provinces from foreign countries cheaper than the native article, owing to the heavy expenses of transport.

Marble and granite are quarried near the village of Tivdia, at the northern extremity of the Lake of Onega, and at Serdobol, on the northern shores of Lake Ladoga. The marble is of good grain; some is white, and some has a reddish colour with white stripes or spots. The granite is worked with great activity; all the public edifices and private mansions in St. Petersburg are built of it.

Inhabitants.—Russia is inhabited by a greater number of nations, differing in language, character, and civilisation, than any other country of Europe. The inhabitants belong either to the Caucasian or to the Mongol race. The Caucasian however is by far the most numerous, as the nations of Mongol origin do not form one-hundredth part of the whole population.

The Caucasian race in Russia consists of individuals belonging to Slavonians, Tshudes or Fins, Turks or Tartars, Germans, Jews, and Greeks. Nine-tenths of the population are of the Slavonic race. They are divided into Russians, Poles, Lithuanians and Lettes, and Wallachians and Servians. The Russians constitute more than two-thirds of the whole population, and their number is estimated by Haxthausen at about 50 millions. They inhabit, to the exclusion of all other nations, the central provinces of the empire between the Dnieper and the Volga. They likewise constitute the mass of the inhabitants in the northern provinces between the Ural Mountains and the White Sea, and in the southern between the Don and the Dniester. They are divided into Great and Little Russians. The latter inhabit the country called the Ukraine. The Cossaks are properly descendants of the Little Russians, and are intermixed with Poles, Tartars, and Kalmucks. [COSSAKS] The Great Russians, with the exception of a comparatively small number who have obtained their freedom, are bondsmen to the numerous body of rich nobles which exists among them. Among the Little Russians a considerable number of families are not subject to any master; and the Cossaks are all free.

The Poles, together with the Russians, inhabit the governments described under POLAND, those of Volhynia and Podolia, and almost exclusively that of Grodno. Their numbers amount to about six or seven millions. The Poles are said to be of more refined manners than the Russians; but in the arts of civilised life, especially in manufactures, and all branches of industry, they are behind the Russians.

The Lithuanians inhabit the governments of Vilna and Minsk. Their number does not exceed one million and a half. Their language is very different from the common Slavonic dialects in its material and forms, but is intermixed with many Russian terms. They are agriculturists, but otherwise they have not made much progress in civilisation. North of the Lithuanians, in Courland and Livonia, are the Lettes, whose number probably does not much exceed half a million. They speak a language different from that of the Russians and the Lithuanians. They are exclusively occupied with the cultivation of the ground. Those who live in Courland are frequently distinguished by the name of Koora. Both nations, the Lithuanians and Lettes, were bondsmen to the German nobility established in their country, till the reign of the emperor Alexander, who partially effected their emancipation.

The Vlaches, or Wallachians, live in the government of Bessarabia, between the rivers Dniester and Pruth. Their number does not exceed half a million. They speak a language which is mainly composed of Latin, Greek, Italian, and Turkish. They are industrious cultivators of the land. They were formerly slaves to the boyars, or

nobility, but they ceased to be so nearly 100 years ago. Among the Vlaches there are a few families of Servians or Razes, and a few more are settled in the government of Ekatarinofslaf.

The Tshudes, or Fins, were formerly considered to belong to the Mongol race; but their light hair and their blue eyes have of late procured them a place among the Caucasian race, in spite of their flat noses and flattened countenances. They inhabit two separate portions of Russia. The majority of them are settled on both sides of the Gulf of Finland. Two of these nations, the Fins and the Laplanders, occupy the country north of the gulf. The Fins, who inhabit FINLAND, are agriculturists and breeders of cattle. The Laplanders live north of 65° N. lat., and are mostly occupied with their reindeer. Their number does not exceed a few thousands. On the south of the Gulf of Finland are the Esthes or Esthonians, whose number is above half a million. Their language is similar to that of the Fins. They are almost exclusively occupied with the cultivation of the ground, and were serfs to the nobles until 1818, when the emperor Alexander effected their emancipation. South of the Esthonians, in the country lying on both sides of the small river Salis (near 58° N. lat.), is the small tribe of the Livis or Livonians, who have given their name to Livonia. They speak a dialect of the Finnish language, and are exclusively agriculturists.

The eastern members of the Tshudic family are separated from the western by an immense tract of country upwards of 500 miles in width, which is now inhabited by Russians. When and how the separation took place is not on record. The eastern Tshudic tribes live on the western declivity of the Ural Mountains, and on the banks of the middle Volga, and are eight in number:—Syrians, Permians, Vogules, Votiakes, Chuvashes, Cheremisses, Mordvines or Mordwi, and Teptiars.

The Syrians, the most northern of these tribes, inhabit the woody country between the upper course of the Kama and the Vychege, an affluent of the Dwina, and particularly both banks of the Vychege, as far west as the mouth of the Syasola. Their principal occupation is the chase of the wild animals with which their country abounds. Their language differs very little from that of the Permians, which has a great affinity to the Finnish.

The Permians occupy the country south of the Syrians, between the rivers Kama and Viatka. Though agriculture has made more progress among them than among the Syrians, they derive their principal subsistence from the chase, and more especially from the fisheries in the Kama and Viatka. Both of these tribes generally speak also the Russian language.

The Vogules (who resemble the Kalmucks) occupy both declivities of the Ural Mountains between 58° and 60° N. lat. They are short in stature, have round faces with projecting cheek-bones, and very little beard. Their language shows that they belong to the Tshudes; it exhibits also a great affinity to the Magyar. The Vogules live entirely on the produce of the chase. They live in small societies, consisting only of five or six huts, and lead a wandering life. A small number have been converted to the Greek Church; the remainder are heathens.

The Votiakes are settled west of the Permians, on both sides of the upper course of the river Viatka, and in the country about the source of the Kama. In language and bodily formation they resemble the proper Fins more than any other of these eastern Tshudic tribes. They are diligent agriculturists, and also rear cattle and bees. They are allowed to choose their own magistrates. They pay only a capitation-tax. Most of them have embraced Christianity.

The Chuvashes and Cheremisses live in the neighbourhood of Casan, on both sides of the Volga. The Chuvashes who dwell chiefly west of the river have become members of the Greek Church. In their personal appearance they resemble the Turkish or Tartar tribes, to whom they are said to be akin in language, though this has been also pronounced to be a dialect of the Finnish. The Chuvashes cultivate the ground, and rear cattle and bees. The Cheremisses speak a language which contains a large number of Finnish roots intermixed with a large number of Turkish origin. The conformation of their body likewise shows some mixture with the Turkish race. They are very diligent and intelligent agriculturists, and have large herds of cattle. The majority have adopted the religion of the Greek Church; they observe the festivals both of the Greeks and the Mohammedans.

The Mordwi, or Mordvines, are settled west of the Chuvashes, in the country on both sides of the river Sura, which falls into the Volga from the south, between Nischnei-Novgorod and Casan. On the west they extend to the Oka. They live intermixed with the Russians, whom they resemble in feature and form, but their language is Finnish. They are all Christians. They cultivate their lands with great care, and their fields are not inferior to the best-cultivated grounds in Russia. They pay great attention to bees, and as they live in a country abounding in forests of lime-trees, their honey is preferred to that of any other part of Russia.

The Teptiars, the most eastern of the Finnish tribes, are settled on the banks of the Bialaya, an affluent of the Kama from the east. Though the Finnish element prevails in their language, it contains also a large number of Turkish words. They rear cattle and bees, and pass a great part of their time in hunting wild animals. They are partly heathens and partly Mohammedans.

The third great branch of the Caucasian family which inhabit

Russia is the Turkish, or Tartar. They came into Russia between the 9th and 13th century with the Mongols and other conquerors. The Turkish tribes at present existing in Russia are four, the Tartars of Casan, the Bashkirs, the Metscheriaks, and the Nogai Tartars. The Tartars of Casan are the most civilised nation in Russia. Their language is a pure and cultivated Turkish idiom. About seven-eighths of them are still Mohammedans. They have schools both for the lower and higher classes of the people. In the elementary schools instruction is given in reading and writing, and the Korán and some other religious books are explained. The objects of instruction in the higher schools are the Turkish, Persian, and Arabian languages, and arithmetic. The priests are educated in an institution established for that purpose in a village called Gargali, which is about nine miles from the town of Orenburg. Those who are established in the towns are either merchants or manufacturers. The inhabitants of the villages are careful cultivators of the soil, and also occupy themselves with rearing cattle and bees. Their villages are well provided with the most common mechanics, as tanners, shoemakers, tailors, dyers, blacksmiths, and carpenters. They have embraced Christianity.

The Bashkirs inhabit both declivities of the Ural Mountains, from 56° N. lat. to near 64° N. lat. They resemble in language and manners the Tartars of Casan, though in the form of their body they approach the type of the Mongols. The Bashkirs still adhere to a wandering life. In winter they inhabit villages, but in summer they ramble about in the country. They cultivate some patches of land near the houses before they begin their wanderings, but the produce of these fields is not adequate to their consumption. Their riches consist in horses, of which the poorest peasant has from 30 to 50, and many have 500, and the richest from 1000 to 2000. Their horses are of a good breed. They keep only a small number of black cattle, sheep, and goats. They have also a great number of bee-hives, and they collect an immense quantity of wax and honey from the wild bees, which are nowhere more common than in the countries adjacent to the base of the Ural Mountains. They train the falcon for the chase of hares, foxes, and wolves. The small tribes of the Metscheriaks live dispersed among the Bashkirs, and subsist on the produce of their herds of cattle and of their bee-hives. They also cultivate the ground, but not to a great extent. They are considered to be more civilised than their neighbours. Both tribes are Mohammedans.

The Nogai Tartars inhabit the Crimea and the steppe which extends north of that peninsula; they are also dispersed over the country east of the Sea of Azof, and along the northern base of the Caucasus. In the Crimea they are agriculturists, and have extensive orchards. They also manufacture leather, and make cutlery, saddles, and shoes. This portion of the Nogai has attained a considerable degree of civilisation. The remainder of the Nogais lead a half-wandering, half-settled life in the steppes north of the Sea of Azof. Their herds consist of cattle and small hardy horses, but of a rather small breed. They have also numerous flocks of the large-tailed sheep.

The number of individuals belonging to the Teutonic family is probably larger than that of the Turks. They are Germans and Swedes, with whom a few Danes are mixed. Numerous families of Germans are dispersed through the provinces along the Baltic, south of the Gulf of Finland, among the Lettes and Esthonians, and in those parts they constitute the nobility of the country. Most of these families settled there when the Order of the Knights Swordbearers was the acknowledged sovereign of these countries (from 1300 to 1530). Great numbers of German families are settled in the two capitals and in the chief towns of the empire, in the southern provinces, and in the Crimea. The Swedes are numerous along the northern coast of the Gulf of Finland, and the eastern coast of the Gulf of Bothnia.

There are few Jews in the central and northern provinces; but they are numerous in those parts which formerly belonged to Poland. They are smiths, tailors, shoemakers, brewers, distillers, &c.

The Greeks are dispersed all over the southern provinces of the empire as merchants. In the Crimea a few villages are entirely inhabited by them. They occupy themselves with agriculture and gardening.

The Kalmucks show their Mongol origin by the form of their body, as well as by their language. The tribes of this nation which still exist in the south-eastern steppes of Russia are the remnant of those which left Russia in 1770 and 1772, at the invitation of the Chinese government, and settled in the plains of Songaria. They are divided into five tribes. In a country which has hardly a few patches of cultivable land, the Kalmucks by able management have succeeded in maintaining horses, cattle, camels, sheep, and goats to the number of three millions. They export to other parts of Russia wool, hair, tallow, lamb- and sheep-skins, hides, and fur to a large amount. The Kalmucks are Buddhists and have their own Great Lama. They have also their own political administration, of which the khan of the Derbet tribe is the head. He is assisted by eight counsellors and judges, and a person sent from St. Petersburg.

After the emigration of the larger number of Kalmucks in 1771 and 1772, by which the whole steppe between the rivers Volga and Ural south of the Obstaihi Sirt was at once deprived of its inhabitants, a numerous tribe of Kirghiz Cossaks, belonging to the Little Horde of that nation, was settled in the tract which the Kalmucks had abandoned. They are known under the name of the Bukei horde, from the name

of their chief, called Bukei, who introduced them into Russia. In personal appearance, they greatly resemble the Kalmucks and other Mongol tribes, but their language is Turkish. Like the Kalmucks, they are nomadic herdsmen, but they have only a small number of camels. They also keep some cattle and goats. Their wealth mainly consists in horses and sheep. Some rich proprietors are said to have 4000 or 5000 horses and 20,000 sheep. The sheep supply the principal articles of traffic, and numerous flocks are annually sold to the Russians at Orenburg, Troizk, and Astrakhan. Their agriculture is limited to the raising of some barley, and a small quantity of wheat and millet. They hunt the fur-bearing animals, with which their country abounds, and in summer the saiga-antelope. The Kirghiz Cossaks are not very strict Mohammedans.

Agriculture.—Notwithstanding the variety and great abundance of the natural productions of the Russian empire, agriculture may be said to be even now (with the exceptions to be noticed presently) in its first stage, since there is certainly no province which yields even half of what it is capable of producing. Hence in the greater part of the empire it is not so much the ground itself that has any value, as the labouring population, and accordingly it is not the number of acres in an estate that is considered, but that of the male serfs attached to it. The old three-field system of husbandry, by which one-third of the land is always in fallow, is generally adopted in Russia. This system is unfavourable to cattle breeding and to the making of manure for supplying the exhaustion of the soil: it has also led to the extirpation of the forests in many parts; but it is too deeply rooted in the habits of the people to be easily changed. In the Baltic provinces however agriculture is in an advanced condition, and many improved methods have been introduced by the wealthy proprietors. The governments nearest to Moscow also, and the Polish governments, have a comparatively large proportion of cultivated land and a tolerably good system of cultivation; yet even in these provinces there are extensive tracts in which not one-fifteenth part of the surface is cultivated. The thinness of the population, the want of roads and markets in the interior of the empire, and obstinate adherence to old routine, contribute to prolong this state of things. On account of the comparatively small value of land, and the want of manure, the fields in Great and Little Russia are often suffered to be fallow for two or three years. The usual kinds of corn grown are rye, wheat, barley, and oats; maize is grown chiefly in the countries about the Black Sea. Other products are pulse, especially peas; millet, hemp, and flax in the west and north-western governments; and hops in Little Russia. The cultivation of grasses is neglected. According to Tengoborski, who in his 'Productive Forces of Russia,' estimates the population of the empire at 68 millions, the total cereal produce annually amounts to 260 million *chetverts*, or 186,875,000 imperial quarters. Of this about 9 million quarters, chiefly wheat, are exported, leaving 177,875,000 quarters to supply seed corn, and the grain used in breweries and distilleries, for feeding cattle, and for the support of the population; which last, according to a careful estimate by Schubert some years ago, amounts to about 15 bushels per head. The average annual exportation of hemp and flax between 1847 and 1850 was not quite seven and a half million poods (36 lbs. each). Timber, hides, tallow, and wool are the other chief exports. The export of wool, formerly very considerable, has fallen off as the supply from Australia has increased; the carelessness of the flockmasters (who labour rather to increase the number of their flocks than to improve their breeds), in matters relating to the cleansing and sorting of the wool, has tended considerably to check export of this article. In some years the harvests fail, and instead of exporting corn it is necessary to allow the importation of corn free of duty. The government makes great efforts to favour agriculture. It endeavours to extend useful knowledge on the subject to all parts of the empire; many agricultural societies have been formed, and schools established, in which everything bearing on the subject is taught in the most simple manner. In European Russia less than 2-10ths of the surface is under corn-culture; in France the ratio is nearly 5-10ths.

Manufactures.—The manufactures of Russia have been chiefly indebted for their encouragement and progress to the efforts of the government. The czars Ivan I. and II. invited artisans and workmen from Germany, the Netherlands, and Italy, and established at Moscow, Yaroslav, Smolensk, and Kiev manufactures of woollen cloth, linen, arms, &c. But the civil wars before the accession of the house of Romanoff, and the interference of Sweden and Poland, which led to the desolation of the country, checked the infant manufactures, so that in fact nothing was done till the reign of Peter the Great, who in this, as in many other respects, was the founder of the prosperity of Russia. He gave great encouragement to foreign manufacturers, and founded in the first instance great manufactories of arms at Tula, Petrosawodak, and at Sestrabeck, near St. Petersburg; and the great imperial manufactories of woollen and linen at Moscow. At St. Petersburg he established manufactories of articles of luxury, such as mirrors, expensive glass-ware, rich carpets, silks, cotton, &c. In all the larger cities he established at least one manufactory of woollen, linen, and metal, so that at his death there were twenty-one great imperial manufactories, and many smaller ones, partly supported at the public expense. The chief seat of manufactures is Moscow and its government; and next the governments of Wladimir, Nischni-Novgorod,

Saratov, and St. Petersburg. In Poland the woollen, linen, and leather manufactures attained great prosperity under Alexander I, and the cotton manufacture, with steam machinery, has been since introduced. [POLAND.] The Russian workman is very clever, and imitates with wonderful facility; but as he attends mainly to external appearance, his works are deficient in quality and durability.

Among the most important branches of national industry are—manufactories of woollen cloths and other woollen goods, silk, cotton, linen of all kinds; tanneries, tallow melting-houses, candle manufactories, soap manufactories, and metal-wares. The central part of the empire is the chief theatre of manufacturing industry. Tula alone used to be mentioned for its manufactories of all kinds of metal articles; it still maintains its manufacturing activity, but no longer holds the first place. The government of Perm has recently become very distinguished for its manufacture of metal-ware and leather. The manufacture of tobacco and snuff, and beet-root sugar, have greatly increased in recent years. The cultivation of beet-root for the manufacture of sugar has taken a great extension within the last twenty years. In the governments of Kiew, Czernigow, Charkow, Kursk, Podolia, and Volhynia, there were 307 factories in 1848 yielding 12,800 tons of sugar, or about one-fourth of the consumption of the empire. This manufacture, like most other Russian manufactures, is 'protected' by heavy import duties upon colonial sugar, the quantity of which consumed in Russia amounts annually to only about 85,000 tons. Besides the workmen employed in these great establishments, there are above two millions of hands employed in handicraft trades, and in coarse woollen and linen manufactures, iron and other metal wares, or in preparing bast-mats, caviar, hogs'-bristles, in dressing furs, &c. Many articles such as tables, vases, library furniture, &c., have been recently manufactured in Russia from malachite, or green carbonate of copper, which is capable of a high polish.

Commerce.—The inland trade is carried on in a very great measure by means of annual fairs, the most remarkable of which is that of NISCHNEI-NOVGOROD. The principal fairs are those of Nischnei-Novgorod, Irbit, Romna, Charkow, Kursk, Korsun, Rostoff, Sumy, Saratov, Simbirsk, Tambow, Taganrog, Jakutzk, Lebedjan, Penza, Nischnei-Lomoff. Several new fairs and weekly markets have been established within the last twenty years. The inland trade is greatly promoted by the extensive system of inland navigation, by which, as above shown, the interior of the empire is able to send its products to the White Sea, the Baltic, the Black Sea, and the Caspian. With the exception of the road from St. Petersburg to Moscow, which is one of the broadest and best in Europe, and the port-roads, which are kept in tolerable repair, the highways and cross-roads in Russia are in a very broken condition. The great bulk of Russian produce however is conveyed to the ports or to the depôts on the navigable rivers and canals on sledges during the long winter. A railway, 400 miles long and straight as an arrow, connects St. Petersburg with Moscow. Another railroad runs south from Warsaw to the Vienna-Krakow line, which connects the west of the empire with the Austrian and Prussian railway system. These are the only railways completed in the empire. A railroad is projected between St. Petersburg and Warsaw; and a line was authorised in 1852 to be made from Riga to Dunaburg, to join the St. Petersburg-Warsaw line.

The principal trading-ports in Russia are—Riga, Cronstadt, and St. Petersburg on the Baltic; Odessa on the Black Sea; Archangel on the White Sea; and Astrakhan on the Caspian. By these chiefly the corn, flax, hemp, tallow, hides, timber, and other raw products of Russia are exported and foreign produce imported. There are however many smaller ports of considerable importance in the Baltic and the Black Sea. Since war was declared between Russia and the Western Powers in 1854, vast quantities of Russian produce have been forwarded for export by the Vistula, from the Prussian harbours of Memel and Danzig, on account of the blockade of the Russian coasts by the French and English fleets. In 1852 the total exports were valued at 114,773,829 silver rubles (about 3s. 4d. each), and the imports at 100,864,052 silver rubles. Of the imports, goods to the value of only 16,649,447 silver rubles entered the empire by the Asiatic frontier, which was crossed by exports to the value of only 12,423,885 silver rubles. All the rest of the trade was with European states. The total customs-receipts of the empire in 1852 amounted to 31,102,789 silver rubles, of which 7 per cent. was absorbed by the maintenance of the frontier guard.

The total number of ships of all nations that entered Russian ports in 1852 amounted to 8655, carrying 790,300 lasts, and the departures to 8507, carrying 768,900 lasts. Of the arrivals 3627 entered Baltic ports; 827 the White Sea; 8929 the Black Sea; and 272 the Caspian: 2020 of them were British ships; 1125 Russian; 1072 Turkish; 660 Greek; 513 Dutch; 470 Swedish; 453 Sardinian; 383 Austrian; 380 Prussian; 361 Danish; 291 Mecklenburg; 258 Hanoverian; 186 French; and 483 belonged to other nations.

The principal articles of export are—Wheat, flour, cattle, furs, feathers, mats, flax, hemp, linseed, hempseed, oil, tallow, hides, wool, bristles, timber, metals, &c.; linen, cordage, woollens and cotton, candles, soap, coarse woollen cloth, exported to China, &c.; spirits, dried- and salt-fish, fruits, honey, &c. The principal imports are—rice, refined sugar, coffee, tea, wine, fruits, raw-sugar, pearls and precious stones, books, engravings, furs, &c.; cattle and horses from Asia,

&c.; foreign manufactures of silk, wool, cotton, &c.; raw cotton, cotton yarn, indigo, cochineal, madder, and dye-woods.

Revenue.—The revenues of Russia, of which we have no recent return, amount to about 400,000,000 silver rubles, of which 45,800,097 silver rubles were derived from the domains of the crown. The debt was, in 1853, 788,573,112 silver rubles.

Army.—The Russian army is composed of regular troops and Cossaks, or irregular troops, which perform the service of light cavalry. In the regular troops of the grand army the soldier engages to serve for 25 years; but in general after 10 to 15 years' service he is put upon the reserve, of which there are two divisions. Before the outbreak of the present war, the active troops of the grand army consisted of 96 regiments of infantry and 64 regiments of cavalry, 33 brigades of horse and foot artillery, 8 battalions of sappers, and 4 squadrons of mounted engineers. On a war footing, the grand army numbers 486,000 men, with 996 guns; the first and second divisions of reserve number respectively 98,000 men with 192 guns, and 115,000 men with 280 guns, giving a total force of 699,000 men and 1468 guns. Besides this force, the regular troops actively employed for local purposes in the Caucasus, in Finland, Orenburg, and Siberia, number about 198,000 men with 180 guns, over and above a reserve of 100,000 men, consisting of veterans and invalided soldiers of the infantry and cavalry. The Cossaks afford irregular troops to the number of 127,200 men, formed into 33 battalions, with 224 guns. Since the war with France and England broke out, the Russian army has received large additions from new levies.

The Navy is divided into the Black Sea division and the Baltic division, and consists, according to recent statements of 60 vessels carrying 70 to 120 guns; 37 frigates, with 40 to 60 guns each; 70 corvettes, brigs, and brigantines; and 40 steamers. The fleet is manned by 42,000 sailors and 20,000 marines. There are some small-armed vessels in the Caspian and the Sea of Okhotak, not included in the numbers just given.

Education.—The institutions for public education are—I. The public schools of all classes under the minister of public instruction. These are—1, the parish schools; 2, district schools; 3, gymnasia; and 4, the universities. II. The military schools. III. The Ecclesiastical schools. IV. Special schools depending on different branches of the administration. Each university has three faculties—philosophy, jurisprudence, and medicine; and includes within its limits several governments of the empire. The universities are those of St. Petersburg, Moscow, Dorpat, Charkow, Casan, and Kiew. At Odessa there are three lyceums. White Russia has 13 gymnasia. Many schools have been founded in the Trans-Caucasian provinces. The military schools contain about 18,000 scholars. The ecclesiastical schools of the Greek Church are above 400 in number, and contain 60,000 scholars. The schools of the Roman Catholics, Protestants, &c., are about 800, with 8800 scholars. The special schools, under the several ministers, are above 1600 in number, and contain about 128,000 pupils. The government contributes about 10,000,000 rubles annually to their support.

The following table, giving the popular divisions, area, and population of the empire, is taken from the Baron de Haxthausen's recent work on Russia:—

Divisions.	Area in Square Miles.	Population.	
		1846.	1852.
Great Russia	328,781	19,220,900	20,403,371
Little Russia	150,141	11,093,400	11,775,865
New Russia	96,636	3,070,700	3,259,613
White Russia	70,399	2,767,300	2,937,436
Western Provinces	47,076	2,704,300	2,870,667
Baltic Provinces	36,616	1,659,800	1,761,907
Northern Provinces	536,226	1,338,300	1,420,629
Ural Provinces	447,788	10,146,000	10,770,181
Cossak Districts	123,776	1,089,700	1,156,736
Poland	49,230	4,857,700	5,156,543
Finland	133,808	1,412,315	1,499,199
Total in Europe	2,022,477	59,360,315	63,012,146
Caucasian Provinces	86,578	2,850,000	
Western Siberia	2,681,147	3,500,000	
Eastern Siberia	2,122,000	237,000	
American Russia	371,350	61,000	
Total out of Europe	5,261,075	6,648,000	6,648,000
Totals	7,283,552	66,008,315	69,660,146

In respect to race, the Baron gives the following approximations in round numbers:—

1. Slavonic races.—Russians, 49,000,000; Poles, 6,500,000; Lithuanians and Lettes, 2,000,000; Bulgarians and Illyrians, 500,000: total, 58,000,000.

2. Other races.—Germans, 650,000; Dacian Romans (Wallachs), 750,000; Tschudes, 3,400,000; Tartars, 2,150,000; Mongols, 250,000;

Munabur, 100,000; Hyperboreans, 200,000; Caucasian tribes, 2,750,000; Greeks, 70,000; Jews, 1,600,000; Gipsies, 30,800; Miscellaneous, 50,000; total, 12,060,000.

The following list exhibits the popular divisions of Russia, with the governments contained in them:—

Baltic Provinces.—St. Petersburg, Finland, Esthonia, Livonia, and Courland.

Great Russia.—Moscow, Smolensk, Pskow, Tver, Novgorod, Olonetz, Archangel, Vologda, Yaroslav, Costroma, Vladimir, Nischnei-Novgorod, Tambow, Riasan, Tula, Kaluga, Orel, Kursk, and Voronetz.

Little Russia.—Kiew, Czernigov, Poltava, and Charkow.

South Russia.—Ekaterinoslaf, Cherson, Taurida or the Crimea with the Nogai Steppe, Bessarabia, Don Cossaks, and Saratov.

Eastern Russia.—Astrakhan, Samara, Saratov, Orenburg, Penza, Simbirsk, Perm, and Viatka.

Western Russia.—Wilna, Grodno, Kowno, Vitpeak, Mohilev, Minsk, Volhynia, Podolia, and the governments of POLAND.

Caucasian Provinces.—Circassia or Hither Caucasus, Tiflis, Kutais, Schemakha, Derbent. [GEORGIA; CIRCASSIA; CAUCASUS; BAKU; DERBENT; DAGHESTAN; &c.]

Siberia.—Tobolsk, Tomsk, Jenisseisk, Irkutsk, Jakutsk, Okhotsk, Kamtschatka, &c. [SIBERIA; KAMTOHATKA; &c.]

Islands.—In the Arctic seas Nova Zembla. Numerous islands opposite the mouth of the Lena; the Liakhov Islands, or New Siberia, north of 75° N. lat.; St. Lawrence, south of Bhering Strait; the Kurile Islands; the Aleutian Islands.

It is said that the Asiatic territories of Russia have been recently increased by the basin of the AMUR, which it is alleged was ceded to the late emperor Nicholas by the Chinese.

(Schubert, *Das Russische Reich*; Schnitzler; Eichwald, *Reise in dem Caucasus*; Birman, *Reise durch Nord Asien*; Von Wrangel, *Reise längs der Nord Küste von Sibirien*, &c.; De Haxthausen, *Études sur la Situation Intérieure, la Vie Nationale, et les Institutions Rurales de la Russie*, Berlin, 1853; Tengoborski, *Commentaries on the Productive Forces of Russia*, London, 1855; Sir R. I. Murchison, *Siberia*, 1854; *Russia in Europe and the Ural Mountains*.)

History.—The history of Russia cannot properly be said to commence before the middle of the 9th century of the Christian era: though we obtain occasional glimpses of the various Scythian and Slavonian tribes which roamed over its vast territory, little more can be ascertained than that it was divided into numerous small independent states, the two principal of which were Kiew and Novgorod. About A.D. 850 however a Varagian (probably Danish) freebooter of the Baltic, named Rurik, who had been called in by the people of Novgorod to defend them against their neighbours, made himself master of great part of the country, and founded a dynasty which continued to rule uninterruptedly till A.D. 1598. The reign of St. Vladimir the Great (980-1015) was the era of the conversion of Russia. Vladimir himself, who had married Anna, sister of the emperor Basil II., became a Christian according to the Greek Church in 988, and his example was speedily followed by his boyars, or nobles, and his subjects. At the death of Vladimir, his dominions were divided and disputed by his numerous sons; and though Yaroslaf, whose reign was signalized by an unsuccessful attack on Constantinople in 1043, reunited them for a short time, a second partition took place at his death (1055); and Russia was devastated for half a century by constant civil wars and Polish invasions. The authority of the grand-prince of Kiew had been curtailed by the erection of petty sovereignties under the different branches of the house of Rurik, till Andrew I., prince of Vladimir, or White Russia (1057-75), arrogated to himself the title of grand-prince of Russia, while the elder line reigning at Kiew sunk into a subordinate rank; and Novgorod, though still retaining the forms of princely government, had become in effect a free republic, and was the centre of an extensive traffic with both Europe and Asia. The annals of this period present only an unceasing succession of destructive struggles between the different principalities, and wars with Poland. The invasion of the Tartars (1223) produced a momentary unanimity from the sense of common danger. A host of 500,000 men under Touthi, the son of Genghis Khan, encountered and overthrew the combined forces of the Russian princes on the river Kalka, near the Sea of Azof: but though the death of Touthi diverted the victors from the immediate completion of their conquest, they returned in 1236 under his son Batu, laid waste the whole country with fire and sword, and took complete possession of its government.

For more than two centuries and a half after this conquest Russia continued to be held in abject vassalage by the Tartars of Kapchak, whose hordes overspread the eastern and southern provinces, and the plains between the Caspian and the Volga, on the banks of which river the Golden Horde, or imperial residence of the khans of the race of Batu, was fixed; but the interior of the country was still left under the government of the native princes. The grand-prince of Vladimir continued to be considered as the head of the Russian nation, though this dignity was disputed both by arms and by intrigues at the court of the khans, who fomented these dissensions as favourable to the stability of their own supremacy. In 1320 the seat of government was removed from Vladimir to Moscow. The principality of Kiew was finally extinguished (1321) by the Duke of Lithuania, who conquered and annexed it to his own dominions. In the meantime

Novgorod (which in 1276 had joined the Hanseatic league) had acquired very great commercial importance. But the remainder of Russia continued to be held in hopeless bondage, till the termination of the direct line of Batu (1361) by the death of Berdi-Bek Khan, gave rise to disputes for the throne of Kapchak, and the discord of their oppressors encouraged the Russians to endeavour to throw off the yoke. The struggle continued for about a century, till at last Ivan or John III. (1462-1505) succeeded in obliterating the last vestiges of dependence.

With the reign of this prince, who married Sophia, the niece of the last Greek emperor, a new epoch commences in the history of Russia. He defeated the Poles and Lithuanians, reduced the Tartars of Casan to tribute, and re-united under his authority most of the minor Russian principalities; but his capture of Novgorod (1475), and the exactions which he levied on the merchants and citizens, gave a death-blow to the commerce of that famous emporium. The embassies of the European powers, Germany, Poland, Venice, the Holy See, &c., were now first seen at Moscow; and though the character of Ivan is sullied by the cruel despotism of his internal administration, he is justly entitled to rank as the founder of the Russian empire, the power and splendour of which date from him. In the reign of his son, Basil IV., the Tartars of the Crimea, incited by the Poles, committed fearful ravages throughout Russia in 1510; and in 1520 their khan advanced to Moscow, which he spared only on promise of tribute. His successor Ivan IV., Vasilovitch, surnamed the Terrible (1533-84), was crowned (1545) by the title of Czar, which he substituted for that of Veliki-Knez. The first acts of his reign were the institution of the corps of Strelitzes (archers), the first regular army of Russia; and the reform of jurisprudence by the publication of a regular code of laws named Youdebnik; but he was unsuccessful in his efforts to procure (by an embassy to Charles V. in 1547) artisans and engineers from Germany for the instruction of his subjects. The voluntary adhesion of the Don Cossaks (1549) secured to Russia the services of those active and warlike auxiliaries. In 1553 the English trade through Archangel was first opened. Siberia was acquired in 1581. About this period the art of printing, and also several branches of manufacture, were introduced into Russia. The cruelty and ferocity of Ivan increased with his years: his eldest son perished in 1584 by a blow from the hand of his father, and Ivan himself died the same year. Though a remorseless and sanguinary tyrant, he had raised the country by his energetic policy to a hitherto unexampled pitch of prosperity. With his son Feodor, or Theodore, in 1598, the male line of the house of Rurik, which had ruled under 66 sovereigns for 736 years, became finally extinct.

Boris Godoonoff, the brother-in-law and minister of Feodor, was placed on the throne, and commenced his reign (1598-1605) by the emancipation of the serfs and other salutary measures; but he soon degenerated into an arbitrary and cruel tyrant, and at length lost his throne and life in a contest with an adventurer who declared himself to be the lost Demetrius, brother of Feodor, whose pretensions were supported by Poland. The real history of this person has never been satisfactorily ascertained, and many writers consider his claims to have been well founded; but after ruling scarcely a year he perished (1606) in a popular revolt headed by a boyar named Basil Schuiski, who thereupon became Czar. But a second false Demetrius speedily started up. The Poles and Swedes, who each aspired to seat a prince of their own nation on the throne, invaded the country, and were supported by various factions among the nobles; and for seven years (1606-13) Russia became the prey of desolating anarchy and civil war. The Swedes occupied Kexholm and Novgorod, and the Polish prince Ladislas, after taking Smolensk, advanced to Moscow, and sent Schuiski prisoner to Warsaw (1610). But the prospect of the dismemberment of their country roused the national spirit of the Russians; the Poles were driven from Moscow (1613), after a sanguinary battle; and in the following year Michael Romanoff, a descendant by females from the house of Rurik, was called to the throne with a unanimity among all orders in the state, which the sense of imminent danger alone could produce.

The accession of the line of Romanoff gives a new character to the history of Russia, which henceforward, from being regarded as a barbarous and semi-Asiatic power, begins to assume an important place among European states. The long reign of Michael (1613-45), afforded him time for the consolidation of his own power, and the restoration of his dominions from the depression caused by the late calamities. Though compelled by the boyars to re-establish the slavery of the peasants, he partially succeeded in redressing the abuses which the preceding anarchy had occasioned; and he gave a fresh impulse to trade by the conclusion of commercial treaties with England (1623) and with France (1628). In the reign of his son Alexis in 1687, after a long contest with Poland, the truce of Andrusow (converted into a permanent peace in 1686) gave to Russia the Tchernigov, Kiew, and the Ukraine, with the protectorate of the Dnieper Cossaks. About the same period internal commotions, and a revolt of the Don Cossaks, occasioned considerable trouble to Alexis. The last years of his reign were devoted to internal improvements and the advancement of civilisation. Numerous foreigners, particularly Scotch and Germans, were attracted to Russia, where they introduced the arts and manufactures of their own countries; and the publication of a revised code of laws gave a settled character to

the national jurisprudence. Alexis died in 1726, at the age of 47, leaving several children by his two wives. The short reign of his eldest son Feodor (1726-32), was remarkable only for the first war between Russia and the Porte (1738-32), which ended in the final cession of Ukraine to Russia; and for the destruction at Moscow of all the charters and muniments of the nobility, who thenceforward took precedence according to military rank. Feodor left no issue, and at his death, Ivan and Peter, both sons of Alexis, but by different wives, were placed jointly on the throne, under the guardianship of Sophia, the sister of Ivan, an ambitious princess, who aspired to the sole exercise of authority in her own person. The attempts of Sophia to exclude Peter from all share in the government brought on a revolution (1689) in favour of Peter, who ascended the throne as sole sovereign.

The genius of this future regenerator of Russia had been cultivated by the instruction of a Genevese named Le Fort, who had been his tutor since 1684, and the energy of his mind speedily developed itself in action. His first care was the reform of the army, and having succeeded in disciplining some regiments in the European manner, he attacked and took Azof from the Turks in 1694, being aided by a flotilla which he built on the Don, and which was the first Russian navy. In 1697 he quitted his dominions, and travelled for nearly two years in England, Holland, &c., in order to acquaint himself with mechanics and ship-building, and to engage artisans and engineers for his service. A sanguinary revolt of the strelitza, in favour of Sophia, having occurred during his absence, the corps was abolished at his return, and replaced by regular troops. The same year (1698) he founded the first Russian order of knighthood, that of St. Andrew; and the cession of Azof by the Porte at the peace of Carlowitz (1699) at length gave him a port on the Black Sea. His next aim was to acquire a territory on the Baltic, and with this view he joined the Northern League with Denmark and Poland against Sweden; and though his raw levies were defeated at Narva (1700) by Charles XII., he succeeded during the next two years in occupying Ingria and Carelia, while the Swedes were engaged in the Polish war; and his new capital city of Petersburg was founded on this territory (1703) at the mouth of the Neva. While these warlike operations were going on, schools, printing-presses, manufactories, and hospitals were everywhere established; the university of Moscow was founded in 1705; and the overgrown power of the clergy was curtailed by the abolition of the patriarchate, the Czar declaring himself head of the church. In the course of the war with Charles XII., Wiborg, Revel, Riga, with all Esthonia and Livonia, fell into the hands of the Russians; and Frederick Augustus, who had been dethroned by Charles XII., remounted the throne of Poland, in which kingdom Russian influence continued from that time paramount. But a war (1710) with Turkey, arising from the shelter afforded by that power to Charles, had a disastrous result; the Russians were surrounded on the Pruth, and Peter was compelled to purchase the peace of Falczay (1711) by the restoration of Azof and other humiliating concessions. In 1716-17 Peter again travelled through Holland and Denmark, and visited France, where he concluded an alliance with Louis XV. On his return, his son Alexis, who had previously offended him by his weak and vicious course of life, was tried on pretence of conspiracy, and condemned, but died, perhaps from natural causes, in prison. The Swedish war, which had languished after the death of Charles XII. in 1718, was at length terminated (1721) by the peace of Nystadt. Russia became thenceforward the great Northern power in place of Sweden; and Peter exchanged the title of Czar for that of Emperor and Autocrat of all the Russias, which his successors have ever since borne. In 1723 he availed himself of the distracted state of Persia to seize a part of their territory on the western shores of the Caspian, which Shah Tahmasp consented to cede to him; but this was his last exploit. He died January 28, 1725, aged 58. In 36 years he had raised Russia from a semi-barbarous state to a pitch of military strength and political importance, which placed her on a level with the first powers of Europe.

In obedience to the last commands of Peter, his widow, Catherine, formerly a Livonian peasant-girl, was proclaimed empress; but her short reign (1725-7), and that of her successor Peter II. (1727-30), were almost barren of events, and remarkable only for the ascendancy, under Catherine, of Prince Mensikoff, and under Peter II. of the Dolgoruki family. On the death of Peter II., Anne, daughter of Ivan, the elder brother of Peter the Great, was called to the throne (1730-40) by the influence of the Dolgoruki faction, on signing an agreement which limited the imperial power in favour of the nobility; but this compulsory act was cancelled under the advice of the chancellor Ostermann, and the Dolgorukis were disgraced and exiled to Siberia. Another revolution placed on the throne, in 1740, Elizabeth, daughter of Peter the Great by Catherine. In the early part of Elizabeth's reign a war with Sweden commenced (1741), which ended (1743) in the acquisition of part of Finland by Russia. The alliance concluded with Maria Theresa (1747), in the war of the Austrian Succession, and the consequent appearance on the Rhine of 36,000 Russian auxiliaries under Repnin, gave Russia, for the first time, a direct participation in the politics of Western Europe; and in the Seven Years' War a large Russian force, acting as allies of Austria, invaded Prussia. The victories of Gross Jagersdorff (1757), and of

Kunnersdorff (1759) over Frederick the Great, established the renown of Russian arms, and Berlin was taken by them in 1760; while an army of observation was maintained from 1758 in Poland, then a prey to anarchy and confusion. Elizabeth died Jan. 1762, regretted by her subjects, to whom she had endeared herself by the mildness of her domestic administration; and was succeeded by her nephew, Peter III., duke of Holstein-Gottorp. This prince, after a reign of six months, was dethroned (July 1762) by a conspiracy, and died in prison a week afterwards, as is generally supposed by violence. His consort, Catherine II., was then called to the throne.

The accession of this ambitious and unscrupulous princess (1762-96) gave a fresh impulse to Russian policy, which from this time assumed the steadily aggressive character which it has ever since maintained. On the vacancy of the Polish throne, in 1764, a Russian army dictated the election of Stanislaus Poniatowski; and the complaints of the Porte, at the continued occupation of the country by Russian troops, led to a Turkish war (1768-74), in which the Russian arms were triumphant. A Russian fleet appeared for the first time (1770) in the Mediterranean, and destroyed the Turkish navy at Tchesmé; the land forces subdued Crim-Tartary, Moldavia, and Wallachia. The Danube was crossed for the first time in 1773; and the losses of the Porte compelled her, by the treaty of Kutchuk-Kainardji (1774), to acknowledge the Crim-Tartars independent, and to cede to Russia an extensive tract of territory. In the meantime the first partition of Poland (1772) had taken place, which gave Polotsk and Mohilew to Russia; and the dangerous revolt of the Cossak Pugatchef, who personated Peter III., was quelled by his capture and death in 1775. The internal administration was placed on a new footing by the division of the empire (1776) into 43 governments (there are now 49) with separate jurisdictions, and by the gradual promulgation (1775-83) of a new code of laws. In the meantime the chains of Poland were daily rivetted tighter; and the opposition of England to the avowed project of erecting a new Greek empire at Constantinople, on the ruins of the Turkish power, is generally supposed to have given rise to the famous Armed Neutrality (1780), in which all the northern powers combined with Russia to resist the right of maritime search claimed by Great Britain. Crim-Tartary was seized (1783) and incorporated with Russia; but this encroachment, though the Porte was compelled at the time to acquiesce, led eventually to the second Turkish war (1787-92), memorable for the sanguinary triumphs of Potemkin and Suwarow. Choczim, Oczakow, Bender, and Ismail were successively taken with fearful slaughter; and the peace of Jassy (1792) established the Dniester as the boundary of Turkey and Russia. The outbreak of the French revolution produced a change in the disposition of Russia towards England, with whom an alliance and a commercial treaty were concluded in 1793; but no active part was taken against France, as the attention of the empress was directed towards Poland, by the second partition of which (1793) Russia gained Podolia and the Ukraine, with half of Lithuania and Volhynia. Warsaw was garrisoned by the Russians, but a fierce struggle ensued (1794) on the general revolt of the Poles under Kosciusko and Madalinaki; till the storm of Praga by Suwarow, in which 20,000 Poles were slaughtered, finally crushed all resistance; and the third and last partition of the kingdom took place the next year, by which the nationality of Poland was extinguished, while Russia gained Courland with the rest of Lithuania and Volhynia, in addition to her former acquisitions.

Catherine II. died the year after the accomplishment of this favourite object of her policy, and was succeeded by her son Paul (1796-1801). He joined (1798) the second grand coalition against France; in pursuance of which the Russian auxiliaries, under Suwarow and Korsakow, were engaged in Italy and Switzerland in the memorable campaign of 1799; but Paul soon abandoned his allies, concluded peace with Bonaparte (then first consul), and, in 1800, put himself at the head of the Convention of the North, a union of the northern states, on the principle of the armed neutrality, against the British maritime supremacy. A war with England was impending, when Paul was murdered in his palace (1801) by a band of conspirators.

His son and successor Alexander (1801-25) immediately effected a pacification with England, and disbanded a force which his father had assembled at Orenberg, with the wild design of marching overland to India. The relations with France continued peaceful till 1805; but Alexander refused to acknowledge Napoleon as emperor, and, joining the Austrian alliance against him, was personally present at the defeat of Austerlitz. In 1806 the renewed alliance of the Porte with France was made the pretext of a new Turkish war (1806-12), and Moldavia and Wallachia were occupied; but the successive victories of Eylau and Friedland gained by the French (1807), led to the famous conferences between Alexander and Napoleon, the result of which was the peace of Tilsit. Russia joined the 'Continental System' of Napoleon, and became an ally of France; declaring war (1808) against England and Sweden, the latter of whom was forced to cede, by the peace of Frederiksham (1809), all Finland, East Bothnia, and Aland. The war with the Porte was resumed with fresh vigour in 1810-11-12; but the injury which the 'Continental System' inflicted on Russian commerce was becoming insupportable, and the refusal of Alexander to enforce it led to a rupture with France (1812). Alliances were now formed with England and Sweden, and the peace of Bucharest with the Porte extended the Russian frontier to the Pruth. In the autumn

of 1812, Napoleon invaded Russia with 500,000 men, defeated Kutusoff at Borodino, and advanced to Moscow; but the country was everywhere laid waste, and the conflagration of the capital itself by the governor Rostopchin compelled the French to retreat in the midst of a winter of unexampled rigour, pursued by the Russians: nine-tenths of their vast host either perished or were taken prisoners. A powerful Russian force continued to take part in the campaigns of 1813-14 against France, and Alexander entered Paris in triumph. By the congress of Vienna (1815), Warsaw and a large territory, under the name of the kingdom of Poland, were annexed to the crown of Russia, but with a separate administration and free press. A desultory war with Persia (1804-13) had been concluded by the peace of Goolistan, Persia ceding most of her Caucasian provinces, and giving up her claims on Georgia.

The military power and political influence of Russia were now almost paramount on the continent; and after the final downfall of Napoleon, in 1815, she became the head of the 'Holy Alliance,' entered into by herself, Austria, Prussia, and France, for the suppression of revolutionary principles. The remainder of the reign of Alexander was peaceful, and occupied chiefly in reforms of the internal government. In one of these tours of inspection Alexander died at Taganrog, on the Don, aged 48 (Dec. 1825); and was succeeded by his brother Nicholas, the third son of Paul, the second brother, Constantine, having previously renounced the succession. This change in the succession occasioned some military tumults, which were not quelled without bloodshed. In 1826 a dispute respecting boundaries led to a fresh war with Persia, which continued till 1828, when the progress of the Russians compelled Persia to give up Erivan and the country as far as the Araxes, as the price of the peace of Turkmanchai. The Greek revolutionary war was now raging, and the treaty of London was signed (July 1827) by Russia, France, and England, for the settlement of the question; but the refusal of the Porte to accede to the terms dictated to her produced the destruction of the Turkish fleet by the allied squadrons at Navarino; and in 1828 a Russian army invaded Turkey, and though repulsed from before Shumla in the first campaign, succeeded in crossing the Balkan (1829), and occupied Adrianople, where a treaty was concluded, by which Russia acquired numerous frontier fortresses on the Black Sea, and the protectorate of Moldavia and Wallachia. A general insurrection of the Poles (Nov. 1830), who were goaded by the tyranny of their viceroy the grand-duke Constantine, and by repeated infractions of their constitution, was crushed, after a campaign of frightful devastation and bloodshed, by the capture of Warsaw, Sept. 1831: many thousand Poles of all ranks were sent to Siberia; the kingdom was incorporated with Russia, and has ever since been governed as a conquered province. The relations with the Porte assumed a new form in 1833, from the application of the sultan for aid to check the advance of the rebel pasha of Egypt: an auxiliary force was sent to Constantinople, and terms imposed on the pasha; but this service was repaid by the treaty of Unkiar-Skelessi, binding the Porte to have recourse to no other power for assistance, and to close the Dardanelles against all foreign ships of war. These proceedings excited in England a strong popular feeling of hostility towards Russia, which was further augmented by the seizure in 1836 of a British merchantman on the coast of Circassia, where a fierce guerilla warfare with the natives had been for some years carried on, the Russians claiming the country as ceded to them by the peace of Adrianople. The march against Herat (1838) of a Persian army, directed by Russian officers, viewed as preliminary to the invasion of the Anglo-Indian empire, brought the conflicting relations apparently to the verge of a rupture: but the apprehensions of the English cabinet were tranquillised by the repulse of the Persians, and the subsequent conquest of Afghanistan by an army from India; and the Russian schemes of aggrandisement in this quarter received a further check from the failure of a formidable expedition directed (1840) against the predatory Uzbek state of Khiva.

Russia was now actively but secretly employed in consolidating her power, fortifying her ports, and strengthening her frontier fortresses. She became also the protectress of the continental monarchies against the efforts for constitutional governments made by their subjects. In 1846 a slight attempt at revolution in favour of the independence of Poland was made at Cracow, which had been formed into a free republic in the treaties of 1815, under the sanction of all the allied powers. On February 22nd a Russian army took possession of Cracow, and in November a joint decree of Russia, Austria, and Prussia revoked and annulled the articles of the treaty, and Cracow was made over to Austria. Soon afterwards the Russian portion of Poland, to which a sort of nationality had been promised, was incorporated with the Russian empire, and formed into a Russian province. In 1847 Russia, in conjunction with Austria and Prussia, addressed a note to Switzerland, stating that they abstained from intervention only on condition of the Swiss adhering to the compact of 1815; that is, not altering or in any way liberalising their domestic institutions; the vorort protested against any foreign interference, proceeded in their own course, and the only measures taken were by Austria in some vexatious restrictions on commerce and intercourse.

In 1848 the German revolutionary struggle was going on, and the insurrection against Austria commenced in Hungary. Unsuccessful in repressing this great national movement, Austria called in the

assistance of Russia, which was readily granted. Early in 1849 an army was marched into Hungary; on June 23 the battle of Eperies was fought, on July 23 that of Miskolcz, and on July 31 that of Segesvar, and in all the Russians were the conquerors; on August 31 the Hungarian army under Görgey, 25,000 strong, surrendered themselves to the Russians at Vilagos, near Groswarden. In the meantime the Turks had been protesting against the violation of their territory by the marching of Russian troops through Turkish Transylvania. On the loss of the Hungarian cause many of the leaders had fled to Turkey, and their expulsion was demanded by Austria, seconded by Russia; and on compliance being refused, the Russian minister suspended all diplomatic intercourse with the Porte. Upon this the British fleet entered the Dardanelles and diplomatic relations were resumed on the refugees being located at Kutayah.

In 1851 considerable progress was made in the construction of railroads, and that between St. Petersburg and Moscow was opened for traffic. In 1852 the emperor Nicholas visited Vienna and Potsdam; and entered into an agreement as to the succession to the Danish crown.

The possession of the Holy Places at Jerusalem, which were the temple, the sepulchre, and perhaps some others, had long been matters of contention between the monks of the Latin and Greek Churches in that city. A recent dispute had sprung up relative to the right of repairing the temple. The Turkish government had endeavoured to settle it by repairing it themselves, but this gave satisfaction to neither party. The defence of the Latins was undertaken by France, who obtained a firman from the Porte which was thought objectionable by Russia, who of course protected the Greeks. On February 28, 1853, Prince Mensikoff arrived on a special mission at Constantinople; on March 16, in an interview with the Sultan, he announced the dissatisfaction of the emperor with the measures taken as to the Holy Places, demanded an arrangement that should remove these causes of complaint, and that a guarantee should be given for the future. In a second note (of April 19) such a guarantee was demanded as would best secure the integrity of the Greek faith throughout the Turkish empire. The Porte endeavoured to satisfy these demands by proposing to issue firmans securing the religious rights of the Greek Christians; but on May 5 Prince Mensikoff informed the ministers that the firmans would not satisfy him, and demanded an immediate decision. The Turkish ministry asked for time to consider of so important a matter; but Mensikoff on May 18 replied that he saw, from the desire of postponement, that his efforts to secure a pacific decision were vain, and therefore considered his mission terminated; that, as the Porte refused to give the required guarantee for the support of the orthodox Greek-Russian faith, nothing remained but for Russia to take the necessary guarantees by force. The next day the Turkish ministry replied to this note. They stated that their government had made no change; that with regard to the Holy Places, the dispute was not with it, but between France and Russia only; that however they would grant permission to Russia to build a church and an hospital in Jerusalem, and that a solemn decree should be issued confirming the privileges of the Greek clergy. These compliances were ineffectual. On May 21 Mensikoff rejected them, and quitted Constantinople. On the 26th the Porte addressed a memorandum to the ministers of Great Britain, France, Austria, and Prussia, detailing the state of the affairs. On the 31st a note from the Emperor of Russia granted a delay of eight days to the Porte for re-consideration of his demands, but approved of the conduct of his ambassador, as he considered the conduct of the Porte to be a personal offence. The reply to this was, that the demands were wholly inconsistent with the independence of the state, and would not be complied with. On the 26th the Russian manifesto against Turkey was issued, and on July 2 Russian troops entered Wallachia.

In the meantime the English and French ambassadors at Constantinople had protested and remonstrated against the claims of Russia; the resolution of England having been much strengthened by an invidious proposition made by the emperor Nicholas to the ambassador at St. Petersburg for apportioning Turkey—he taking Constantinople provisionally only, and England taking Egypt. On the appearance of a commencement of hostilities, the British fleet was summoned to the Dardanelles, and that of the French quickly followed.

In September 1853 war was formally declared by the Porte against Russia, and on the 1st of October an appeal for material support was made by Turkey to France and England. On the 27th of October the Turks crossed the Danube opposite Widdin, and with greater force on the 3rd of November. Whenever the Russians attacked them, the Turks maintained their position with obstinate courage.

On the 30th of November the Turkish fleet was destroyed in the harbour of Sinope by the Russian fleet from Sebastopol. The narrative of that destruction was so full of horrible circumstances, presenting the character of rather a cruel massacre than an equal battle, that the indignation of England was fairly roused. The combined fleets of Great Britain and France entered the Black Sea on the 3rd of December, on the demand of the Porte to the ambassadors. The Russian fleet retired to the shelter of Sebastopol, from which it never again stirred.

We cannot go into the details of the war with the minuteness of a history: it will be sufficient to mention the more striking events. On the 22nd of April the allied fleets bombarded Odessa; the Russians laid

siege to Silistria, were most signally repulsed, and in June they retreated across the Danube; the Aland islands in the Baltic were taken in August, all the Russian ports in that sea blockaded, and Cronstadt, the port of St. Petersburg, watched and threatened. On the 14th, 15th, and 16th of September the allied armies landed in the Crimea near Eupatoria. On the 20th was fought the battle of the Alma, in which the passage of the river was forced against great advantages of position and numerical superiority, and the Russians were forced to retreat; Sebastopol was then passed, and the siege begun from the southern side; repeated conflicts have taken place, the most brilliant was that called the battle of Inkermann on November 5, 1854, which ended in the repulse of the Russians.

Government, &c.—The emperor is an absolute monarch. Several classes of the inhabitants enjoy certain privileges and immunities, under no other guarantee however than the pleasure of the monarch, who may abolish them just as he granted them. No one has of right any rank unless such as he obtains by filling a civil or military office. The inhabitants of Russia are divided into the following classes:—the clergy, the nobility, the merchants and burghers, and peasants.

The clergy is composed of the monastic or regular clergy, and the secular clergy. All the higher preferments of the church are held exclusively by the first; the secular clergy (the members of which must be married) have no higher preferment than the superintendence of a certain number of parishes. The children of the clergy generally follow the vocation of their parents; some of them enter the civil service.

The nobility is the privileged class. They may enter the service of foreign powers not at war with Russia. A noble cannot be judged except by a judge belonging to his condition, and sentence passed against him cannot be carried into execution without having been previously examined by the senate and confirmed by the emperor himself. A noble is exempt from corporal punishment. The nobility may establish any kind of manufacture and engage in commerce, but in the latter case they must inscribe themselves in one of the merchants' guilds, and pay the taxes attached to it. All the minerals found on their estates are their property, and they are the almost exclusive landholders of the country. All Russian subjects, except those employed on diplomatic service, are prohibited from educating their children from ten to eighteen years of age abroad. All children educated in contravention to the ukase are incapable of holding office in Russia.

The nobles have meetings for the election of certain magistrates, and they may send deputations to the emperor after permission obtained. They may also deliberate at those meetings on several local affairs. Those nobles only who enjoy a grade in the military or civil service are capable of voting. There are two classes of nobles, hereditary and personal. To the first class belong all nobles who have inherited their rank or risen in service to the eighth grade, that of major in the army, captain-lieutenant in the navy, or assessor of a college. The personal nobles are those who have acquired by their services a grade inferior to the eighth. These latter enjoy the privileges of the order without transmitting them to their children, and they cannot be elected to certain offices. The titled nobility, or princes, counts, and barons, have no privileges beyond those of the other nobles. The titles are derived from Russian and foreign grants. The princes are chiefly descendants of the ancient petty princes of Russia, and some of the Lithuanian dynasty; many are of Tartar, some of Georgian or Iberian descent.

The second order of the inhabitants of Russia is composed of the citizens or townsmen, who are subdivided into many classes. Honorary citizens, who are exempt from the capitation-tax, military conscription, and corporal punishment, and have the right of being elected to municipal offices, consist of free non-nobles who have obtained academical honours, distinguished artists, and heads of manufacturing establishments. Academical honours entitle the individual who has obtained them to receive a corresponding grade on entering the civil service. The children of the personal nobles are hereditary honorary citizens. The privileges of that order are forfeited either in consequence of a criminal sentence, or by engaging in some mean trade, and entering into domestic service.

The merchants are divided into three classes or guilds. The first guild which pays annual taxes of 100*l.*, has a right to engage in any commercial or manufacturing enterprise without any limitation as to the amount of capital employed in it. The members of the second guild pay an annual tax of 40*l.*, and cannot enter into any contract for more than 2000*l.*, nor can they keep a banking or insurance office. Both the first and second classes enjoy an exemption from the capitation-tax, military conscription, and corporal punishment. They may possess estates with serfs employed in manufactories. The merchants of the third guild pay an annual tax of 10*l.*, and are retail dealers and small manufacturers. Nobles may enter one of these three guilds.

Foreign merchants trading in Russia must pay the same taxes as the Russian merchants. They may acquire real property in places where they are settled.

The burghers by paying an annual licence of 1*l.* to 3*l.*, may engage in several kinds of retail trade, and have workshops with eight workmen, and by doubling the price of their licence 16 workmen. If they wish

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to increase that number they must pass into the third guild of merchants. The burghers are not exempted from the capitation-tax, military conscription, or corporal punishment.

The peasants constitute the lowest class of the inhabitants of Russia. They pay the capitation-tax and are subject to military conscription. Beside their agricultural pursuits, they are allowed to engage in handicrafts and some minor trades. By purchasing licences they may engage in any kind of commerce, even that which is carried on by merchants of the first guild, but they do not enjoy the personal privileges of the merchants. They are divided into crown peasants, those of appanage estates, serfs of landowners, and free cultivators of land; the number of these last is however very small.

The crown peasants are those who live on the estates belonging to the crown. They pay, besides the capitation-tax, a rent for their grounds. Many villages are obliged to maintain post-horses for the government couriers and private travellers. The crown peasants elect some of their authorities. Each commune (500 male individuals constitute a commune), elects every two years its chief, called head. Each commune also sends a deputy for the election of assessors who judge in causes arising among themselves, or between them and other classes. These assessors may be chosen from among the peasants themselves or other classes. Causes between crown peasants themselves are decided by the judge of the district with the above-mentioned assessors; but when other parties are concerned, the causes are decided by the same judge with an assessor of the peasants and another of the nobles. The crown peasants may pass into the class of burghers and merchants.

Recent official statements quoted in the 'Gothic Almanac' for 1855, give the area of the crown domains of Russia at the end of 1850 at 80,393,601 desjatines or 340,000 square miles, or 140,000 square miles more than the area of France. The population of the crown domain in 1851 amounted to 18,975,416, of whom 16,005,294 (7,825,154 males, 8,180,140 females) were crown peasants. The capitation, excise, and administrative taxes, together with contributions of various kinds, and rent and forest produce, raised the receipts from the imperial crown-lands throughout the empire to 45,300,097 silver rubles in 1852.

Many estates peopled with crown peasants have been ceded to particular individuals on condition of establishing manufactories. These peasants work in manufactories on certain fixed terms. The owners of the manufactories pay all taxes due from these peasants, who are likewise exempted from military conscription.

The landowner's peasants, or serfs, are complete slaves. Their master can inflict on them such punishment as he chooses, but he is not permitted to kill, to starve to death, or to maim his serf. A serf cannot contract marriage without the permission of the master. The predial serf cannot be sold without the ground to which he is attached, but the domestic serf may be sold like any other chattel. A ukase of 1808 however prohibits the sale of serfs at fairs or by auction, or as substitutes for recruits. An accusation of a serf against his master, except in cases of high treason, is not admitted, and he who proffers such a charge is liable to punishment.

The free peasants, a class whose existence began under the emperor Alexander, are subject to the capitation-tax and military conscription, but they are free in all other respects.

A great number of German colonists have settled in Russia at different times. They are exempt from all taxes for ten years after their settling, and from military conscription entirely.

Administration.—The principal authority is the council of the empire, presided over either by the emperor or by a member specially appointed. It is divided into four departments: legislative, military (which comprises also the navy), civil and ecclesiastical, and financial. Each of these departments has a secretary of state, and they deliberate either separately, or together, which is called the general assembly of the council. The affairs which are decided by a majority of votes, are submitted to the approbation of the emperor.

The Directing Senate, established by Peter the Great, is the supreme tribunal for all judicial cases. Its authority is limited only by that of the monarch. It is presided over by the emperor in person. The ukases of the senate are binding like those of the emperor, who alone can prevent their execution. The senate is divided into eight departments, of which the first superintends the general affairs of the country; the second, third, and fourth try civil cases; and the fifth, criminal cases: these are all at St. Petersburg. The sixth, which also tries criminal cases, and the seventh and eighth, which try civil cases, are at Moscow. Each of these departments has a number of governments or provinces, from the courts of which it hears appeals. Judgment is given by a majority of votes, which must consist of two-thirds of the whole number, or of the number present. In case the required majority cannot be obtained, the cause is decided in the general assembly of the senate, where all the departments vote together. Causes are not publicly argued before the senate or before any other Russian tribunal. A statement of the case of each party is made by the secretary, and communicated to the party, who signs it as correct. These statements are then read to the court, which pronounces judgment. In the Polish provinces causes were publicly argued by advocates, but these laws have been abolished and those of Russia introduced.

The synod, or, as it is officially called, the most holy directing synod, is the supreme administrative and judicial court for all ecclesiastical affairs of the Greek religion. Its decisions are subject to the control of the emperor as head of the Church.

The administration of the country is conducted by the following ministries:—Ministry of the imperial household; foreign affairs; interior affairs; war; marine; national education, to which is attached the administration of the ecclesiastical affairs of those sects which do not belong to the Russian Church; finance; justice; board of control, which audits the accounts of all moneys expended for the public service; post office; and direction of land and water communications.

The governments or provinces are organised in the following manner:—The head of the administration of a province is the civil governor, to whose department belong all the affairs of the province except judicial cases. There is also a military governor, who frequently has more than one province under his jurisdiction, to whom all civil and administrative affairs are referred.

The tribunals or courts of appeal try civil and criminal cases, and the members of them are elected by the nobles. The conscientious tribunal is composed of a chairman and two assessors elected from the nobles, two assessors from the merchants, and two from the peasants. This court hears those criminal cases where the crime was committed more from a concurrence of unfortunate circumstances than from malice. The jurisdiction of the court does not however apply to cases of offence against the imperial person, high treason, murder, theft, and robbery. There are a medical board, a board of public charities, and a council called the tutelage of the nobles (which is trustee of all minors of that class) in each government.

The towns have their separate jurisdiction, composed of the burgo-master and ratmans, councilmen, who are elected from the merchants and burghers of the town. One of the most mischievous defects in the Russian administration of justice and police is the insufficient pay of magistrates, of whom the highest, namely, a senator, receives 160*l.* a-year. Bribery is the universal plague of the Russian administration.

Laws.—In 1497, Ivan III. made an order for collecting into one body the existing customs and ordinances, and rendering the collection complete by the necessary additions. By order of Ivan the Terrible, this code was (1550) revised and completed under the name of Sudebnik, or judgment-book. The Czar Alexey Michaelovich gave orders (1640) for composing a general code of laws under the name of Ulogenis (Regulation). It consists of 25 chapters, and still forms the basis of the Russian law. Since that time the Russian legislation has been continued by Ukases, that is, ordinances issued either in the name of the monarch himself, or of the senate; and their number from the 25th January, 1649, to the demise of the emperor Alexander I. was 30,920.

Immediately after his accession, the late emperor Nicholas declared that a systematically arranged collection of the existing laws and ordinances should become the basis of legislation. A collection of all the laws and ordinances from 1649 till the death of the emperor Alexander I. (December 1, 1825), was published in 48 volumes, 4*to.*, 1827-30. It was followed in 1832-33 by a collection of the ordinances of the emperor Nicholas, from his accession to 1832, in 8 vols. 4*to.*, and is still continued. From the collections just named was extracted the Svod Zakonov (corpus juris), which was published 1826-33, 15 vols., and is the general law of the empire.

RUSTSCHUK, a fortified town in Bulgaria, capital of an eyalet in European Turkey, is situated near the right bank of the Danube, about 40 feet above the level of the river, 40 miles S. from Bukharest, and has a population variously estimated at from 20,000 to 40,000. The Danube opposite Rustschuk is nearly two miles wide, but its surface is broken by a number of islets and shallows, and the banks are low. From a distance Rustschuk has an agreeable appearance, with its white chimneys and graceful minarets rising up from among the foliage of extensive orchards. This impression however is removed by a view of the interior, which presents dirty ill-paved streets, flanked by low wooden houses, most of which stand in little courts or gardens. The Pasha's konak, or palace, and the mosques, are the only buildings worth notice. The town has baths, a bazaar, and about 3000 houses; it has also some trade with Vienna in cloth, indigo, corn, wine, &c. A harbour for river craft is formed below the town by a small recess of the river, which is sheltered towards the north-east by a cape crowned by a bastioned citadel. Rustschuk is commanded by heights to the south-west, on which five detached bastioned earth-works have been recently thrown up. The town itself is surrounded by an earthen rampart, which presents eight bastioned fronts, revetted half-way up with masonry, and surrounded by a moat and counterscarp. The front towards the river is irregularly fortified. The Russians took Rustschuk after enormous losses of men in 1811; it opened its gates to them in the invasion of 1828. The fortified enceinte of Rustschuk measures four miles. On the left or Wallachian bank of the Danube, opposite to Rustschuk, is *Giurgevo*, which was originally the fortified tête-de-pont to Rustschuk. Its defences were razed in carrying out the treaty of Adrianople, but have been recently repaired. A ferry connects the two places. A tall clock-tower stands in the principal square. One of the islands in the Danube is fortified. A pentagonal fort built with stone defends the harbour. Beyond this fort the town of Giurgevo is built; its

enceinte presents a semicircle towards Wallachia. Giurgevo trades with Austria in the produce of the country, and has about 7000 inhabitants. In the wars between Russia and Turkey, Giurgevo has been frequently the scene of hard fighting between the two nations. The Russians took it in 1711, and completely defeated the Turks in the vicinity the same year; they took it again in 1810. The Russians occupied Giurgevo in 1854, and were defeated by the Turks under its walls on July 7 of that year.

RUTHERGLEN. [LANARKSHIRE.]

RUTHIN, Denbighshire, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, is situated in 53° 7' N. lat., 3° 18' W. long., distant 8 miles S.E. from Denbigh, and 195 miles N.W. by W. from London. The population of the parliamentary borough of Ruthin in 1851 was 3373. The borough is governed by 4 aldermen and 12 councillors, one of whom is mayor; and is contributory to the borough of Denbigh in returning one member to the Imperial Parliament. The living is a wardenship, with a rectory annexed, in the archdeaconry of Merioneth and diocese of Bangor. Ruthin Poor-Law Union contains 21 parishes and townships, with an area of 92,853 acres, and a population in 1851 of 16,853.

Ruthin is situated on the summit and slope of a considerable hill, at the foot of which flows the Clwyd. The town appears to have grown up gradually around the castle, which was built by Roger Gray, to whom Edward I. granted nearly the whole of the vale of Clwyd. The castle stood on the western slope of the hill towards the river. General Mytton took the castle for the parliamentarians, after which it was dismantled. It appears to have been a capacious and lofty building. A new gothic castellated edifice, presenting a very fine appearance, has been erected on the site of the ancient castle, by Frederick R. West, Esq., M.P. for the Denbighshire boroughs. The round towers of the ancient castle remain. The town is lighted with gas. The summit of the hill is occupied by the market-place, to which the principal streets lead. The county-hall or court-house is the finest building for judicial purposes in North Wales. The county prison is well built. The church is the choir of the conventual church of a community of Bonhommes (suppressed in 1310), and afterwards rendered collegiate. The roof of the present church is admired for its curious workmanship. Part of the cloisters have been converted into a residence for the warden of Christ's Hospital. The Wesleyan Methodists, Welsh Independents, Baptists, and other Dissenters, have places of worship. Dr. Gabriel Goodman, whose monument is in the church, founded, in 1592, Christ's Hospital for a warden and 12 decayed housekeepers. The warden has the government of the Free school, which was also founded and endowed by Dr. Goodman. It is under the care of a head-master and two other masters, and is accounted one of the best schools in North Wales. In 1854 the number of scholars was 30. A lending library is attached to it; and there are also connected with the school several exhibitions. The school and hospital constitute the 'Wardenship of Christ's Hospital in Ruthin.' In the town are National and British schools, a young men's library, and a savings bank. A soda-water manufactory has been carried on successfully for several years. The market for corn is held on Monday, that for meat on Saturday; six fairs are held in the year. The assizes for the county are held at Ruthin: the quarter sessions are held alternately at Ruthin and Denbigh. A county court is held.

RUTLANDSHIRE, an inland county of England, is bounded N. and N.E. by Lincolnshire, S.E. and S. by Northamptonshire, and W. by Leicestershire; and lies between 51° 31' and 52° 46' N. lat., 0° 23' and 0° 49' W. long. Its greatest length from north-east to south-west is nearly 20 miles; its greatest breadth at right angles to the length is 16 miles. The area is 150 square miles, or 95,805 statute acres: the population in 1841 was 21,802; in 1851 it was 22,983. In area and amount of population, it is far below the rest of the English counties.

Surface, Geology, Hydrography, and Communications.—The north-eastern part of the county consists of a somewhat elevated plain or table-land, skirted on the southern side by the valley of the Wash, which opens on the west into the more expanded vale of Catmoss. The rest of the county consists of valleys whose general direction is east and west, divided from each other by narrow ranges of low hills. There are no very elevated points in the county; Manton, between Oakham and Uppingham, is said to be the highest.

The county is included in the district occupied by the lower formations of the oolitic series. The great oolite forms the north-eastern table-land above mentioned, and occupies also the higher ground on the southern side of the county from Stamford to within two miles of Uppingham: the prevailing rock is a close-grained buff limestone clouded with blue. The remainder of the county is occupied by the red or reddish-brown ferruginous sands which separate the great oolite from the subjacent lias. These are covered in many places, especially near their junction with the lias, which takes place just on the north-western border of the county, by vast accumulations of transported blocks of gravel. There are quarries of good building-stone at Ketton, between Stamford and Uppingham, just on the border of the district occupied by the great oolite.

Rutlandshire belongs chiefly to the basin of the Wash. The *Welland*, one of the rivers flowing into the estuary of the Wash, skirts the county between Rockingham and Stamford, separating it throughout

from Northamptonshire. This river is not navigable above Stamford, where it quits the county altogether. The *Wash* rises just within the border of Leicestershire, and flows eastward through this county into Lincolnshire, where it joins the Welland below Stamford. The *Chater* also rises in Leicestershire, and flows parallel to the *Wash*: it joins the Welland just above Stamford. The *Eye* brook bounds the county on the south-west, and joins the Welland below Rockingham. The *Wreak*, which joins the Soar, a feeder of the Trent, rises in Rutlandshire near Oakham, and flows northward into Leicestershire, draining a small district in the north-west of the county, which is thus included in the basin of the Humber.

The Oakham Canal is a prolongation of the Melton Mowbray navigation, from Melton Mowbray in Leicestershire to Oakham. It follows a circuitous course, passing through the vale of Catmoss, and has a total length of 15 miles, of which about six and a half miles are in Rutlandshire.

The principal roads are, the coach road from London to Melton Mowbray, and the Great North road. The former enters the county on the south side just beyond Rockingham in Northamptonshire, and runs northward through Uppingham and Oakham into Leicestershire. The Great North road crosses the eastern side of the county between Stamford and Grantham. A road from Leicester to Stamford crosses the county from west to east, passing through Uppingham, and following the valley of the Welland; and two roads run from Oakham into the Great North road—one at Stamford, the other at Stretton between Stamford and Grantham.

The Syston and Peterborough railway on leaving Stamford passes through Ketton, Luffenham, Manton, Oakham, and Ashwell in this county. The section of the Great Northern railway between Peterborough and Newark crosses the eastern angle of Rutlandshire between Ryhall and Essendine.

Climate, Soil, and Agriculture.—The climate differs in no perceptible degree from that of the surrounding counties of Leicester, Northampton, and Lincoln. Of the land in the county there is hardly an acre waste. Rutlandshire is a grazing county. Much attention is paid to rearing choice animals, both oxen and sheep. The face of the country is agreeably diversified, affording good sites for country-seats, parks, and pleasure-grounds. The best pastures are on the lias clay, which, with a portion of oolite, red sand, and magnesian limestone, forms the principal soil of the county. Some low meadows subject to be flooded lie along the rivers Welland, Wash, and Chater. Short-horns are the general favourites with those who pay particular attention to their stock. Other breeds are frequently met with, such as North Devon, Hereford, and Scotch. The milk-cows are chiefly short-horns. A good deal of Stilton cheese is made in the west of the county, especially in the districts of Leighfield Forest and the plain of Catmoss. The sheep are generally of the improved Leicester breed. The farm-horses are large; strong dray-horses are bred in the county for the London market. The hogs which are fattened are mostly of the Berkshire or Suffolk breed.

Among the mansions of this county, three are remarkable for their spaciousness and architecture, and also for the extensive grounds in which they stand. Normanton Hall, the residence of Sir G. J. Heathcote, is situated two miles north from the Luffenham station of the Syston and Peterborough station. It consists of a centre, flanked by wings, each front presenting a majestic simplicity united to great architectural beauty. Burley House, the seat of G. Finch, Esq., is about a mile east from Oakham. It was the residence of the noble family of Harrington in the reign of Elizabeth, and was purchased afterwards by the Duke of Buckingham, who enlarged the mansion, and entertained here, on several occasions, James I. and Charles I. Daniel Finch, Earl of Nottingham, having purchased the estates, erected the present magnificent residence. The building is in the Doric order. The centre of the north front is 196 feet long, and connected, by a colonnade of 32 columns on each side, with the offices. Exton Hall and park, the residence of the Earl of Gainsborough, is about two miles east of Burley Park. The mansion is built in the Tudor style. Exton Park abounds in the finest specimens of oak, ash, beech, and elm trees.

Divisions, Towns, &c.—The divisions of the county are as follows:—Alstoe Hundred, north; East Hundred, east; Martinsley Hundred, central; Oakham Soke, west; Wrandyke Hundred, south and south-east. There are only two market towns, OAKHAM and UPPINGHAM.

The following are the more important villages, with the parish populations in 1851, and a few other particulars:—

Barrowden, population 718, is 10 miles S.E. from Oakham, on the left bank of the Welland, which here bounds the county. An establishment for the manufacture of carpet-rugs, white leather, parchment, and glue, employs some of the inhabitants. *Belton*, population 408, about 4 miles W. by N. from Uppingham, near the left bank of the Eye Brook, contains several well-built houses. Besides the parish church there are a chapel for Baptists and a Free school. Malting is carried on. *Braunston*, population 411, about 2 miles S.W. from Oakham, in a retired valley near Leighfield Forest, has a venerable gothic church, with a tower and spire; a chapel for Baptists; and a National school. *Cottesmore*, population 735, about 4½ miles N.E. from Oakham, occupies an elevated site, and has a respectable appearance. The church is a fine gothic edifice. There are National schools. R. W.

Baker, Esq., introduced here the system of allotments of land for cultivation in small patches; founded the County Friendly Society; instituted prize-ploughing matches; and in other modes promoted the general welfare. The 'Cottesmore Hunt' has a pack of about 70 fox-hounds, and a stud of horses of considerable value. *Empingham*, population 988, about 6½ miles E. from Oakham, contains a handsome cruciform church, of Norman and early English character; in it is a fine window filled with ancient painted glass, exhibiting numerous armorial bearings. The Wesleyan Methodists have a chapel, and there is an Endowed National school. *Exton*, population 832, about 5 miles E.N.E. from Oakham, has a handsome gothic church, with a tower and spire. Schools for girls and infants are supported by the Countess of Gainsborough; there is also a Free school for boys. *Greetham*, population 718, about 6 miles E.N.E. from Oakham, a long straggling village, possesses an ancient parish church with a tower and spire; also National and Infant schools. Forster's charity, founded in 1692, for the instruction of children in Greetham and several neighbouring parishes, produces above 400*l.* a year. *Ketton*, population 1138, a well-built village, 9 miles E. by N. from Uppingham, stands in a valley on the left bank of the river Welland. The church is cruciform, with a tower rising from the intersection, surmounted with a spire 180 feet high. Parts of the west front are Norman. Quarries of good freestone for building are in the vicinity. *Lampham*, population 629, about 2 miles N.W. from Oakham, has an ancient church, with a tower and spire, erected about 1235; chapels for Wesleyan Methodists and Baptists; a British school and a Free school. *Liddington*, or *Lyd-dington*, population 604, a long straggling village, once a market-town, 2½ miles S. from Uppingham, has a parish church, a chapel for Wesleyan Methodists, a Free school, and an hospital, called Jesus Hospital, founded in 1600 by Lord Burghley for a warden, 12 brethren, and 2 nurses. *Luffenham, North*, population 442, about 7 miles E.N.E. from Uppingham, has a handsome gothic church, with a tower and spire; and a Free school. *Luffenham, South*, population 487, about 6 miles E. by N. from Uppingham, possesses an ancient gothic church, with parts of Norman character. In the village are National schools. *Market Overton*, population 498, near the north border of the county, 6 miles N. from Oakham, formerly possessed a market. The parish church is a neat early English structure, with a tower. *Ryhall*, population 1075, including 285 labourers on the works of the Great Northern railway, situated 8 miles N. by E. from Stamford, is a village of considerable size. It contains a handsome church, with a tower and spire; National schools; a large corn-mill; and an establishment for the manufacture of agricultural implements. *Whissendine*, population 795, about 4 miles N.N.W. from Oakham, possesses a handsome church, with a square tower; chapels for Wesleyan and Primitive Methodists; and a Free school. Malting is carried on.

Divisions for Ecclesiastical and Legal Purposes.—The county is in the archdeaconry of Northampton and diocese of Peterborough. It is included in the Midland Circuit; the assizes and quarter-sessions are held at Oakham, where is the county jail. County courts are held at Oakham and Uppingham; which are also the seats of Poor-Law Unions. The county returns two members to the Imperial Parliament.

History and Antiquities.—This county appears to have been included in the country of the Coritani; and upon the Roman conquest of Britain it was included in the province of Flavia Caesariensis. A Roman road (Ermine-street) crossed the eastern side of the county in the line of the present North road. Some remains of a Roman station are near Great Casterton.

Under the Saxons this county was included in the kingdom of Mercia. In the reign of John, Rutland, then first mentioned as a county, was assigned to his queen Isabel as part of her dower. An Earl of Rutland is mentioned in a charter of Henry I. The first earl known to history was Edward, eldest son of Edmund of Langley, who was the fifth son of Edward III. The title was inherited by Richard, duke of York, and by his son, a boy of 12 years of age, who was stabbed by Lord Clifford after the battle of Wakefield in 1460. The earldom was revived by Henry VIII., and conferred on the family of Roos: it afterwards came to the Manners family, in whose favour it was raised to a dukedom, which still exists.

In 1381 Henry le Spencer, bishop of Norwich, assembled a force at Burley in this county to suppress the insurrection of the commons in Norfolk, under John the Litester, or Dyer. In 1468 the Lincolnshire insurgents under Sir Robert Wells were defeated with great loss by Edward IV., at Hornfield in Empingham parish. The battle is commonly known as the battle of Lose-coat-field, from the fugitives throwing off their coats in order to escape more swiftly.

The antiquities of the county are chiefly ecclesiastical. Tickencote, Little Casterton, Empingham, Essendine, and Ketton churches, all on the east side of the county, date from the Norman period. Tickencote was rebuilt in 1792, and only the elaborately-ornamented arch between the nave and chancel, and part of the groining of the chancel, with the font, remain. Essendine is a small church, with nave and chancel, and a gable for two bells at the western end: the architecture is partly Norman, partly early English: the south doorway is Norman, with sculpture in the tympanum and elsewhere.

Statistics: Religious Worship and Education.—According to the Returns of the Census in 1851, it appears that there were then in the

county 91 places of worship, of which 53 belonged to the Church of England, 18 to Methodists, 12 to Baptists, 6 to Independents, 1 to Quakers, and 1 to Mormons. The total number of sittings provided was 17,399. The number of day-schools was 113, of which 39 were public schools, with 2175 scholars, and 74 were private, with 1230 scholars. Of Sunday-schools there were 58, with 3038 scholars. The Rutland Farmers' and Grasers' Club had 40 members, with 80 volumes in its library.

RUVO. [BARI, TERRA DL.]

RYAN, LOCH. [WIGTONSHIRE.]

RYBINSK. [YABOSLAV.]

RYDE, Isle of Wight, Hampshire, a watering place in the parish of Newchurch, is situated on the north-east shore of the Isle of Wight, opposite Spithead, in 50° 43' N. lat., 1° 10' W. long., distant 7 miles N.E. by E. from Newport, and 75 miles S.W. by S. from London. The population of the town of Ryde in 1851 was 7147. The living of Newchurch is a vicarage, with the chapelry of Ryde annexed, in the archdeaconry and diocese of Winchester.

The town is modern; the streets are wide and tolerably regular, well paved, and lighted with gas; and there is a good supply of water. The houses being generally stuccoed, and of various forms and sizes, and intermingled with the foliage of trees in the numerous gardens, the appearance of the town is very picturesque. The market-house and town-hall form a handsome building of the Doric order, 198 feet by 56 feet. St. Thomas's, Holy Trinity, and St. James's chapels are subordinate to the parish church, which is 7 miles distant. The Independents, Baptists, Wesleyan and Primitive Methodists, and Roman Catholics have places of worship. National, British, and Infant schools, a literary and scientific institute, and a dispensary are in the town. There are commodious baths near the pier; a neat theatre, libraries, and reading and assembly-rooms, a handsome town-hall, and an arcade of superior architectural character. There are also the Royal Victoria hospital, a dispensary, a literary institute, a philosophical society, founded in 1851, especially for the prosecution of meteorological studies. One of the finest buildings in the town is the recently-erected mansion of the Royal Victoria Yacht Club. The town exports corn, flour, sheep, calves, lambs, &c., and East and West India ships frequently call here for supplies of provisions. Tuesday and Friday are the market-days: a pleasure fair is held on July 6th. Boat- and yacht-building are carried on, and occasionally larger vessels are built. The pier extends 1740 feet into the sea, and forms an excellent promenade. The vicinity of Ryde is very beautiful, and contains many handsome mansions. A landing may be made in calm weather at all times of the tide. Communication by steam-boat with Portsmouth is kept up hourly in summer and from four to six times a day in winter.

RYE, Sussex, a market-town, a municipal and parliamentary borough, a seaport, a member of the Cinque Ports, and the seat of a Poor-Law Union, is situated upon an eminence at the south-eastern corner of the county of Sussex, about 38 miles E.N.E. from Lewes, 63 miles S.E. from London by road, and 74 miles by the South-Eastern railway. The population of the town of Rye in 1851 was 8541. The borough is governed by 4 aldermen (or jurats) and 12 councillors, one of whom is mayor; and, in conjunction with Winchelsea and six rural parishes, returns one member to the Imperial Parliament. The living is a vicarage in the archdeaconry of Lewes and diocese of Chichester. Rye Poor-Law Union contains 12 parishes and townships, with an area of 39,369 acres, and a population in 1851 of 12,349.

Rye is bounded E. by the river Rother, the channel of which was suddenly diverted from Romney by the tempest that overwhelmed Old Winchelsea in 1287, and S. and W. by the river Tillingham, which, having received the waters of the Brede immediately above the town,

joins the Rother at Rye; the united stream enters the sea nearly two miles below the town, and there forms Old Rye harbour. Rye is supposed to be the Novus Portus of Ptolemy. The earliest authentic record of Rye is of the year 893, when the Danes, under the pirate Hastings, effected a landing near this town, and afterwards took Appuldore. In the reign of Stephen, William d'Ipres, earl of Kent, erected on an eminence which commands the rivers at their junction, a small castle, which is still standing. It is now used as a jail; immediately below it is a modern battery for 18 guns. In 1194 a charter was granted by Richard I., enabling the inhabitants to wall and fortify the town. Edward III. caused the town to be walled on the north and west sides. The steep cliffs which were at that time washed by the sea were considered a sufficient protection on the south. There were originally three gates, besides a small postern-gate. The eastern or land-gate, the only one still preserved, has a handsome gothic arch, flanked on each side by a round tower. In 1572 Rye became an asylum for the Huguenots, who were driven from their homes by Catherine de Medici. They remained at Rye till the latter part of the reign of James I., when they or their descendants re-embarked for France.

The condition of Rye has mainly depended upon its harbour, which in the 16th century was nearly choked up. The sea continued to recede during the 17th century. In 1750, all hopes of improving the old harbour being abandoned, it was determined to form a new mouth by a canal running directly south into the sea. This work was prosecuted at a great expense till 1778, when the new harbour was found to be a complete failure, and was abandoned. The old harbour was once more resorted to, and was much improved. A wooden pier of piles was constructed on the eastern side, and embankments were thrown up on the western side, leaving an intermediate entrance 160 feet in width. Many alterations have since been made in it by narrowing the channel, and otherwise, but the works have been far from successful. The harbour only admits vessels of 200 tons burden. The average rise of spring-tides is about 17 feet, and of neap-tides from 9 to 12 feet at the pier-head. At low water the harbour is dry. The approach from the bay to the entrance of the harbour is intricate and difficult, especially for sailing-vessels, owing to the sand-banks and the tortuous course of the channel. The chief trade consists in the export of hops, bark, and wool, and in the import of coals, corn, timber, and Dutch produce. Lime is also burnt near the town from chalk brought from Beachy Head, and shipbuilding is carried on.

The town is pleasantly situated on the northern and eastern slopes of a hill. The houses are irregularly built. The town is lighted with gas. The town-hall is a neat brick building supported on arches, with a market-place beneath. The fishery is somewhat productive, and a large proportion of the fish taken is sent to the London market. The market-days are Wednesdays for corn, vegetables, fish, &c., and Saturdays for vegetables, fish, and meat. Every alternate Wednesday there is a market for fat stock, well supplied. An annual fair is held in August. The church, dedicated to St. Mary, is partly Norman, and partly in the early English style. The Wesleyan Methodists, Independents, and Baptists have places of worship. The chapel of the monastery of the friars eremites of St. Augustine is used as a warehouse. There are two Endowed schools which have been united; one a Free Grammar school, founded in 1638 by Thomas Pescock, one of the jurats, which has an income from endowment of 341. 10s. a year, and had 50 scholars in 1854, and the other for poor children, founded and endowed by James Saunders, Esq., in 1702, with a rent-charge now producing 116l. 10s. per annum. There are National schools and a savings bank.

RYSWYK. [HOLLAND, South.]

RYTON. [DURHAM.]

RZESZOV. [GALICIA, Austrian.]

S

SAALFELD. [SAXE-MEININGER.]

SAAR-UNION. [RHIN, BAR.]

SAARBRÜCK. [TRIER.]

SAARLOUIS. [TRIER.]

SAATZ. [EGER.]

SABA, a small island in the West Indies, belonging to the Dutch, is situated in 17° 40' N. lat., 63° 20' W. long. The coast rises in perpendicular masses to a considerable elevation, and at a distance the island appears like a steep round rock. Landing is effected only on the south side, where an artificial path has been made, which however is intricate, and admits only one person at a time. By this path a small place is reached which is built in a secluded valley. The area of the island is about 15 square miles. The small portion of it which is cultivable is appropriated to the growth of cotton, which the inhabitants work into stockings, for sale as well as for their own use. The common vegetables of the West Indies come to perfection. The population is about 1600.

SABINE, RIVER. [LOUISIANA; TEXAS.]

SABLES-D'OLONNE. [VENDÉE.]

SACKATOO, or SAKATU. [SOODAN.]

SACKETT'S HARBOUR. [NEW YORK, State of.]

SACO. [MAINE, U.S.]

SACRAMENTO CITY, the capital of Sacramento County, State of California, United States of North America, is situated on the left bank of Sacramento River, at the confluence of American Fork, in 38° 34' N. lat., 121° 40' W. long., about 150 miles N.E. from San Francisco. The city was founded in the spring of 1849; in 1850 it contained 6820 inhabitants, of whom only 474 were females; and at the State Census in 1852 the population was above 10,000.

Sacramento City owes its origin to the discovery of gold, which gave so remarkable an impetus to California generally. It was on the south branch of American Fork, about 50 miles from Sacramento City, that gold was first discovered. The growth of the city was, from its foundation, remarkably rapid. In April 1849 there were only four houses on the site; in the following year it was a large and regularly laid-out town of nearly 7000 inhabitants. The city stands in the midst of a fine farming country, and about 30 miles from the commencement of the gold diggings. Occupying a low site, it has

been found necessary, in order to protect it from inundations, to which it is liable in the rainy season, to construct a bevee along the bank of the river. The streets of the city cross each other at right angles; those running east and west are designated by the letters of the alphabet, and those running north and south by the numerals. Many of the streets are lined with old oak and sycamore trees of large size, imparting a considerable degree of picturesqueness to their general appearance. The city contains Episcopalian, Presbyterian, Methodist, Baptist, Roman Catholic, and other churches, schools, numerous stores, above 150 eating saloons and hotels (some of which are of a very costly and splendid character), several steam-mills, and a few manufactories. Like San Francisco, Sacramento City has suffered severely from several very destructive fires; but the parts of the city which were destroyed have always been quickly rebuilt, and generally in an improved style. Several daily and weekly newspapers are published here. Regular daily communication is maintained with San Francisco by steam-boats. [See CALIFORNIA, in SUPPLEMENT.]

SADDLEWORTH, West Riding of Yorkshire, a village and the seat of a Poor-Law Union, in the parish of Rochdale, and upper division of Agbrigg wapentake, is situated in 53° 33' N. lat., 2° 1' W. long., 10 miles S.E. from Rochdale, and 192 miles N.W. by N. from London. The population of the township of Saddleworth-with-Quick in 1851 was 17,799. The living is a perpetual curacy in the archdeaconry and diocese of Manchester. Saddleworth-with-Quick Poor-Law Union consists of the township, which has an area of 18,280 acres. The village gives name to a district in which the woollen and cotton manufactures have advanced with amazing rapidity and to a very great extent. The district includes nearly 100 villages and hamlets, although it is only about 7 miles long by 5 miles wide. Broadcloth of a superior quality is manufactured. Several coal-mines and extensive free-stone-quarries are wrought. The Huddersfield Canal and the Manchester and Huddersfield railway afford facilities for communication with the metropolis and with other towns. The canal passes at this place through a tunnel about three miles long. A county court is held at Saddleworth.

SAFFL. [MAROCCO.]

SAFFRON WALDEN, Essex, a market-town, municipal borough, and the seat of a Poor-Law Union, is situated near the right bank of the river Cam, in 52° 1' N. lat., 0° 14' E. long., distant 22 miles N.N.W. from Chelmsford, and 42 miles N.N.E. from London by road. The population of the municipal borough, which is co-extensive with the parish of Saffron Walden, was 5911 in 1851. The borough is governed by 4 aldermen and 12 councillors, one of whom is mayor. The living is a vicarage in the archdeaconry of Colchester and diocese of Rochester. Saffron Walden Poor-Law Union contains 24 parishes and townships, with an area of 62,630 acres, and a population in 1851 of 20,716.

A castle was erected here by Geoffrey de Magnville, one of the companions of the Conqueror. The remains consist of some parts of the walls and towers, built with flint bound together by a very hard cement. Geoffrey, the grandson of the founder of the castle, having deserted the party of Stephen for that of the empress Maud, obtained of her permission to remove the market from the neighbouring town of Newport (now a village) to Walden. Having been however seized by Stephen, he could only obtain his freedom by the delivery of his castles, Walden being one of them, to the king. The same nobleman founded here in 1136 a Benedictine priory, which was some years later raised to the rank of an abbey. The site was granted to Sir Thomas Audley, lord chancellor, and the title of Lord Audley of Walden was conferred upon him.

The town is irregularly laid out, and some of the houses are of considerable antiquity. The streets are lighted with gas and paved. The church, which is of the reign of Henry VII., is a large and very elegant specimen of the late perpendicular style. It has a nave and aisles, large south porch, and chancel and aisles. The interior of the church is very elegant. There are two places of worship for Particular Baptists, one for General Baptists, and one each for Independents, Quakers, and Wesleyan and Primitive Methodists. The Free Grammar school, founded in 1525, has an income from endowment of 60*l.* a-year, and had 25 scholars in 1854. There are also National, British, and Infant schools, and a savings bank. The town-hall, a neat building, stands in the market-place. In the town are a new post-office, a corn exchange in the Italian style, a museum, a literary institution, a cattle-market, and a handsome range of almshouses. The chief trade is in barley and malt; there are an iron-foundry and a brewery. The market is on Saturday. Three annual fairs are held: one, chiefly for horses, on the Saturday before Mid-Lent Sunday; one at Audley End, on August 3rd; and another at Saffron Walden, on November 1st. A county court is held.

Audley House, or, as it is usually termed, Audley End, the seat of Lord Braybrooke, is a noble mansion, erected on the site and grounds of the ancient monastery by the Earl of Suffolk, who in the time of James I. had inherited the estate of the Lord Chancellor Audley. The grounds are beautiful, and the Cam, which flows through them, expands so as to form a considerable sheet of water in front of the house.

SAG HARBOUR. [NEW YORK, State of.]

SAGAING, or ZAKKAIN. [BURMA.]

SAGALASSUS. [PISIDIA.]

SAGAN. [LIEGENTZ.]

SAGHALIEN. [TARAKAL.]

SAGRES. [ALGARVE.]

SAGUENAY RIVER. [CANADA.]

SAGUNTUM. [VALENCIA.]

SAHAGUN. [LEON.]

SAHA'RA, SAHRA, or the Great Desert, is a country of immense extent, which occupies the central parts of Northern Africa. Its western extremity is washed by the Atlantic, along which it extends from Cape Nun, 28° 46' N. lat., to the mouth of the river Senegal, 17° N. lat. From the shores of the Atlantic it extends eastward nearly across the continent of Africa, being separated from the Red Sea only by the valley of the Nile and the rocky country which lies between that river and the Red Sea. The valley of the Nile constitutes the eastern boundary of the Sahara. The western edge of that valley occurs between 30° and 32° E. long., and as the African shore along the western boundary of the Desert is between 11° and 17° W. long., the Sahara extends from east to west, on an average, through 44 degrees of longitude, or about 2000 miles. The northern and southern boundaries are very imperfectly known. The Atlas constitutes the northern boundary of the Sahara from Cape Nun on the west to 10° E. long. on the east. From this meridian as far east as the valley of the Nile (30° E. long.), a stony and broken country extends between the Sahara and the Mediterranean, comprehending the countries belonging to Tripoli, including Barca and the stony desert which lies between Barca and Egypt. This rocky region terminates in the desert near 20° E. long., and on the east of it the Sahara appears to extend to the shores of the Mediterranean. This northern branch of the Sahara has probably an average width of about 100 miles. On the shores of the Gulf of Sidra in the Mediterranean it occupies the space between Geria and Haen-Agan.

The southern boundary of the Sahara is best known towards the Atlantic, where it extends to the vicinity of the Senegal River, and between 15° and 4° W. long. approaches the parallel of 15° N. lat. Farther east the river Joliba, or Quorra [NIGER], constitutes the dividing line between the Desert and Soodan as far as the meridian of Greenwich, so that Soodan advances to 17° N. lat., near Timbuctoo. Between that place and the Lake Tchad the boundary line probably lies near 14° N. lat., and this parallel may also be considered as dividing the Sahara from Eastern Soodan as far as the frontier of Dar-Fur, near 23° E. long. Farther east it lies between 16° and 17° N. lat. We may therefore suppose that on an average the Sahara extends from north to south over 14 degrees of latitude, or 960 miles. The area of the Sahara, within these limits, occupies more than 2,500,000 square miles.

The Sahara is a desert, but it is not, as is commonly supposed, covered in its whole extent by a fine and loose sand. There are tracts of considerable extent, the surface of which is covered with a thick layer of fine and loose sand, and with low sandy hills; but it would seem that the greater part of this immense country consists of a firm soil, in many parts composed of indurated sand, in others of sandstone. The surface of other tracts consists of rocks, especially granite, frequently mixed with quartz. A very few tracts of small extent are found covered with bushes and coarse grass. This general sterility is chiefly owing to the dryness of the atmosphere. The Sahara is situated in that part of the globe which separates the region of the winter rains from those of the summer rains, and it does not participate in either of them. In the greatest part of this extensive region a drop of rain never falls to refresh the arid soil; and in those districts which approach the countries which have abundant rains, only a few showers occur in August and September, and even these not every year. This want of rain renders the whole region unfit for any kind of cultivation, but not uninhabitable, as the lower depressions contain a few wells, in the vicinity of which the soil is covered with grass and bushes, that afford pasture to camels, goats, and sheep. These animals supply subsistence to the nomadic tribes, who wander about in this boundless waste. Travellers who cross this region are exposed to many dangers, both from the nature of the country and from the character of its inhabitants. Though the camels occasionally find some shrubs or grass to satisfy their hunger, no provisions can be got along the whole route, which exceeds 1000 miles in length. The traveller must carry everything with him. The wells of drinkable water occur only at a distance of ten days' journey from one another, and sometimes the distance is still greater. The traveller in the desert must therefore provide himself with as much water as is required for his consumption until he reaches the next well; and if the season is drier and hotter than usual, the well is dried up, and he runs imminent risk of perishing of thirst. If he loses his way in the wilderness certain death awaits him from hunger and thirst. In those tracts which are covered with fine loose sand the whirlwinds often blow with great force, and raise a large portion of the sand to a considerable height, and deposit it again at some distance. Such pillars of sand have buried many caravans. The inhabitants of the desert lead a wandering life, and, like all nomadic tribes, are always ready to attack the traveller, to deprive him of his goods, and to reduce him to slavery. In spite of all these dangers the Sahara is annually traversed by several caravans, which carry on the commerce between Soodan and the countries on the shores of the Mediterranean.

There is however a tract across the desert, in which these dangers are comparatively small. It lies between 13° and 16° E. long., and owes its advantages partly to its climate and partly to its soil. It is remarkable that this tract occurs where no elevated country lies between the Mediterranean and the Sahara, but only the low range of the Harutsh, which joins that arm of the Sahara that reaches the shores of the Mediterranean. The country along the shores of the Gulf of Sidra, between 12° and 19° E. long., and between the Gulf and the Sahara, does not appear to rise in any part more than 1000 feet, and in most parts it is much lower. Through this wide gap the northern winds, which frequently blow a gale, and bring moisture from the countries north of the Mediterranean, which at that season are drenched with rain, find access to the Sahara, and produce a considerable degree of cold even as far south as Mourzuk. To these winds also we may probably ascribe the rain which falls in this season in the kingdom of Fezzan, and renders it the most fertile tract of the Sahara. These rains appear to extend to 21° N. lat., and as the northern limit of the tropical rains occurs near 16° N. lat., the tract between the two limits of rain does not exceed 5 degrees of latitude, whilst in other places it occupies more than double that extent. The advantages of this tract as a thoroughfare for caravans consist in the smaller extent of the sandy tracts and of the continuous or broken ridges of rocks. Though the rocky parts within the rainless region resemble the sandy tracts in being without vegetation, the wells which occur between them are more numerous, and rarely more than a few days' journey from one another. The road through this country gives the easiest access to the interior of Africa from the north. This road, after leaving the town of Tripoli, runs south-east to the northern boundary of Fezzan, over a country which partakes in some degree of the nature of the Sahara, presenting a succession of plains and ridges of hills. The hills are of inconsiderable height, generally not exceeding 400 feet, and never rising above 600 feet. Many of them consist of limestone overtopped by lava; others are only sand-hills. They are without vegetation, but contain between them many fertile valleys. This country, which extends to the town of Sokna in Fezzan, has abundance of wells and water. South of this place extends the Harutsh Assouat, or Mons Niger, occupying a width of about 35 miles in a straight line. Fezzan, which extends from this mountain tract to the northern tropic, consists of numerous small oases separated from each other by comparatively narrow tracts of sand. [FEZZAN.] Water is abundant, except towards the southern boundary, where a level desert occurs, which can only be traversed in four days; but in the middle of it there is a small place called Gatrone, surrounded by sandy hills and mounds covered with small trees. At Kasrowa and Tegerhy there are extensive plantations of date-trees and abundance of water. From the southern boundary of Fezzan to the town of Bilma, or from 23° to 18° 30' N. lat., a continuous ridge of steep rocky hills, elevated from 300 to 500 feet above the plain, runs almost due north and south; and from 5 to 20 miles east of this ridge there are isolated hills, mostly composed of sand, but in some places of rock. Between these rocks the road runs over a stony plain without the least vegetation, but Denham says that after the rains a grass quickly springs up, which is several feet high, and that the rains fall in torrents as far as the Tiggerindumma Hills. It would therefore appear that in this tract the northern rains extend to 21° N. lat. No part of this country is inhabited, but wells of drinkable water occur at distances of three or four days' journey. Near 19° N. lat. however there are several small towns or villages, which owe their existence not so much to a certain degree of fertility in the soil, as to numerous small lakes which lie along the foot of the rocky range, and in which trona crystallises. In the vicinity of some of these lakes there are groves of date-trees and pasture-ground for cattle. In some parts the soil is covered with incrustations of pure trona, which extend for several miles in every direction. In a few places mimosa-trees are found. Bilma is noted for its extensive salt-pits [BILMA], and in its vicinity there are a few spots covered with vegetation. South of Bilma the road runs over loose hills of fine sand, in which the camels sink nearly knee-deep. The hills sometimes disappear in a single night by the drifting of the sand, and all traces of the passage, even of a large caravan, vanish in a few hours. Wells are rare. After four days' travelling from Bilma the wells of Dibra are met with; and after four days more those of Agbadem. The last-mentioned wells are abundant, and situated in a wooded valley, which however is not inhabited. After three days more the country is reached which enjoys a small portion of the tropical rains, and the soil improves. At first the sandy soil is interspersed with clumps of grass, and here and there with low bushes; trees soon appear, and then increase in number. Thus the desert ceases near 16° N. lat., but no permanent habitations are met with until the vicinity of Lari is reached, a town which is situated a short distance from Lake Tchad (14° 20' N. lat.). The desert between Bilma and Lari is called the Desert of Tintuma.

The tract just noticed as traversing the desert from north to south, divides the Sahara into two unequal portions, of which the western and larger is known among the natives by the name of Sahel, and the eastern and smaller among geographers by that of the Libyan Desert.

Coast.—Until lately many misconceptions prevailed respecting this coast, which extends perhaps more than 1200 miles along the Atlantic.

Modern surveys of the shore have shown that nearly the whole of the coast is elevated, and consists of sandstone, which in most parts rises to the height of 100 feet and more, but in some does not exceed 60 or 80 feet. A low coast only occurs between Cape Mirik (19° N. lat.) and the mouth of the river Senegal, but here, as at some other parts of the coast, dunes, or sand-hills, are found at no great distance from the shore, and behind these the flat country seems to have a considerable elevation above the sea. The whole coast, as far south as Cape Blanco, is free from sand-banks and shoals, and has regular soundings. The depth gradually increases from the beach, and at the distance of 4 miles there are from 30 to 34 fathoms; at 12 miles from 50 to 60 fathoms; and at the distance of 30 miles about 100 fathoms. The water then deepens very suddenly. A large sand-bank however extends from Greyhound Bay (21° N. lat.) to Cape Mirik; it is known by the name of the Bank of Arguin, and on it the French frigate *Medusa* was lost in 1816. The currents generally follow the direction of the coast. East of Cape Juby is a sudden bend of the coast, which is the most dangerous place in the whole coast-line, as the swell is almost invariably from the north-west, and consequently almost directly on the coast; besides this, the fine particles of sand which cover the desert being blown into the sea and mingling with the haze occasioned by the heavy surf, render this coast very indistinct. The greatest strength of the current is usually at the distance of 3 to 6 miles from the land, and it gradually decreases as it recedes from it. The wind generally blows from the north-west or west, and frequently in hard gales, especially in the night. It is supposed that the rarefaction of the air produced by the arid soil of the Sahara being heated to an extraordinary degree by the almost perpendicular rays of the sun, gives rise to the westerly winds along the coast of the Sahara.

Soil.—The Sahel, or western part of the desert, is by far the worst part of the Sahara. It does not appear that in all this vast extent a single oasis occurs the soil of which is fit for agriculture or for the growth of date-trees. The soil however varies greatly, passing from a fine to a coarse sand and gravel, and then gradually to a bare layer of broken stones and rocks. In many places hills of moderate elevation occur. Some of them consist of sand, and are subject to be changed in size and form by the winds; others consist of rocks, frequently of granite and quartz. All these soils are destitute of vegetation, which only appears in the depressions between the hills and sometimes at the base of the rocky elevations, but it consists only of a few grasses and shrubs. There appear to be numerous tracts, though of small extent, which are fit for pasture; for, according to all accounts, the number of individuals who find subsistence in this part of the Sahara is considerable, and they subsist altogether on the produce of their herds. It is stated, and with some degree of probability, that the caravan-road has been purposely formed through the worst part of the desert, the merchants being less afraid of the dangers of the country than those which they would have to encounter if they traversed a tract which is inhabited by numerous independent tribes, each of which is eager to enrich itself by plundering the caravans or subjecting them to a heavy tax for a free passage through their territories. It would appear that at no great distance from the sea the country contains extensive pasture-grounds, though of very inferior quality, and frequently interrupted by tracts which are completely sterile. Farther inland desert tracts entirely destitute of vegetation and inhabitants are scattered over a much greater portion of the country, but it is perfectly sterile and uninhabited only along the caravan-road, so that the caravans generally terminate their long journey without meeting with a single person. The different tracts covered with sand, gravel, and rocks, as well as the ridges of low hills which occur along the caravan-road, run east and west, a fact which may perhaps be accounted for by the circumstance of the wind almost without exception blowing from the east. The country between this road and the above-mentioned country between Tripoli and Lari is inhabited by numerous tribes of Tuaricks.

The Libyan Desert, or eastern part of the Sahara, contains a considerable number of oases or fertile tracts, which support a moderate population. Nearly all of them contain extensive groves of date-trees and fields in which dhourra is grown. [EGYPT; AUGILA.]

Climate.—It has been ascertained that no rain falls along the coast south of Cape Juby. Some showers fall annually in the countries south of Mount Atlas, but it is not known how far inland they extend. These showers fall between August and November. Along the coast heavy dews occur in the summer months. In the interior the wind blows almost without interruption from the east, and in the day-time frequently with the violence of a gale, which however is generally followed by a dead calm after sunset. The strong wind moderates the heat of the burning sun, and hence the nights are usually more insupportable than the noon-day heat. The violent gales frequently raise the loose sand in such quantities that a layer of nearly equal portions of sand and air, and rising about 20 feet above the surface of the ground, seems to divide the purer atmosphere from the solid earth. This sand, when agitated by whirlwinds, sometimes buries caravans, and often puts them into the greatest confusion. The degree of heat to which these countries are subject is variously stated. On the southern border of the Sahara the thermometer at noon in summer rises to 107°; in some other places to 120° and 140°. The greatest degree of heat which is experienced in the interior of the Sahara seems to occur in August

and September, at which time caravans do not travel, though it is the season in which the northern parts of the desert are refreshed by showers of rain.

Productions.—The most useful domestic animal is the camel, without which these extensive deserts could not be traversed. The camels which are reared by the tribes that inhabit the desert are distinguished by their extraordinary speed and abstinence, and known in northern Africa by the name of 'heiries,' or 'maharbies.' Next to the camel the most useful animal is the goat, which is very abundant in the Sahel, as the dry pastures are more adapted to it than to sheep. Sheep are also common. There are some black cattle of a small breed, but only in those places which have good pasture. Horses are rare in the Sahel, but more numerous farther east. There are lions and panthers, and some other smaller wild animals. Gazelles are frequent in all places where bushes and shrubs occur, and in a few places antelopes are met with. In the deserts bordering on Egypt the *Dipus jerboa* abounds. In the Sahel ostriches are very numerous, and they are hunted by the natives for their feathers from May to July. Vultures and ravens are the only birds that inhabit the deserts, except on some of the lakes along the rocky hills between Fezzan and Bilma, where there are snipes and wild-ducks. In some parts the Guinea-fowl occurs. There are also serpents in the desert.

The vegetable productions are few in number. Date-trees are only found in the oases of the eastern districts and at the foot of Mount Atlas. The Tibboos, a native tribe of the Libyan Desert, cultivate 'gufsub,' a species of millet, and a little cotton. Among the wild plants there are some species of mimosas, of acacias, and the *Hedy-sarum alhaji*, a thorny plant about 18 inches high, which remains green all the year round, grows in many parts of the desert in the sand, and is eagerly eaten by the camels: it is nearly the only plant that supplies them with food while they are traversing the desert. Near the most south-western corner of the Sahel are extensive woods consisting of acacia-trees, from which by far the greatest part of the gum is obtained which in Europe is consumed under the name of gum-arabic.

The minerals are limited to iron-ore and salt. Iron-ore occurs between Fezzan and Bilma. Salt is obtained from springs and lakes, and it occurs also in extensive beds in the Sahel. It is of great importance to the inhabitants, as it furnishes them with the most abundant article of commerce. The countries south of the Sahara, comprehended under the name of Soodan, or Sûdan, appear to have no salt, and all the salt which is consumed in them is brought from the Sahara. The only places permanently inhabited in the Sahel are those in the neighbourhood of which salt is found.

Inhabitants.—A great number of independent tribes are dispersed over the Sahara. They belong to four nations, the Moors, the Tuareks, Tibboos, and Arabs. The Moors seem to be in possession of the whole country west of the road leading from Timbuctoo to Drah. They are a branch of the Moors who inhabit Morocco, but have a greater mixture of negro blood in them. Their complexion is in general nearly black, but the red colour under it is perceptible: their hair is straight; they have a spare body and rather slender legs; the spine is slightly curved, the face long, the cheeks hollow, the eyes sunk but lively. They speak the Moghrebin dialect of the Arabic language, and though they live on the produce of their herds, and consequently lead a nomadic life, they take care of the education of their children, all of whom are taught reading and some part of the Korán. They are very expert in tanning and preparing leather, and in manufacturing bracelets, earrings, and necklaces of gold, in making knives and daggers and other arms, and they are even expert in weaving. Many of them are merchants, and a still greater number are employed in accompanying the caravans on the route between Drah and Timbuctoo. The numerous tribes of the Tuareks occupy the centre of the Sahara, or that country which lies between the two great caravan routes that traverse it from north to south. The form of their body and their language prove that they belong to the aboriginal inhabitants of Northern Africa, who are known by the name of Berbers, and in Morocco are called the Amazirghis. [BERBERS.] The Tibboos occupy the tract between Fezzan and Lake Tchad, and an extensive country extending east of this line towards the boundary of Egypt. In features they strongly resemble the negroes. Most of them are quite black, though some have copper-coloured faces. A brief general notice of the tribes of the Sahara will be found in the article AFRICA.

Commerce.—Though the Sahara only supplies three commercial products, salt, gum-arabic, and ostrich-feathers, a considerable traffic is carried on between the countries north and south of the desert, which is frequently traversed by caravans, consisting of from 200 to 500 persons, and of from 500 to 2000 camels. A camel's load is 500 lbs. The caravans export from the countries situated on the Mediterranean chiefly goods of European manufacture, such as fire-arms, gunpowder, and some cotton stuffs, to which are added some articles manufactured at Fez, and tobacco, dates, &c. Their returns include gold, ostrich-feathers, and ivory. In traversing the desert they usually buy large quantities of salt, which they sell in Soodan at a great profit. Several routes across the Sahara are traversed by the caravans. A caravan route traverses the Libyan Desert, beginning in Soodan at Wara, the capital of the country of Dar-Zaleh, or Wadai, and traversing Borgou and Tibesti in a north-western direction. From

the last-mentioned place it runs westward to the great road that leads from Bornou to Tripoli. The most eastern caravan road that traverses the Sahara connects Dar-Fur with Egypt. [DAR-FUR.]

Salt is got in great abundance at three places in the Sahel: at Toudeney, which is situated near 21° 30' N. lat., 4° W. long.; at Hoden, or Waden, near 20° N. lat., 13° W. long.; and at Shingarín, near 17° 30' N. lat., 4° W. long. The town of El Arawan sends the abundant produce of the rock-salt mines of Toudeney to the countries on the banks of the Joliba, especially to Sansanding and Yamina, and receives in return ivory, gold, slaves, wax, honey, cloths of Soodan, and cured provisions. The salt obtained from the rock-salt mines of Hoden and Shingarín is carried to the same places and to Sego by the caravans of the merchants of Walet, a town which is said not to be inferior in extent and population to Timbuctoo. The caravan route from Timbuctoo to Benown in Ludamar passes through Walet.

An extensive fishery is carried on along the coast of the Sahara by the inhabitants of the Canary Islands. This fishery commences on the north at Cape Nun; the fishermen seldom venturing to go farther north, although fish are equally abundant there, from fear of the Moors on that part of the coast, who possess boats. The fish taken are porgy, mullet of several kinds, rock-cod, and red snapper. The fish are very abundant, and weigh from 8 lbs. to 60 lbs. each. This fishery gives employment to between 400 and 500 men from the island of Lanzarote, to about 250 from Fuerteventura, and to a considerable number from the other islands. Fish constitutes the principal food of the poorer inhabitants of the Canaries. The fishermen frequently land, not only to procure water, but to barter their fish with the inhabitants of the desert for wool and orchilla.

Discoveries.—The nature of the Sahara opposes insuperable obstacles to the progress of a conqueror. The Greeks and Romans were only well acquainted with the oases of the Libyan Desert, which are at no great distance from the western edge of the valley of the Nile, and with those which are contiguous to the rocky region that divides the desert from the Mediterranean, as the Ammonium (now Siwah), Augila, and Cydamum (now Gadames). The coast of the Sahara was discovered by the Portuguese between 1412 and 1443 [AFRICA, vol. I, cols. 106-107], but the interior of that country was unknown up to the end of the 18th century, with the exception of what knowledge might be derived from a few notices in the writings of Leo Africanus. The first impulse to discovery in the interior of Africa was given by the establishment of the African Association in 1783; but before their labours produced any important result, Browne had succeeded (in 1793) in penetrating to Dar-Fur, with the Soodan caravan, through the oases which lie west of the valley of the Nile. Before he published his 'Travels' (1800), Mungo Park had returned from the banks of the Joliba, where he had collected some information respecting the south-western districts of the Sahara, though he had only been on the borders of the desert. Two years afterwards the travels of Hornemann were published, who had penetrated from Egypt to Fezzan by the way of Siwah and Augila. In 1819 Captain Lyon entered Africa from Tripoli, and although he did not add much to our knowledge of the Sahara, he collected much interesting information, which was published in 1821. Denham, Clapperton, and Oudney (1822-1824), following the same route, not only traversed the desert in all its width from Tripoli to Bornou, but discovered a considerable extent of Soodan. These important discoveries were to be enlarged by the travels of Major Laing, who in 1825 likewise departed from Tripoli, and passing through the oasis of Gadames, traversed the whole width of the Sahara, and reached Timbuctoo; but on attempting to return to Morocco by the way of El Arawan, he was murdered by the natives before he reached El Arawan. Two years afterwards Caillié, a Frenchman, who in 1827 had traversed the southern portion of Senegambia between 10° and 12° N. lat., and then passed through the western countries of Soodan to Timbuctoo, departed from the last-mentioned place, and reached Fez by the route which is frequented by the caravans that carry on the trade between Soodan and Morocco. A statement respecting recent explorations in the interior of Africa, including a journey across the Great Desert, is given in the article AFRICA, vol. I, cols. 115-117.

All the nomadic tribes which inhabit the Sahara are independent; but Fezzan and Gadames are subject to Tripoli, and the oases along the western edge of the valley of the Nile, as well as Siwah, depend on the Pasha of Egypt.

SAHARUNPOOR. [DELHI.]

SAIDA. [SIDON.]

SAILLANS. [DÔME.]

SAINS. [AISNE.]

ST.-AFFRIQUE. [AVEYRON.]

ST.-ALBANS. [ALBANS, ST.]

ST.-ALVAIRE. [DORDOGNE.]

ST.-ANDREWS. [ANDREWS, ST; NEW BRUNSWICK.]

ST.-ANTHÈME. [PUY-DE-DÔME.]

ST.-ASTIER. [DORDOGNE.]

ST.-AULAYE. [DORDOGNE.]

ST.-CATHERINE'S. [CANADA.]

ST.-CHAMAS. [BOUCHES DU-RHÔNE.]

ST.-CHELY-DAUBRAC. [AVEYRON.]

ST.-CLEAR. [CAMBRIDGESHIRE.]

ST.-CYPRIEN. [DORDOGNE.]

ST-DENIS. [BOURBON, ISLE OF.]
 ST-DIZIER. [MARNE, HAUTE.]
 ST-DONAT. [DRÔME.]
 ST-ESPRIT. [LANDES.]
 ST-FLOUR. [CANTAL.]
 ST-FRANCIS, RIVER. [CANADA.]
 ST-GENIEZ-DE-RIVE-D'OLT. [AVEYRON.]
 ST-GENIS-LAVAL. [RHÔNE.]
 ST-GEORGE. [AZORES; BERMUDAS.]
 ST-GHISLAIN. [HAINAULT.]
 ST-GILLES. [GARD.]
 ST-HELENS. [LANCASHIRE.]
 ST-HÉLIER. [JERSEY.]
 ST-HILAIRE. [AUDE.]
 ST-HYACINTH. [CANADA.]
 ST-IVES. [IVES, ST.]
 ST-JEAN-D'ANGELY. [CHARENTE-INFÉRIEURE.]
 ST-JEAN-DE-BOURNAY. [ISÈRE.]
 ST-JEAN-DE-LUZ. [PYRÉNÉES, BASSES.]
 ST-JEAN-DE-VERGT. [DORDOGNE.]
 ST-JEAN-EN-ROYANS. [DRÔME.]
 ST-JEAN-PIED-DE-PORT. [PYRÉNÉES, BASSES.]
 ST-JOHN, RIVER. [CANADA.]
 ST-JOHN'S. [ANTIGUA; NEW BRUNSWICK; NEWFOUNDLAND.]
 ST-JOHN'S, Weardale. [DURHAM.]
 ST-MARY CRAY. [KENT.]
 ST-MARY'S. [AZORES.]
 ST MAURICE, RIVER. [CANADA.]
 ST-MICHAEL'S. [AZORES.]
 ST-NEOT'S. [NEOT'S, ST.]
 ST-OSYTH. [ESSEX.]
 ST-PAPOUL. [AUDE.]
 ST-PAUL. [MINNESOTA.]
 ST-POL. [PAS-DE-CALAIS.]
 ST-POL-DE-LEON. [FINISTÈRE.]
 ST-PÖLTEN. [ENB.]
 ST-RÉMY. [BOUCHES-DU-RHÔNE; PUY-DE-DÔME.]
 ST-SALVADOR. [BAHAMAS.]
 ST-SAMPSON, Harbour. [GUERNSEY.]
 ST-SERNIN. [AVEYRON.]
 ST-THÉOGONNEC. [FINISTÈRE.]
 ST-VALLIER. [DRÔME.]
 SAINTE-FOY-LE-GRAND. [GIRONDE.]
 SAINTE-GENEVIEVE. [AVEYRON.]
 SAINTE-MARIE, or ST-MARY'S ISLAND. [MADAGASCAR.]
 SAINTE-MARIE-AUX-MINES. [RHIN, HAUT.]
 SAINTE-MARIE-D'OLORON. [PYRÉNÉES, BASSES.]
 SAINTE-MENEHOULD. [MARNE.]
 SAINTE-MÈRE-EGLISE. [MANCHE.]

* Many other names of places beginning with 'Saint' will be found arranged according to the following part of the name.]

SAINTES. [CHARENTE-INFÉRIEURE.]

SAINTONGE, a province of France, lying on the coast of the Atlantic. It was bounded N.W. by the little province of Aunis, from which it was in one part separated by the Charente; N.E. by Poitou; E. by Angoumois, or Angoumois; S. and S.W. by Le Bordelais, or Guyenne Proper, from which it was separated by the Gironde; and W. by the ocean. It was united with Angoumois into one military government; and the district of Brouageais, which extended along the sea-coast between the Charente and Gironde, was detached from it, and annexed to the government of Aunis, so as to deprive Saintonge of its maritime character. Saintonge was divided into Haute and Basse, or Upper and Lower, separated from each other by the Charente. Saintonge is now comprehended in the department of Charente-Inférieure, except a very small part which is included in the department of Charente. [CHARENTE; CHARENTE-INFÉRIEURE.]

The province obtained its name from the Celtic people, the Santones or Santoni, by whom in Cæsar's time it was inhabited. It formed part of the Roman province of Aquitania, and afterwards fell into the hands successively of the Visigoths and the Franks, and was included in the duchy of Aquitaine, afterwards Guienne.

SAISSAC. [AUDE.]
 SAKARIYEH, RIVER. [ANATOLIA.]
 SALA. [SWEDEN.]
 SALAGNAC. [CREUZE.]

SALAMANCA, a city of Spain, capital of the modern province of Salamanca, which is included in the ancient province of Leon. It is situated in 41° 5' N. lat., 5° 43' W. long., on the north bank of the Tormes, which is here crossed by a stone bridge resting on 27 arches solidly built on Roman foundations. Salamanca is about 180 miles W.N.W. from Madrid, and 120 miles S. by E. from the city of Leon. It is the see of a bishop. The population in 1845 was 12,870.

The city is built on rocky and elevated ground, in the form of a horse-shoe, with the curve sweeping round to the north. It is surrounded by a wall, and entered by 13 gates. That portion of the wall which overlooks the river is very ancient. The streets are steep, narrow, crooked, and dark, mostly consisting of old stone houses, among which are some large and stately residences of the old nobility.

The western portion is mostly in ruins, as it was left by the French on their retreat from the city in 1812. The whole place has an antique and venerable look, but is dull and cheerless. There are several public squares and a few fountains, but the main supply of water is from the river. The Plaza Mayor is a vast square, the largest in Spain, with an arcade, or piazza, of 90 arches supported on columns. It was constructed in 1700-1738. This Plaza contains the town-hall (casa del ayuntamiento) and the post-office. It is occasionally fitted up as a bull-arena (plaza de toros), when it can accommodate 16,000 to 20,000 spectators.

Salamanca contains two cathedrals. The old cathedral is a building of the 12th century, simple and massive. The new cathedral, which is close to the old one, is a splendid specimen of the florid gothic. It was begun in 1513, and was not completed till 1734. The grand entrance-portal is covered with statues and ornamental carving, and is exceedingly beautiful. The two towers are of later date, and of inferior architecture. The interior is divided into a nave and side-aisles, the nave being 130 feet high, and the aisles 80 feet. The length of the cathedral is 378 feet, and the width 181 feet. Besides the two cathedrals Salamanca contains 24 parish churches, which exhibit various styles of architecture, mostly gothic. In 1791, when Mr. Townsend was at Salamanca ('Journey through Spain'), there were 27 parish churches, with 15 chapels; 39 convents, of which 16 were nunneries; and 25 colleges. In the course of the three years during which the French held possession of the city, they destroyed about 20 of the convents, and about the same number of the colleges, partly in order to construct fortifications for the defence of the city, and partly to use the timber for fire-wood.

During the middle ages Salamanca acquired great celebrity by its university, one of the first in Europe. It was founded in 1200 by Alfonso IX. of Leon, and afterwards in 1239 extended by Alfonso X., who incorporated with it that of Palencia. It soon rose into importance, and its professors became eminent in Europe by their acquaintance with the Arabian writers on medicine and philosophy, and through them with the writings of the Greeks. It remained however stationary during the 15th century; and whilst sound science was spreading throughout the rest of Europe, very little was taught here except medicine and dogmatic theology. The number of students in the 14th century amounted to 14,000. In the 16th century the number had diminished to 7000. It continued to languish till the French invasion, since which it has been comparatively deserted. The students are now about 600. The university buildings consisted of 4 superior colleges (colegios mayores) and a library, which still remain; and 21 smaller colleges, which are all or nearly all destroyed. The college of San Bartolomé is the oldest of the collegios mayores, and is thence called El Colegio Viejo (the Old College). It was modernised about 1767. The Colegio de Cuenca was an exquisite specimen of the cinquecento style, but only a small part of it remains. The Colegio do Santiago, usually called El Colegio del Arzobispo, was begun in 1521, and is also of the best period of the cinquecento style. The Colegio del Rey (King's College) was commenced in 1625. The quadrangle is Doric. The Jesuits had also a college, which was built by them in 1614. It consists of two wings each 200 feet long, and three stories high. When the Jesuits were expelled from Spain, one wing was appropriated to the students of the Bishop's Seminary, and the other to the Irish Catholic clergy, who were then educated here. One wing is still used as a clerical seminary, and the other as an Irish mission-school. The façade of the Library of the University is of the period of Ferdinand and Isabella, and is a rich specimen of the decorative and heraldic style. The Library contains about 25,000 volumes. The Dominican convent of San Esteban, which still remains, was one of the finest structures of enriched gothic in Spain. The façade and portal are full of elaborate details of great beauty, and the church belonging to the convent is also a noble building. The French made a magazine of the church, and converted the cloisters into stables.

The manufactures of Salamanca consist of common cloth, hats, leather, earthenware, and a few other articles.

The battle of Salamanca took place on July 22, 1812, between the British under Wellington and the French under Marmont. The French had abandoned the place on the first attack by the allies; but Marmont, having received reinforcements, advanced against the British line, and after various movements the battle took place near the heights of Arapiles, a short distance from the city. The French commander having imprudently extended his left wing too far, Wellington took advantage of his error, and the enemy was defeated with great loss.

Under the Romans, Salamanca was a municipium of the province of Lusitania. The Roman name was Salmantica. It does not seem to have been of much importance during the Roman domination in the peninsula.

(Ford, *Handbook of Spain*; Madox, *Diccionario Geografico de España*; Townsend, *Travels in Spain*.)

SALAMANCA. [MEXICO.]

SALAMIS, now Kolúri, is a small island adjacent to the coast of Attica. It forms the southern boundary of the beautiful Bay of Eleusis, and is only separated from the mainland, at the eastern and western extremities respectively, by a narrow winding channel. The bay is surrounded on the west, north, and east by the high land of

Attica, of which the northern shore of Salamis seems like a continuation, and thus the bay has the appearance of a large lake. The two channels have deep water, and a vessel may enter the Bay of Eleusis through them with any wind.

The form of the island is very irregular. Its greatest length from north to south is about ten miles, and the longest line that can be drawn in the island, from about east to west, is a little more; but the area is probably not above fifty square miles. It produces good honey. There is only one stream in the island, which enters the sea on the south-west coast, and is probably the Bocaros, or Bocalias, of Strabo. The village of Koluri, which is situated on the shore of the deep Bay of Koluri, on the west side of the island, with two other villages called Mulki and Ambelákia (vineyards), and a convent, are the inhabited places on the island.

The old city of Salamis, which was deserted in the time of Strabo, stood on the south coast opposite to Ægina; but the city Salamis of Strabo's time was on the small Bay of Ambelákia, and near the peninsula which projects from the eastern part of the island to the shores of Attica, and terminates in Cape Cynosura. (Herod., viii. 76.) About midway between this peninsula and the Piræus, but not exactly in the strait leading to the Bay of Eleusis, is the small island of Payttaleia, now Lipsokutáli, which makes a conspicuous figure in the battle of Salamis. (Herod., viii. 95.)

The ancient names of Salamis were Sciras and Cychreia, derived from ancient heroes. It was also called Pityuasa, from the pines that grew in it. In Homer the island is only called Salamis, a name said to be derived from Salamis, the mother of Asopus. About the time of Solon and Pisistratus there was a dispute about the island between Megaris and Attica, which terminated in favour of Attica, and from that time the island became one of the Attic demí. In the time of Pausanias the city was in a ruined state, but he could trace the remains of the agora, and there was a temple of Ajax with a statue of ebony.

The great event in the history of Salamis is the naval battle fought B.C. 480, between the combined Grecian fleet and the Persian fleet under Xerxes. The battle took place chiefly in the eastern strait, which, being a contracted space, was very unfavourable to the enormous fleet of the Persians. The Persian king saw the battle from the Attic coast, where he had his seat at the foot of Mount Ægaleos, with his secretaries by his side to register the events of the action. (Herod., viii. 90.) The result was the complete defeat of the Persian armament.

(Herodotus, viii.; Æschylus, *Persæ*; Strabo, p. 393; Pausanias, i. 85; Leake, *On the Demí of Attica*.)

SALAYER ISLANDS are a small group in the Indian Archipelago, situated between 5° 40' and 6° 20' S. lat., 120° and 121° E. long. The group consists of an island about 30 miles long, with an average width of 8 miles, and several smaller islands. The smaller islands are uninhabited, with the exception of two called Bonaratta and Calauwe. The principal island is divided from Cape Lassoa in Celebes by a strait about 8 miles wide. In the strait there are three small rocky islands, called the Budjeroons, which are uninhabited.

A ridge of high hills traverses the island from north to south, and descends to the east and west with a rapid slope. These hills are entirely covered with wood, and abound in deer. Along the base of the hills there are tracts of low land, which are carefully cultivated. They produce several roots and grains common in the archipelago, but especially botta, a kind of millet, which constitutes the chief article of food of the inhabitants. Cotton is also grown to a great extent. Among the trees there are several kinds of palms, and also the tallow-tree, the substance obtained from which is used for burning, as it is in China. The inhabitants, who are stated to amount to about 60,000, are Malays, and apply themselves to agriculture, and the manufacture of coarse cotton stuffs. The island is divided among several petty princes, who are dependent on the Dutch at Macassar.

SALCOMBE. [DEVONSHIRE.]

SALEM. [HINDUSTAN; MASSACHUSETTS; NEW JERSEY; OREGON.]

SALERNO, an archiepiscopal city in the kingdom of the Two Sicilies, capital of the province of Principato Citra, is finely situated on the sea-coast, at the head of the Gulf of Salerno, and surrounded by a beautiful tract of country at the southern foot of the chain of the Apennines, in 40° 44' N. lat., 14° 46' E. long., 30 miles S.E. from Naples, and has about 12,000 inhabitants. The city is old and irregularly built, with narrow and dirty streets, but contains a few good buildings, such as the cathedral and the governor's palace. The Marina, or quay, which was constructed by the French, is a mile in length, and forms a fine promenade. The harbour, which was commenced by John of Procida for Manfred in 1260, and enlarged and completed under Robert the Wise, is now almost useless in consequence of the accumulation of sand: only small craft can enter it. The ruins of the old Greek or Lombard citadel, which was taken by Robert Guiscard after a siege of eight months, crowns a lofty hill above the city. Salerno has a lyceum which grants academical degrees, a court of justice for the province, a theatre, and many churches and convents. The cathedral, the most remarkable structure in Salerno, rebuilt by Robert Guiscard in 1084 on the site of a former cathedral destroyed by the Saracens, is dedicated to St. Matthew. It is adorned with columns of porphyry and verde-antique, mosaics, bas-reliefs, and other ancient works of art, brought by its founder from the temple of

Pæstum. Round the inclosure of the quadrangle are fourteen ancient sarcophagi. The bronze doors were erected in 1099. The interior, which is modernised, contains many of the works of art just alluded to, and also many pieces of excellent sculpture, besides two pulpits and an archiepiscopal throne of rich mosaic work. But it is more celebrated for the tombs which it contains than for its works of art. Among these are the tombs of several descendants of the Norman dukes of Apulia, and the monument of Pope Gregory VII., who died in Salerno the guest of Robert Guiscard in 1085: this monument was restored in 1578. The crypt beneath the cathedral is celebrated for containing the body of St. Matthew, which is said to have been brought here from the east in 930. It also contains the tomb of Margaret of Anjou; and three ancient sarcophagi, which inclose the remains of archbishops, and are adorned with bas-reliefs. An annual fair for native and foreign goods and for cattle is held at Salerno in the month of September, and is resorted to by the merchants from Naples, and by vast numbers of the peasantry.

Salerno (ancient Salernum) seems to have been founded by the Phœnicians. It early came into the hands of the Greeks. Under the Romans it was an important city, and was much frequented for the beauty of its environs during the empire, when it became a Roman colony. The Goths took it in the 6th century; soon after the Lombards made themselves masters of the city, which became the residence of the dukes of Benevento. It was taken from the Lombards by the Saracens A.D. 905. In A.D. 920 the Greek emperor dispossessed the Saracens, but the city seems to have been recovered by the Lombard princes, from the last of whom (Gisulph) the city was wrested by Robert Guiscard in the 11th century. From this time it became the chief seat of the Norman power south of the Apennines. Roger II., duke of Apulia, was elected king of Naples and Sicily by an assembly of barons held in Salerno A.D. 1130. In 1193 the city was sacked and destroyed by the emperor Henry VI. The town had recovered in the following century. Ever since the foundation of the monarchy it has been annexed to the crown of Naples, and it confers the title of prince upon the heir-apparent to the throne of the Two Sicilies. The city of Salerno was famous from very early times for its university and school of medicine, which was protected and flourished most under the Norman princes. The university, probably the most ancient in Europe, existed till 1817, when it was replaced by the lyceum.

SALFORD. [MANCHESTER.]

SALIAN RIVER. [KUR.]

SALIBABO ISLAND. [MOLUCCAS.]

SALIES. PYRÉNÉES, BASSES.]

SALINE. [LIPARI ISLANDS.]

SALINS. [JURA, Department of.]

SALISBURY, or NEW SARUM, the capital of Wiltshire, an episcopal city, a municipal and parliamentary borough, and the seat of a Poor-Law Union, is situated on the Great Exeter road, at the junction of the rivers Avon, Wily, and Bourne, in 51° 5' N. lat., 1° 48' W. long., distant 82 miles W.S.W. from London by road, and 94 miles by the Salisbury branch of the South-Western railway. The municipal borough is co-extensive with the parliamentary: the population in 1851 was 11,657. It is governed by 6 aldermen and 18 councillors, one of whom is mayor; and returns two members to the Imperial Parliament. The city comprises three parishes, the livings of which are in the archdeaconry and diocese of Salisbury. For Poor-Law purposes Salisbury is managed under a local act; that part of the borough which is affected by the act comprises an area of 480 acres, with a population in 1851 of 8930.

This city had its origin in the 13th century, when the bishop and canons of the cathedral of Old Sarum [WILTSHIRE], in consequence of a feud with the captains of the fortress, commenced a new church on lands belonging to the see. The inhabitants of Old Sarum followed their clergy, and New Sarum, or Salisbury, rose into existence. Henry III., made it 'a free city,' and gave to the inhabitants a fair and a market; in the succeeding reigns several parliaments were held in it. The city was fortified by a wall and ditch; and the erection of a bridge over the Avon at Harnham brought to it the great western road which had previously passed through Old Sarum. The borough has returned members to Parliament from the 23rd year of the reign of Edward I.

The city occupies part of a peninsula formed by the river Avon on the west and south, and by the river Bourne on the east. The suburb of Fisherton Anger, which forms part of the borough, is on the left bank of the Avon, at the confluence of the Wily. At the suburban village of Harnham, the Dorchester and Exeter road crosses the Avon by a bridge of 10 arches. There are two other bridges over the Avon. The principal part of the city lies immediately to the north of the cathedral close, and consists of several regular streets, forming a series of squares called chequers, the interior of which is laid out in courts and gardens. Most of the houses are of brick, of comparatively modern erection. The streets are well paved, lighted with gas, and drained by brooks let in by floodgates from the Avon through the principal streets. The cathedral close, a meadow of half a square mile in area, is entered by three ancient gates, and the open space around the cathedral adds much to the imposing beauty of the edifice, which for size and for uniformity and purity of style is one of the finest ecclesiastical structures in England.

It is of the early English style, in the form of a double cross, and consists of a nave and choir with two side aisles, a space on the east of the choir, and a lady-chapel at the east end; a large transept with an aisle on its east side; a smaller transept east of the former, with an aisle on its east side; a central tower and spire; a north porch, a monument-room, or vestry, at the south end of the eastern transept; cloisters, and a chapter-house. The tower and spire were built a century later than the church. The church is 474 feet in extreme length, the great transept is 230 feet, the nave from the western door to the organ-screen is 229 feet. The height within the vaulting of the nave, choir, and transepts is 81 feet; the external height, to the ridge of the roof is 115 feet; the height of the spire, which is the highest in England, is 404 feet. The cloisters and the cemetery of the close form a square of 181 feet, inclosed by a beautiful arcade corresponding in style with the church, and connected with the chapter-house, which is a remarkably elegant octagonal chamber with a vaulted roof, supported by a clustered pillar in the centre, and adorned with some curious sculptures. There is some excellent stained glass. The episcopal palace in the south-eastern angle of the close is a large building of various dates and styles, with an extensive garden. At the north gate, adjoining the city, is the Matrons' college, founded by Bishop Ward for ten clergymen's widows of the diocese. There are two parish churches and a chapel of ease; two chapels for Independents, two for Wesleyan Methodists, and one each for Primitive Methodists, Baptists, and Roman Catholics. In the close is a Normal school for female teachers, under the superintendence of the bishop and clergy of the diocese. This institution had 60 students in residence in 1854. The Cathedral Grammar school had 37 scholars in 1854. There are also a school for preparing indigent girls of respectable families for superior service; two National schools; and one Roman Catholic school. In the centre of the city is the market-place, a spacious and handsome square. At its south-east corner stands the council-house, a fine building of brick with a stone portico, erected at the expense of the Earl of Radnor. At the south-west corner of the square is the poultry-market, which contains a very handsome hexagonal cross of the age of Edward III. Among the public buildings are the county jail and bridewell; a spacious and well conducted infirmary; the Salisbury and Wiltshire library and reading-rooms, with a museum attached; the assembly- and concert-rooms; the savings bank; the Wilts and Dorset female penitentiary; a small theatre; and the Union workhouse, which is part of an ancient monastic establishment. The charities of the city produce a yearly revenue of 5000*l*. Salisbury contains many examples of ancient domestic architecture. The Lent assizes for Wiltshire are held in the city, also quarter and petty sessions, and a manor court-leet. The manufacture of hardware and fine cutlery, particularly scissors, is carried on to some extent; but the principal traffic consists in the sale of agricultural produce. There are markets, on Tuesday for corn, Saturday for cheese and provisions, and once a fortnight for cattle. Fairs are held on the Monday before April 5th, and on October 22nd. Salisbury is the place of election for the southern division of Wiltshire.

The see of Salisbury is in the province of Canterbury. The diocese includes Dorsetshire and the larger part of Wiltshire, and comprises 444 benefices; it is divided into the archdeaconries of Wilts, Dorset, and Salisbury. The chapter consists of the dean, archdeacon, chancellor, precentor, and five canons. The income of the bishop is fixed at 5000*l*.

SALLE, LA. [GARD.]

SALLEE, or SALE. [MAROCCO.]

SALLES. [AUDE.]

SALLES-COMTAUX. [AVEYRON.]

SALM. As far back as the 10th century, there have been in Germany two counties bearing the name of Salm; the county of Ober-Salm (with the rank of a principality) in the Vosges Mountains, between Alsace and Lorraine, in the circle of the Upper Rhine; and the county of Nieder-Salm, in the Ardennes, between the duchy of Luxemburg and the bishopric of Liège, which subsequently made part of the circle of Burgundy. Of the family of the counts of Salm, the two principal lines, sub-divided into several branches, subsisted till the French revolution, during which their territories were annexed to France, and in the sequel other possessions were assigned them from the secularisations on the east of the Rhine. At present, the elder line is divided into three branches:—Salm-Salm, Salm-Kyrberg, and Salm-Horstmar. The second line is that of Salm-Reifferscheid, divided into the two branches of Salm-Reifferscheidt-Kraatheim and Salm-Reifferscheidt-Dyck. The sovereign rights held by these princes have been transferred to Austria, or to other members of the German confederation, in whose dominions their possessions are situated.

SALO. [BRESCIA.]

SALON. [BOUCHES-DU-RHÔNE.]

SALONIKI. [THESSALONICA.]

SALOP, County of. [SHROPSHIRE.]

SALSETTE, an island in the Indian Ocean, close to the west coast of Hindustan, and included in the British presidency of Bombay. It is a little to the north of the island of Bombay, with which it is united by a causeway which was constructed in 1805, but which is so

narrow as to be rarely used by carriages. Salsette extends from 19° 4' to 19° 17' N. lat., 72° 50' to 73° 2' E. long., with an average length of about 16 miles, and an average breadth of about 10 miles; its area is therefore about 160 square miles.

The island consists for the most part of rocky hills, in some parts of considerable elevation, but covered with underwood to their tops; in the valleys there are groves of mangoes and palms, and some fine timber-trees. There are tigers in the jungle, and great numbers of monkeys and jungle-fowl. The soil is said to be fertile, but little care is bestowed on its cultivation. An excellent road has been formed round the island by the Bombay government. Tannah and Gorabunder are the only towns. Gorabunder is little better than a poor village, but Tannah is a neat and flourishing town on the eastern coast of the island, chiefly inhabited by descendants of Portuguese and by Hindoos. There is a small but regular fortress, with a considerable cantonment of British troops at Tannah. The hills are inhabited by a wild race of people, who are charcoal-burners, and have little or no intercourse with the Hindoos, who inhabit the lower grounds.

The chief objects of curiosity in Salsette are the temple caves of Kennery, which resemble those of Elora and Elephanta. They are for the most part small, and are cut in two of the sides of a hill, at different heights and of various forms. The largest cave is a Buddhist temple, a rectangle about 50 feet long by 20 feet wide, terminated by a semicircle. The entrance is formed by a lofty portico, over which, but detached and a little to the left, is a high octagonal column, with three lions sculptured on the top, seated back to back. A colossal statue of Buddha, with his hands raised in supplication, is on the east side of the portico. The temple is entered by a large door, above which are three windows contained in a semicircular arch. A colonnade of octagonal pillars surrounds the temple on every side except the entrance. The ceiling of the cave is a semicircular arch, curiously ornamented with slender ribs of teak-wood, of the same curve as the ceiling, which they seem to support; this however is not the case.

Salsette is supposed to contain about 50,000 inhabitants, who are chiefly occupied in fishing, of whom about 10,000 are of Portuguese origin. The Portuguese obtained possession of the island in the 16th century, but it was taken from them by the Mahrattas in 1750, and conquered from the Mahrattas by the British in 1774.

SALT-RANGE. [AFGHANISTAN.]

SALTA, the most northern of the provinces of the Argentine Confederation, South America, extends between 22° and 26° 30' S. lat., 61° and 68° W. long. It is bounded S. by the province of Tucuman, E. by the Gran Chaco, N. and W. by the republic of Bolivia. The area is about 56,000 square miles; the population is about 60,000.

The surface, hydrography, &c. of the country are described under ARGENTINE CONFEDERATION.

It has a great diversity of surface and almost every variety of soil and climate. On the west it includes the eastern sides of the Andes with the lower offsets of that system. On the north, where it borders on the republic of Bolivia, it includes a portion of the desert table-land of Yavi and the range called Abra de Cortaderas. It comprehends likewise a portion of the Gran Chaco; the Desapoblado, whose climate resembles that of Siberia; the valley of the Guachipas, which in climate and productions represents Europe; and the Plain of Salta and the valley of the Rio de Jujuy, which in both climate and productions resembles the West Indies.

The principal rivers are the Vermejo and the Salado—described under ARGENTINE CONFEDERATION. The Vermejo forms the eastern boundary of Salta; it is formed by the junction of the Tarija, and the Jujuy (a stream which belongs wholly to this province), and is navigable for large boats from their confluence about 35 miles below Oran. The head-streams of the Salado rise on the eastern slopes of the Andes in the south-western part of this province. In its upper course the main stream is called the Sileta, and subsequently El Pasaje, but it is known as the Salado for some distance before it passes out of Salta. The Salado drains the southern and western half of the province. During the summer season the water is low and the river is easily fordable, but when the rains set in it becomes so much swelled that all the ordinary traffic between Salta and the lower provinces of the Confederation is suspended. The road connecting Salta with Buenos Ayres is noticed under ARGENTINE CONFEDERATION (vol. i, col. 473), and the inconveniences which this as well as the other provinces of the interior, suffers from the limited means of transit, and the advantages to be derived from the establishment of steam communication on the Paraná, are indicated.

As already mentioned, the country possesses a remarkable variety of soil, and a climate ranging from extreme heat to the most intense cold, permitting the cultivation of almost every kind of natural production. But the country is too thinly peopled, the difficulties of transit are too great, and the inhabitants have too little energy and industry to allow the resources of the country to be other than most imperfectly developed, if even the country itself were in a less disturbed state. The inhabitants are now chiefly settled in the larger towns, and in the valleys of the lesser affluents of the Vermejo and Salado. The cereals grown are wheat and maize, which are raised in considerable quantities in the valleys of the south, for the supply of

the other parts of the province. The vine is extensively cultivated in the same district, and a good deal of common wine made and exported to the neighbouring provinces. The cocoa plant is cultivated in the department of Oran. In the valleys of the Jujuy and its tributaries tobacco and the sugar-cane are grown in sufficient quantities to supply the whole of Salta, and to furnish exports to the rest of the upper provinces, and also to Chili. Cotton and indigo are also cultivated to some extent; and the cochineal insect furnishes a source of profit. Along the valley of the Vermejo there are very extensive forests of valuable timber-trees, as well as the palm, the carob, and other trees which furnish the natives with fruit and a substitute for bread, the maté plant, &c. The cochineal cactus and the aloe are found in every direction. One of the chief sources of wealth to the province has always been the rearing of mules, which are bought in the southern provinces in a very lean state, acquire strength in the rich pastures of Salta, and are sent to Peru and Bolivia in large numbers. Before the revolution from 50,000 to 60,000 mules were annually exported from Salta to Peru alone, but the trade with Peru has greatly declined. In the colder parts of the province alpacas, vicuñas, chinchillas, and guanacos are indigenous. The mountains contain gold, silver, copper, and other metals. The mines have not proved very successful; but the inhabitants of the valleys obtain considerable quantities of gold after the rains from the rivers, and in the alluvial soil which has been left by the receding waters. In the desolate country known as the Desplabado are extensive saline plains, from which the inhabitants of the adjacent districts obtain large quantities of salt, which they carry for sale to the towns of Salta and Jujuy.

Like the other provinces of the Argentine Confederation, Salta is a federal state, owning however little more than nominal dependence upon the central government. The executive power is vested in a governor elected by the junta or provincial assembly.

Salta, the capital of the province, is situated on the left bank of the Sileta, in the valley of Chicuaña, in 24° 51' S. lat., 64° 48' W. long.; population about 8000. The streets are regular, but narrow. In the central square are the government-house, the cathedral, and other public buildings. Jujuy is built in an extensive basin, surrounded by high mountains, on the banks of the Rio de Jujuy; population about 3000. It has some traffic, as the carriage-road leading to Bolivia terminates here, and the goods must be transported farther north on mules. At Jujuy begins one of the most extraordinary mountain-passes in the world. A narrow valley extends from the town to the summit of the range called Abra de Cortaderas, a distance of 90 miles by the road. The highest summit of this road appears to have an elevation of between 11,000 and 12,000 feet. Oran is a small town, founded in 1793, on the Rio de Tarija, about 80 miles above its junction with the Rio de Jujuy. As the centre of a very fertile district, Oran is a place of considerable trade.

SALTASH. [CORNWALL.]

SALTCOATS, Ayrshire, Scotland, a burgh of barony, and a small port on the coast of the Frith of Clyde, 31 miles S.W. from Glasgow by road, and 30½ miles by the Glasgow and South-Western railway. The population in 1851 was 4338. A large portion of the population is employed in weaving for the Glasgow and Paisley manufacturers: they produce gauzes, shawls, &c. Many women are employed in sewing and flowering muslin. Magnesia is extensively manufactured. The harbour admits vessels of 200 tons burden. Some ship-building is carried on. Saltcoats possesses a handsome chapel of ease and a Free church, in both of which the services are frequently conducted in the Gaelic language; two chapels for United Presbyterians, a parochial school, a subscription library, and a public reading-room. The town is frequented in summer by sea-bathers. In the vicinity are several collieries.

SALTFLEET. [LINCOLNSHIRE.]

SALTILLO. [MEXICO.]

SALUEN, RIVER. [BURMA.]

SALUZZO. [CONI.]

SALVADOR, SAN. [SAN SALVADOR.]

SALVATIERRA. [BASQUE PROVINCES.]

SALVETAT. [HÉRAULT.]

SALZBURG, a crownland of Austria, formerly the duchy of Salzburg, is bounded W. by the Tyrol and Bavaria; N. by Bavaria and the crownland of Upper Austria; E. by the same crownland and Styria; and S. by Illyria. The area is 2639 square miles; and the population in 1850 was 146,007. It is a mountainous country, covered by the Noric Alps, which on its southern frontier branch out from the Rhetian Alps. High mountains screen the valley of the Salzach for the greater part of its length, and numerous lateral valleys open into it, divided from each other by branches of the principal chains, and traversed by rapid torrents. The principal valley, one of the most lovely that has been formed by nature, and adorned by the industry of man, begins in the western corner of the country, runs first to the east, then to the north, and is inclosed on the right side, along the southern frontier, by lofty mountains, the continuation of the central Alpine chain, which passing through the Tyrol, to the eastern frontier of Salzburg, forms an almost uninterrupted chain of glaciers, here called Kees, with all the varieties of Swiss scenery, defiles, avalanches, cascades, lakes, &c. Some of these mountains are covered with per-

petal snow. The chain of calcareous rocks which accompanies the central Alps to the north forms the frontier on the other sides, and its highest points are 8382 feet above the level of the sea. The country is open to the north only where the Salzach issues from the mountains, and forms a fruitful plain, which however is marshy in some parts. The Salzach, the principal river, is a feeder of the Inn. The lakes are numerous; that called the Zellersee is ten miles long and above two miles broad. Of the many mineral waters, the hot springs of Gastain are the most celebrated. The cascade of the Krimmler Ache, about 5 miles above the village of Wald in the south-western angle of the province, is the most striking in Austria; the torrent falls in five breaks from the height of above two thousand feet, forming at last a magnificent arch. There are other very fine cascades. The climate is severe. Even in the neighbourhood of the city of Salzburg the hills, which are much lower than those of the south, are covered with snow by the end of September, though it does not lie permanently till November. In the south the winter lasts, with little intermission, from the beginning of November till April, and storms and frosts do not cease till the end of June. The heat in summer is very great in the valleys, and vegetation is rapid. Most of the valleys are very fruitful, and produce corn, flax, and fruit, which thrives even at the foot of the mountains. The middle mountain region is covered with forests of fir, larch, and pine, and the upper with fine Alpine pastures, which afford subsistence to numerous herds of cattle, and to a breed of remarkably strong and large horses. There are chamois goats, marmots, bustards, and heath-cocks. The corn produced is in general of excellent quality, but not sufficient for the home consumption. The products of the mineral kingdom are gold, silver, copper, iron, lead, cobalt, arsenic, rock crystal, marble, saltpetre, salt, sulphur, asbestos, and serpentine. The once celebrated mines of gold and silver now yield little; those of copper, iron, lead, and arsenic are very productive, and the salt-works and marble-quarries are very important. The country people make their own clothing. The inhabitants are a robust race.

In ancient times Salzburg was inhabited by the Celts, who, as dwellers on the Tauern (which is the name they still give to their language to the mountains), were called by the Romans Taurisci. Salzburg was in the province of Noricum, the capital of the province. Hadrian planted a colony in Juvavium, or Juvavia, the old capital of Noricum, which occupied the site on which the city of Salzburg now stands. The decline of the Roman power led to the ruin of Juvavia, which was plundered and destroyed by the Heruli. The country was nearly a desert when the pious Scotchman, Hrodbert (Ruprecht or Rupert), arrived there towards the end of the 7th century, and converted the natives to Christianity. A monastery and church were built for him in Salzburg, and richly endowed. Arno, the seventh successor of St. Rupert, was raised in 798, by Pope Leo III., to the archiepiscopal dignity.

SALZBURG, the capital of the crownland of Salzburg in Austria, is situated in 47° 48' 10" N. lat., 13° 1' 32" E. long., on the banks of the Salza or Salzach, over which there is a bridge 370 feet long and 40 feet wide. The situation is one of the most picturesque in Germany. The city is surrounded with an amphitheatre of lofty mountains, which form a noble background to the view. The river runs between two isolated mountains of breccia, the Mönchsberg on the left and the Capucinerberg on the right, leaving in many places only a narrow space on the banks, on which the city is built. The streets are narrow and crooked, and the squares small, but regular. The houses are built of red marble from the neighbouring quarries, with flat roofs. The archbishops adorned the city with so many splendid buildings, chiefly in the Italian style, that Salzburg was called Little Rome. It is surrounded with walls and bastions, and has eight gates, one of which, called the new gate, is a tunnel cut through the Mönchsberg, 415 feet long, 39 feet high, and 22 feet broad. Salzburg gives title to an archbishop since A.D. 798. The university, founded in 1620, was abolished in 1800, and a lyceum or academy established in its stead, which has a library of 38,000 volumes, 20 professors, and 310 pupils (in 1850), a botanical garden, and a geological museum. The monastery of St. Peter has a library of 40,000 volumes. The city has a theatre, four hospitals, a lunatic asylum, and many other charitable and useful public institutions. The cathedral is built (1614-63) in the Roman style, with a façade of white marble. It is a building of great architectural merit, adorned with many statues of white marble, and good paintings. St. Peter's church contains the tombs of Haydn and St. Rupert. In the cemetery at the back of this church is shown the original cell occupied by St. Rupert, who introduced Christianity into this part of Europe: he died A.D. 623. The cell is now inclosed in the chapel of St. Egidius. The university church, built in 1696-1707, is in a mixed Greek and Roman style. St. Margaret's, a handsome edifice, was built in 1485. The Benedictine church has some beautiful painted-glass windows executed in 1480. The palace called the Winter Residence is a very extensive building ornamented with columns: it is now used for public offices. The square in front of it is adorned with the finest fountain in Germany, 45 feet high, made entirely of white marble. On the opposite side of the square is a magnificent palace called the Neubau, now belonging to the emperor. The town-house and the palace of Count Kerenburg are also splendid buildings. The stables for 180 horses are accounted

the handsomest in Europe. A stream called the Alberbach flows through them; the racks are of white marble. Two fine riding schools, one for the summer, and one for the winter, are attached to the stables. There are many other buildings that deserve notice, for instance some of the 26 churches, the palace of Mirabell, and the church of St. Sebastian, both rebuilt since the fire of 1818, which destroyed part of the city. In the churchyard of St. Sebastian is the grave of Paracelsus, who died here A.D. 1541. A bronze statue of Mozart (a native of Salzburg) by Schwanthaler is erected in the centre of the Michaels-Platz. Salzburg is rich in Roman antiquities, including baths and fine mosaics. The fortress of Hohensalza, commanding the town, from which there is a most interesting prospect, is now used as a barrack. There are in the town one military and three civil hospitals, an hospital for incurable patients, several schools, and many other useful and charitable institutions. The inhabitants, about 18,000 in number, manufacture calicoes, leather, and hardware. Two large fairs are held annually in the town, which has an important transit trade between the eastern Austrian provinces and Bavaria, and between Bavaria and Italy. The environs of Salzburg embrace a great variety of grand and picturesque scenery.

SALZWEDEL. [MAGDEBURG.]

SAMAR. [PHILIPPINES.]

SAMARA. [SIBIRSK.]

SAMARANG. [JAVA.]

SAMARCAND. [BOKHARA.]

SAMARIA. [PALESTINE.]

SAMBOR. [GALICIA, AUSTRIAN.]

SAMBRE. [AISNE; MEUSE RIVER; NORD.]

SAMUI ISLAND. [SIAM.]

SAMEN MOUNTAINS. [ABYSSINIA.]

SAMFORD, a hundred in the county of Suffolk, which has been constituted a Poor-Law Union. The hundred of Samford is bounded N. by Bosmere and Claydon hundred, E. by the river Orwell, S. by the river Stour, and W. by the hundred of Cosford. The hundred and union comprise 28 parishes, with an area of 50,230 acres, and a population in 1851 of 12,498.

SAMNIUM, or territory of the Samnites, an ancient nation of central Italy, comprised an extensive tract of country on both sides of the central ridge of the Apennines, including the valleys of the Vulturinus, Tamarus, and Calor, towards the Tyrrhenian Sea, and those of the Sarus, Tifernus, Trinius, and Frento, towards the Adriatic, and corresponding to the present provinces of Sannio and Principato Ultra, and parts of Terra di Lavoro, and of Abruzzo Citra, in the kingdom of Naples. It was bounded N. by the Peligni and Marrucini, and by the Adriatic, for the Frentani, who extended along the coast of that sea, formed part of the Samnite confederation, and were also of Sabine origin; E. by Apulia and Lucania; S. by the Campanians, being divided from the latter by the ridges of Tifata and Taburnus; and W. by Latium and the country of the Marsi. The Samnites were originally a colony of the Sabini, which migrated in remote times, probably before the building of Rome, to the banks of the Vulturinus and the Tamarus, and thence spread on one side as far as the plains of Apulia, and on the other to those of Campania. They were an agricultural and pastoral people, and as their numbers increased beyond the means of subsistence, they followed the custom of their Sabine ancestors, and sent forth colonies, which were the origin of the Lucanians, who gradually extended as far as the southern extremity of the peninsula. The Samnites were divided into several nations or tribes, known by the names of Pentri, Caudini, Caraceni, Hirpini, and Frentani, the three first of which inhabited the country designated by the name of Sabinium Proper, having the Frentani on the north, and the Hirpini to the south-east. Their principal towns were:—*Bovianum*, the head town of the Pentri (Livy, ix. 31), near the modern Bojano, at the foot of the lofty Mount Matese, near the source of the Tifernus; part of the walls, formed of irregular polygonal stones, still remains. *Bovianum* was entirely destroyed by an earthquake in the 9th century; its site is covered with a marshy alluvial soil, in which ancient remains have been found. The modern Bojano stands on a rocky hill, one of the lowest offshoots of Mount Matese. *Esernia*, now *Isernia*, on the opposite or western side of the Matese ridge. *Allifia*, south of *Esernia*, in the valley of the Vulturinus. The modern Alife, which occupies the ancient site, still gives title to a bishop. The ancient walls, gates, and many other vestiges of antiquity, including ruins of a theatre, amphitheatre, and baths, still remain. *Maluentum*, afterwards called Beneventum. [BENEVENTO.] *Caudium*, long since destroyed, stood on the Appian Way, near the little river Isclero, 21 Roman miles from Capua, and 11 miles from Beneventum. It gave name to the pass or passes called *Furculæ Caudinæ*, where the Samnites compelled the Roman army to pass under the yoke, B.C. 321. *Blacium*, in the country of the Hirpini; its remains are within a mile of Mirabella, at a place called *Le Grotte*, on the high road from Naples to Puglia. Near this place are the celebrated *Amsaneti Lakes*, of which Virgil gives a fine description ('*Æn.*' vii. 568). *Telesia*, now *Teles*, near the banks of the river Calore. *Aufidena*, or *Alfidena*, the chief town of the Caraceni, on a hill above the left bank of the Sagrus or Sangro, 5 miles above Castel de Sangro. The remains of its massive walls prove it to have been a fortress of great strength. A village called *Alfidena* perpetuates the name, but does not stand on the ancient

site. *Taurasium*, on the river Calore, where there are considerable remains, and several sepulchral inscriptions near the modern village of Taurasi. Pyrrhus was here defeated by Curius Dentatus. *Compsa*, now *Conza*, in a strong position near one of the sources of the Aufidus or Ofanto. Hannibal occupied it immediately after the battle of Cannæ (B.C. 216) and deposited in it his baggage and plunder. It was a municipal town under the empire, and continued to be a place of strength and importance in the middle ages. In the 10th century it became the seat of an archbishop, which it still is, although the modern town of Conza has no more than 1200 inhabitants. *Seppinum*, in the mountains east of Bovianum. *Abellinum*, now *AVELLINO*. *Larinum*, commonly placed in the country of the Frentani, seems to have had an independent territory, comprising the country between the Tifernus (Biferno) and the Frento (Fortore). It continued to exist till A.D. 842, when it was ravaged by the Saracens, and the site abandoned for one about a mile to the westward, where the modern city of Larino stands. The ruins of the ancient town cover the summit of a hill called *Monterone*, and comprise portions of the walls, one of the gates, an amphitheatre, and a large building supposed to have been the senate house. *Histonium*, near the site of the present town of Il Vasto. *Anxanum*, the remains of which are on a hill near the town of Lanciano. *Ortona*, which has retained its name, and was the chief fortified town of the Frentani. [ABRUZZO.]

The Samnites brought at various times as many as 80,000 armed men into the field. Their chief strength consisted in their infantry. Their government appears to have been a kind of aristocracy, in which the priests exercised a great influence. Livy (ix. 40) describes the army of the Samnites as splendidly accoutred; and (x. 46) he speaks of two millions of pounds weight of coined copper taken from them by the younger Papirius; all which shows that the Samnites were no longer a rustic people. But they never became effeminate and corrupt like the Campanians, and they retained to the last their character for hardness, perseverance, and devotedness to their country. Each of the nations of Samnite race had its own independent government, its magistrates, and its comitia. The chief magistrate of each nation was styled *Meddix Tuticus*, an Oscan denomination, as the Samnites appear to have spoken a dialect of the Oscan, and to have used Oscan characters. It was only in cases of urgent necessity, such as resistance to a common invader, that the various Samnite states acted in concert, and then only for a time.

Between the years 440 and 423 B.C., the Samnites attacked the Etruscans, who had settled in the plains of the Osci or Opici about half a century before, and who had founded or colonized Vulturinum. This town the Samnites took and named Capua. (Livy, iv. 37.) [CAPUA.] About B.C. 340 the first war broke out between the Samnites and the Romans. After defeating the Sidicini, who were aided by the Campanians of Capua, the Samnites overran the Campanian Ager, and laid siege to Capua. The Campanians then sent ambassadors to the Roman senate to ask for aid against their formidable enemies, to which the senate objected, that there existed a previous alliance between the Samnites and Rome. The Campanian ambassadors in despair made a solemn surrender, in the name of their countrymen, of all they were possessed of to the Roman people. Upon this the senate sent messengers to the Samnites to request them to abstain from molesting the Campanians. The supreme council of the Samnites resolutely refused compliance. The senate then sent the *feciales* to declare war against the Samnites. Two armies were ordered out—one, under the consul M. Valerius Corvus, into Campania, and the other, under A. Cornelius Cossus, into Samnium. Valerius, after an obstinate fight, routed the Samnites, who abandoned their camp in the night. The Romans acknowledged that they never before met such stubborn enemies. The other consul having entered the confines of Samnium by the valley of Saticula, at the foot of Mount Tifata, found himself surrounded by the Samnites, who were posted on the heights. A legionary tribune named Decius Mus, by his intrepidity and quickness in marching up to a height yet unoccupied by the enemy, was the means of extricating the Roman army, which attacked and defeated the Samnites. A third battle took place near *Suessola*, in the plain of Campania, in which the Samnites were again defeated. The two consuls re-entered Rome in triumph. Two years afterwards the consul L. Emilius Mamertinus entered the country of the Samnites, who sued for peace, and obtained it.

In the year B.C. 323 a new war broke out with the Samnites, on the occasion of the Romans besieging the Greek town of *Palæopolis*, which was garrisoned by a party of Samnites, but which the Romans took by a secret understanding with the inhabitants. The Samnites were joined by the Lucanians. L. Papirius Cursor, being appointed dictator to carry on the war, his master of the horse, Q. Fabius Maximus Rullianus, attacked the Samnites in his absence and against his orders, and defeated them; but for this breach of discipline he was condemned to death by the dictator, and only saved by the interference of the soldiers and of the people of Rome. Papirius himself defeated the Samnites, who asked for and obtained one year's truce; but before the expiration of the truce, the Samnites having again attacked the Roman territory, the dictator, A. Cornelius Arvina, with M. Fabius Ambustus, his master of the horse, was sent against them. The Roman army, being surprised by the enemy in an unfavourable position, after five hours' desperate fighting was in danger of being

totally defeated, when the Samnite cavalry, seeing the baggage of the Romans moving away in the rear without protection, rushed forward in disorder for the sake of plunder. The dictator, who expected this, allowed them to begin plundering, and then ordered his own cavalry, which he had kept in reserve, to fall upon the enemy's horse, which were cut to pieces. The Roman cavalry then returning, attacked the Samnite infantry in the rear, while the Roman legions pressed them in front with renewed ardour. At last the Samnites gave way, and the defeat was complete. (Livy, viii. 23, 39.)

In the following year, B.C. 321, the Samnites having made great preparations for war, gave the command of their forces to Caius Pontius, son of Herennius, an experienced officer, who had already served against the Romans. He placed his troops in ambuscade in a defile between Mount Taburnus and an offset of the Tifata ridge, through which flows the small river Isclerus, an affluent of the Vulturinus. This was the direct road for the Roman army, which was posted at Calatia, north of the Vulturinus, to proceed by to Maluentum. [BENEVENTO.] Pontius sent emissaries disguised as shepherds towards the Roman outposts, who, being seized and questioned, said that the Samnite forces were then engaged in besieging Luceria, a town of Apulia, which was in alliance with Rome. The consuls, T. Veturius Calvinus and Sp. Posthumius, after some consultation, resolved to march to the assistance of Luceria by the most direct way, which was across the Vulturinus, at the confluence of the Isclerus, and then through the defile towards Maluentum. Advancing through a narrow gorge, they came to a little valley between the mountains, and farther on to another narrow defile, which they found barricaded with trunks of trees and pieces of rock; and looking up they saw the Samnites posted on the hills. The Romans thought of retracing their steps, and recrossing the little valley; but they found the other narrow pass, leading to the banks of the Vulturinus, also barricaded and defended. The consuls then ordered the army to encamp in the plain and to fortify themselves. The Romans, after attempting to break through the surrounding enemy, and, feeling the want of provisions, sent messengers to ask for honourable conditions. Pontius told them that they must consider themselves his prisoners, and as such give up their arms and file off, under a yoke, in presence of the whole Samnite army, after which they would be allowed to return home; and this, the greatest disgrace that ever befell the armies of Rome, they submitted to. The spot on which this transaction occurred became known by the name of the Furculæ Caudinæ (Caudine Forks), from its being in the neighbourhood of Caudium. The war was continued with varying success, but, on the whole, in favour of the Romans, till B.C. 303, when, after the submission of most of their fortified towns and the defeat of the Samnite army by the consul Postumius Megillus, who lost his colleague Minucius Augurinus in the battle, the Samnites sued for peace, which was granted.

In the year B.C. 298, the Roman senate obtained information from the Lucanians and the Picentes, that the Samnites had urged them to join in a new war against Rome, and a new war ensued. The Etruscans having joined the Samnites with a large force, in which were auxiliaries from Cisalpine Gaul, the Romans chose for their new consuls Q. Fabius Maximus, notwithstanding his great age, and P. Decius Mus (B.C. 297). After ravaging a large tract of country, Fabius met the Samnite army on the banks of the Tifernus, and for a long time the Romans could make no impression on the enemy's ranks; but at last Fabius, having sent the hastati of the first legion round a mountain to attack the Samnites in the rear, the latter, thinking that the other consul with his army had arrived, made a precipitate retreat, leaving 3040 killed on the field and 330 prisoners. Decius, who had marched through Campania, also entered Samnium, and the two consular armies spread themselves over the country, which they ravaged for five months. At last those Samnites who were still in arms, being unable any longer to defend their country, migrated in a body under their leader Gellius Egnatius into Etruria. For several years afterwards the war with Samnium however gave the Roman armies occupation, without any decisive success on either side. The Samnite host which had migrated into Etruria fought bravely in conjunction with the Etruscans and Gauls; and on one occasion, near Sentinum, the Gallo-Samnite army spread disorder into the Roman ranks, when the consul P. Decius, perceiving the critical moment, devoted himself to the infernal gods, and, rushing into the thickest of the fight, fell covered with wounds. This act restored confidence to the Romans, and they finally routed the enemy after a severe loss on both sides. In the year B.C. 293, the consul L. Papirius, son of the former conqueror of the Samnites, marched into Samnium, and laid siege to Aquilonia, near the Apulian borders, whilst his colleague Carvilius besieged Cominium. An army of 40,000 Samnites, 16,000 of whom were picked men and bound by solemn oaths to fight to the last, moved to the relief of Aquilonia. Papirius, having attacked them, met with a desperate resistance; but ultimately the Samnites were routed, after losing a great number of men. The remainder of the Samnite infantry took refuge within Aquilonia, whilst the cavalry rode off towards Bovianum. Both Aquilonia and Cominium were taken by the Romans and burnt. Papirius next besieged Sepinum, which he entered after a brave resistance; and his colleague, Carvilius, took Volano, Palumbinum, and Heroulanum. The snow, which fell deep in the mountains, obliged the Romans to evacuate Samnium.

In the following year, B.C. 292, one of the new consuls, Fabius Gurgus, son of Fabius Maximus, marched against the Samnites, and was defeated by them with a severe loss. The senate proposed to deprive him of his command; but his veteran father, deprecating this humiliation, offered to serve under his son as his legatus. A new battle was fought, in which the Samnites were finally routed. Pontius, the conqueror at the Furculæ Caudinæ, was taken prisoner. After taking Venusia, to which the Romans sent a colony, the two Fabii, father and son, returned to Rome, and the senate granted to Fabius Gurgus the honour of a triumph, in which Pontius appeared with his hands tied behind his back: after the ceremony he was beheaded.

In the year B.C. 290, the Samnites, worn out by their repeated defeats, sued for peace, which the Romans, likewise exhausted by their dearly-bought victories, felt disposed to grant. The consul M. Curius Dentatus, being charged with the negotiation, concluded a peace, the conditions of which are not known. (Livy, 'Epitome,' xi.) In the war of Pyrrhus, the Samnites joined that prince, after whose second retreat from Italy and subsequent death they found themselves attacked by two Roman armies, under their old antagonists L. Papirius Cursor the younger and S. Carvilius, who utterly defeated them (B.C. 272). It was then that Samnium became a conquered country, and the Romans sent colonies to Maluentum and other places. In the war of Hannibal the Hirpini joined the Carthaginians after the battle of Cannæ, but the Pentri did not. At last, in the Social War, the Samnites having joined the Marsi, Vestini, Peligni, and others in the common league against Rome, remained last in the field, and were defeated and slaughtered without mercy by Sulla. The devastation of Samnium by Sulla was most effectual; the towns were burnt and razed to the ground; Beneventum alone was spared. During the war of Sulla against the younger Marius, Pontius Telesinus, who had joined the latter at the head of 40,000 Samnites and Lucanians, stole a march upon Sulla, who was besieging Prænestæ, and advanced within ten stadia of Rome, which was without any adequate defence. Sulla however came in time to save the city. A desperate battle ensued: the Samnites defeated the left wing of the Romans, commanded by Sulla himself; but Crassus, who commanded the right wing, having defeated Carina, a Roman officer of the party of Marius, who was opposed to him, fell upon the flank of the Samnites, who were obliged to retire to Antemna, where Telesinus was killed. Between 7000 and 8000 Samnites surrendered to Sulla, who marched them to Rome; and, having shut them up in the Circus Maximus, had them all butchered in cold blood, while he was haranguing the senate in the neighbouring temple of Bellona. The remainder of the Samnites were slaughtered in the same manner at the taking of Prænestæ.

SAMOGITIA, an extensive tract of the ancient duchy of Lithuania, was bounded N. by Courland and the Baltic, W. by the Baltic and Prussia, and S. and E. by Lithuania Proper. It now forms part of the Russian government of Wilna. The inhabitants have retained the peculiar customs and language of the Lithuanians.

SAMOS, an island in the Archipelago, situated near the coast of Asia Minor, between 37° 35' and 37° 48' N. lat., 26° 36' and 27° 8' E. long., at the distance of about a mile from the promontory of Troglitium, or Cape Santa Maria, which lies between the Gulf of Scala Nova and that of Balat. Its early history is mixed with fable. The earliest inhabitants according to ancient tradition were Carians and Leleges, with whom some Lesbians and Ionians were incorporated in the 10th century B.C. Very soon after the year B.C. 776, the Samians became remarkable for maritime enterprise and commerce. They traded with Egypt under the protection of Psammetichus, who gave them a settlement there: about B.C. 630, a Samian merchant, Colonus, made a successful voyage to Tartessus (Herod. iv., 152). During this period they founded several colonies, Samothrace, Anoea, Perinthus, Bisanthe, Amorgus, and joined the confederacy on the Asiatic continent, called the Panionium, consisting of twelve cities.

In the time of Cyrus and Pisistratus, the government of the island was in the hands of Polyocrates, the most remarkable of the tyrants of his day. He extended his sway over the neighbouring states, Lesbos, Miletus, &c., and had a larger navy than any other Grecian prince or state of his time; he was also strengthened by his alliance with Amasis, king of Egypt. Shortly after the invasion of Egypt by Cambyses, Polyocrates became engaged in a war with Lacedæmon, in which the Spartans were finally repulsed from the island. His increasing power at length provoked the jealousy of the Persian monarch Darius, whose Satrap, Oroetes, allured him by treacherous promises to trust himself in his power, and then murdered him. (Herod. iii. 125; Athenæus, lib. xii., 540, Cas.) After the death of Polyocrates, the island fell into the hands of Darius, who appointed Syloson, the brother of Polyocrates, as governor. The resistance of the inhabitants to this measure led Otanes, the Persian general in command, to order a general massacre, and Samos was delivered up to Syloson almost unpeopled. Shortly after the Samians joined the revolt of Ionia. At the battle of Lade, however, they treacherously withdrew from the engagement, to obtain favour with Darius, to whose empire they were again made subject, but were released from it after the battle of Mycale.

The maritime strength of Samos was broken, and their government made democratical by Pericles, B.C. 440. After the battle of Ægosp-

potami, the Samians sustained a siege from Lysander, and were compelled to submit to Spartan principles of government. After this time the Athenians, Lacedæmonians, and Persians became successively possessors of Samos. After forming part of the Egyptian, Macedonian, and Syrian empires, it was finally made subject to Rome, B.C. 84. Samos was afterwards the residence of Marcus Antonius and Cleopatra, A.C. 32, and of Augustus, who gave its inhabitants a titular freedom. It was reduced by Vespasian to the form of a province.

The Samians made great progress in the arts after their commercial connection with Egypt. In sculpture, casting in bronze, architecture, painting, and ship-building, they were eminent. The coins of Samos are very numerous and worthy of attention. The earliest autonomous coins bear the head of a lion or of a bull; a winged wild boar or a prow of a ship are common reverses. Juno, with her attributes, and Neptune, Vulcan, and Minerva, are deities represented upon the imperial coins; the usual reverse is the archaic figure of Juno, which resembles very much that of Diana on the coins of Ephesus. Pythagoras, who was a native of Samos, is also represented in a sitting attitude on the imperial coins, touching a globe placed on a column with his hand. Other types are Meleager attacking the boar, the river Parthenius personified, Nemesis, &c.

Samos was taken and plundered by the Arabs in the 8th century, and recovered by the emperor Leo in the 13th. It subsequently fell into the hands of the Venetians, and afterwards of the Genoese; and upon the taking of Constantinople (1453), was ravaged by Mahomet II. Selim granted permission to colonise the island, as the population had been much reduced by frequent piratical invasions. It has continued ever since under the dominion of the Turks. In recent times the Samians joined the Greek revolution, but were unable to free themselves from the Turkish yoke.

The greatest length of the island is from west to east, and the circumference is about 80 miles. It is separated from the continent of Asia by a strait called the Little Bosphorus, about six miles long, nowhere more than three miles in breadth, and full of small islands. Through the island in a direction from east to west runs a high limestone mountain called Ampelus by Strabo, which is a continuation of the promontory of Trogium, and terminates at its western extremity with the height of Kerkia, the Mons Cercestius of the ancients, the loftiest point in the island. The mountain sides are covered with pine woods, vineyards, or olive-grounds. The valleys of the island are fertile, and yield abundance of wheat. Marble, iron, silver, lead, and emery are among the mineral products.

Immediately opposite to Cape Santa Maria, between the rivers Metelenous and Imbrasius, is the port of Tigani, the ancient harbour of the city of Samos, which has an artificial mole built across it from north to south. Herodotus speaks of an immense mole in this harbour, which he considers one of the three works most worthy of mention in the island. A little inland at the distance of about five miles from Cape Santa Maria is the site of the ancient town of Samos. It was situated partly on flat ground, and partly on the south side of Mount Ampelus; the walls, of which there are still remains, are cased with white marble, and have square towers. At about 60 paces interval they inclose a quadrangular space; within them are the ruins of a theatre with the seats, built on the side of a hill. To the west of the city, towards the Imbrasius, are the remains of an aqueduct, which does not seem to be the one mentioned by Herodotus (iii. 60), which was carried through a mountain, and was one of the three works which he considered most worthy of admiration at Samos. Of the great temple of Juno, said by Herodotus to have been the largest he had seen, and famous for its archaic statues of Juno, which is represented on the coins of the island, hardly anything remains except a capital and base. (Tournefort; Leake, 'Asia Minor'). Opposite the old city, about a mile to the west of it, is the modern town of Cora or Khora (*Χώρα*), the largest in the island, containing, in Pococke's time, about 12 small churches and 250 houses. On the south side of the city is a large plain called Megalocampus, which has become a stagnant marsh. To the west of Cora is the river Imbrasius, on which is the small village of Mily. At the mouth of this river the land juts out to the south, terminating in Cape Colonna, opposite to the small island of Samopoula. To the west of this promontory is the village of Marathrocampus, about 40 miles distant from Patmos. Three miles from this village, opposite to the island of Nicaria, and distant from it about 12 miles, is a hermitage called St. George's, with a grotto near it, on the top of Mount Kerkia, called Panagia Phaneromena. The summit of this mountain is covered with snow all the year round, and has a lake at the top.

Five miles from Marathrocampus towards the north is the village of Castany. Proceeding along the coast in a north-east direction we come to Carlovassi, the most considerable town in the island after Cora. The port is a bad one, being much exposed to the north wind. Three miles to the east of this town is Farni, a village, 10 miles from which, in a deep bay, is Vathi, a town with a good harbour capable of holding a large fleet. There is a small harbour 4 miles to the north-east, the mouth of which is well protected by little islands. On the east side of the island is another port.

The soil of Samos is very fertile, and produces very good wine, though this was not the case formerly, according to the testimony of the ancients. The muscat grape is much cultivated. There is good

timber on the hills, which have quarries of white marble in abundance. Samos was formerly celebrated for its pottery. Game abounds in the island. The inhabitants, about 30,000 in number, are nearly all Greeks. Samos is the see of an archbishop, who is also bishop of Icaria.

SAMOTHRACE (*Samendreck*), a small island in the Ægean Sea, opposite the mouth of the Hebrus in Thrace. According to Herodotus (ii. 51) Samothrace was originally inhabited by the Pelasgians, from whom the inhabitants learnt the religious mysteries of the Cabiri, or Corybantes, for the celebration of which they were famous.

In Homer the island is usually called Samos ('IL,' xxiv. 78, 753), or the Thracian Samos ('IL,' xiii. 12), and was said, according to some accounts, to have derived its name from a colony from the island of Samos on the coast of Asia Minor, who settled there (Paus., vii. 4, s. 3; Strabo, x., p. 457); but Strabo, who did not believe this account, derived its name from *samos*, which meant a height, or from the Sarii, whom he supposed to be the ancient inhabitants of the country. Other accounts state that it was originally called Dardania, and that Dardanus, the founder of Troy, passed over from this island to Asia Minor. (Strabo, vii., p. 331.)

The Samothracians joined the army of Xerxes when he invaded Greece, and one of their ships distinguished itself at the battle of Salamina. (Herodotus, viii. 90.) In the time of Pliny it was a free state.

Samothrace, according to Pliny, was 32 miles in circumference. It contains a very high mountain, called Saocce by Pliny, from which Homer says that Troy could be seen. It is above 5000 feet high. The island has an area of about 30 square miles, with a population of about 2000. ('IL,' xiii. 12.)

SAMPFORD. [ESSEX.]

SAN, RIVER. [POLAND.]

SAN ANTONIO. [CAPE VERD ISLANDS.]

SAN BARTOLOMEO. [MEXICO.]

SAN BLAS. [MEXICO.]

SAN CARLOS. [BRAZIL.]

SAN CHRISTOVAL. [CANARIES.]

SAN-DEMTRIO. [ABRUZZO.]

SAN FELIPE. [ACONCAGUA; VENEZUELA.]

SAN FILIPO D'ARGIRO. [CATANIA.]

SAN FRANCESCO. [BRAZIL.]

SAN FRANCISCO, a city, port of entry, and the capital of San Francisco county, State of California, United States of North America; is situated on a narrow neck of land forming the southern side of the entrance to San Francisco Bay, and between that bay and the Pacific Ocean, in 37° 47' N. lat., 122° 26' W. long. The population, which was only 150 in 1845, was omitted from the Census of the United States in 1850; but in 1852 it was, according to the State Census, 34,776, of whom only 5245 were females. The government of the city is vested in a mayor, recorder, aldermen, county assessors, street commissioners, &c.

The sudden rise of the present city of San Francisco, is perhaps the most remarkable on record. But the place is not devoid of interest in other respects, being one of the earliest settlements of the old Spaniards for the charitable purpose of converting the Indians to Christianity. Their fort, or stronghold, called the Presidio, was fixed near the entrance of the bay, on the southern shore, about half a mile inland. It was a square inclosure, the sides of which were about 300 yards in length, surrounded by a mud wall about 15 feet high, pierced for munitary. Against the inner sides of the walls were the dwellings of the settlers, the centre being left clear for exercise and military evolutions. The walls are now in ruins. From this primary settlement, which was termed the Mission Dolores, emanated the five following missions, which were established in various parts of the adjacent country under the protection of the Presidio:—San Francisco, founded in 1776; Santa Clara, 1777; San José, 1797; San Francisco Solano, 1823; San Rafael, 1827.

The town, which arose in connection with the mission of San Francisco, was called Yerba Buena, or Good Herb, from a plant used as a beverage, and also as a medicine, which grew abundantly in the vicinity. From its foundation the mission continued in a very flourishing condition till about 1831, when in the political disturbances which distracted Mexico, the Indians were driven away from Yerba Buena, and the settlement soon fell to ruin. In 1839 the site was regularly laid out as a town, which however, six years later, as already mentioned, only contained 150 inhabitants. But about this time it began to attract the attention of adventurers from the United States, and soon became in effect an American settlement, though still nominally belonging to Mexico: it was not formally ceded to the United States till 1848. A local government was established, similar to that which prevails in the towns of the United States; an American school was founded, and in January, 1847, an 'ordinance' was issued by the town council directing that the name of the town should henceforth be San Francisco, instead of Yerba Buena. Towards the end of 1847 the first discovery of gold was made, and soon after San Francisco, the port of California, experienced the most extraordinary influx of adventurers ever heard of, accompanied by an unparalleled rise in the cost of provisions and the value of property. The remarkable scenes which were subsequently witnessed in the town, or city as it had now

come to be designated, its rapid extension in every direction, the reckless habits and almost extravagant energy of the strangely diversified population, are too familiar to need more than a word of reference. Nor less well known are the terrible conflagrations which have so often laid large portions of the city in ruins, to be however restored with surprising rapidity to far more than its previous condition, the opportunity afforded by every fire being seized upon to rebuild the destroyed places on a larger, more costly, and substantial scale.

The magnificent bay of San Francisco, on which the city stands is described under CALIFORNIA. The city is built on the western side of the bay, at the extremity of the peninsula, which forms the southern side of the entrance to the bay. It occupies an inclined plane of about half a mile in extent from the hills in the rear of the city. The houses have been carried far up these hills, and a shallow portion of the bay lying between two projecting points of land in front of the city, has been filled up and built upon. The city is regularly laid out, with broad streets intersecting at right angles, and squares at convenient distances. The streets are now tolerably well paved, and many of them are laid with planks; well lighted, and watched; and arrangements have been made for their sanitary supervision. Several of the public buildings and churches are comparable with those in most of the cities of the United States, but the city is still so entirely in a transition state, that the most accurate account of to-day would be inapplicable a few months hence. Besides the churches there are several schools, general and marine hospitals, and numerous benevolent institutions. The warehouses, stores, and shops are on a capacious scale, and abound with every variety of articles of necessity and luxury. The hotels are among the most noticeable features of the place as it now is, and some of them are carried on in a very costly manner. There are also numerous eating and drinking saloons, theatres, concert-rooms, lycæums, and other places of amusement or dissipation, including not a few gaming-houses of various grades. The manufactures of the city are comparatively inconsiderable.

The commercial facilities of San Francisco are very great. The bay, which is 8 miles wide, affords excellent anchorage, and is the natural outlet, not only for the almost unparalleled mineral riches of California, but of a district the extreme fertility of which has as yet hardly begun to be developed. The city fronting the bay is now lined with wharfs and quays, and vessels of great burden can lie alongside to land and take in their cargoes. Steamers are in regular and constant communication with New York and the Atlantic ports, and with the ports of Central America. The character and extent of the commerce of San Francisco have been given pretty fully under CALIFORNIA, and it is needless to repeat the details here. In the years subsequent to that there given, there has been a considerable, though fluctuating, increase in the number and tonnage of vessels arriving and departing at San Francisco, but the returns are informal and incomplete. The annual clearances of shipping from the port at present, average about 500,000 tons; the entrances somewhat less. The amount of gold dust annually shipped from San Francisco exceeds in value 50,000,000 dollars. Up to the close of 1853 there had been deposited at the United States mint and branches, gold from California amounting to 207,316,177 dollars, nearly all of which had passed through San Francisco; besides which a very large quantity has been received in this country and elsewhere direct from San Francisco. Coal is found near the city; and there are quarries of good limestone. Eight or ten daily and several weekly newspapers are published in the city. [See CALIFORNIA, in SUPPLEMENT.]

SAN GERMANO. [LAVORO, TERRA DL.]

SAN JOAO DEL REY. [BRAZIL.]

SAN JOAQUIN, RIVER. [CALIFORNIA.]

SAN JOSE. [CALIFORNIA; COSTA RICA.]

SAN JUAN DE LA FRONTERA, one of the provinces of the Argentine Confederation, South America, extends between 30° 30' and 32° S. lat.; 67° 30' and 70° 20' W. long. It is bounded S. by the province of Mendoza; E. by that of San Luis; N. by La Rioja; and W. by the republic of Chili. The area is about 40,000 square miles: the population is estimated at from 22,000 to 25,000.

The province lies to the north of MENDOZA, which it resembles in its general character and productions. The surface of the country is described generally under ARGENTINE CONFEDERATION. Extending along the eastern declivity of the Andes, San Juan comprehends the northern part of the Vale of Uspallata and a large portion of the plain which separates the Paramilla range from the mountains of Cordova, and contains the Lakes of Guanacache. The Vale of Uspallata is barren and nearly uncultivated. The soil of the plain consists of sand, and is without grass, but covered with stunted prickly trees of the mimosa kind. It is quite barren, and produces no kind of grain or vegetables, except where it is irrigated by the sweet water of the Rio de San Juan and some of its minor affluents. This irrigation renders the land exceedingly fertile; without any other manure, they produce most plentiful crops of wheat and maize. The ordinary crops of wheat are fifty for one, in better lands eighty or a hundred for one, and at Augaco, about 5 leagues north of the city of San Juan, they have been two hundred and even two hundred and forty. The distance from a market and the difficulties attendant on the transport of heavy goods through desert plains, greatly diminish the value of

this fertility. But as fruit-trees, especially vines, succeed very well in this soil, wines and brandies are exported to a considerable amount. In the northern district, called Jachal, there are some gold-mines, whose produce is however not very great. Like the other provinces of the Argentine Confederation San Juan is a federal state, owning little dependence on the central government. The executive power is vested in a governor, elected by the junta, or provincial assembly.

San Juan, the capital of the province, is situated on the Rio de San Juan, in 31° 4' S. lat., 68° 57' W. long.: population about 7000. It contains the government house and other public buildings, and has considerable commerce, being the mart whence the wines and brandies of the province are exported, and from which foreign goods are distributed to the interior. In 1833 the city was nearly destroyed by an inundation of the Rio de San Juan, by which three churches and several other public buildings, with numerous private houses, were thrown down, and many of the inhabitants lost their lives.

SAN JUAN DE LOS REMEDIOS. [CUBA.]

SAN JUAN DEL RIO. [MEXICO.]

SAN JUAN DEL SUR. [NICARAGUA.]

SAN LORENZO DE LA FRONTERA. [BOLIVIA.]

SAN LUCIA. [JAMAICA.]

SAN LUIS DE LA PUNTA, one of the provinces of the Argentine Confederation, South America, extends between 31° and 35° S. lat., 64° and 67° 30' W. long. It is bounded S. by the province of Buenos Ayres, E. by Cordova, N. by La Rioja, N.W. by San Juan, and S.W. by Mendoza. The area is about 36,000 square miles. The population is about 20,000.

The country included within this province is described under ARGENTINE CONFEDERATION. It comprehends that immense tract of country which extends between the provinces of Mendoza on the west and Cordova on the east. Its north-western part runs northward to the border of the Great Salina, and it reaches southward to the country of the Ranqueles Indians, but now claimed by the province of Buenos Ayres. No part of it possesses any considerable degree of fertility. The greatest number of the widely-separated and isolated settlements, consisting mostly of estancias, or cattle-farms, occur along the road leading from Buenos Ayres to Mendoza, in the hilly country, where tracts of grassy land alternate with ridges of hills and sandy deserts overgrown with mimosas. As the grass is coarse and long, the pastures are indifferent; still cattle, horses, mules, and sheep are abundant, and are exported to a small amount, together with some wool. The corn and maize which are raised are not sufficient for the consumption of the scanty and widely-scattered population. The country between the Sierra de Cordova on one side, and Mendoza and San Juan on the other, is still worse. As no fresh-water stream runs through it, it cannot be irrigated; and, with the exception of a few spots, is a complete desert. The climate is dry and hot; rain seldom falls. The gold-mines of La Carolina, about 60 miles N. from the city of San Luis, have ceased to be worked; but the people of the village sift the alluvial soil at certain places in the neighbourhood, and collect annually a small quantity of gold in dust and small lumps (pepitaa). Like the other provinces of the Argentine Confederation, San Luis is a federal state; the executive power being vested in a governor elected by the junta, or provincial assembly, but for many years there has been no really effective government.

San Luis de la Punta, the capital of the province, is pleasantly situated on the western slope of a hill, 2417 feet above the level of the sea, in 33° 17' S. lat., 65° 46' W. long.; but it is merely a straggling village-like collection of mud-huts, and does not contain more than 1500 inhabitants. There is no other place in the province above the rank of a hamlet.

SAN-MARINO, or SAMMARINO, is a small republic in Italy, consisting chiefly of a steep mountain with its offsets and valleys, covering an area of about 21 square miles. It is situated within the papal province of Urbino, and about 10 miles from the Adriatic. The population amounts to about 7600. The town of San Marino stands on the upper part of the mountain, the summit of which is crowned by an old castle with three towers, on which the standard of the republic waves. The town is ill built and ill paved; the streets are steep, and only practicable for mules and donkeys. The square before the town-house is large, and commands a fine view of the neighbouring Apennines. The church of the Capuchins contains a fine painting representing the Descent from the Cross. Outside of the town is Il Borgo, a suburb. The other towns, or rather villages, which give names to communes are—Serravalle, Montegiardino, and Faetano. The inhabitants have cultivated every slip of ground that can be made productive; they make some very good wine, some oil, and rear silk-worms, the produce of which constitutes an article of trade. They have also some good cattle. They import corn from the neighbouring Papal State.

Marinus, a holy hermit from Dalmatia, is said to have retired to this mountain in the 4th century; after his death a church was raised to his memory, and a village grew up round the spot. In the 10th century it became a walled town by the name of 'Plebs Santi Marini cum Castello.' It seems to have governed itself as an independent municipality. During the wars of the Guelphs and Ghibelines, the people of San Marino took the part of the latter. About the year 1291, the commune of San Marino being summoned to pay certain

dues to the Pope's vicar, refused; and the matter being referred to a learned judge of Rimini called Palamede, he decided that the community and men of San Marino were exempt from payment, having been of old independent of all foreign dominion. From that time San Marino has been acknowledged as an independent state by the popes. When Napoleon I. overthrew the papal government he respected the independence of San Marino; and in 1814, when the Pope was reinstated in his dominions, the freedom of the republic was confirmed. The legislative power is in the hands of a great council, formerly composed of 300 anziani, or elders, but now of 60 members—nobles, townsmen, and small proprietors in equal numbers, named for life by the council itself. A committee or council of 12 is appointed from among the members of the great council, 8 for the town and 4 for the country parts. The great council also appoints two Capitani Reggenti, or regents, who are the chief magistrates of the republic, and hold office for six months each. Formerly the chief representative of the republic was styled a Gonfaloniere, and changed every three months. There are secretaries of state for the interior, for foreign affairs, and for the finances. The administration of justice is lodged in the hands of a lawyer not a native of the state, who is elected for three years; after the expiration of which term he may be re-elected once more for the same period.

SAN MIGUEL DE IBARRA. [ECUADOR.]

SAN MIGUEL EL GRANDE. [MEXICO.]

SAN-MINIATO. [FIRENZE.]

SAN NICOLAO. [CAPE VERD ISLANDS.]

SAN NICOLAS DE LOS ARROYOS. [BUENOS AYRES.]

SAN PAULO, the capital of the province of San Paulo, Brazil, South America, is situated on two of the head streams of the river Tiete, in the plain of Piratininga, at an elevation of 2464 feet above the level of the sea, in 23° 33' S. lat., 46° 45' W. long. The population is about 22,000, exclusive of the suburbs. San Paulo is one of the oldest towns in Brazil, having been founded by a colony of Portuguese in 1560. The streets are wide, and lined with houses of two stories, built of 'taipa,' which is a frame-work of wood filled in with earth. The public buildings are—the palaces of the governor of the province, formerly a Jesuit college, and of the bishop; a spacious cathedral, 12 churches, and a convent of the Carmelites; a college, schools, &c. The only manufactory is a government establishment for making fire-arms. Some coarse woollen cloths and hats are made. San Paulo is the general emporium of the commerce of the plain in which it stands. The exports are—maize, tobacco, cotton, coffee, sugar, rum, jerked beef, hides, horns, and tallow; the manufactured goods of Europe and North America are imported. Santos, the port of San Paulo, is 42 miles S.W. from the city; and the descent to it is so steep that nearly all goods are carried on the backs of mules.

SAN PEDRO, Province of. [BRAZIL.]

SAN REMO. [NICE.]

SAN SALVADOR, Republic of, Central America, extends along the Pacific Ocean from the Bay or Gulf of Conchagua to the Rio de Paz. It lies between 13° 10' and 14° 15' N. lat., 86° 45' and 89° 45' W. long.; and is bounded E. by Nicaragua, N. by Honduras, W. by Guatemala, and S. by the Pacific Ocean. The area is about 6380 square miles. The population is about 300,000.

San Salvador is the smallest, but, in proportion to its size, much the most populous, of the republics of Central America. The surface is very unequal. The main portion of the coast extends along the Pacific in a generally west-north-west and east-south-east direction for about 140 miles; while on the east a smaller portion of it forms the western half of the Bay of Conchagua. There are four harbours—Acajutla or Sonsonate, Libertad, and La Union, which are ports of entry, and Jiquilisco or Triunfo de los Libres. Except La Union, which is on the west shore of the Bay of Conchagua, and is extensive and safe, these harbours are, properly speaking, only open roadsteads, hardly accessible during the rainy season and the prevalence of the south-west winds. As far northward as Libertad the shore is bordered by a narrow tract of low and generally level land from 10 to 12 miles wide; but farther north, up to Sonsonate, the coast is more elevated and broken. The interior is very rugged, being broken by several short ranges of mountains of moderate height, but separated into distinct groups. About 12 to 15 miles from the coast, and nearly parallel to it, are the five volcanoes of Apaneca, Yzalco, San Salvador, San Vicente, and San Miguel. San Salvador and San Vicente are the loftiest, being upwards of 8000 feet above the level of the sea. The eruptions of San Salvador have at times been very destructive; but Yzalco is by far the most remarkable, from its unceasingly active condition, surpassing, it is said, in this respect, and in the impetuosity of its eruptions, any other volcano in America. Neither of the other volcanoes has exhibited other than very slight eruptions of late years.

The rivers of San Salvador have only a short course, and are in their natural state of little importance; though it is asserted that they might easily be rendered of great service for irrigation, and some of them be made navigable for barges and other small craft. The chief river is the *Lempa*, which rising in *Equipulas*, in Guatemala, forms for a short distance the boundary between Honduras and San Salvador, receives the outflow from Lake Guixar, thence crosses San Salvador in a southern direction, and falls into the Pacific a little to the westward of the Bay of Jiquilisco. It is a deep but rapid stream, and the bar

at its mouth prevents vessels of even moderate burden from entering it. The other larger streams are the Rio de Paz, at the western extremity of the republic; the Jiboa, which falls into the sea between the Lempa and Port Libertad; and the Sirama, or San Miguel, all of which have their mouths obstructed by sand-bars. There are two lakes of some size in the state. The Lake of Guixar, near the north-western boundary of the state, has a circuit of about 80 miles, and is one of the principal feeders of the Rio Lempa. It is said to communicate by a subterranean channel with the much smaller Lake of Metapa. Lake Ylopango, about 6 miles E. from the city of San Salvador, is about 9 miles long and 3 miles wide: its only outlet is a small tributary of the Jiboa. Mineral and thermal-springs occur very numerously in various parts of the country.

Owing to the great inequality of surface, there is considerable variety of climate: as a whole, it is warmer than in Guatemala; but it is generally regarded as healthy. The hottest and least healthy part is the low tract along the coast. San Salvador has great agricultural capabilities. The soil is generally good, and in some parts remarkably rich, and the climate permits a considerable variety of crops to be profitably cultivated. The inhabitants are an industrious race, and more skilful agriculturists than the natives of other parts of Central America. Nearly all the available land in the country is appropriated to individuals, and much attention has been paid to its cultivation, though now, from the long continuance of civil dissension, agriculture is in a very neglected condition. Maize is cultivated to a considerable extent; wheat succeeds well only in a few places; several varieties of fricoles, and most of the usual vegetables, are raised for the ordinary food of the people. Oranges, lemons, pine-apples, plantains, and various fruits are extensively grown; sugar, cacao, coffee, tobacco, and cotton succeed very well, and might, were the country in a more settled state, be raised largely for exportation. Since the gold discoveries in California, a very large quantity of sugar has been grown in the neighbourhood of Sonsonate, chiefly for the purpose of distilling rum for the Californian market. Indigo has however always been the chief source of wealth to San Salvador. During the Spanish supremacy, upwards of 1,800,000 lbs. are said to have been annually exported, and though the quantity raised has greatly fallen off, it is still considerable. The coast west of Point Libertad is commonly known as the Balsam Coast, it being the only place where the article known as the Balsam of Peru is collected. This part of the coast is in the possession of the Indians, who live in five villages, have their own chiefs, with a kind of municipal government, and subsist chiefly on the produce of the balsam, which they collect to the amount of about 15,000 to 20,000 lbs. annually and dispose of in Sonsonate. They also cut and carry to Sonsonate a considerable quantity of cedar-trees. There are large forests on the slopes of the mountains of the interior.

Cattle are numerous, and of a good breed; sheep do not succeed very well; hogs are everywhere abundant. Turkeys and fowls are plentiful; but there are few ducks and geese. An inferior kind of cheese is made in large quantities; butter is seldom made.

The mineral wealth of the state appears to be considerable, but it has been very imperfectly developed. Gold has been obtained in several places. Some rich silver-mines were formerly worked, but, owing to the general insecurity of life and property, they have been for many years almost entirely neglected. Excellent iron-ore is obtained near Metapa. Lead and copper have also been found.

The only manufactures are of the common articles of domestic consumption. They consist chiefly of coarse cotton goods, cutlery, and iron ware, and some of them used to be in considerable request throughout Central America. The foreign trade is of comparatively little importance. The exports in 1852 amounted in value to 700,000 dollars; the imports to 1,360,000 dollars.

San Salvador is divided into four departments, which are named after their respective capitals—San Salvador, San Vicente, San Miguel, and Santa Anna. In all, the republic contains 6 principal towns, 142 smaller towns, and 62 villages. The following are the more important places; the populations are merely a loose approximation:—

San Salvador, the capital of the republic, is situated on the Rio de Aselhuate, a small affluent of the Lempa, in 13° 44' N. lat., 89° 8' W. long. The site of the city is more than 2000 feet above the level of the sea, on undulating ground, in a kind of valley, surrounded by high hills covered with wood, among which, in a north-eastern direction, and at a distance of about nine or ten miles, is the volcano of San Salvador, which at different periods has caused great devastation by its eruptions. The city itself was laid out with considerable regularity, and had in the centre a plaza, or square, three sides of which were lined with shops, with porticoes before them, supported by a colonnade; while on the fourth side was the cathedral, an edifice which had no great claims to architectural beauty. The population was about 20,000. But on the night of the 16th of April, 1854, the city was entirely destroyed by an earthquake, and a very large number of the unfortunate inhabitants killed. For several days previous to the sad catastrophe there had been slight tremblings of the earth, but as they caused no mischief, little heed was given to their premonition. On the evening of the night named however the shocks became more frequent and severe, and, being unattended with noise, the inhabitants became seriously alarmed, and many of them assembled in the great square. At length, at about ten minutes to 11 o'clock, a violent heaving

motion of the earth occurred, which in a few seconds levelled the cathedral, churches, university, and every other public building in the place. Of the private houses a few were left standing, but these were rendered uninhabitable; and the wells and fountains were either filled or dried up. Many of the inhabitants, as we have said, perished, and of the survivors many fled to other towns. The movements of the earth continued for some time after the fatal night; and the president of the republic, in his address to the departments calling on them to assist the destitute citizens, intimated that measures were to be immediately taken for the selection of a better site on which to rebuild the city; but we have not heard whether this intention has been carried into effect. Some manufactures of iron, especially of cutlery and coarse cotton stuffs, were carried on here; and some sugar and indigo used to be exported. Sugar-plantations are numerous in the neighbourhood, as are also extensive orchards. Mestizoes, or ladinos, as they are called here, constituted the bulk of the population. Near the city there are some warm and some cold rivulets, which afterwards unite, affording the inhabitants the advantage of having natural baths of every degree of temperature.

San Miguel, some distance east of the Rio Lempa, population about 7000, is noted for its fairs, of which the most important is held in November after the indigo crop.

San Vicente, on the right bank of the Lempa, contains about 8000 inhabitants in the town and its suburbs. In its neighbourhood are extensive plantations of indigo, and near the village of Istepeque excellent tobacco is grown, which is known under that name all over Central America.

Santa Anna, situated in the western part of the state, at a considerable elevation above the sea, population about 9000, has in its neighbourhood extensive plantations of indigo and sugar; in the mountains near the town are iron-mines, which were formerly profitably worked.

Sonsonate, near the western extremity of the state, population about 8000, carries on at present considerable commerce by means of the port of Acajutla, exporting sugar to Peru and Chili, and rum, &c., to California. The Indians inhabiting the country about the town make very beautiful mats, which are also exported. In the neighbourhood of Sonsonate is the Yzalco, a very active volcano.

The other more populous towns are—Aguachapa, Apastepeque, Cojutepeco, Metapa, Sacatecoluca, &c.; but none of them requires further notice.

San Salvador is a republic with a legislative chamber of 25 deputies, but the government is really vested in the president. The history of San Salvador is similar to that of the other republics of Central America. [COSTA RICA; GUATEMALA; HONDURAS; NICARAGUA.] On the formation of the republic of the United States of Central America, San Salvador became one of the federal states, and its capital was made the seat of the federal government; but the union was speedily dissolved, and San Salvador, like the other states, became an independent republic, and like them its progress has hitherto been arrested by constant internal discord.

[Juarros, *History of Guatemala*; Haefkens, *Reise naar Guatemala*; and *Central Amerika*; Baily, *Central America*, &c.)

SAN SALVADOR. [ALESSANDRIA; BAHIA; BAYAMO.]

SAN SEBASTIAN, a city and sea-port of Spain, and capital of Guipuzcoa, one of the Basque Provinces, is situated in 43° 19' N. lat., 2° W. long., on the coast of the Bay of Biscay. The town is built on a low peninsula, or tongue of land, which is terminated by a rocky conical hill 400 feet high, and is flanked on the east side by the estuary of the small river Urumea, and on the west side by a bay which forms the harbour. The hill is named Monte Urgull or Orgullo, and its summit is crowned by a fortified castle called La Mota, whence the hill is commonly called El Monte del Castillo. There are other defences on the slope of the hill, and the town lies at its southern base. The land-front, 350 yards wide, stretches quite across the peninsula, and is defended by a solid rampart, strengthened by a lofty casemated bastion in the centre, and by a half-moon at each end. In front of the bastion is a horn-work. The narrowest part of the peninsula is still farther inland, between the horn-work and the rocky ridge of San Bartolomeo, at the foot of which is the suburb of San Martin. The flanks of the town are protected by ramparts, one of which is washed by the sea in the harbour, and the other is 27 feet above the bed of the Urumea, in which the tide rises about four feet. A long wooden bridge crosses the estuary of the Urumea.

The town has been mostly rebuilt since the two sieges of 1813. The streets are wide and clean, and the houses generally good. Besides the Plaza Nueva, which is a handsome square surrounded by elegant houses, there are other squares, several churches, and three or four civil and military hospitals. The population is about 18,000.

The harbour is small, but secure, and is defended by a mole, and by the small rocky island of Santa Clara at the entrance. There is a good import trade in English and French goods, and an export trade in corn and other produce.

After the battle of Vitoria Wellington despatched Sir Thomas Graham to San Sebastian, which was then defended by General Rey, and which had been held by the French from the year 1808. General Graham commenced the siege on the 10th of July, 1813, and assaulted

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the town on the night of the 24th, without success, and with the loss of more than 500 killed and wounded. The siege was then suspended for want of ammunition; but after the defeat of Soult at the foot of the Pyrenees on the 31st of July, the siege was renewed, and continued till the 31st of August, when the place was stormed, and all the defences of the town were carried, but with the enormous loss of upwards of 2500 killed and wounded. The castle of La Mota held out till the 9th of September. In 1823, when the French invaded Spain, to put down the constitutional government, they succeeded, after several assaults, in getting possession of San Sebastian by capitulation. Afterwards, during the Carlist insurrection in the northern provinces of Spain, it became the head-quarters of the British auxiliary legion, under General Sir De Lacy Evans, who, in the summer of 1836, resisted several attacks of the Carlists, who occupied the neighbouring heights.

In the article *BASQUE PROVINCES*, Tolosa is stated to be the capital of Guipuzcoa, but since that article was written a decree of the Spanish government, dated August 24, 1854, announced that the city of San Sebastian was in future to be the capital of Guipuzcoa, as it had been from 1822 to 1844, when it was deprived of its title of capital, which was then conferred on Tolosa.

SAN SEBASTIÃO. [BRAZIL.]

SAN-SEVERINO. [MACERATA-E-CAMERINO.]

SAN-SEVERO. [CAPITANATA.]

SAN TADEO, RIVER. [PATAGONIA.]

SAN VINCENTE. [CAPE VERD ISLANDS.]

SANA is the capital town of the province of Yemen in Arabia, situated in 15° 5' N. lat., 44° 5' E. long. Sana, though the chief town of Yemen, is the seat of an independent chief, the Imam of Sana, who exercises authority over a wide district around, and is often opposed to the Egyptian government, which has advanced its frontiers to Beit-el-Fakih, a town in the Jehameh, about midway between Sana and the port of Mokha, on the Red Sea. Sana is pleasantly situated on an elevated table-land, surrounded on three sides by higher mountains. The valley thus formed is about nine miles broad, but extending uninterruptedly to the north. The country round about supplies a considerable quantity of coffee, which at present is transmitted to Mokha on camels; but the exactions of the Egyptian government are so great, that it has been considered likely that the traffic may be turned to Aden, to which port Sana is as near as to Mokha. Coffee forms almost the only export; the imports are piece-goods, thread, and twist, Persian tobacco, glass, silks, spices, and sugar. The town is walled and indifferently fortified. It is about 5½ miles in circumference, with narrow streets, but with many good houses; those of the more opulent having windows of stained-glass. The imam has two handsome palaces, both built of hewn-stone and fortified, in the town, and there are about twenty mosques, some very handsome, and many baths and public fountains. Across the principal street a handsome bridge has been thrown, as in rainy seasons a torrent runs down the street, but occasionally the town is seven years without rain, and is much too dry in general to be healthy. The population is estimated at 40,000; and of three neighbouring towns in the same valley, Rodah, Wady-Dhar, and Jeraf, the population is at least 30,000 more. In Sana, and probably in the other towns, the principal part of the artisans are Jews, who pay a capitation-tax for permission to reside in the town: they live in a quarter by themselves, and their number is about 3000. (*Geog. Journal*, vol. viii.; *Journey of Mr. J. C. Crutenden to Sana*, 1836.)

SANCERRE. [CHER.]

SANDBACH, Cheshire, a market-town in the parish of Sandbach, is pleasantly situated on an eminence near the right bank of the river Wheelock, in 53° 8' N. lat., 2° 21' W. long., distant 26 miles E. by S. from Chester, 162 miles N.W. from London by road and by the North-Western railway. The population of the town in 1851 was 2752. The living is a vicarage in the archdeaconry and diocese of Chester. The manufacture of shoes is extensively carried on, and there are several silk-throwing mills. The worsted trade has declined. The town is lighted with gas. The parish church, a handsome structure in the perpendicular style, erected about 1400, has been in great measure rebuilt. There are two new district churches, chapels for Wesleyan, Primitive, and Warrentite Methodists, and Baptists; National and Infant schools, and a British school. The Grammar school, founded in 1577, has an income from endowment of about 200*l.* a year, and had 74 scholars in 1854. Thursday is the market-day: fairs are held three times a year. In the market-place are two ancient crosses.

SANDEK. [GALICIA, Austrian.]

SANDGATE. [KENT.]

SANDIACRE. [DERBYSHIRE.]

SANDOMIR. [POLAND.]

SANDOWAY. [ARACAN.]

SANDUSKY. [OHIO.]

SANDWICH, Kent, a cinque-port, market-town, and municipal and parliamentary borough, is situated on the right bank of the river Stour, in 51° 16' N. lat., 1° 20' E. long., distant 12 miles E. from Canterbury, 67½ miles E. by S. from London, and 98 miles by the South-Eastern railway. It is governed by 4 aldermen and 12 councillors, one of whom is mayor; and, in conjunction with Deal and Walmer, returns two members to the Imperial Parliament. The

population of the borough in 1851 was 2966. The livings are in the archdeaconry and diocese of Canterbury.

Sandwich was early a place of importance, and is an original member of the Cinque Ports. It probably arose out of the decay of the Roman Ritupa. [KENT.] The name Sondwic occurs as early as 665. Canute landed here in 1016 and in 1029. In the time of Henry III. the town was burnt by the French. In the reign of Henry VI. the French took and plundered the town three times. In course of time the harbour became choked up with sand, and the town declined. In the reign of Elizabeth it revived by the settlement of Flemish refugees, who introduced the manufacture of baize and other woollens, and cultivated the neighbouring lands for vegetables, flax, and canary-seed. Sandwich has returned two members to Parliament since the 42nd Edward III.

The town stands in the marsh lands which border on the Isle of Thanet, about two miles from Pegwell Bay, into which the Stour discharges itself. It is paved, lighted with gas, and supplied with water. A part of the town wall, and one of the gates, called Fishergate, on the north side of the town are still standing. The Stour is here crossed by a stone-bridge, which has in the middle a swing-bridge to allow the passage of vessels. St. Clement's church is a massive building, consisting of a nave and two aisles, a chancel, and a tower rising above the centre of the church. The tower is of Norman architecture, supported by four semicircular arches with massive piers, and is built of Caen stone. There are two other churches of the establishment, and chapels for Independents, Wesleyan Methodists, and Baptists. A Grammar school, founded in Elizabeth's reign, has two exhibitions at Lincoln college, Oxford, which however are not claimed, and the school is at present without scholars. There are National schools for boys and girls. The hospital of St. Bartholomew is an ancient almshouse, with an income of 800*l.* for 16 inmates, who must be decayed tradesmen of the town, or the widows of such. It has a small chapel of early English date, with lancet windows. There are two other almshouses, or hospitals. The Guildhall was built in the time of Elizabeth. The jail is a well built and commodious modern building. There are assembly-rooms and a custom-house. The port extends from the North Foreland southward to Sandown Castle, and seaward as far as the line of Goodwin Sands, having jurisdiction as a Cinque Port over Fordwich, Sarre, Ramsgate, Deal, Walmer, and Stonar. Only small vessels can come up to the town. There is a considerable import of timber, iron, and coal; and corn, flour, malt, seeds, hops, fruit, bark, leather, ashes, and wood, are exported, chiefly to London. Ship-building, tanning, and wool-sorting are carried on. A corn-market is held every Wednesday, a cattle-market on alternate Mondays, a pleasure fair on December 4th. A county court is held. Near Sandwich are the remains of a Roman amphitheatre, 210 feet in diameter.

SANDWICH. [CANADA.]

SANDWICH ISLANDS are a group of islands situated in the northern part of the Pacific, between 18° 55' and 22° 20' N. lat., 154° 50' and 160° 40' W. long. They extend within these limits in a slightly curved line from south-east to north-west, and are thirteen in number; eight of them are of moderate size, and the other five small. The larger islands are Hawaii, Maui, Tahaurawe, Ranai, Morokai, Oahu, Tauai, and Nihau.

Hawaii, formerly called *Owhyhee*, the most south-eastern island, is the largest of the whole group, and indeed twice as large as all the rest together. In form it approaches to a triangle, and is nearly 100 miles long from south to north, and about 80 miles wide in the broadest part. The surface is probably about 5000 square miles. The interior is occupied by a table-land 8000 feet above the sea-level, and almost entirely unknown, there being no road over it from one side of the island to the other. According to the scanty information collected from the natives by Ellis, it is chiefly covered with lava and ashes, but in some places overgrown with wanti-trees, or paper-mulberry-trees. The edge of this table-land toward the east is about 25 miles from the sea, but on the west and south it approaches somewhat nearer the shore. Near these edges are situated three volcanoes, of which the highest, Mouna Kea, is near the eastern declivity of the table-land. Its summit attains an elevation of 18,587 feet above the sea-level, but it is extinct. Near the south-western corner of the table-land is the Mouna Roa, whose summit is 13,175 feet above the sea. No eruption of this mountain is recorded, but it does not appear to be extinct. The present crater has a circumference of about six miles and a quarter, and the ancient orifice is not less than 24 miles round. On the western edge of the table-land is the volcano called Mouna Huararai, whose elevation is estimated at 10,000 feet. It is still active, the last eruption having taken place in 1800. On the table-land there are many other conical peaks, which are evidently extinct volcanoes. But the most remarkable volcano is that of Kirauea, which is at no great distance from the eastern declivity of Mouna Roa, but properly on the southern declivity of the table-land. This volcano is not, like other volcanoes, a conical mountain, but a depression below the general surface of the slope, of somewhat irregular shape, with almost perpendicular sides. The elevation of the slope where this vast pit occurs, is 3873 feet above the sea-level. The surface of the volcanic lakes is about 850 feet below the upper surface. The crater contains two lakes, the smaller of which is nearly of a

circular form, and 319 yards across; the larger is 1190 yards long, and in one part about 700 yards wide. These lakes are vast caldrons of lava in a state of furious ebullition, sometimes spouting up to the height of 20 and even 70 feet. The fiery waves run with a steady current at the rate of nearly three miles and a quarter per hour southward, enter a wide abyss, and fall into the sea in 19° 11' 51" N. lat. All the country round this volcano is covered with lava. The volcano of Kirauea has from time immemorial been prodigiously active. In 1787 it overflowed, when a dreadful eruption took place, and lasted seven days.

From the edges of the table-land, which are about 8000 or 9000 feet high, the country has a gradual slope to the sea. The higher part of this slope, from the table-land to the distance of about four miles from the shore, where it sinks down to 1500 feet, is covered with dense forests, consisting chiefly of several species of acacia, which attain a great size, and of which the canoes of the natives are made. The underwood is tree-fern, from four to forty feet high, and clothed to the top with an almost endless variety of climbing plants. The soil on which these woods grow lies on lava, which frequently rises above it. The tract which lies west of Byron's Bay, or Waiakea, and extends towards the base of the volcano of Mouna Kea, is thickly inhabited and well cultivated; but nearly contiguous to it on the south, and adjacent to the volcano of Kirauea, is a desert of rugged lava, extending 40 miles along the shores, where no cultivation occurs, and which is only inhabited by fishermen. The north-eastern coast is bold and steep; on the western side the land rises with a gentle slope from the shore.

Byron Bay, on the eastern shore, is a spacious harbour, which lies south and north: it is protected from the north-east wind by a coral reef, half a mile wide, which leaves a channel three-quarters of a mile wide, and from ten to eleven fathoms deep. It is the best harbour belonging to the island, and the only one on the eastern shore. On the western coast are the harbours of Towaihe and Karakakoa. In Karakakoa harbour Captain Cook was killed, in 1779.

Maui, or *Mowee*, is situated north-west of Hawaii, and separated from it by a strait 24 miles wide. Its length is 48 miles, and its breadth, in the widest part, 29 miles. It is composed of two masses of rock, surrounded by a narrow tract of low land, and united by a low and sandy isthmus which is nine miles in width. The larger mountain mass, which occupies the eastern portion of the island, is supposed to rise nearly 10,000 feet above the sea, but it contains only a small portion of low and cultivable land. The smaller mountain mass or peninsula has a fine tract of level land along the south-western coast. At the back of it there are well-wooded slopes, with broad valleys, which terminate, towards the summit of the mountains, in deep ravines. The mountains, which rise to about 5000 feet, are also well wooded. The harbour of Lahaina nearly in the centre of the plain, is formed by two low projecting rocks, two miles distant from each other.

Tahaurawee lies south-west of the larger peninsula of Maui. It is about 11 miles long from east to west, and 8 miles wide in the broadest part. The surface hardly exceeds 60 square miles. Like the other islands, it is composed of lava, which however rises only to a moderate elevation. The soil is thin, and covered with a species of coarse grass.

Ranai, which lies west of the smaller peninsula of Maui, is separated from that island by a strait nine or ten miles wide. It is 17 miles long and about nine miles wide. It is a mass of volcanic rocks, but does not rise to a great elevation. A great part of it is barren, and the remainder is only of moderate fertility.

Morokai, or *Morotot*, lies north-west of Maui and north of Ranai; it extends 40 miles from east to west, and 7 miles from south to north. It consists of one mass of rocks, the most elevated portion of which rises about 5000 feet above the sea, and the sides are furrowed by deep ravines full of trees. Level tracts of small extent occur along the shores, and many of them are fertile.

Oahu, or *Woahoo*, lies north-west from Morokai, and extends 46 miles from south-east to north-west, and is 23 miles across in the widest part. It is the seat of government for the islands, and the place in which the foreign commerce is concentrated. It contains a larger proportion of cultivated land than the other islands of the Sandwich group.

A mountain range traverses the island: it begins at the north-eastern point, called Mocupu, and runs first southward and afterwards inclines to the south-west, terminating, at Diamond Point, the south-western cape of the island, in a hill about 400 feet high. This range is more than 3000 feet above the sea-level, and, with the valleys by which it is intersected, covers about half the surface of the island. Another mountain mass occupies the north-western part, but it is not connected with the chain, being separated from it by a plain extending from the mouth of Pearl River to Waiarus on the northern coast, a distance of nearly 20 miles. It is called the Plain of Eva, and is fertile and well wooded, but not much cultivated. The soil consists of a deep mould resting on lava. The plain of Honolulu, on the south side of the island, extends about ten miles along the shore, with a width varying from two to three miles, has a very rich alluvial soil, and is carefully cultivated. Several wide valleys, which extend northward into the mountain range, open into this plain, and are also cultivated to the distance of six or seven miles from the shore, where

they begin to be narrow, and to be inclosed by steep mountains on each side.

Honolulu is the capital of the Sandwich Islands, and the residence of the king. It consists of a considerable number of stone houses built by foreign merchants, and numerous huts of the natives not arranged in regular streets. The harbour is small, being not more than half a mile long and a quarter of a mile broad; but it is tolerably deep, and perfectly safe. It is formed by a coral reef, which extends along the shore at the distance of some hundred yards, and against which the swell of the sea breaks. These reefs have a considerable width, and are dry at low-water. A narrow opening in them opposite to Honolulu forms the entrance to the port, which however is not deep enough for large vessels, and they remain in the roadstead, which is capacious, but has a rocky and uneven bottom.

Tauai, or Atoot, west-north-west of Oahu, is about forty miles long, and more than twenty-four miles broad in the widest place. It is a mountain mass sloping on all sides towards the sea, where it terminates with a rather high coast. Wide valleys run from the shores towards the centre of the island, and they are well cultivated and fertile. On the southern coast, at Waimea, there is a roadstead, but there is no other anchorage round the island.

Nihau, or Oneehou, the most western of the Sandwich Islands, is about twenty miles long from north to south, and seven miles across where widest. The most southern point rises abruptly to a considerable height; but about five miles north, the rocky mass sinks down to a moderate elevation, and afterwards rises again, but not so high as before. The inhabitants make a great number of painted and variegated mats, which are extensively used in all the other islands, and the island produces abundance of yams, which also go to the other islands. On the western side of Nihau there is a very good harbour.

Climate.—The climate is principally regulated by the trade-winds, which during the summer, or from March to October, are strong and regular, but in winter light, and frequently interrupted by calms and south-westerly winds. The rainy season occurs in winter. In summer the atmosphere is usually clear and bright, and in many places on the western or leeward side of the islands not a drop of rain falls. On the eastern or windward parts however, even in this season, seldom a day or night passes without a smart shower, and occasionally heavy rains fall. From September to April the atmosphere is more or less hazy, obscure, and cloudy, with frequent light rains in some places, and in other parts heavy rains of two or three days' continuance.

The heat is considerable in the lower tracts, but perhaps less than might be supposed from the latitude. This is partly owing to the vast expanse of water by which the islands are surrounded, but principally to the prevalence of the north-east trade-wind, which during the greater part of the year sweeps over and about the islands with great velocity, and, having passed a great expanse of sea, is far from being hot. In the eastern districts the thermometer in summer seldom rises higher than 80° or 82°, and during the winter not higher than 72° or 74°; but the lower tracts on the western side of the mountains are exposed to greater heat, and in those parts the thermometer frequently rises to 88° or 90°. According to observations made at Honolulu, the mean annual temperature of that place does not exceed 75° Fahr. In general the thermometer ranges between 70° and 83°. The greatest heat experienced was 88°, and the least 61° Fahr. The elevated tableland in the interior of Hawaii is of course much colder, and snow frequently falls there. In the lower districts on the western side of the islands the sea and land breezes are generally regular, especially during the summer. The sea-breeze sets in at 10 o'clock in the morning, and continues till sunset, when it is immediately followed by the land-breeze, which lasts till sunrise. From sunrise till 10 o'clock a calm prevails.

Productions.—The quadrupeds found on these islands at the time of their discovery were the hog, dog, and rat, to which have been added the cow, horse, sheep, goat, and mouse, all of which thrive very well except the sheep. Fowls were found at the discovery; but turkeys, geese, ducks, and pigeons were introduced afterwards. Fish abound, but there is no great variety; the most common are sharks, bonetos, flying-fishes, and red and white mullets. Many families live on the produce of the fishery. Pearls are found in Pearl River; they are small, but fine.

It does not appear that the European grains are cultivated to any great extent, with the exception of maize. The principal objects of cultivation are roots, especially the taro-root (*Arum macrorhizon*). Potatoes and camotes, or sweet potatoes, are also generally grown. The fruit-trees which were cultivated before the arrival of Europeans were the cocoa-nut, the bread-fruit tree, the ohia- or jumbo-tree of the East Indies, and the kou; several kinds of bananas were also grown. Strawberries and raspberries are also indigenous. The Europeans have introduced oranges, lemons, citrons, grapes, pine-apples, papaw-apples, pomegranates, and figs, all of which come to perfection except pine-apples. The sugar-cane is indigenous, and much cultivated, but only for eating. Melons and water-melons are excellent. The most cultivated vegetables are cucumbers, pumpkins, French beans, onions, and red pepper. The wauti, or paper-mulberry tree, is grown for its interior bark, which is used here, as in China, for making cloth. The forests do not contain many trees fit for ship-building. In several parts the mountains were formerly covered with sandal-wood; but as

the exportation of this wood to China has been very great it begins to be rare.

Salt is the only mineral which is obtained in abundance. A large quantity is got from a salt-lake in the island of Oahu, west of Honolulu, which is between two and three miles in circumference, but has only a few feet of water in the deepest parts. The bottom and shores are incrustated with salt, the water being strongly impregnated, and the crystallisation very rapid. This salt is exported to Kamtohatka. Large quantities of salt are also obtained from sea-water by evaporation, for which purpose there is along the shore a succession of artificial vats of clay, into which the salt-water is let at high tide.

Inhabitants.—The population consists of natives, with the exception of a small number of whites, Englishmen and Americans, who have settled among them as merchants or as missionaries. The population in 1853 amounted to 71,019, being 37,079 males, and 33,940 females. The natives, who call themselves Kanaka, belong to the family of Malay nations. Their colour is a kind of olive, and sometimes reddish-brown. They are of middle stature, and well formed, with muscular limbs and open countenances. The roots of their language have a great affinity to those of the other Malay nations who inhabit the islands of the Pacific. When these islands were discovered by Cook, it was observed that the natives of this group had made further progress in civilisation than those of the other islands and groups. This was evident from the care with which the taro-fields were cultivated, but still more from their manufacturing cloth from the bark of the paper-mulberry and other trees, their beautiful mats, and the art with which they united, and as it were wove together, many beautiful feathers, so as to be used as articles of dress. They also made several utensils of stone, wood, and shells, without the use of iron tools. At that time they wore only a wrapper, called tapa, about their loins; but many of them now dress in the European fashion. They have also improved in other respects, especially in ship-building and navigation. Vessels built at Honolulu, and manned by natives, traverse the Pacific to Canton. Many of the chiefs have built houses in the European style.

Commerce.—Agriculture has not yet supplied articles for exportation, but by selling their produce to the vessels which visit the islands, the natives procure the foreign articles that they are in want of. The arrivals of merchant vessels at the port of Honolulu were as follows:—In 1850, 469; 1851, 446; 1852, 235; and 1853, 194. Salt and sandal-wood are exported. The imports of 1853 amounted to 1,281,951 dollars; the exports to 281,599 dollars. There is some commercial intercourse with San Francisco, Vancouver Island, Australia, China, and the East Indies. Ships of war of England, France, the United States of America, and other countries, visit the islands for supplies.

History and Government.—These islands were discovered by Captain James Cook in 1778, and again visited by him on his return from Behring's Strait, when he was killed by the natives. Within the first twenty years after their discovery they were only visited by Portlock and Dixon, La Perouse, and Vancouver; but towards the end of the last century whaling-ships from America began to visit these seas, and they were soon followed by fur-traders; all these vessels put into some of the ports for provisions. At that time each island had its sovereign and several other chiefs. One of the latter, Tamehameha, succeeded in subduing all the islands except Tauai and Nihau, whose sovereign after the death of Tamehameha, acknowledged the successor of that prince as his king. As Tamehameha had succeeded in his enterprise by the aid of Europeans, he favoured their settlement in the islands, and in 1817 he placed his kingdom under the protection of England. His successor, Rho-Rho, came to London, where he died in 1824. Soon after the death of his father he had succeeded in abolishing idolatry, and in persuading the natives to accept the Christian religion (1819). Since that time many English and American missionaries have visited the islands, and have obtained considerable success. Several books have been printed in the native language at Honolulu and Laheina, and a map of the island has been engraved at Laheina.

Within the last few years, chiefly under the advice of American residents, a regular constitution, in imitation of the parliamentary constitutions of England and the United States of America, has been adopted by the king of the Sandwich Islands. The House of Nobles is composed of 25 members, including the king, queen, and four ministers, of whom three are foreigners—all the rest are natives. In the Lower House are 27 members, of whom eight are foreigners. The revenue of the government for the year 1850-51 was 315,735 dollars, being nearly seven-fold the revenue in 1842-43. The number of public free schools in 1853 was 423, with 12,205 scholars: of these schools, 344 were Protestant and 79 were Roman Catholic. Strenuous efforts have been recently made by Americans in the United States and in the islands to procure the annexation of the Sandwich Islands to the American Union.

(Cook, *Third Voyage to the Pacific*; Lord Byron, *Voyage of H.M.S. Blonde to the Sandwich Islands*; Ellis, *Tour through Hawaii*; Stewart, *Journal of a Residence in the Sandwich Islands*; *London Geographical Journal*, vols. iv. and vii.)

SANDWICH LAND is the name given by Cook to a number of islands in the Southern Atlantic, between 57° 10' and 59° 40' S. lat.

24° and 27° 42' W. long. The most northern group is called Candelmas Islands, and the most southern is named the Southern Thule. They are of volcanic origin. Some of them are very high, and covered with perpetual snow. Others are bare rocky masses, slightly elevated above the sea-level. The surrounding seas contain sea-elephants and octaceous animals.

SANDY. [BEDFORDSHIRE.]

SANDY HOOK. [NEW YORK, City of.]

SANGA. [JAPAN.]

SANGARIUS, RIVER. [ANATOLIA.]

SANGERHAUSEN. [MERSEBURG.]

SANGIR ISLANDS. [MOLUCCAS.]

SANGUESA. [NAVARRA.]

SANNAZARRO. [NOVARA.]

SANNIO, or *Molise*, a third-class province of the kingdom of the Two Sicilies, lies chiefly on the east side of the central ridge of the Apennines, and extends as far as the Adriatic coast. The district of Isernia however, which belongs to the administrative province of Sannio, lies on the west slope of the Apennines, and belongs to the basin of the Volturno. Sannio is bounded N. by Abruzzo Citra and the Adriatic, S. by Capitanata, Principato Ultra, and Terra-di-Lavoro. The area is 2857 square miles; the population in 1851 amounted to 360,549. The province is crossed in its length by the river Biferno, the ancient Tifernus, which rises from two sources in the high Apennines near Bojano, and flowing north-east enters the Adriatic near the town of Termoli, after a tortuous course of about 60 miles. The other principal river of the province is the Trigno, which flows nearly parallel to, but to the north of the Biferno. In the lower part of its course the Trigno marks the boundary between Sannio and the province of Abruzzo Citra. South of the Biferno, the Fortore constitutes, for a small part of its course, the boundary between Sannio and Capitanata. The central ridge of the Apennines, which runs in a general direction from north-west to south-east, sends out several offsets, which run in a north-east direction to the Adriatic coast. Between these offsets there are valleys through which the rivers flow with a rapid course. The valleys and the lower hills are very fertile, and produce corn, maize, pulse, oil, wine, and fruits. Agriculture is however in a very low condition. The highlands are chiefly used for summer pasture. The forests are of small extent. The chief manufacturing industry in the province is that of cutlery and fire-arms, which is established at Campobasso, Frossolone, Lucito, and Agnone. Agnone has also copper-works. At Calletorto there is a profitable trade in hats, dressed skins, wax ornaments, and candles. Isernia has manufactures of woollen-stuffs, paper, and earthenware.

The province comprises the ancient territories of Larinum, of the Caraceni, and the Pentri. [SAMNIUM.] It has a civil and criminal court at Campobasso, from which there is an appeal to the High Court of Naples. The ecclesiastical administration is under the five bishops of Larino, Termoli, Isernia, Bojano, and Trivento. There are a royal college, and an institution for female boarders at Campobasso, and three grammar-schools at Cascalenda, Montenero-di-Bisaccia, and Morcone. There are elementary schools in many communes. The province is connected with Naples, and the towns on the Adriatic by excellent roads. [NAPLES.]

The following are the principal towns of the province:—*Campobasso*, a town indifferently built, situated on the slope of a hill above the valley of the Biferno, has an important corn-market, manufactories of cutlery, which supply the whole kingdom, and 9000 inhabitants. *Trivento*, in the valley of the Trigno, is a bishop's see, with 3000 inhabitants; it contains some ancient remains. *Sepino*, the ancient Sepinum, formerly a town of the Samnites, is situated in the Apennines, which here divide the valley of the Tiferno from that of the Tamaro, an affluent of the Volturno; it has several churches and convents, a classical seminary, a paper manufactory, and 4000 inhabitants. *Termoli*, the ancient Interamna, a small town of 2000 inhabitants on the sea-coast, between the mouth of the Trigno and that of the Biferno, has a castle on a promontory, and a neglected harbour. *Larino*, a small town of 4000 inhabitants, in the valley of the Biferno, not far from the sea, is the head of a district. [SAMNIUM.] *Agnone* is a thriving modern town, with iron- and copper-works, and about 7000 inhabitants. *Bojano* is an old decayed town in the Apennines, near the sources of the Biferno. *Isernia*, on the site of the ancient *Æsernia*, is an old-looking town, situated in a valley on the west side of the Apennines, near the Volturno, on the high road from Naples to Abruzzo. It contains several remains of antiquity, and has flourishing manufactories of pottery and paper, woollens, and a population of 5500. An ancient aqueduct carried through a tunnel a mile in length, supplies the fountains and manufactories of the town. Native sulphur is found in the hills round Isernia in the form of crystals. From Isernia a carriage-road branches off to the eastward, crosses the central ridge to Bojano, and leads to Campobasso and Larino. The province of Sannio comprises only a part of the ancient Samnium, which also included the whole of the Principato Ultra and part of Terra-di-Lavoro.

SANQUHAR, Dumfriesshire, Scotland, a royal and parliamentary burgh, is seated on the river Nith, in 55° 23' N. lat., 3° 57' W. long., 27 miles N.W. from Dumfries, 56 miles S.E. from Glasgow by road, and 65 miles by railway. The population of the royal burgh in 1851

was 1884; that of the parliamentary burgh was 2381. The town is governed by a provost and 16 councillors, three of whom are bailies. It unites with Annan, Dumfries, Kirkcudbright, and Lochmaben, in the return of one member to the Imperial Parliament. The town possesses a handsome parish church, a Free church, two chapels for United Presbyterians, and one for Reformed Presbyterians; a town-hall of some architectural pretensions; and a small prison. Some of the inhabitants are employed in weaving and sewing of muslin, and in carpet-making. The castle of Sanquhar is a very picturesque ruin.

SANSANDING, a town in Africa, in the kingdom of Bambarra, on the banks of the river Joliba, or Quorra, situated about 13° N. lat., 5° W. long. It is a place of considerable extent, containing about 10,000 inhabitants. It carries on an active trade with Timbuctoo by means of the river, which is navigable for large river-boats all the way between the two towns. All the salt which is consumed in the western countries of Súdán is brought from the Sahara, and passes through this town. By the cañals from El-Arawan it receives coral and beads from the Mediterranean. These articles are sent to the countries south and west of Sansanding, and exchanged for gold, ivory, slaves, wax, honey, and cloth of Súdán, which are afterwards sent to Walet and El-Arawan. The trade of this place is in the hands of the Moors.

SANT-ANASTASIA. [NAPLES, Province of.]

SANT-ELPIDIO. [FERMO.]

SANTA BARBARA ISLANDS. [ABROLHOS.]

SANTA CATHERINA. [BRAZIL.]

SANTA CLARA. [CUBA.]

SANTA CRUZ. [CANARIES; MAROCCO; MEXICO; VIRGIN ISLANDS.]

SANTA CRUZ, RIVER. [PATAGONIA.]

SANTA ESPIRITU. [CUBA.]

SANTA FÉ, one of the riverine provinces of the Argentine Confederation, South America, extends along the right bank of the Rio Paraná, from about 29° to 33° S. lat., and between 59° 30' and 62° W. long., but the boundaries are not very distinctly defined. It is bounded S. by the province of Buenos Ayres; E. by Entre Rios; N.E. by Corrientes; N. by the Indian country called the Gran Chaco; and W. by the provinces of Cordova. The area is about 41,000 square miles; the population is under 20,000.

The country is low and much of it very infertile; in its natural state it is mostly covered with coarse grass, thistles, and low mimosa-trees. The surface is described generally under ARGENTINE CONFEDERATION. The southern, where it adjoins Buenos Ayres, is the only boundary which is not formed by a desert. A large portion of the country along the Paraná is a barren swamp, while the southern part is subject to very destructive periodical droughts. On the eastern side, where it abuts on Cordova, is the low uncultivated tract in which is situated the Laguna de los Porongos, and in which the rivers Primero and Segundo are lost. The northern boundary is the desert known as the Gran Chaco. But a large portion of the interior of the province is also unfit for agriculture, though it supplies indifferent pasture for cattle, which, with horses and mules, constitute the commercial wealth of the province. Formerly Santa Fé was the centre of communication between Buenos Ayres and the western provinces, with Paraguay, whose enormous supply of maté to those provinces, Chili, and Peru, mostly passed through Santa Fé. But the closure of Paraguay to external commerce, the disturbed state of Santa Fé, owing to domestic dissensions, and the frequent encroachments of the Indians from the Gran Chaco, almost entirely destroyed its trade, and reduced the inhabitants to poverty. Santa Fé is however so admirably situated for commerce that it cannot be doubted that, if the tranquillity of the country could be secured, the partial revival of trade, which has taken place since the opening of the navigation of the Rio Paraná, will be more than maintained; indeed it might be almost indefinitely extended with a larger, more wealthy, industrious, peaceable, and energetic people. The major part of the inhabitants are of Guarini origin, who settled here after the expulsion of the Jesuits in 1790. There are also many Indians, who reside in villages (of which Sauce, 7 miles west of the city of Santa Fé, is the chief), and spin the cloth and make the ponchos usually worn in the country; they are however generally wretchedly poor and degraded. Santa Fé, like the other provinces of the Argentine Confederation, owns a nominal dependence on the central government; the executive power is vested in a governor elected by the provincial assembly.

Santa Fé, the capital of the province, is a meanly-built place on the Rio Salado, a few miles above its confluence with the Paraná, in 31° 38' S. lat., 60° 49' W. long.: population about 3500. The town consists of a central square, and eight streets branching off from it at right angles, and contains the government buildings and four large churches, one of which is of considerable splendour. The port has convenient quays, but at certain seasons there are not more than 3 or 4 feet of water on the bar at the mouth of the river. The town was formerly the entrepôt of the goods which were exchanged between the western states and Paraguay, but that branch of commerce entirely failed when Paraguay broke off all connection with the adjacent countries, and at present the little trade it has is all in the hands of Italians, who navigate the Paraná and Plata by vessels of from 20 to 100 tons burden. It has some overland trade with Monte Video, from which it receives foreign goods.

Rosario, situated on the high and precipitous bank of the Paraná, a considerable distance below Santa Fé, appears likely to become the commercial emporium of the province, being situated in a fertile district, conveniently placed for the steamers navigating the Paraná; and much the most convenient port for the foreign commerce of the western and north-western provinces. It wears already a far more commercial appearance than the capital; has a larger population; and the inhabitants are said to be industrious and diligent. Mr. McCabe, whose visits were made for commercial purposes, says, in his 'Two Thousand Miles Ride through the Argentine Provinces,' that "next to Monte Video, Rosario is the most rising port in this part of South America."

SANTA FÉ. [NEW MEXICO.]

SANTA FÉ DE BOGOTÁ. [BOGOTÁ.]

SANTA-MARIA-DE-BETANCURIA. [CANARIES, *Fuerteventura*.]

SANTA-MARIA-DE-CAPUA. [CAPUA.]

SANTA MARIA DE PUERTO PRINCIPE. [CUBA.]

SANTA MARIA. [NEW GRANADA.]

SANTA MAURA. [IONIAN ISLANDS.]

SANTA LUCIA. [CORRIENTES.]

SANTA ROSA. [ACONAGUA; MEXICO.]

SANTANDER. [CASTILLA LA VIEJA.]

SANTAREM. [BRAZIL; ESTREMADURA, Portuguese.]

SANTIA'GO, the capital of the republic of Chili, South America, is situated on the Mapocho, a feeder of the Maypú, in the plain of Santiago [CHILI], at an elevation of 1690 feet above the level of the sea, in 33° 25' S. lat., 70° 38' W. long., population about 50,000. The plain of Santiago, in which the city stands, from its great elevation above the level of the sea, is unfit for agricultural purposes, except where it is irrigated along the banks of some small rivers, and by a canal which brings water from the river Maypú to the vicinity of the town, and fertilises a tract more than twenty miles in length, and several miles in width.

Santiago is one of the finest cities in America in respect to buildings, convenience, and healthiness. It stands on a very gentle slope towards the west; and it is regularly laid out, being divided, like other Spanish towns, into rectangular and equal squares, called *quadras*. The principal streets are about forty-five feet wide; the houses are usually only one story high, on account of the earthquakes; but they are very large, and contain many rooms, arranged round three quadrangular squares, called *patios*. The Plaza, or great square, stands nearly in the middle of the city; it occupies the space of a whole *quadra*. It has a handsome bronze fountain in the centre, surrounded by a basin of hewn stone, from which the inhabitants are supplied with water by water-carriers. The buildings on the north-west side are—the government palace, the prison, and the chamber of justice; on the south-west side stand the cathedral, the only stone building in the city, and the palace of the bishop, an extensive building in the Moorish style; on the south-east side are a number of little shops; and on the north-east there are private residences. There is also a university. The only other important public building is the Casa de Moneda, or Mint, which is very large, but has ceased for several years to be used as a mint. There are several handsome churches and convents in Santiago, especially those of San Domingo, San Francisco, and San Augustin.

At the eastern extremity of the town is a small rocky eminence, on which the fort of Santa Lucia is built, which is much visited by foreigners on account of the beautiful view which it affords of the Andes. Adjacent to the hill on the north is the Tajamar, or break-water, raised to protect the city from the overflow of the Mapocho during the melting of the snow on the mountains. At the western extremity of the Tajamar is a handsome bridge over the Mapocho of eight arches, which leads to the suburb of Chimba. Along the south-western side of the city is the Cañada, which serves as the public walk, and is a large open place planted with four magnificent rows of poplars, which are watered by small canals constantly full of clear running water. The Cañada separates the city from the large suburb called La Cañadilla. At the western extremity of the city is the small suburb of Chuchunco.

Coarse ponchos and saddlery are made to some extent in Santiago, and sent to the other parts of Chili. Santiago exports the produce of its mines, and jerked beef, hides, and fruits to Valparaiso, from which place it receives the manufactures of Europe, China, and the East Indies, with sugar, cacao, and some other colonial productions from Peru and Central America. The road from Santiago to Valparaiso, a distance of 90 miles, is the best artificial road in South America; and practicable for carriages, though it crosses three ranges of steep hills. Santiago has some commercial intercourse with Mendoza, on the eastern side of the Andes, with which it is connected by two roads, the northern of which traverses the Andes by the mountain pass of Uspallata, which at its highest elevation, called the Cumbre, attains 12,454 feet above the sea-level, and may be passed on mules from the beginning of November to the end of May; while the southern road leads over the mountain pass of Portillo, south of Mount Tupungato, which attains an elevation of 14,865 feet above the sea-level, and is seldom open longer than from the beginning of January to the end of April. By these roads Santiago receives mules, hides, soap, tallow, dried fruits, and wine from Mendoza.

SANTIAGO DEL ESTERO, one of the provinces of the Argentine Confederation, South America, lies between 27° and 30° S. lat., 61°

and 65° W. long. It is bounded S. by the province of Cordova; S.E. by that of Santa Fé, from which it is separated by the Laguna Salados de los Porongos; E. by the desert tract known as El Gran Chaco; N. by the province of Tucuman; and W. by that of Catamarca, from which it is separated in part by the desert tract called the Gran Salinas. The area is about 70,000 square miles; the population is under 50,000.

The province of Santiago comprehends the western part of the Gran Salinas, the country between the Rio Dulce and the Rio Salado, south of 27° S. lat., and also a large tract of the Gran Chaco, to the east of the Rio Salado. The surface of the country and its hydrography are described generally under ARGENTINE CONFEDERATION. It is for the greater part a level country, but it extends on the south-west towards the hilly region surrounding the Sierra de Cordova. The climate is considered to be the hottest in South America. By far the larger part of the country is very infertile. The good land is of comparatively small extent, and almost entirely limited to a narrow tract along both sides of the river Dulce, and a still smaller tract on the banks of the Salado. Though the soil is sandy, it has great fertility in the neighbourhood of the river, producing plentiful crops of maize and wheat, and some good grass. Where it is not cultivated, it is mostly covered with large trees. In the deserts which surround the cultivated tract that species of cactus on which the cochineal insect lives (*Cactus opuntia*) grows to an extraordinary size, and is very abundant. Formerly a considerable quantity of cochineal (from 8000 to 10,000 lbs. annually) was sent to Peru and Chili. A large quantity of wild bees' wax and honey was also collected in the woods; but since the occurrence of the civil dissensions these pursuits have been almost entirely abandoned. Some districts have good pasturage. Among the inhabitants are many Indians who speak the Quichua language, and manufacture ponchos (cloaks) and coarse saddle-cloths or blankets. Some soda is extracted on the borders of the Gran Salinas from the *salsola*. Like the other provinces of the Argentine Confederation, Santiago is a federal state, owning a qualified dependence on the central government. The executive power is vested in a governor elected by the junta, or provincial assembly.

Santiago del Estero, the capital of the province, is situated on the right bank of the Rio Dulce, in 27° 47' S. lat., 64° 3' W. long., population about 4000. It is a straggling ill-built place, but is the emporium of the little internal and foreign trade which the province now possesses. *Matará* is a small place on the Rio Salado, where it begins to be navigable.

SANTIAGO DE ALANGE. [PANAMA.]

SANTIAGO DE COMPOSTELA. [GALICIA, Spanish.]

SANTIAGO DE CUBA. [CUBA.]

SANTIAGO DE VERAGUA. [PANAMA.]

SANTIAGO ISLAND. [CAPE VERD ISLANDS.]

SANTILLANA. [CASTILLA LA VIEJA.]

SANTO-STEFANO. [PONZA.]

SANTO TOME. [ANGOSTURA.]

SANTONA. [CASTILLA LA VIEJA.]

SANTORIN. [THEBA.]

SANTOS. [BRAZIL.]

SAÔNE, HAUTE, a department in the east of France, is bounded N. by the department of Vosges, E. by that of Haut-Rhin, S. by that of Doubs and Jura, and W. by that of Côte-d'Or, and Haute-Marne. The greatest length is from east-north-east to west-south-west, 72 miles; the greatest breadth, at right angles to the length, is 38 miles. The area of the department is 2064½ square miles. The population in 1841 was 347,627; in 1851, 347,469, giving 168·3 inhabitants to a square mile, or 6·2 below the average of the French departments.

The eastern side of the department is occupied by the branches of the Vosges, the main ridge of which is just upon the border. The principal elevations are Le Ballon de Servance, 3967 feet; and Le Ballon de Lure, 3718 feet. A range of heights branching from the Vosges skirts the right bank of the Oignon, as far as the road between Vesoul and Besançon, and indeed rather farther; and some of the branches of the Faucilles overspread the northern portion of the department.

The east of the department is occupied by the primary rocks which form the nucleus of the Vosges. The country on the west and south of this primary district is occupied by the sandstone of the Vosges and other of the lower secondary formations, but the greater part of the department is occupied by the secondary formations which intervene between the cretaceous group and the sandstone of the Vosges. The minerals are granite, porphyry, freestone, stone for lithography, and excellent grindstones, gypsum, and a white sand valuable for the manufacture of glass, coals, and iron. Numerous coal- and iron-mines are worked. There is a large number of furnaces and forges for the manufacture of pig- and bar-iron and steel. Peat is also procured. There are several mineral-springs, of which those of Luxeuil, a town at the foot of the Vosges, are the most frequented.

The department belongs to the basin of the Saône. The Saône, the ancient *Arar*, rises in the department of Vosges, and enters Haute-Saône near Jonvelle. Hence it runs in a general southern direction through this department past Gray and across an angle of Côte-d'Or. It then enters the department of Saône-et-Loire, passing Châlon, and

reaches the department of Ain below Tournus. From this point to its junction with the Rhône at Lyon, it flows nearly due south. The whole length of the Saône is 280 miles, of which 162 below Gray are navigated by steamers and large barges. During the freshes of the river many large rafts of square timber, loaded with staves, iron, and other heavy produce are floated down to Gray and the towns above it. Near St.-Jean-de-Loane it is joined by two canals, which connect it with the Rhine and the Seine. The stream is proverbially gentle. The principal tributaries which it receives are the Coney, the Superbe, the Lanterne, the Drejon, the Romain, the Morte, and the Oignon, on the left bank; and the Amance, the Gourgeon, and the Saulon on the right bank. Of these the Oignon is the most important: it rises near the eastern extremity of the department amid the Vosges, and flows south-west, partly within, partly upon the border, 90 miles into the Saône. The department is crossed by 5 state and 14 departmental roads. The department has no canals nor railroads. A railway however is authorised to be made from St.-Dizier, in Haute-Marne, to Gray, which will connect the basin of the Upper Saône with the Strasburg-Paris line.

The heat of summer and the cold of winter are less intense than in the adjacent departments, the autumn is usually fine; but the spring is variable. The soil is on the whole fertile. About half the area of the department is under the plough. The chief crops are wheat, rye, maalin (wheat and rye mixed), maize, barley, oats, and potatoes. A surplus of wheat is grown for export to the southern departments from Gray, which is one of the greatest corn-markets in France. Millet, beet-root, pulse, and seeds for oil are also grown. The grass-lands occupy an area of nearly 150,000 acres; they are chiefly along the banks of the Saône and Oignon, and afford abundance of good pasture. The heaths and commons occupy nearly 55,000 acres. The number of horned cattle is above the average; but the number of horses, and still more of sheep, is below the average. Pigs, goats, and asses are reared, but the mule is rare. The vineyards occupy nearly 30,000 acres; the wine is of very ordinary quality. The woods occupy nearly 400,000 acres, and contain abundance of oak, beech, and hornbeam; on the slopes of the Vosges there is abundance of fir-timber. The wolf, the fox, the squirrel, and the otter are common. Game is tolerably plentiful. The rivers abound with fish, including trout, carp, pike, barbel, eels, and grayfish.

The manufactures comprise iron and ironmongery of all kinds, carried on in 60 furnaces, forges, and foundries; glass, pottery, bricks, leather, spirits, cotton-stuffs, paper, hats, druggat, hosiery, canvass, seed-oil, &c. There is a good trade in agricultural produce, timber, staves, deals, cheese, salt, and cattle.

The department is divided into three arrondissements as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Vesoul	10	215	113,862
2. Gray	10	203	144,372
3. Lure	8	166	89,235
Total	28	583	347,469

1. In the first arrondissement the chief town is *Vesoul*, which is also the capital of the whole department. It is situated at the base of a conical hill at the junction of two small streams that form a feeder of the Saône, 200 miles S.E. from Paris, and has 6061 inhabitants in the commune. It is well built, and is adorned with public walks. There are a church, with a handsome high altar in marble, a town-hall, a court-house, a covered market, and handsome cavalry barracks; there are also a theatre, an hospital, and public baths. The manufactures are calicoes and other cottons, braid, hats, nails, hosiery, and olock and watch works. There are dye-houses, tan-yards, and wax bleaching-works. Trade is carried on in corn, hay, wine, cattle, iron, and hides; there are twelve yearly fairs. The town has a college, a public library of 21,000 volumes, an agricultural society, an ecclesiastical school, a normal school, a scientific society, and a departmental nursery-ground. The other towns of the arrondissement are small: they are *Jussy*, 18 miles N.W. from Vesoul, population 2800; *Pont-sur-Saône*, 8 miles W. from Vesoul, population 2200; *Scy*, on the Saône, which is here crossed by a fine bridge of 14 arches: population, 2150. *Scy-sur-Saône* has iron-works and tanyards; the neighbouring country is beautiful and fertile.

2. In the second arrondissement the chief town, *Gray* (population 6703), is built on the slope of a hill above the Saône, 80 miles S.W. from Vesoul, and is commanded by the ruins of an ancient castle formerly inhabited by the dukes of Bourgogne. The streets are crooked and steep, but the houses are built with tolerable regularity. There are cavalry barracks, a theatre, a fountain, a public walk, an exchange, two hospitals, and several parish churches. Some woollen cloth and other articles are manufactured; but the chief business of the town arises from its situation on the Saône, on which river goods are here embarked from different parts of Lorraine, Champagne, Bourgogne, and Franche Comté, in order to be sent to the south of France; and goods from the south are landed. There are immense mills of different kinds on the Saône. One of them, the great flour-mill of M. Tramoy, contains 11 hydraulic wheels, worked by water-

power derived from the Saône, and driving 11 pairs of millstones. The flour is sent down the river chiefly to Lyon and Marseille. The chief articles of trade are corn, hay, timber, deals, wine, iron, and colonial produce. Gray has a tribunal of first instance, an agricultural society, a college, and a public library. At *Champlitte*, which stands 14 miles N.W. from Gray in the valley of the Saône and has 3100 inhabitants, linens, druggats, brandy, and hats are manufactured. The hills around Champlitte are covered with vineyards. At *Gy*, 11 miles E. from Gray (population 2700), druggats, cotton goods, and vinegar are made, and considerable trade is carried on in wine.

3. In the third arrondissement the chief town is *Lure*, which is situated in a marshy plain 16 miles N.E. from Vesoul, and has 3346 inhabitants in the commune. Lure was formerly celebrated for its Benedictine abbey. The sub-prefect occupies the former residence of the abbot. The town consists principally of one long and very wide street, into which some smaller streets or lanes open; the houses are low, but tolerably well built. The inhabitants have tan-yards and dye-houses, and carry on trade in leather, iron, corn, timber and cheese. Straw-hats are made in the district. The town has a tribunal of first instance and a college. Among the other towns are *Champagny*, 8 miles N.E. from Lure, population 3000, mostly employed in the neighbouring coal-mines; *Héricourt*, a well-built town, 15 miles E. from Lure, with above 3500 inhabitants, several cotton-mills, some of which are driven by water and some by steam, tan-yards, breweries, and tile-works; *St.-Loup*, at the foot of the Vosges, population 2600; and *Luxeuil*, a well-built town on the Breuchin, 12 miles N.W. from Lure, population 4000, engaged chiefly in trade and in large iron-works near the town. Luxeuil is frequented for its hot mineral-springs, which were known to the Romans. It was in former ages still more celebrated for its abbey and school, founded by St. Columbanus A.D. 590.

This department, with that of Doubs, constitutes the archiepiscopal diocese of Besançon; it is included in the jurisdiction of the High Court and within the limits of the University Academy of Besançon. The department returns three members to the Legislative Chamber of the empire. It is included in the 7th Military Division, the headquarters of which are at Besançon. The Lutherans have a consistory at Héricourt, and churches at four other places in the department. The Lutheran service is performed in the nave, while mass is celebrated in the choir of the parish church of Héricourt.

(*Dictionnaire de la France.*)

SAÔNE-ET-LOIRE, a department of France, bounded N. by Côte-d'Or, E. by Jura, S. by those of Ain, Rhône, and Loire, and W. by those of Allier and Nièvre. Its greatest length from north to south is 68 miles, from east to west 85 miles. The area is 3306.7 square miles. The population in 1841 was 551,548; in 1851 it had fallen to 534,720, which gives 161,708 inhabitants to a square mile, being 12.876 below the average per square mile for the whole of France.

The department is traversed from south to north through its centre by the Charolais and Mâconnais heights, which form the prolongation northward of the Cévennes, and unite them with the Côte-d'Or, the heights of Langres, the Faucilles, and the Vosges. [CÉVENNES.] These heights in the southern part consist of short parallel ranges of hills, which are separated by longitudinal valleys drained by the feeders of the Saône or the Loire. In the northern part of the department they do not occupy so much space as in the southern, and consist of two ranges of low hills separated by the valley of the Dheune, through which the Canal-du-Centre passes. On the eastern and western sides of these heights the surface of the department is tolerably level.

The nucleus of the mountain chain is granite, which prevails also in the country westward. The eastern slopes and the plain at their base nearly to the Saône, are occupied by the oolitic formations. A considerable extent of country also around Charolles, on the west side of the heights, and extending northward almost to the Arroux, is occupied by the same formations. The immediate banks of the Loire (above the junction of the Arroux) and of the Saône, and that portion of the department which lies east of the Saône, are occupied by the tertiary formations.

In minerals this is one of the richest departments in France. The hungry ungrateful soil of the basin of the Arroux covers one of the richest coal-fields in France. Iron-ore is found also in this district, and numerous important iron-works are established near the coal-mines. At Creuzot, where both coal- and iron-mines are worked, there are some of the most important iron-works in France, and great foundries which turn out cannon, anchors, steam-machinery, mill-castings, &c. The produce of these coal-fields is distributed by means of a railroad 17 miles long, which conveys the coal to the Canal-du-Centre. The richest manganese-mine in France is at Romanèche, near the Saône, in the south of the department. Marble, alabaster, lithographic stones, and abundance of freestone are quarried.

The department is partly in the basin of the Loire, partly in that of the Saône. The line of separation between the two basins is formed by the Charolais heights, the country on the east of them being drained by the Saône, and the country on the west by the Loire. The Saône itself enters the department on the north-east side from Côte-d'Or, between Seurre and Verdun: it pursues a winding course south-south-west past Verdun and Châlon, from which town its course is more directly south, to the junction of the Reyssouce, whence it

separates the department from that of Ain. Its length within or upon the border is about 70 miles, navigable throughout. Its principal affluents are the DOUBS and the Seille, on the left bank; and the Dheune, the Gaye, and the Grône, on the right bank. The Doubs receives the Guiotte on its left bank, and the Seille receives the Solman and the Sane on its left bank. The Seille is navigable from Louhans.

The Loire enters the department on the south-west side, crosses the south-west corner, and for the remainder of its course, until it quits the department altogether, forms the western boundary; about 53 miles of its course, all navigable, belong to this department. It receives the Arconce, or Reconce; the Arroux, which has 12 miles of navigation; the Somme and the Tannay, all on its right or east bank. There are a number of small lakes, some of them on the watershed of the two river-basins.

The Canal du Centre, formerly the Charolais Canal, unites the Loire and the Saône. It commences in the Loire at Digoin, and follows the valley of the Arroux for a very short distance, then that of the Bourbinois, a feeder of the Arroux; at the head of which valley is its summit-level, about two miles long, where the canal crosses a depression in the Charolais heights; it then descends by the valley of the Dheune to the neighbourhood of Chagny, where it turns off, and joins the Saône at Châlon. Its length may be estimated at 75 miles, all in this department. The lateral canal to the Loire consists of two parts, one extending from Roanne, in the department of Loire, to Digoin, in this department; the other from Digoin to Briare, in the department of Loir-et-Cher. The total river and canal navigation of the department amounts to about 270 miles.

The climate is changeable in the Charolais heights; it is too cold in this part to allow the culture of the vine. In the rich plain extending from these heights to the Saône the climate is delightful. Of the total area of the department, more than half is under the plough. The chief crops are wheat, rye, maalin, maize, barley, buckwheat, and potatoes. That part of the department which lies to the east of the Saône is chiefly a corn-growing district; the parts immediately adjacent to the river are productive in wine and pasturage, as well as in corn; and the plain between the heights and the Loire abounds in pasture. The meadows and grass-lands have an extent of nearly 320,000 acres, besides 64,000 to 65,000 acres of heath and common. The number of horned-cattle is above the average. The beef of the district is very good; the principal supply of Lyon is from this department. The number of horses and sheep is small. A considerable number of pigs is bred. Oxen are very generally employed in the labours of agriculture, and a considerable number is sent from the neighbourhood of Charolles for the supply of the markets of Paris. The vineyards occupy about 95,000 acres, and some of the wines, especially those grown in the neighbourhood of Mâcon, are in very high repute. The great bulk of the vintage however ranks only as common table-wine. The woodlands occupy above 400,000 acres; the timber is chiefly oak, beech, ash, pine, fir, and chestnut. The wolf and the wild boar are met with in the Cévennes.

Besides the industrial products already mentioned, the inhabitants manufacture steel, glass bottles, paper, copper ware, beet-root sugar, cotton stuffs, leather, pottery, druggot, felt hats, wine casks, oil, flour, bricks, &c.

The department is divided into five arrondissements, as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Mâcon	9	133	122,401
2. Autun	8	85	100,286
3. Charolles	13	138	133,304
4. Châlon	10	155	130,173
5. Louhans	8	81	88,556
Total	48	592	574,720

1. The first arrondissement is named from its chief town, MÂCON, and among the other places worth naming is *Cluny*, situated in the valley of the Grône, 12 miles N.W. from Mâcon, and famous for its ancient Benedictine abbey, which was founded by William I. of Aquitaine, A.D. 910, and destroyed at the time of the first French revolution. The town has a college and 4260 inhabitants, who manufacture druggot, steel-ware, paper, vinegar, leather, &c. The abbot's house is the only part of the buildings of the Cluniac monks now still standing. *Tournus* is pleasantly situated at the foot of a little hill on the right bank of the Saône, over which there is a good wooden bridge: the houses are indifferently built; there are two public walks and a quay along the river. The townsmen manufacture hats, blankets, calicoes, cotton-counterpanes, beet-root sugar, and potash; they send a great quantity of good building-stone to Lyon by the river, and carry on trade in corn and wine. There are twelve yearly fairs. There is a tribunal of commerce at Tournus. The population of the town is 5300.

2. In the second arrondissement the chief town is AUTUN. The other towns are—*Couches*, 13 miles S.E. from Autun: population, 3050. *Épinac*, in a rich coal-field, 10 miles E. from Autun: population, 2800. *Luy-l'Évêque*, 22 miles S. by W. from Autun: population, 2000; and *Montcenis*, 15 miles S. by E. from Autun: population, 1500. Mont-

cenis formerly gave name to a county belonging to the dukes of Bourgogne, the ruins of whose castle still cover a hill above the town. Near Montcenis is the village of *Cressot*: population, 6100. From 1500 to 2000 workmen are employed in the coal- and iron-mines, iron-works, glass-works, &c.

3. In the third arrondissement the chief town, *Charolles*, is situated at the junction of the Semence and Arconce, 28 miles W. by N. from Mâcon, and has about 3000 inhabitants. Charolles has tribunals of first instance and of commerce, an agricultural society, and a college. The townsmen are engaged in the iron-works and potteries of the neighbourhood. Among the other towns are—*Bourbon Lancy*, famous for its hot-springs, 27 miles N.W. from Charolles: population 2900. *Chaussailles*, a busy modern little town of 3600 inhabitants, who manufacture linen and cotton stuffs, is 17 miles S. from Charolles. *Digoin*, at the junction of the Canal du Centre with the Loire, population 3100. *Marcigny*, 18 miles S. by W. from Charolles, has 2500 inhabitants, who manufacture leather and table-linen, and carry on trade in corn and wine. *Paray-le-Monial*, near the Canal du Centre, has a fine gothic church (which dates from A.D. 1004), and 3400 inhabitants; and *Toulon-sur-Arroux*, 20 miles N.N.W. from Charolles: population, 2340.

4. In the fourth arrondissement the chief town is CHÂLON, or Châlon-sur-Saône. *Chagny*, 10 miles N.W. from Châlon (population 3000), is rather a pretty town in the midst of a country of vineyards; *Givry*, a well-built town of 3000 inhabitants, is situated 6 miles W. from Châlon, in a country which produces excellent wines; *Sennecey-le-Grand*, 9 miles S. from Châlon, is a handsome well-built town, with 2600 inhabitants, who carry on trade in corn and wine; *Verdun*, at the junction of the Doubs and Saône, situated partly on a hill, partly on a plain (which is protected by dykes from the floods of the two rivers), was formerly a strongly fortified place. Its defences were demolished by Henri IV. and Louis XIV.: population, 2000.

5. In the fifth arrondissement the chief town, *Louhans*, an ill-built place on the Seille, 19 miles S.E. from Châlon, is an old town, with the upper stories of the houses projecting over the causeway. It has an hospital, an agricultural society, a college, tribunals of first instance and of commerce, and 3700 inhabitants, who manufacture flour, leather, and trade in cattle, poultry, &c. It stands on the left bank of the river Seille, the navigation of which commences here. The other cantons are named from mere villages.

The department is well provided with the means of communication both by land and water. It is traversed by 7 government, 21 departmental, and several parish roads; and also by the Paris-Marseille railway, which runs down the right bank of the Saône from Châlon to Lyon, and passes through Mâcon. From Châlon, lines are authorised to be constructed to Dôle, in the department of Jura, whence one branch is to run to Besançon, another to Gray, and a third to Lons-le-Saulnier.

The department constitutes the diocese of Autun, in the ecclesiastical province of Lyon-et-Vienne. It is in the jurisdiction of the High Court of Dijon, and within the limits of the University-Academy of Lyon. It is in the 8th Military Division, the headquarters of which are at Lyon. It sends four members to the Legislative Chamber of the empire.

(*Dictionnaire de la France; Annuaire pour l'An 1858; Official Papers.*)

- SAORGIO. [NICE.]
- SAPCOTE. [LEICESTERSHIRE.]
- SAPONARA. [BASILICATA.]
- SAPRI. [PRINCIPATO CITRA.]
- SARA. [GEORGIA.]
- SARAGOSSA. [ZARAGOZA.]
- SARAIK. [RIASAN.]
- SARAMON. [GERM.]
- SARANSK. [PENNA.]

SARATOV, a government of Asiatic Russia, lies between 48° and 53° N. lat., 42° 20' and 51° 20' E. long. It is bounded N. by Pensa, Simbirsk, and Orenburg; E. and S. by Astrakhan; and W. by Tambow, Voronets, and the country of the Don Cossaks. The northern frontier is 375 miles in extent, but the southern only 75 miles. The area is about 74,590 square miles; and the population in 1846 was 1,718,600. The soil of this government is very unequal: to the east of the Volga, which traverses it from north to south, and divides it into two nearly equal portions, it forms a barren steppe of great extent; on the west of the Volga the surface is undulating and varied with hills, very fruitful in the northern part, but poor and stony towards the south. In the western portion there are hills of slate and limestone, which are pretty elevated in the south, and accompany the right bank of the Volga as far as Zaritayn. These hills separate the Volga from the Don. The Volga traverses the government in its whole length from north to south, as far as Sarepta below Zaritayn, where it forms an elbow, and running to the east, divides this government from that of Astrakhan. To the west of the Volga there are some tributaries of the Don, which run from south to north. In the eastern part there are many lakes, the most remarkable of which is the salt-lake of Elton, on the south-east, towards the frontier of Astrakhan. On the north side the banks rise rapidly; on the south access to it is easy. The lake is of an oval form, the longest diameter being about 11 miles

and the shortest nearly 9 miles. The superficial extent is 45,500 English acres. There are some other less considerable salt lakes. The climate is temperate, the air dry and healthy. The mean summer heat is 64°, and the mean winter cold 23°; the greatest cold is -17° and the greatest heat +97° of Fahrenheit's thermometer. Violent whirlwinds are frequent. The steppe beyond the Volga serves only for pasturage, and it is only along the banks that there is a little cultivation. To the west of the Volga agriculture is the chief occupation of the inhabitants; and in the north-west part the soil is so rich as to need no manure. Rye, wheat, oats, millet, peas, flax, and hemp are cultivated. The foreign colonists have introduced the cultivation of tobacco, hops, and madder. The inhabitants cultivate melons (especially water-melons), fruit-trees, and even vines about Sarepta, and mulberry-trees at Saratov. The forests, which are chiefly to the north-west, consist of oaks, pines, maples, and poplars, but though pretty extensive, they do not suffice for the general consumption. The breeding of cattle is, next to agriculture, the chief occupation of the inhabitants; the breed of sheep, which yield coarse wool, has been improved by the importation of merinos. The Tartars keep a great quantity of bees. The fisheries on the Volga are productive. The minerals are salt, millstones, and a little iron.

The government is divided into 10 circles, and comprises a mixed population composed of Russians, Tartars, Cossaks, and other tribes, besides a great number of foreign colonists, who were originally introduced by Catherine II., chiefly from Switzerland and Germany. Most of the colonies are on the right bank of the Volga between Volkug and Kamyschinst, and on the banks of the Medweditz and of the Ilawliß, which fall into the Don. The names of Soleure, Schaffhausen, Zürich, Glaris, Lucerne, Unterwalden, &c., which are given to these villages, indicate the original country of the founders. The little town of Sarepta was founded by the Moravian brethren, and is still occupied by members of that society.

Saratov, the capital of the government, population about 45,000, is situated on the right bank of the Volga, in 51° 31' N. lat., 46° E. long., in an arid and barren valley, between the river and a range of rather high calcareous mountains. The town, which is neither handsome nor regular, is divided into the upper and lower towns; it was built on its present site in 1685, and has been frequently ravaged by fire. The greater part of the city is built of wood. There are seven stone and several wooden churches, two convents, a very large market-place or bazaar, a gymnasium, and a botanic garden. Saratov is the seat of a consistory for the Protestant communities (except the Moravians at Sarepta) in the governments of Saratov, Astrakhan, and eight other governments, and is also the centre of a very extensive and advantageous trade. Three large annual fairs are held here. *Volgak*, with 8500 inhabitants, is a very pretty town, built at the foot of a high mountain on the right bank of the Volga, above 90 miles above Saratov: it is inhabited by wealthy merchants, who carry on a considerable trade. The neat town of *Sarepta* was founded in 1765. It is situated on the right bank of the Volga, near the junction of the Sarpa, and has about 3000 inhabitants. All the streets, which are planted with poplars, terminate in a very large market-place, with a fountain in the centre, which supplies every house with water. The Moravians intended at first to follow agriculture, but in the midst of an arid steppe they could not execute this project; they now have manufactures of linen-cloth, tobacco, liqueurs, &c., with which they carry on considerable trade with the Kalmucks. The brethren cultivate their gardens around the town with much care. *Kamishin*, population about 7000, is situated on the Volga, at the junction of the Kamishirka. It has a considerable trade in agricultural produce. There are several salt-stores, tallow factories, and water-mills. The town is protected by a wall. *Kuensk*, population 4500, about 110 miles N. by E. from Saratov, has a good trade in timber. There are some iron-works, and tan-works. *Petrowsk*, population 7000, on the river Medweditz, carries on some trade in corn. The town possesses a citadel. *Zaritsyn*, or *Tzaritsin*, population 4600, is situated on the right bank of the Volga, about 230 miles S.S.W. from Saratov. This place is celebrated for its mineral waters.

SARAWAK, a province on the north-western coast of the island of Borneo, of which Sir James Brooke is the Raja, or governor, under the appointment of the Sultan of Borneo. The province of Sarawak extends between 1° and 2° N. lat., 109° 40' and 111° 40' E. long. It is watered by the river Sarawak and its tributaries. [BORNEO.] The capital, Sarawak, formerly Kuchin, contains a population of 12,000.

SARDEGNA, SARDINIA, a large island in the Mediterranean Sea, situated between 38° 52' and 41° 17' N. lat., from Cape Spartivento, the most southern point, to Cape Longosardo on the north, and between 8° 4' and 9° 50' E. long., from Cape Caccia near Alghero, the most western point, to Cape Comino on the eastern coast. It is 160 miles in length, the average breadth is 69 miles, leaving out the projections. The area is variously stated, some estimates making it 9300 square miles, which is considerably more than the area of Sicily, others make it only 8021 square miles, being a little less than that of Sicily. The north-eastern point of the island, near Terranova, is about 150 miles W. by S. from the mouths of the Tiber, and Cape Carbonaro, at the south-eastern extremity, is about 300 miles W. from the coast of Calabria. Cape Spartivento, the most southern point of Sardinia, is about 120 miles north of Cape Serrat on the coast

of Tunis; and Cape Carbonaro, the south-east point, is 170 miles from Trapani on the north-west coast of Sicily. Towards the north, the narrowest part of the Strait of Bonifacio, which divides Sardinia from Corsica, is about 9 miles across. The situation of Sardinia is central with regard to Italy, Sicily, Barbary, France, and Spain. The island contains excellent harbours; San Pietro and Porto-Conte on the western coast, the roadsteads of Maddalena on the northern and Terranova on the eastern coast, besides the spacious bays of Cagliari, Palmas, Oristano, and Alghero, and the roadsteads of Vignola, Tortoli, and Porto Torres.

A chain of primitive mountains runs from north to south along the whole eastern side of the island, occupying about one-third of its surface, and forming the wild districts of Gallura, Ogliastra, Barbagia, Sarabus, and Badui: this range consists of granite and schistus, with large masses of quartz, mica, and felspar. Few of the summits exceed 3000 feet, except the Peak of Limbarra in the Gallura, which is 3686 feet high, and the Genargentu range, which is near the centre of the island, and attains an elevation of 5276 feet. West of this highland region, and along the central length of the island, there is a succession of fine plains intersected by ranges of smaller hills, and stretching in some places as far as the western coast, such as at Oristano and Alghero. The remaining part of the western coast is occupied by several unconnected mountain groups, some primitive, some secondary, and others of volcanic formation, jutting out in numerous and picturesque headlands, and giving to that part of the island a more varied and pleasing aspect than the abrupt and iron-bound eastern coast. At the south-western extremity of the island are the mountains of Sulcis, consisting of granite and primitive limestone, separated from the eastern chain by the Campidano, or wide plain, which spreads north of Cagliari towards Oristano. North of the Sulcis, and separated from it by the romantic valley of Iglesias, are the mountains of Murgiani and Arcuentu, which rise along the western coast, and the latter of which attains the height of 2316 feet. North of these lies the deep Gulf of Oristano, and east of it is a great plain, through which flows the Tirsì, the principal river of Sardinia. North of this plain, and near the western coast, is the group of Monte Ferru, which rises 2796 feet above the sea; and farther north, towards Alghero, is Monte Minerva, 2400 feet high. A succession of highlands, partly of volcanic formation, extends north of the basin of the Tirsì, and quite across the breadth of the island, through the district of Goceano, and joins the mountains of Gallura on the eastern coast. This range divides the north-west part of the island from the remainder. At the northern base of it is the extensive plain called Campo d'Ozieri, and Campo di Giavesu, through which the river Coguinus flows to the northward. This plain is bounded on the north-west by a hilly tract mostly of volcanic formation, one point of which, whereupon stands the town of Osilo, is 2009 feet high. West of this hilly tract is the plain of Sassari, extending from the northern coast at Porto Torres to the western sea towards Alghero.

North-west of the plain of Sassari is the mountainous peninsula of Nurra, which stretches out into the sea, terminating in three abrupt headlands: Cape Caccia to the south, above 500 feet high; Cape Argentaro to the west; and Cape Falcon, the Gorditanum Promontorium of Ptolemy, to the north. A narrow and shallow strait, lined with sharp rocks, runs between this cape and the island of Asinara, the ancient Herculis Insula, a mountainous island of a long irregular shape, indented by several gulfs and coves, and having nearly 30 miles of coast-line to a comparatively small surface. It is inhabited by a few shepherds and farmers. The north and west coasts of Asinara are very steep, Mont Scommunica, the principal elevation, being 1500 feet above the sea. The whole peninsula of Nurra is covered with mountains, the northern parts of which consist of great masses of granite with schistose rocks, and the southern part is compact limestone with gypsum and quartz. The principal summits in this range are from 1400 to 2000 feet high.

An ancient volcanic district extends along the centre of the island, beginning at Monastir, north of Cagliari, and running northward between Nurri and Sardara: it comprehends the towns of Ales, Milis, and San Lussurgiu, which last is built in the crater of an extinct volcano. It then extends to Bonorra and Queremula, on the border of the great northern plain of Giavesu, where a crater is clearly distinguishable, which from its unbroken conical shape and fine red ashes bears the appearance of comparatively recent action; and the whole surrounding country consists of slaggy lava, rugged scoriae, obsidian, and indurated pozzolana, with large hills of porphyritic tufa towards Bonorra, lying over calcareous rocks. The volcanic beds extend farther north, through Codrongianus and Osilo in the hilly region east of Sassari, where remains of craters occur, to Castel Sardo, on the northern coast, where they form abrupt cliffs 300 feet above the sea. The town-wall and most of the houses of Castel Sardo are built of lava. The river Coguinus forms on this side the geological boundary between the primitive formations of the eastern country, and the trap and volcanic products to the westward. At Nurri, in the southern part of the island, on the borders of the eastern highlands overlooking the Campidano, or great plain of Cagliari, are two hills called 'Pizz'e Ogheddu' and 'Pizz'e Ogu Mannu,' meaning peaks of the little and great eye, which appear to have been ignivomous mouths. A lava stream has run from them over a calcareous tract, which forms an

elevated plain or table-land nearly 1600 feet above the sea, called Sa Giara a Serri, from the neighbouring village of Serri. This plain is covered with oak, ilex, and cork-trees, while its northern declivity contains rich pasture. North-west of this plain is the Giara, or lava-bed of Gestori, of similar formation, which has proceeded from a crater near the town of Ales: it is strewn with masses of obsidian and trachytic and cellular lava, so as to resemble a city in ruins. At Monastir, in the plain north of Cagliari, there is a distinct double crater, now well wooded, and a bridge has been constructed there of fine red trap over a feeder of the Ulla.

The principal rivers of Sardinia are:—1. The *Tirsi*, the *Thyrus* of Ptolemy, which drains the central part of the island. It rises near Buduso, on the west side of the Gallura Mountains, flows first south and then south-west, along the base of the Goceano ridge, passes through the fine valley of Ottana, receiving several tributary streams from the mountains of Genargentu; then flowing by Fordonianus it enters the plain of Oristano, passing north of that town, below which it turns abruptly to the south, and enters the sea after a tortuous course of between 70 and 80 miles. In very dry summers it is fordable near its mouth, but in winter it contains a vast mass of water, and inundates considerable tracts. 2. The *Coguinis*, in the northern part of the island, rises in the volcanic region of Bonorva, flows northward through the plains of Giavesu and Osieri, receives several streams from the highlands of Goceano and of Gallura, passes between Mount Sassu and the Limbara ridge, when it assumes the name of Rio di Partidas, and flowing through a romantic ravine below the cliffs of Castel Doria, enters a fine plain adjoining the sea. It forms a small lake near its mouth, a few miles east of Castel Sardo. The course of the *Coguinis* is between 50 and 60 miles, and it is fordable near its mouth, except in rainy seasons. 3. The *Flumendoso*, the *Saprus* of Ptolemy, the principal stream of the eastern part of the island, rises in the mountains of Corno di Bue, and runs southward through a high valley between the ridge of Genargentu on the west and the Ogliastra Mountains to the east, passing through many solitary glens. It then turns eastward between the mountains of Sarrabus on one side and the hills of Parte Olla, which divide it from the Campidano, or plain of Cagliari, and afterwards winding through the fertile grounds of Villa Puzzu, San Vito, and Muravera, enters the sea between two low rocky points on which stand the towers of Kalinas and Corallo, after a course of between 50 and 60 miles. As it runs between two mountain ridges, the basin of the *Flumendoso* is very narrow; in the winter it is swelled with the drainage of the surrounding mountain region, and it then assumes a very imposing appearance. 4. The *Manna*, or *Ulla*, rises in a fountain in the table-land of Sarcidanu on the south slope of the Genargentu ridge, and, flowing southward through the plain of the Campidano, is joined by the Calarita from the mountains of Gergei on the east, and the Sixerris, which comes near Iglesias, from the west. The united stream enters the *Lake of Cagliari*, which lies west of that city, and is 6 or 7 miles long by 3 or 4 miles broad, and communicates with the sea by seven cuts through a narrow strip of sand. This lake is navigated by flat-bottomed boats, and contains abundance of eels, mullets, and other fishes; it is also frequented by flamingoes and pelicans in the winter. Between the lower course of the *Flumendoso* and Cape Carbonara is a remarkable seven-peaked ridge (2310 feet high), called *Sette-Fratelli* (Seven Brothers), which fills up the south-eastern angle of the island. Besides these four rivers there are many smaller streams, such as the *Turrucano*, which flows through the plain of Sassari, and is crossed near its mouth by a substantial Roman bridge in excellent preservation; the *Terma*, or River of Bosa, on the western coast; and the *Cedreno*, or River of Orosel, which is navigable by boats for about a mile and a quarter inland on the eastern coast; it is an abundant and impetuous stream from its source, which is on the eastern slope of the Barbagia Mountains.

The climate varies greatly according to the seasons and localities. Along the coast the thermometer ranges in the course of the year from 34° to 90°; but it falls at times considerably lower in the highlands. The summits of Genargentu are often capped with snow in the course of the winter. Hail and thunder-storms are rare, but rain falls copiously in the autumn. In the summer the country is subject to long droughts, but the heavy dews of the night partly compensate for the want of rain. Earthquakes are very rare and slight. The plains and some of the lower valleys are very unhealthy in consequence of malaria fever, called by the natives 'intemperie.' Most people remove from the plains to the higher grounds on St. John's Day, the 24th of June, when the air begins to be unhealthy, though it does not become dangerous till August, from which time it continues so to the end of November. The inhabitants of the plains are viewed by those of the highlands with marked contempt as weak and degenerate.

The lands of Sardinia are divided into feudal and non-feudal. The feudal lands either belong to the respective nobles, several of whom are of Spanish families and non-resident, who entrust their domains to indolent 'podatarii,' or stewards, or have been sold to private individuals, who still recognise the feudal lord by paying him a trifling fee, and are under some restrictions, such as not planting vineyards or trees without his consent. The lands not feudal belong either to communities or individuals, and can be let or sold, or given away at the will of the owners. Small portions of these lands are inclosed and well

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cultivated, and are called 'tanche'; but the larger proportion consists of 'vidassoni,' that is, lands belonging to communities; they are mostly divided into three parts, each of which is cultivated in its turn, and while under culture is inclosed with a line of hurdles, and the rest, being fallow, is generally open to the wandering flocks. The government however has for several years encouraged the inclosure of fields, and trees and hedges have been planted in many places. Leases are short, and rent is generally paid in kind. In some parts farms are let on the metayer system. One-third of the surface of the island consists of macchie, bush or waste, consisting of sandy or stony districts, and lakes and marshes; another third is occupied by forests or natural pastures; and the remainder, which is estimated at 5,500,000 starelli (a measure about four-fifths of an acre), consists of corn-fields, vineyards, olive-grounds, orchards, and gardens. About a million of these starelli are allotted to the growth of corn. The Sardinian plough resembles the aratrum of the Romans; it is light, and penetrates only two or three inches into the ground, and has no coulter. Most of the garden-grounds are worked with the hoe, the spade and mattock being generally unknown. Corn is left in the fields until it is threshed, which operation is performed by the treading of mares or colts on an area prepared by paring off the sward and beating the soil with a mallet to the requisite hardness. Wind-mills are unknown, and water-mills are found only in the northern part of the island. Corn is winnowed, and it is generally ground in a corner of the house by means of the domestic mill, turned by an ass. There is no regular system of manuring the ground; it is done however sometimes when urgently required. Paring and burning are the common processes. The only artificial fodder for cattle is the 'mischiale,' a mixture of barley, lucerne, basil, and vetches, well known to the ancients.

Cattle, sheep, goats, and swine are divided into two classes: the 'manso,' or tame, being those which work or yield milk, wool, &c., are carefully tended and kept in the best pastures; and the 'rude,' which are for slaughter or for breeding, and which are allowed to ramble over hills and wastes almost in a wild state. All the labour of the field is done by oxen. The breed of horses reared in the tanche, or inclosed grounds, is carefully attended to: horse-races are frequent. For the improvement of the breed there is a government establishment in the plain of Ghilarza, called Regia Tanca, where Arabian and Spanish stallions are kept, and also Swiss bulls and rams. Sardinian horses are in general free from vice, patient of fatigue, and require but moderate food, and the Sards are generally very good horsemen. The mule is unknown. Oxen are used for drawing the carts, the wheels of which are made of a solid piece of wood, strengthened and protected by large-headed nails, the only iron used in the whole machine. The axle-tree is fixed into the wheels, and turns round with them.

The best forests are in the mountainous districts of Gallura, Barbagia, Goceano, Marghine, and Planargia. On the south-west side of the ridge of Genargentu is an extensive elevated plain, called Su Sarcidanu, covered with fine oak, beech, chestnut, and cork-trees; and on the Menomemi range, between San Lussurgiu and Maocmer, is another elevated plain, called Su Littu de St. Antoni, about nine miles wide and eleven or twelve miles long, covered with a rich forest. Fine woods are also found in the Giara de Serri, and on the hills of Trebina and Arcuosa, and they abound with wild hogs and game. Pine-trees are not common except near Terranova. The cork-tree grows very fine and in great quantity in the northern part of the island. Timber is very scarce in the plains, and the want of roads prevents the people from making use of that of the mountain forests. Dwarf mulberry-trees grow in abundance.

Among fruit-trees, the fig, the vine, the apple, apricot, peach, almond, and prickly pear, are the most common. Walnuts and chestnuts are only met with in some places. Oranges, lemons, and citrons are cultivated chiefly in the southern districts of Iglesias and Villa Cidro, and near Sassari, but are not held in great esteem. Date-trees grow on the Campidano, and some of the produce is gathered and sold, but it is not of a good quality.

Vegetables are fine and plentiful; peas and cabbage grow wild in the greatest luxuriance, and the asparagus of the hedges is abundant in the markets in March and April. Celery and tomatoes are large and well flavoured. The 'torzo,' a kind of turnip-cabbage, grows to a gigantic size, weighing without the leaves 8 lbs. or 10 lbs. Saffron is cultivated, and is much used in cookery.

The vine is extensively cultivated, both soil and climate being highly favourable to it; and though the process of making wine is still very imperfect, Sardinia produces some excellent wines. The 'Malvasia,' or malmsey wine of Quarto, Cagliari, Bosa, and Sorso, the muscat wine of Alghero, the red wine of Alghero and Oristano, and the wines of the Campidano, are much esteemed. The natives in general make considerable use of wine. Common white wines are made near Sassari and Terralba, and also in the Campidano.

There are several extensive olive-grounds. The best olives are those of Sassari. Inferior oil is produced from the *Ogliastra*, or wild olive, which, with that made from the *Lentiscus*, serves the peasants for burning.

Corn is the principal article of export. The greater part of the wheat raised in Sardinia is of a superior though soft kind called trigue; it will keep good only eighteen or twenty months; it is sowed in November and December, and reaped in June. In seasons of abundant

harvest about 400,000 starelli (1½ bushels each) are exported. The barley is inferior in quality as compared with the wheat; about 200,000 starelli are exported. Maize, though it thrives well, is not very extensively grown. One hundred thousand starelli of beans, 200,000 starelli of peas, and 1000 starelli of lentils, are also exported annually.

Cheese is a great object of rural economy; it is made chiefly from sheep and goats' milk, and being steeped in brine, it has a salt bitter taste. A great quantity is shipped for Naples, where it is in great demand, being much used when grated to season maccheroni. Little butter is made, as the treatment of cows is not well understood, and fodder is scarce.

Salt is a monopoly of the government, and a profitable branch of the royal revenue, the continental states of the house of Savoy being supplied entirely from Sardinia. Sweden and other states take many cargoes of salt from Sardinia. The salterns, both natural and artificial, are round the Gulf of Cagliari, at Oristano, Terranova, and on the northern coast west of Porto Torres. The salterns are worked by convicts sentenced to the galleys. Tobacco is also a royal monopoly. This plant, which was introduced in 1714, thrives well.

Flax is cultivated, and used in the linen manufactories of the country. The finer sort of linen is made at Busachi. Wool is coarse; it is manufactured into coarse cloth for the peasantry. Cotton grows very well in the Campidano. Madder grows wild, and is used by the peasants for dyeing their coarse cloth. Some rock-mosses are also gathered for dyeing. Bullocks' hides, sheep and goat skins, and kid or lamb skins, are exported in great quantities. Leather is imported from Marseille and other places. Among the exports are—fox skins, martin skins, rabbit and hare skins. The forests abound with stags, small deer, wild boars, and mufoni, or murvoni, a species of large sheep, clothed with hair instead of wool.

The tunny fisheries on the north and west coasts are very productive. They are mostly in the hands of foreigners. The tunnies generally weigh from 100 lbs. to 300 lbs. each, but some of them are above 300 lbs. All the parts of the fish are turned to account; most of them are salted and shipped to various parts of the Mediterranean, and a comparatively small proportion is used in the island. The fishery of anchovies and sardines, which once used to be very productive, is much fallen off. Coral is taken off the west and south coasts. This branch of industry is carried on by the Neapolitans and Genoese. Pearls of an inferior quality are obtained from the *Pinna nobilis*, which abounds in the shallow bays. The shell measures from 15 to 27 inches in length, and is sought chiefly for the tuft of silky hair, the *Byesus* of the ancients, which is attached to it. The filaments are of a glossy brown colour, about 8 inches in length, and are easily spun into gloves, stockings, &c.

Sardinia was noted in ancient times for its mines, which were worked to a great extent, as is attested by vast excavations and remains of foundries. South-west of Iglesias is Monte d'Oru, which appears to have derived its name from the gold formerly extracted from it; the mountain has been reduced by excavation to a mere shell. Iron and lead-ore are found in abundance in many places, as well as copper, silver, and quicksilver. In the eastern mountains are found porphyry, basalt, alabaster, and marble. Chalcedonies, jaspers, carnelians, sardonyx, turquoises, and rock-crystal are found in the districts of Sulci and other mountains of the west. Other mineral products are fossil-wood, lignite, and inferior coal; alum, nitre, amianthus, asbestos, and a mixture of carbonate of lime and alumina, which is used by the natives in washing. There are numerous mineral springs. They are however unprovided with buildings or any sort of accommodation for invalids. Vestiges of ancient terraces exist at the sulphureous springs of Fordongianus.

The population of Sardinia amounted in 1838 to 491,973; in 1848 to 547,112. The island is divided into 8 administrative districts: Cagliari, which comprises the south and south-west parts of the island; Nuoro the east; and Sassari the north and north-west. The administrative division of Cagliari contains the following provinces:—Cagliari, population 106,388; Iglesias, 42,598; Isili, 48,958; and Oristano, 78,189. The administrative division of Nuoro contains the provinces of Nuoro, population 53,882; Cuglieri, 37,522; Lanusci, 27,530. In the administrative division of Sassari are the provinces of Sassari, population 65,821; Alghero, 34,108; Ozieri, 24,456; and Tempio, 22,660. For ecclesiastical purposes the island is divided into eleven dioceses:—Cagliari, Oristano, Sassari, Galtelli-Nuovo, Iglesias, Ales, Alghero, Ampurias Civita, Bosa, Biarcio, and Ogliastra. Cagliari, Sassari, and Oristano are archbishops' sees. The Roman Catholic is the only religion of the country. Over each of the administrative divisions there is an intendant-general, appointed by the king.

The earliest inhabitants of the island were Celts, among whom the Phœnicians formed settlements; to these Iberians and Ligurians, Greeks and Etruscans were successively joined; and afterwards an infusion of Carthaginian and of Roman blood was added. In later times Pisans and Spaniards settled in the towns and lower country, but in the highlands the population has remained almost purely Celtic, and may be considered as the real descendants of the old Sards, who struggled hard against both Carthage and Rome. The Sards are of a middle stature, and well formed, with dark eyes and coarse black hair, though fresh complexions and blue eyes are also seen in the mountains. In the Campidano they are more swarthy than

in the north part of the island, and have generally a large mouth and thick lips. They have strong intellectual faculties, though mostly uncultivated, and an enthusiastic attachment to their country and their native district, in consequence of which families seldom remove or disperse. They are kind and hospitable, but easily offended and excited to revenge. If the family of the sufferer in a blood feud has influence enough to stir justice into active measures against the offender, the latter flies to the mountains, where he joins others of a similar description, and becomes a robber.

Italian is the language of the government, and is also spoken by all educated persons in the large towns. The native tongue is derived from the Latin, with an admixture of words of Greek and Arabic origin. The natives of the Barbagia district pride themselves on the number of Greek words which they retain, and their distinct but harsh and guttural enunciation, which is with difficulty attained by the rest of the Sards. At Alghero the Catalanian is generally spoken.

The villages are generally large and well situated, but with unpaved narrow streets, mean houses, and a general want of comfort. Large dunghills disfigure the principal avenues. The villages in the Gallura are built of granite blocks, and in the other northern districts of freestone; but in the southern division of the island most houses in the country are built of sun-dried bricks. The dwellings of the peasants have generally only one story, without windows, or if they have windows, they are not glazed. A whole family often dwells in a single room, with their chickens, dogs, and kids, whilst the patient ass turns the mill in a corner. Throughout the island the *cittadini*, or inhabitants of walled towns, hold the *contadini*, or villagers, in utter contempt, a feeling which is cordially returned by the rustics, besides which the people of Cagliari and those of Sassari mutually hate each other. Kissing on meeting is an indispensable custom among men of all ranks.

The Sards are fond of feasting; they drink wines and cordials, rarely to excess. Fine wheaten bread is in general use, except among the shepherds of the eastern highlands, who eat a coarse kind of bread, and sometimes acorns. The Sards eat more butcher's meat than the Sicilians or South Italians. Poultry is rather scarce, but game is plentiful. The only mode of travelling for both sexes is on horseback. There are few coaches, and those only in the large towns, and the country people regard them as articles of effeminate luxury. A high road, 125 miles in length, runs from Cagliari to Sassari, passing through Oristano, and keeping as much as possible along the western plains. There are branch roads to the most important towns in the interior. The eastern highlands still remain difficult of access.

The law is the chief profession for young men of respectable connections. The highest legal rank is that of a member of the Real Consiglio for the affairs of Sardinia, which consists of seven members, and sits at Turin. It is a supreme court, and decides finally upon all important matters, appeals, &c. The high court, called Reale Udienza, sits at Cagliari for civil and criminal cases. There is an appeal from it to the Real Consiglio at Turin. In every town or considerable district of the island there is a magistrate called Vicar, in some places Podestà, or Consul in others, who, with an assessor and secretary, judges in the first instance for the town and surrounding territory. The prefects in each of the eleven provinces are also judges in civil matters. There is a commercial court at Cagliari, which decides all commercial suits. Sardinia furnishes by voluntary enlistment one regiment to the royal army, besides which it has a militia, an irregular force of about 6000 cavalry and 1200 infantry, the officers of which wear a uniform, but receive no pay. There are only three regularly fortified towns: Cagliari, Alghero, and Castel Sardo. The coasts are defended by a line of stout towers, garrisoned by a body of coast-guards called *Torrari*, under the superintendence of a council of three members, chosen for three years.

Scientific education is given by the universities of Cagliari and Sassari. The university of Cagliari has faculties of theology, medicine and surgery, law, and philosophy, with a full list of professors in each. Among the accessories are a library of above 15,000 volumes and a cabinet of natural history and antiquities. The university of Sassari has likewise five faculties. The accessory establishments consist of a cabinet of natural history, and a library. In the head town of every province there is a Latin school, and most villages have an elementary school for boys, in which reading, writing, and arithmetic are taught, besides the doctrines of religion and the elementary principles of agriculture. In almost every town there is an hospital for the sick, the insane, and foundlings.

The mechanical arts are in a very low state; the guns of Tempio are in some repute, but the cutlery is of the commonest sort; the potteries are very coarse, and wooden platters are used by the country people; builders and carpenters are very indifferent workmen, besides which all artisans are extremely indolent. Superior workmen come from Piedmont or Genoa.

The principal towns of Sardinia are the following:—CAGLIARI: Sassari, the head town of the north part of the island, situated on a gentle declivity, in a pleasant and fertile country, about 9 miles from the coast. It has a good main street, which is the only one paved; fine public walks, shaded by trees, outside of the walls; twenty-four churches, ten convents, three nunneries, a clerical seminary, a uni-

versity, an ecclesiastical college, several palaces, a public hospital, and about 20,000 inhabitants. The cathedral is a large structure, with a very elaborate façade. Good water is brought to the houses by water-carriers. Sassari was built in the 7th century of our era, by emigrants from the ancient town of Turris, which had been ruined by the Longobards. A fine road leads to Porte Torres, the nearest harbour, where the mail packet puts in from Genoa: ALGHERO: *Oristano*, a town of about 4500 inhabitants, in a low unhealthy plain, near the mouth of the Tirsi, has several churches and convents, a clerical seminary, a college, and a spacious cathedral, with a detached octagonal belfry, which is the most striking object in the town. A spiral staircase of 150 steps leads to the top, whence there is a splendid view. Oristano is a busy lively place in the winter and spring, but in summer all those who can, leave it for a healthier residence. Several noble families inhabit the town: *Nuoro*, the chief town of the eastern province, is situated on the eastern slope of the Barbagia Mountains, near their junction with the Genargentu range, and has about 4000 inhabitants. It gives title to a bishop. On its territory are excellent pastures: *Bosa*, a town of about 3500 inhabitants, finely situated in a valley, between two flat-topped hills, on the north bank of the river Termo, a short distance from the sea. Bosa has nine churches, some convents, a clerical seminary, several paved streets, and a long bridge over the river. The country around is very productive of oil, wine, fruit, flax, cheese, &c., and the inhabitants are very active; most of the travelling pedlars about the island are from Bosa. The town is extremely unhealthy in summer: *Iglesias*, a pleasant town, in a healthy spot, on an elevated and fertile plain, amidst limestone hills, is abundantly supplied with good water, conducted by an aqueduct to a fountain in the centre of the town. The streets are dirty and ill-paved, but they contain some good houses. The cathedral and bishop's palace are remarkable structures. The town is surrounded by a dilapidated Pisan wall, and the remains of a castle are seen on a hill to the north. *Iglesias* reckons about 9000 inhabitants: *Tempio*, the head town of the mountainous district of Gallura, in the north-eastern highlands, stands in a very healthy situation; it has several large houses three stories high, built of granite, with wooden balconies, a collegiate church, a nunnery, a college, and about 6000 inhabitants: *Quartu* [CAGLIARI]: *Villacidro*, at the foot of the mountains north-west of Cagliari, in a healthy situation, has 5500 inhabitants: *Oriolo*, on a mountain 2000 feet above the sea, east of Sassari, has 5400 inhabitants: *Sorso*, in the same district, between Sassari and Castel Sardo, has 4000 inhabitants: *Castel-Sardo*, a strong place on the coast between Sorso and the mouth of the Coguinis: population, 2000. *Bonorva*, at the northern foot of the Marghine Mountains, has 4000 inhabitants.

History.—The island was inhabited by some ancient race before the Greeks became acquainted with it. Iolaus, the mythic charioteer of Hercules, is said to have led a Greek colony into Sardinia, and to have founded Olbia on the north-east coast, afterwards a considerable town in the Roman period, and of which vestiges are found near Terranova. Strabo (p. 225) says that the colonists of Iolaus inhabited the island jointly with the barbarians, who were Tyrrheni. From an inscription found at Stampace, it appears that Caralis, or Cagliari, assumed at one time the name of 'Civitas Iolæ.' The island became well known to the Greeks, who called it Sardo. (Herodotus, v. 106.)

The first Carthaginian expedition to Sardinia, of which the epoch however is not ascertained, was defeated by the natives. About B.C. 490, Hasdrubal and Hamilcar, sons of Mago, led another expedition to Sardinia, which gained a footing in the southern part of the island, and built or colonised Caralis and Sulcis. Hasdrubal however lost his life in fighting against the natives, who appear to have struggled bravely against the invaders. The Carthaginians never reduced the island entirely, as the natives took refuge in the mountains. The lower country however was permanently in their possession until the first Punic war. Sulcis was one of their chief colonies, but the site of that once wealthy town is now a subject of controversy, some placing it on the southern coast, where a district still retains the name; whilst others, with more plausibility, place it in the small island of *San Antioco* opposite, where considerable ancient remains are seen. In the neighbouring island of *San Pietro*, an amphora full of Carthaginian brass coins, was some years ago found by a farmer in ploughing the ground.

During the first Punic war the Romans attacked and defeated the Carthaginian fleet at Olbia, where Hanno, the commander, fell; and again they gained another naval victory over the Carthaginians at Caralis, but at the conclusion of the war the island still belonged to Carthage. The Romans however soon after subjugated the principal part of the island, which was incorporated, with Corsica, into a Roman province, under a prætor, about B.C. 228. After the breaking out of the second Punic war, the Sardis rebelled against the Romans, and having received aid from Carthage, fought a general battle near Caralis, in which they were utterly defeated, and Cornus, the stronghold of the insurgents, surrendered to the Romans. (Liv. xxiii., c. 40, &c.) After this Sardinia remained quiet during the rest of the Punic war. From this time the island, though often disturbed by insurrection, remained subject to Rome. During the period of the empire it was considered by the Romans as one of their granaries, and a penal colony for their criminals. Pliny (iii. 7) mentions Caralis,

Sulcis, Nora, and other places as towns that had the Roman civitas, and Turris Libysonis as a colonia.

Nura, afterwards one of the chief towns of the island, is particularly noticed in the Roman period on account of the inhabitants having accused the prætor Scæurus of malversation, on which occasion Scæurus was defended by Cicero. But the ante-Roman origin of Nura is proved by one of those singular structures called Nuraggi, which is a large cone constructed of coarse blocks without mortar, and flanked by four small ones, upon which rests the foundation of a Roman aqueduct that supplied Nura with water. There are also at Nura other Roman remains, such as a small theatre, baths, &c., all very much defaced. Nura is said to have been destroyed in the wars of the Vandals. The Nuraggi are attributed by some to Iberian colonists and their leader Norax. They are a kind of tower in the form of a truncated cone, constructed of large blocks of stone, lava, porphyry, or freestone, without cement, and forming two concentric walls, between which are stairs leading to the summit. The inner part has generally two vaulted rooms, one above the other. The entrance at the base is very low, and leads through both walls to the lower chamber. The stairs give access to the upper chamber. The Nuraggi are of two sorts; the most common, and probably the most ancient, bear no marks of the chisel, and are constructed of massive blocks, with irregular faces, and smaller stones in the interstices. The exterior materials of the others are evidently worked by tools; and though the stones are not exactly square, they are placed in horizontal layers, and gradually diminish in size towards the summit. The Nuraggi stand generally on the summit of hills commanding a view of the plains. Some rest upon a solid and spacious substructure or platform walled round in the same manner, and in which are constructed hidden chambers, which communicate with the central one by a covered gallery. One of the loftiest Nuraggi is between Samagheu and Fordonianus, in the district of Busachi, east of Oristano: it is nearly 60 feet high, and is called by the natives 'Su Nuraggi longu.' Nuraggi are scattered all over Sardinia, to the number of several hundred, and are seen in every state, some nearly perfect, others a heap of rubbish. They are very numerous in the district of Sulcis, or the south-west part of the island, and also in the hilly region of Le Marghine, north of Oristano. There are also fine specimens of them in the Campo d'Ozieri, and at Isili and Gennuri in the Campidano. The original purpose of these buildings was probably for watch and defence, though in after-ages some of them may have been used as monuments for the dead, fragments of Roman terra-cotta and coins of the Empire having been found in them. Neither literal nor symbolical characters are discovered in these singular structures.

Genesio, the Vandal, invaded Sardinia from Africa, and attached it to his kingdom. After the overthrow of the Vandal kingdom by Belisarius, Sardinia was annexed to the prefecture of Africa, and was governed by an officer styled duke. The Saracens began, about A.D. 720, to ravage the coasts of Sardinia; and as the Byzantine emperors were unable to protect them, the natives applied for assistance first to the Longobards, and afterwards to Louis le Debonnaire, Charlemagne's son, to whom they tendered their allegiance. About the year 1000, Musait, a Moorish chieftain, sailed from Africa to Cagliari with a large force, took it, and conquered the greater part of the island, and assumed the title of king of Sardinia. Musait sent from thence armed vessels to ravage the coasts of Italy. The Pisans sent an armament which took possession of Cagliari; but Musait (1015) obliged the Pisan garrison to capitulate, and then sailing for the coast of Luna in Italy, surprised and sacked that town. He was however attacked in his retreat, and lost most of his men, and even his wife, who was taken prisoner and beheaded. Musait escaped to Sardinia. The combined forces of the Pisans and Genoese now attacked the Moors, and drove them away from both Sardinia and Corsica (1016-1017). After this "the Genoese kept for themselves Corsica and Capraja, and the Pisans had Sardinia." The island being finally cleared of the Moors, the Pisans divided it into four provinces, called Giudicature, and appointed Pisan noblemen over each, styled 'Giudice,' each independent of the others, but all feudatory to Pisa. Cagliari in the south, Torres in the north, Gallura in the east, and Arborea or Oristano in the west, were the names of the four giudicature. Some places along the northern coast were however assigned to the Genoese, among others Castel Sardo, which was for a long time in the possession of the Doria family, who built a castle near it, still called Castel Doria.

The dominion of the island remained long after a constant subject of contention between Pisa and Genoa, whilst the lords of the various provinces made themselves independent in reality. The emperor Frederick II. took advantage of this to make his natural son Hentzius king of Sardinia. Hentzius distinguished himself for his bravery and determination both in Sardinia and Sicily, where he fought for many years for his father against the Pope and the Guelphs, until he was taken prisoner by the Bolognese in 1249, who kept him in confinement for the rest of his life, during which he bore the title of King of Sardinia. His title was however a mere name, and the various judges of the island ruled as independent princes, whilst Pisa and Genoa continued to fight for their respective claims to the nominal sovereignty. After the defeat off Meloria (1284), by which the Pisan naval power was annihilated [LIVORNO; PISA], proposals were made by the Genoese to release their numerous prisoners, provided Pisa would

make a cession of Sardinia, and give up the castle of Cagliari into the hands of the Genoese; but the prisoners themselves, it is reported, protested against recovering their liberty at such a price.

In 1323 Jaime, king of Aragon, who had been invested with the sovereignty of the island by Popes Boniface VIII and Clement V., sent the Infante Don Alonso to make a descent upon the island. The Infante being joined by Hugo, judge of Arborea (whose plot for massacring the Pisans throughout the island had been successfully executed) and some of the native leaders, besieged Iglesias, and after several months' resistance compelled the Pisan garrison to capitulate. He then proceeded to blockade Cagliari by sea and land. A Pisan fleet of 52 galleys arrived in the spring of 1324, and landed a body of troops, which were joined by some of the natives, but being defeated by the Aragonese, a treaty was concluded by which Sardinia was given up by the republic to the crown of Aragon, on condition that the Pisan inhabitants and their property should be respected, and that the castle and suburbs of Cagliari, with the port, and the adjoining lakes should remain in possession of Pisa, on payment of an annual tribute as a sign of homage to the king of Aragon. This arrangement did not last long. In the following year, the Pisan squadron being entirely defeated by the Aragonese in the Bay of Cagliari, the town was evacuated, and Sardinia was entirely lost to Pisa. But the judges were no more inclined to submit to their new masters than to the Pisans, and for many years they carried on a destructive warfare against the Aragonese. At last Peter the Ceremonious, king of Aragon, landed in 1354 with a strong force at Porto Conte, and having traversed and pacified the principal part of the island, made his public entry into Cagliari, where in April of the following year, with a view of checking the influence of the factious chiefs, he convoked a general parliament, after the model of the Cortes of Spain, consisting of prelates, peers, and commons, which was called 'Stamenti,' or Estates. He thus laid the foundation of a representative government in Sardinia, which still subsists. Brancalione Doria, head of the Genoese faction, who had married Eleanor, daughter of Mariano, judge of Arborea, offered his services to the king of Aragon to bring the whole of Sardinia into subjection; but his wife put herself at the head of a strong party of natives, who named her son judge of Arborea. Brancalione, who had gone to Spain, was detained there as a hostage, and after fruitless negotiations Eleanor took the field, being joined by the people of Gallura, and drove the Aragonese from almost the whole northern division of the island. She ruled for several years by the name of 'Giudicessa,' but in fact as queen of Sardinia, and she compiled for her subjects the 'Carta de Logu,' or Code of Laws, which remains in force with few modifications to the present day. This remarkable woman died of the plague in 1403, and her only son dying in 1407, without issue, the Sards invited over the viscount of Narbonne, husband of Beatrice, Eleanor's sister. But the viscount found an opponent in Brancalione Doria, who after his wife's death had taken possession of Arborea, and was supported by the Genoese in the north. In the spring of 1409 an Aragonese army, under Martin, son of Martin of Aragon, landed and entered Cagliari, and from thence, with 8000 foot and 3000 horse, he marched against the forces of both Doria and the viscount, who had united against him. A battle took place at San Luri, in June 1409, in which the Aragonese obtained a complete victory; Doria was taken prisoner, and the Viscount fled precipitately. Martin however died shortly after of the malaria fever, and the Viscount continued to carry on the war. At last Alfonso V. of Aragon obtained the formal cession of the province of Arborea in 1428, by paying 100,000 gold florins to the heir of the late viscount of Narbonne, and the whole island became subject to the crown of Aragon. In 1492 Ferdinand the Catholic established the Inquisition in Sardinia, and ordered the expulsion of all Jews who refused to be baptised, and their synagogues to be converted into churches. From that time the Jews have not been tolerated in Sardinia.

By the union of the crowns of Aragon and Castile, Sardinia became an appendage of the vast Spanish monarchy, and was ruled for two centuries by triennial viceroys sent from Spain. In the war of the Spanish succession, the mountaineers of Gallura having declared themselves for Charles of Austria, an English fleet under Sir John Leake appeared before Cagliari, and the viceroy capitulated, and the island acknowledged Charles; but by the peace of Utrecht in 1713, Charles having resigned his claims to Spain, Sardinia was given to him as emperor. In 1717 Alberoni, the minister of Philip V., sent a large force in the midst of peace, under the Marquis de Lede, which took possession of Sardinia in less than two months. By the treaty of London of 1720 Philip was obliged to restore Sardinia, which was finally given to Victor Amadeus, duke of Savoy, who then assumed the kingly title. From that time the history of Sardinia becomes closely connected with that of the house of Savoy.

In December, 1792, the National Convention, having declared war in the name of the French republic against the king of Sardinia, sent a large fleet under Admiral Truguet to attack the island. The French, who attempted a landing at Cagliari and Quartu, were repulsed by the natives, who are generally good marksmen, and accustomed to the use of fire-arms. The admiral, after uselessly bombarding the town for several days, re-embarked the soldiers and sailed away.

The king of Sardinia, pleased with his insular subjects, invited them to ask for anything that they might think useful for the island. The

Sards demanded, 1, the convocation of the stamenti; 2, the confirmation of their laws, customs, and privileges; 3, that all offices in the island, except that of viceroy, should be held by natives; 4, the establishment of a council to advise the viceroy; 5, permission to send a minister to reside at Turin and watch over their interests. The Piedmontese ministers however dissuaded the king from listening to the petition; situations continued to be filled with Piedmontese; and the consequence was that insurrections broke out in 1794 and 1795, and the commander-in-chief and the intendant-general were killed by the people of Cagliari. By the mediation of the archbishop of Cagliari however, and of the Pope, a general amnesty was proclaimed in 1796, and some of the demands of the islanders were granted. Charles Emmanuel IV., driven away by the French from his continental states, landed at Cagliari in March 1799, and was received with enthusiasm. The king however returned soon after to the continent, and in 1802 abdicated in favour of his brother Victor Emmanuel, who, having lost all hopes of recovering his continental dominions, repaired to his island kingdom in February 1806, and continued to reside in Sardinia till the fall of Napoleon in 1814.

SARDINIAN STATES, the dominions of the House of Savoy, constitute a monarchy, the head of which derives his title of king from the island of Sardinia. These states consist of—1, the duchy of SAVOY; 2, the principality of PIEDMONT; 3, the duchy of GENOA; 4, the county of NIZZA; 5, the island of SARDEGNA. The continental territories have an area of 19,775 square miles. The population in 1848 amounted to 4,368,972. The total area of the kingdom, including the island of Sardinia, is 29,075 square miles (about one-seventh of the area of France), and the total population in 1848 amounted to 4,916,084 (less than one-seventh of the population of France at the census of 1851). The continental territories are divided into 11 administrative divisions and 89 provinces; the area and population of which are given in the following table:—

Divisions.	Provinces.	Area in Square Miles.	Population in 1848.
Torino . . .	Torino . . .	1,117	411,959
	Pignerol . . .	593	153,233
	Susa . . .	539	81,834
Genoa . . .	Genoa . . .	358	285,330
	Chiavari . . .	354	116,077
	Novi . . .	289	65,013
	Levante . . .	261	78,859
	Savona . . .	311	78,906
Savona . . .	Aequi . . .	445	101,102
	Albenga . . .	263	59,993
	Nizza . . .	1,180	118,377
Nizza . . .	Onegilo . . .	175	60,072
	San Remo . . .	265	64,541
	Coni . . .	1,003	179,638
Coni . . .	Mondovi . . .	679	148,450
	Alba . . .	408	118,844
	Saluzzo . . .	632	153,942
	Alessandria . . .	332	117,870
Alessandria . . .	Asti . . .	351	136,065
	Voghera . . .	308	101,695
	Tortona . . .	257	58,853
	Bobbio . . .	269	37,833
	Novara . . .	533	178,069
	Lomellina . . .	480	139,649
Novara . . .	Pallanza . . .	312	64,030
	Osola . . .	521	36,331
	Valsesia . . .	292	35,879
	Ivrea . . .	562	168,561
Ivrea . . .	Aosta . . .	1,233	81,232
	Vercelli . . .	473	121,806
Vercelli . . .	Biella . . .	377	180,691
	Casale . . .	335	420,428
	Chambéry . . .	634	152,468
Chambéry . . .	Alta Savoia . . .	377	50,873
	Moriana . . .	798	64,239
	Tarantasia . . .	706	48,723
	Annecy . . .	620	107,474
Annecy . . .	Faisaigny . . .	786	105,474
	Chablais . . .	356	57,563
Total . . .		19,774	4,368,972

An account of these divisions and their chief towns is given under their respective heads.

Each province is administered by a governor called Intendente, appointed by the king. The province is an aggregate of communes; each commune has a sindaco, or mayor, who is subordinate to the intendente. For judicial purposes each province has a court, called Tribunale di Prefettura, which sits in the chief town. The provinces are divided into districts called Mandamenti, in each of which there is a justice of the peace, who has a secretary. There are in all 412 of these mandamenti. There are four supreme courts, which are also courts of appeal. The supreme court of Turin has jurisdiction over

all the provinces on the Italian side of the Alps and north of the Ligurian Apennines. The jurisdiction of the High Court of Genoa extends to all the provinces of the duchy of Genoa, with the exception of San Remo. The High Court of Nizza has jurisdiction over the provinces of Nizza, Oneglia, and San Remo. The High Court of Savoy, which sits at Chambéry, decides all suits within the limits of the duchy of Savoy. Each court has two chambers, one for civil and the other for criminal matters. The judges are irremovable. There is an Admiralty Court which sits at Genoa; and tribunals of commerce are established in all the leading towns. The tribunals of commerce of Nice, Genoa, Chiavari, Savona, Novi, and San Remo, Turin, Chambéry, and Nice are called *Consolati*. The towns and other communes have a communal council composed of notables of the place, at the head of which is the *syndic*. The council superintends the local and economical administration of the commune, but its acts are subject to the sanction of the intendents of the province.

The government until lately was an absolute monarchy. The late king, Carlo Alberto, published a constitution for his subjects, dated February 8, 1848, which has been since faithfully acted upon. It declares the Catholic religion to be the dominant religion, but gives perfect freedom of conscience to dissenters. The executive is vested in the king, who acts by responsible ministers; the command of the army, the right to make peace or war, to make appointments to office, to sanction laws, also rest in the king. The legislative power is exercised by the king and two chambers—a Senate and Chamber of Deputies—which must be convoked every year by the king; or if dissolved, the king must convoke a new chamber within four months. All financial laws must first be introduced into the second chamber. The freedom of the press and of the person is guaranteed. The judges are irremovable.

The army is recruited yearly by means of a conscription. Every conscript, unless he provides a substitute, is bound to serve eight years in the regular army, after which he is enrolled for eight years more in the provincial battalion of his respective district. In time of war the provincial battalions are called into active service, and the army becomes thereby increased to about 150,000 men. The regular army in 1854 numbered 47,524 men and 7602 horses. The corps of carabinieri, in number about 4000 (of whom 885 are in the island of Sardinia, which is free from the conscription), are charged with the police of the country, being scattered in detachments over the various provinces. In 1855 the army was increased in consequence of the king sending 15,000 men to aid the French and English against Russia in the Crimea.

The naval force consists of 4 sailing and 4 steam frigates, 4 corvettes, 3 brigantines, 1 brig, 6 war steamers, and several smaller vessels, carrying in all 900 guns, and manned by 2860 men, besides officers. The stations of the royal navy are at Genoa, Villafranca, and in the island of Sardinia. The mercantile navy numbers 3419 vessels, carrying an aggregate of 154,852 tons, and 24,539 men, including captains, sailors, and workmen.

The public revenues of the state, as estimated in the budget of 1855, amounted to 128,182,561 francs; and the expenses to 187,668,242 francs. The national debt on the 1st of January 1854 amounted to 571,826,164 francs (22,873,000*l.*), which has been increased during the present year (1855) by a loan of 3,000,000*l.* sterling, guaranteed by the British government. The revenue is derived chiefly from land-tax, customs and excise duties, post-office, public works, &c.

The ecclesiastical administration of the continental states is under the 4 archbishops of Turin, Chambéry, Genoa, and Vercelli; and 26 bishops, of Maurienne, Tarantaise, Annecy, Aosta, Susa, Pinerolo, Acoqui, Alba, Asti, Cuneo, Fossano, Ivrea, Mondovì, Saluzzo, Alessandria, Biella, Casale, Novara, Vigevano, Albenga, Nizza, Bobbio, Sarzana, Savona, Tortona, and Ventimiglia. The number of parishes is 3756; that of collegiate churches, besides cathedrals, is 74; and that of clerical seminaries, 54. There is an ecclesiastical academy for the higher theological studies at Superga, near Turin. There are in all the continental states about 240 convents of monks and 82 convents of nuns; by a law passed by the Sardinian Chambers in May 1855, all religious orders are suppressed, with the exception of those employed in "preaching, teaching, or tending the sick." The Valdenses are the most numerous Protestant sect as yet in the Sardinian states. They dwell chiefly in the valleys of Pignerol. Their clergy study at Geneva or Lausanne in Switzerland. They have churches in Genoa and Turin.

Public instruction is afforded by the royal and communal colleges. In every province there are one or more royal colleges, in which grammar, rhetoric, and philosophy are taught; and in some of them there are chairs of law, medicine, and divinity. In most towns there is a communal college, besides grammar schools. Female education is afforded almost exclusively in convents of nuns, of which there are forty-two thus engaged. Scientific instruction is given in the two universities of Turin and Genoa, in which cities there are academies of sciences and of the fine arts. [GENOA; TORINO.] There are a veterinary school at La Veneria near Turin, a school of mineralogy at the mines of Moutiers in Tarantasia, and a naval school at Genoa. Most communes have schools for boys.

The continental states of the king of Sardinia have several fine carriage-roads across the Alps and Apennines, which intersect their territory. The most remarkable are:—1, the great road of Mont

Cenis, leading from Chambéry to Turin, constructed by Napoleon; 2, that of the Simplon, leading into Switzerland, likewise constructed under Napoleon; 3, the road from Genoa to Sarzana and Luoca along the Eastern Riviera; 4, the road from Genoa to Novi by Serravalle; 5, the road Della Cornice, from Genoa to Nizza, along the Western Riviera, begun under Napoleon, and finished under king Charles Felix. There is a well-regulated and cheap post-office system throughout the Sardinian dominions, as well as diligences for travellers on all the high roads; and public conveyances, called 'velociferi,' on the provincial or cross roads. Under the late king, Carlo Alberto, railroads were begun to be constructed in the continental states. Lines now extend from Turin to Genoa through Alessandria; from Turin to Cuneo, to Pignerolo, and to Susa; from Alessandria a line runs up to Novara. Along these roads electro-telegraphic wires are laid down; and the city of Turin has electric communication through Chambéry with Paris, and by the Gulf of Spezia with the island of Sardinia, from the south-western point of which it is contemplated to carry electro-telegraphic cables to Bonah in French Africa. A railway is projected from Annecy to Chambéry, thence to Montmelian on the Isère, up the left bank of that river to the confluence of the Arc, and up the valley of the Arc to Modane. This line in all probability will be extended from Annecy to Geneva, from Montmelian to Grenoble, so as to form a junction with the French railway system; and the project of cutting a tunnel through the Alps under Mont Cenis, so as to unite the Savoy railroad at Modane with an extension of the Turin-Susa line to Grande-Croix, has been long entertained with great favour by the people and government of the Sardinian States.

The plains of Piedmont are well supplied with canals, chiefly for the purpose of irrigation, the principal of which are in the provinces of Alessandria, Vercelli, Biella, Casale, Ivrea, Alba, and Turin. The river system of Piedmont is described under Po.

The staple products of the continental Sardinian territories for exportation are—silk, rice, hemp, wine, and oil. Most of the wine is consumed in the country. The principal manufactures consist of paper, silks, woollens, linen, glass, and cotton-yarn. The importation of colonial articles and foreign manufactures takes place chiefly through the port of Genoa. A considerable trade is carried on with Switzerland and Germany by the Lago Maggiore, and the Bernardin road leading to the Grisons.

The Sardinian States have Switzerland on the north, France on the west, the Mediterranean on the south, Austrian Italy, Parma, and Tuscany on the east. They comprise the countries between the Var and the Magra, the Rhône and the Ticino. The Sardinian portion of the Lunigiana lies east of the Magra. The surface is covered on the west and north by the Alps, on the south by the Apennines, and between these two great mountain systems lies the most extensive and valuable portion of the country, comprising the slopes, valleys, and plains that form the basin of the Po to the junction of the Ticino. The face of the country is described in the articles ALPS, APENNINES, GENOA, PIEDMONT, SAVOY, and under the names of the several administrative divisions or provinces.

History.—The origin of the house of Savoy is involved in the greatest obscurity. The first historical ancestor of the house of Savoy is Humbert, count of Maurienne and great vassal of Rudolf III., the last king of the second kingdom of Burgundy. As a reward of his services to Conrad the Salic, Humbert was confirmed in his extensive fief of Maurienne, and obtained military jurisdiction over other parts of Savoy, the lower Valais, and also the valley of Aosta, on the Italian side of the Alps, which was part of the kingdom of Burgundy. Count Humbert died about A.D. 1048, and was buried in the cathedral of St. Jean de Maurienne. His eldest son Amadeus I. succeeded him, but, dying shortly after, was succeeded by his brother Oddo, who, by his marriage (A.D. 1045) with Adelaide of Susa, daughter and heiress of Odelric Manfred, count of Turin and marquis of Italy, extended the dominion of his house to the banks of the Po. Oddo by his marriage became marquis of Italy and count of Turin, and master of the principal passes of the Western Alps; for, in addition to that of Great St. Bernard and Little St. Bernard, which were already within his ancestral territory, which extended over the valley of Aosta, he became possessed of those of Mont Cenis and Mont Genève. Oddo died about A.D. 1060. He left by Adelaide three sons, Peter, who is styled marquis, Amadeus, who is called count, and Oddo, who became a bishop; besides two daughters, Bertha, who married Henry, afterwards Henry IV. of Germany, and Adelaide, who married Rudolf, duke of Suabia. Adelaide, the mother, appears to have governed, after the death of her husband, as regent or colleague of her sons, the extensive territories belonging to them on both sides of the Alps. After the death of Peter about 1078, his brother, count Amadeus or Amadeus II., succeeded, who at his death (1080) left by his wife Joan, daughter of the count of Geneva, an infant son, who is styled Humbert II. The Marchioness Adelaide continued to administer her dominions, as guardian to her grandson, eleven years longer, till she died at a very advanced age in 1091.

Humbert II., count of Maurienne, succeeded to his father's Burgundian estates in Savoy, and even increased them by the acquisition of Tarantasia, but those on the Italian side of the Alps had been seized upon during his minority by several claimants. At the same time the great towns, Turin, Asti, and others, availed themselves of the

confusion occasioned by the long struggle between the pope and the emperor to assert their independence of all vassalage except the nominal one to the empire. Humbert crossed the Alps in 1097; and not being strong enough to attack all his opponents, he made a treaty of alliance with the town or commune of Asti and its bishop, by confirming the newly acquired liberties of the citizens of Asti, and by ceding to them several villages and territories, and ensuring to them free passage and protection throughout his Burgundian or Transalpine territories. Humbert died in Savoy in 1103, and was buried in the cathedral of Moutiers in Tarantasia. By his wife Gisla of Burgundy he had a son, who succeeded him by the name of Amadeus III., and a daughter Adela or Adelaide, who married Louis VI., king of France.

Amadeus III. received from Henry V. of Germany the investiture of all Savoy as an Imperial county. Amadeus recovered also in part his ancestral Italian dominions, and, above all, the city of Turin, of which he was acknowledged lord in the year 1181. Count Amadeus III. proceeded with the crusade to Syria, and died of disease at Nicosia in the island of Cyprus, in the year 1148. He was the founder of the magnificent abbey of Hautecombe in Savoy, which was for ages after the burial-place of his descendants. His daughter Matilda married Alfonso I., the founder of the Portuguese monarchy.

1149-88. Humbert III., called 'the Saint,' son of Amadeus III., succeeded him as count of Savoy and marquis of Italy. He compelled Manfred, marquis of Saluzzo, to acknowledge himself his vassal. But the emperor Frederick I. deprived him of part of his dominions, among the rest of Turin, creating the bishop of that city prince of the empire. Frederick also burnt the town and castle of Susa in 1174, when the archives of the house of Savoy are said to have perished in the flames. Humbert was fond of religious retirement, and spent much of his time in the abbey of Hautecombe. He died in 1188.

1188-1238. Thomas I. succeeded his father Humbert III. Philip of Suabia restored to him all the titles and prerogatives of which his father had been deprived by Frederick I. Thomas purchased the seignory of Chambéry, and enlarged the town and built the castle. Until this time Aiguebelle had been the capital and residence of the counts of Savoy. Count Thomas died in January, 1238.

1238-58. Amadeus IV., son of Thomas, recovered the dominion over Turin, and he was created by Frederick II. duke of the Chablais and of Aosta. He died in 1258, and was buried at Hautecombe. Amadeus gave up to his brother Thomas, count of Flanders, the 'utile dominium' of his Italian states with the title of count of Piedmont, retaining however the suzerainty for himself.

1258-63. Boniface, the infant son of Amadeus, was placed under the guardianship of his uncle Thomas, count of Flanders. The people of Turin having revolted again and being supported by the free city of Asti, took Thomas prisoner. When Boniface became of age, he crossed the Alps, and laid siege to Turin, but the Marquis of Montferrato, and Charles, count of Anjou, marched against him and took him prisoner. Boniface died in prison at Turin, and left no issue.

1263-68. Peter, son of Count Thomas I. and uncle of Boniface, born in 1208, succeeded to his nephew. By affinity, he was uncle of Henry III. of England, who had married Eleanor of Provence, daughter of Beatrix of Savoy, Peter's sister. In 1241 Peter had repaired to England, and had been received with great honours by Henry and his consort. Henry made him earl of Richmond, and gave him for his residence a palace near London on the banks of the Thames, which was from that circumstance called Savoy House. Peter's first care on his accession was to reduce the city of Turin, in which he succeeded after a long siege. Peter afterwards obtained the inheritance of Hartmann, count of Kyburg, who had married Peter's sister, and who died without issue in 1264. This inheritance extended along the northern banks of the Lake of Geneva, and through this and the grants of former emperors to Peter's ancestors the house of Savoy became possessed of the whole of the Barony, now the Canton of Vaud in Switzerland. Peter died in the castle of Chillon on the shore of the Lake of Geneva, in 1268, and was buried at Hautecombe. He left only one daughter by his wife Agnes, heiress of the barony of Faucigny. This daughter, Beatrix, made subsequently a donation of that barony to Amadeus V.

1268-84. Philip I., Peter's brother, succeeded him as count of Savoy in his old age. He died at the castle of Rouseillon in the Bugey, leaving no issue.

1285-1323. Amadeus V., styled the Great, son of Thomas, count of Flanders, succeeded his uncle Philip. He made frequent wars with the dauphin of Vienne and with the counts of Geneva, whom he repeatedly defeated. He gave Piedmont in fief to his nephew Philip, who, having married, in 1304, Isabella of Villehardouin, heiress of the principalities of Achaia and Morea, received the investiture of the same from Charles II. of Anjou, king of Naples and count of Provence. In 1323 he went to Avignon, to induce Pope John XXII. to preach a crusade in order to save the Byzantine empire, and whose emperor, Andronicus the Younger, married Anna of Savoy, daughter of Amadeus. Amadeus fell ill and died at Avignon, 1328.

1323-29. Edward, son of Amadeus, succeeded him. He had to repel the repeated attacks of the dauphin of Vienne, the count of Geneva, and the baron of Faucigny, who were leagued against him. At last, through the mediation of Philip of Valois, king of France,

peace was made. The count of Savoy, in 1328, led a body of men to join king Phillip against the Flemish, and contributed to the defeat of the latter by the French at Mont Cassel. After the termination of that war Count Edward went to Paris, where he fell ill and died, in November 1329, leaving no male issue.

1330-43. Aymon, Edward's brother, was proclaimed his successor by the states of Savoy, in preference to Edward's daughter, who was married to the Duke of Brittany. His reign was peaceful. He applied himself to improve the administration. He created the office of chancellor as the head of the judicial order; and he also established a supreme council of justice at Chambéry, to hear appeals from the local courts. Aymon married Yolande, daughter of Theodore Paleologus, marquis of Montferrato, and son of Andronicus the Elder, emperor of Constantinople. He died at Montmélian in 1343.

1343-83. Amadeus VI., son of Aymon, succeeded. His long reign was eminently successful. He drove away the Anjous from Southern Piedmont; he defeated the Marquis of Montferrato, who was leagued against him with the Visconti of Milan; he received the voluntary allegiance of Chieri, Mondovi, and other towns; and he consolidated and greatly extended the dominion of the house of Savoy on the Italian side of the Alps.

1383-91. Amadeus VII. succeeded his father Amadeus VI. He soon after proceeded to the assistance of Charles VI. of France against the united Flemish and English, and distinguished himself in several actions. On his return home, he made the important acquisition of the county of Nios, the people of which chose him for their sovereign in 1388. Amadeus VII. died in 1391 of a fall from his horse, while hunting the bear in the forest of Lornes in the Chablais.

1391-1440. Amadeus VIII., son of the preceding, succeeded his father. By the extinction of the line of the counts of Geneva, he inherited the county of Genevois, and the suzerainty over the imperial city of Geneva. He purchased the valley of Ossola from the Grisons. He obliged the marquises of Saluzzo and of Ceva to swear allegiance to him; and he obtained of Filippo Maria Visconti, duke of Milan, the cession of the town of Vercelli and its territory west of the Sesia. In 1418, Louis of Savoy, prince of Morea and Achaia, and prince of Piedmont, dying without issue, Amadeus, his next heir, reunited the principality of Piedmont to his other dominions, which thus extended without interruption from the shores of the Lake of Geneva to those of the Mediterranean Sea, and from the Rhônes to the Sesia. The emperor Sigismund, on passing through Chambéry, formally created Amadeus duke of Savoy, in 1416, confirming all former investitures granted by his predecessors, and moreover debaring all subjects of the house of Savoy from appealing to the imperial chamber from judgments pronounced by the duke or his successors. Amadeus VIII. collected the edicts and statutes of his ancestors, and from them compiled a code of laws for all Savoy, under the title of 'Statuta Sabaudia,' which he published in 1430. After the death of his wife, Maria Beatrix of Burgundy, in 1434, he retired to the hermitage of Ripaille, leaving the administration of his state to his son Ludovic. In 1439, the council assembled at Basle called him to the Papal chair, which he filled with the title of Felix V. till 1449, when he resigned the tiara to Pope Nicholas V., and retired again to Ripaille. He died in January 1451, at Geneva.

1440-65. Ludovic, son of Amadeus VIII., assumed the ducal crown in consequence of his father's abdication in 1440. He married Anna de Lusignan, of the royal dynasty of Cyprus. His second son, likewise named Ludovic, married Charlotte, heiress of that kingdom, and he was crowned King of Cyprus in 1558; but he and his wife were soon after driven away by Charlotte's illegitimate brother, and the island ultimately fell into the hands of the Venetians. The title of King of Cyprus and Jerusalem is still assumed by the representative of the dynasty of Savoy. Ludovic established the university of Turin; he created a supreme court of justice for Piedmont, called a Senate; and he admitted the barons of Piedmont to the first offices of the state, which had been till then monopolised by the Savoyards. Ludovic died at Lyon, in January 1466, whilst proceeding to the court of his son-in-law Louis XI. of France.

1466-72. Amadeus IX., son of Ludovic, succeeded him. He was of a pious turn of mind, and remarkable for his charities. He died at Vercelli in 1472.

1472-82. Philibert, son of Amadeus IX., succeeded him while yet a minor, under the guardianship of his mother Yolande, sister of Louis XI. The duchess sent a body of troops to join the army with which Charles le Teméraire, duke of Burgundy, invaded Switzerland in 1476. These troops however almost all perished in the battles of Grandson and Morat; and Charles, fearing that the duchess might turn against him in his adversity, caused her to be seized and shut up in the castle of Rouvre. A Piedmontese concealed the young duke Philibert, whom he carried to France to his uncle Louis XI., who soon after sent an armed party to deliver the duchess from the castle of Rouvre, and he restored both her and her son to their dominions. In 1478 Yolande died; and in 1482 Duke Philibert, being now of age, went to Lyon on a visit to King Louis, but died soon after in that city, leaving no issue.

1482-89. Charles I., Philibert's brother, assumed the ducal crown, and in November 1483 made his public entry into Turin. He died at Pignerol in March 1489, being only 21 years of age.

1489-96. Charles John Amadens, styled Charles II., son of the preceding, was a mere child when his father died. His mother, Bianca of Montferrato, was proclaimed regent, with the assistance of a council. Turin was definitively chosen for the residence of the court. From that time the house of Savoy became really Italian. In April 1496, the duke died of a fall at the villa of Moncalieri, near Turin.

1496-97. Philip II., count of Bresse, and a son of Duke Ludovic, succeeded as duke of Savoy and prince of Piedmont. He died in November 1497. He left by Margaret of Bourbon, his first wife, a son, Philibert, who reigned after him, and a daughter, Louisa, who married the Duke of Angoulême, and was the mother of Francis I. of France; and by a second wife, Charles, who was duke of Savoy after Philibert.

1497-1504. Philibert II. married Margaret of Austria, daughter of the emperor Maximilian I. The Duke of Savoy had the title of Imperial Vicar in Italy, and was by interest as well as duty attached to the imperial cause. Philibert however allowed Louis XII. of France to pass through his dominions on his way to invade the duchy of Milan in 1499. In 1504 Philibert II. died without issue, and was buried in the convent of Brou at Bourgen-Bresse, where his monument is still seen.

1504-53. Charles III., brother of Philibert II., although fond of peace, found himself for the greater part of his reign in the midst of the most destructive wars; first between Louis XII. of France and the Holy League, headed by Pope Julius II. against the French; afterwards between Francis I. on one side and the Swiss and Duke Sforza of Milan on the other; and lastly, between Francis I. and his powerful rival the emperor Charles V.: in all of which the territories of Savoy and Piedmont, though the duke professed neutrality, were devastated without mercy by French, Swiss, and Imperialists. In 1530 Duke Charles attended the coronation of Charles V., who treated him with marked attention, giving to his wife Beatrix of Portugal, and her heirs, the county of Asti. Francis I. pretended to be offended at this, and having in 1535 declared war against the duke, his troops occupied the whole of Savoy and Piedmont, except a few fortresses which held out for the duke, who took refuge in Nice. The troops of Charles V. entered Piedmont, and that unfortunate county was for many years the theatre of war between the two great rivals. In 1543 Nice was attacked by a combined French and Turkish fleet; the town was sacked, but the castle was saved by the timely arrival of Andrea Doria. In 1547 Henry II., having succeeded Francis I., came to Turin to take formal possession of Piedmont. In 1551 war broke out between France and the emperor, and Piedmont was again the field of battle between the two armies. In the midst of this confusion, Duke Charles died in 1553, at Vercelli, where he had taken refuge under the protection of the Imperial troops. Vercelli, Nice, Aosta, and Cuneo were the only places that still held out for the house of Savoy.

1553-80. Emmanuel Philibert, son of Duke Charles, had acquired great military reputation in the armies of Charles V., and he continued in the service of Philip II., for whom he won the great battle of St. Quentin from the French in 1557, and in the following year he gained the battle of Gravelines. By the peace of Cambresis, it was stipulated that the hereditary dominions of the house of Savoy should be restored to Emmanuel Philibert, who married Margaret of France, sister of Henri II. The duke, having thus recovered Savoy and Piedmont, which had been estranged from his house for nearly half a century, fixed his residence at Turin, and applied himself to restore order in every branch of the administration. He purchased the county of Tenda and the principality of Oneglia, and created a small naval force for the protection of the coasts. But Geneva had established its independence, and the Pays-de-Vaud had been occupied by the Bernese, so that the Lake of Geneva became the northern boundary of the dominions of Savoy. Emmanuel Philibert died at Turin in 1580.

1580-1630. Charles Emmanuel I., son of Emmanuel Philibert, married Catherine of Austria, daughter of Philip II. He wrested the marquisate of Saluzzo from the French, and made the Alps the boundary between France and Piedmont. When Henri IV. was acknowledged king of France, he claimed the marquisate of Saluzzo, and the claim being refused, he invaded Savoy in 1600. By the peace of Lyon in the following year, Saluzzo was definitively given to the house of Savoy, in exchange for Bresse, Bugy, and the county of Gex, which were ceded to France. In December 1602 Charles Emmanuel unsuccessfully attempted to seize Geneva. In the following year he formally acknowledged the independence of that city and its territory. He was afterwards engaged in wars for the possession of the marquisate of Montferrato. He joined Spain and the emperor against France. The French invaded Savoy and overran Piedmont, and in the midst of this the duke died at Savigliano in July 1630.

1630-37. Victor Amadeus I., son of Charles Emmanuel, obtained possession of the greater part of Montferrato by the peace of Cherasco in 1631. He died in October 1637, in the midst of the war between the Spaniards and the French in Italy, leaving two infant sons, the first of whom, Francesco Giacinto, reigned nominally only for one year, as he died in 1636.

1638-75. Charles Emmanuel II., second son of Victor Amadeus, was proclaimed duke under the regency of his mother Christina of France. French troops, in their quality of allies, were in possession

of the greater part of the country. In the meantime Thomas of Savoy, prince of Carignano, and Cardinal Maurice of Savoy, uncles of the infant duke, being supported by Spain, demanded for themselves the regency and guardianship of their nephew, in order to free the territories of their house from the baneful influence of France. A Spanish army from the Milanese entered Piedmont, led by the two princes, and most of the towns opened their gates to them. In 1640 Turin, being in possession of Prince Thomas and the Spaniards, was besieged by a French army, which had possession of the citadel, and the French were in their turn surrounded in their entrenchments by a Spanish army commanded by Count Leganes. At last Turin capitulated and Leganes withdrew. Piedmont was freed of foreign troops and Charles Emmanuel, being of age, assumed the government. The peace of the Pyrenees in 1659 terminated the Italian wars between France and Spain, which had lasted with little interruption for nearly eighty years. Duke Charles Emmanuel enjoyed peace during the remainder of his reign. He applied himself to the improvement of his dominions. He died in 1675.

1675-1730. Victor Amadeus II. succeeded his father Charles Emmanuel. He found himself harassed between Louis XIV. of France on one side and the house of Austria on the other. Louis ordered him, among other imperious commands, to give up to him the citadel of Turin. Victor Amadeus summoned round him the nobles of Piedmont and declared war against France. Being joined by an Austrian force, he disputed every inch of ground against the French. The war lasted till 1695. The peace of Ryswyck restored peace to Italy, and the French evacuated all the territories of the duke, including Pignerolo, which they had possessed for about a century. In the war of the Spanish succession Victor Amadeus sided first with the French, but afterwards with the emperor. French armies again overran and devastated Piedmont, and in 1706 besieged Turin, which made a noble defence. Victor Amadeus, being joined by the Austrian army under his relative Prince Eugene of Savoy, defeated the French besieging army on the 7th September 1706, and delivered Turin. By the peace of Utrecht (1713) he obtained the Valsesia, the territory of Lomellina, the remainder of Montferrato, and other districts, and above all the island of Sicily with the title of king, and he was crowned at Palermo in December 1713. By the subsequent treaty of London, Victor Amadeus gave up Sicily to the emperor, and received in exchange the island of Sardinia with the title of a kingdom. Thus through his gallantry and perseverance the house of Savoy became numbered among the royal houses of Europe. Victor Amadeus employed the peaceful period which followed to improve the administration and to encourage agriculture and industry. Through his care the cultivation of the mulberry-tree and the rearing of silkworms attained in Piedmont that perfection which they still maintain. He abdicated in 1730 in favour of his son Charles Emmanuel, and retired to the villa of Moncalieri, where he died in 1732. He was the first king of his dynasty.

1730-73. Charles Emmanuel III., King of Sardinia, Duke of Savoy, Prince of Piedmont, &c., assumed the crown in times of peace. But the ambition of the court of Spain, excited by Elizabeth Farnese, wife of Philip V., aimed at recovering its lost preponderance in Italy, and Spain was supported by France in consequence of the family alliance. The contested election for the crown of Poland became the pretext for a new war in 1733. The French cabinet, in order to obtain the alliance of the king of Sardinia, promised him the duchy of Milan, which was to be taken from Austria. Charles Emmanuel united his forces to the French army under Villars, and the Milanese was conquered in a few weeks. Don Carlos, infante of Spain, on his part conquered Naples. In September 1734 the battle of Guastalla took place between the Austrians on one side, and the French and Sardinian troops, commanded by King Charles Emmanuel, on the other. The Austrians lost 8000 men, and were obliged to retreat. In 1735 the preliminaries of peace were signed, and Charles Emmanuel, instead of the duchy of Milan, obtained only the Novarese and Tortona.

In the war of the Austrian succession King Charles Emmanuel took the part of Maria Theresa. In 1748 he signed a treaty with Maria Theresa and England, engaging himself to defend Lombardy with 45,000 men. The French and Spanish combined forces invaded Piedmont and laid siege to Cuneo, which they could not take. In 1745 another French and Spanish army, passing the Riviera of Genoa, entered Lombardy and took Milan. In the following year the king of Sardinia, united with the Austrians, drove them away. In 1747 a French force of 50 battalions attacked the entrenched camp of the Piedmontese near the pass of the Col de l'Assiette on the 19th of July; but after the most strenuous efforts they were completely repulsed, having lost their general (the Chevalier de Belleisle), between 400 and 500 officers, and 6000 men. This defeat put an end to all attempts at invading Piedmont for half a century. By the peace of Aix-la-Chapelle the king of Sardinia obtained the Upper Novarese, or Valli di Novara, and the districts of Voghera and Vigerano near the Po.

The remaining 25 years of the reign of Charles Emmanuel III. were spent in peace, and in the cares of administration. He published a code of laws; effected a general survey of the land; he opened new roads, excavated canals, encouraged commerce; and in 1771 he published an edict, empowering all individuals and communes to

commute feudal services for a money equivalent, to be fixed by a court created for the purpose. He took off all the extraordinary imposts which had been put on during the long preceding wars. Charles Emmanuel died at Turin, in February, 1773, at 72 years of age.

1773-96. Victor Amadeus III., son of Charles Emmanuel, succeeded. The storms of the French revolution rendered his reign calamitous; he lost Savoy and Nice in 1792, Oneglia in 1794, and after two years more of a desultory but sanguinary warfare, the line of defence formed by the Alps was turned by the French passing through the Ligurian Apennines, and the revolutionary torrent poured down into the plains of the Po. King Victor was induced to conclude a hasty peace, which left his dominions at the mercy of the French. He died soon after, in October, 1796.

1796-1802. Charles Emmanuel IV., son of king Victor, succeeded his father on a slippery throne. Savoy and Nice were united to France, and Piedmont was overrun by French troops, who held the principal fortresses in their hands. At last the king was obliged to retire to Sardinia in 1799. In June, 1802, Charles Emmanuel, who was then at Rome, abdicated in favour of his brother, Victor Emmanuel.

1802-21. Victor Emmanuel, seeing no chance of being restored to his continental states, repaired to the island of Sardinia. In the year 1814 he returned to Turin, and took possession of the dominions of his ancestors, to which the Congress of Vienna added the Genoese territory. A conspiracy which broke out in Piedmont (in March 1821), headed by some of the military and the nobles (who wished for either a representative constitution with two chambers, or the Spanish constitution of 1812 with only one chamber), induced the king to abdicate in favour of his brother Charles Felix (he himself having had no male offspring), who was then at Modena. In the meanwhile Charles Albert of Savoy Carignano, who had joined the insurrection, was appointed regent, and proclaimed the adoption of the Spanish constitution of 1812, toleration of all religions, and some other important changes, all however on condition of the royal assent.

1821-31. Charles Felix, the new king, as soon as he was made aware of the proceedings of the regent, issued a proclamation from Modena (March 16, 1821), declaring all that had been done since his brother's abdication null and void. The regent fled to Novara, and thence to the Austrian head-quarters. Charles Felix, supported by Austria, put down the insurrection in Piedmont, and restored the former system of monarchy. He occupied himself with the business of administration, and also in making new roads and other improvements both in his continental dominions and in the island of Sardinia, where he appears to have been very popular. He died at the beginning of 1831, leaving no male issue, and was succeeded on the throne by his collateral relative, Charles Albert of Carignano, a descendant of Prince Thomas, brother of Victor Amadeus I.

1831-49. Charles Albert, after his flight from Turin in 1821, settled for some time in Florence. In 1823 he served as a volunteer in the army of the Duke of Angoulême in Spain, and assisted to crush the constitution in that country which he had endeavoured to set up in his own. He ascended the throne on April 27, 1831. For many years he seemed to oscillate between a desire to retain arbitrary power on the one hand, and a desire to grant political privileges to his subjects on the other. In 1836 he issued an edict for the suppression of the feudal system in the island of Sardinia, and in February 1842 an amnesty to his accomplices in the conspiracy of 1821. The interference of Austria in Italy inclined him to liberal institutions as a means of defence against external aggression. Accordingly when the Austrians, fearing the consequences of the liberal measures of Pope Pius IX., occupied Ferrara in 1847, the king of Sardinia protested, and offered to defend the independence of the States of the Church with all his forces. In the same year he made a commercial league with the Pope, with Tuscany, and Lucca; and followed this up in November by establishing municipalities and provincial councils throughout his states. In February 1848 he granted a representative constitution, the heads of which have been enumerated above. After the Milanese had driven the Austrians out of Milan, he marched at the head of his army to aid the insurgents in the cause of 'Italian regeneration,' as it was called, but his real motive was most likely to extend his dominions. After two days' hard fighting he defeated the Austrians at Goito, May 29. Peschiera then surrendered to him. Verona was attacked, and Mantua threatened. Soon after the Sardinian fleet entered the Adriatic, and blockaded Trieste. Hitherto he had been on the whole successful; but the Austrians, who were led by a master of warfare, were not beaten—they had retreated from Lombardy only to gain strength. On the 27th of July the Sardinian army was compelled to retreat, and Mantua was relieved. Marshal Radetsky pursued the retreating Sardinians to Milan, and forced them to surrender (August 4). [MILAN.] An armistice was agreed upon in September. In the spring of 1849 Charles Albert, influenced by the clamour of his subjects or by sinister advice, renewed the war. He was defeated at all points, and Marshal Radetsky by his great victory at Novara crushed the designs of Charles Albert, who abdicated in favour of his son (the present king Victor Emmanuel II.) on the 24th of March. The Austrians took military possession of the fortress and half the town of Alessandria, and also of the country between the Po and the Sesia, until the conclusion of peace. The Sardinian fleet was withdrawn from the Adriatic, and the army reduced to a peace-footing. Charles Albert retired to Portugal,

where he died at Oporto on the 23th of July. His remains were brought from Portugal and buried in the catacombs of the basilica of Superga. He married in 1817 Teresa, archduchess of Austria, by whom he left two sons, the present king, and Ferdinand, duke of Genoa, since dead.

SARDIS. [LYDIA.]

SAREE. [PERSIA.]

SAREPTA. [SARATOV.]

SARLAT. [DORDOGNE.]

SARMA'TIA was the name given by the Romans to all the country in Europe and Asia between the Vistula and the Caspian. It was bounded S. by the Euxine and Mount Caucasus, and was divided by the Tanais into Sarmatia Europæa and Sarmatia Asiatica. The people inhabiting this country were usually called Sauromatæ by the Greeks and Sarmatæ by the Romans.

Neither Herodotus nor Strabo makes mention of the European Sarmatians. The Sauromatæ of Herodotus dwelt to the east of the Tanais, by which they were separated from the Scythians of Europe, and inhabited a tract of country extending northward from the Palus Mæotis equal to fifteen days' journey in length. (Herod., iv. 21, 58.) Herodotus also says that the Sauromatæ sprung from the intercourse of a body of Scythians with some Amazons who came from the river Thermodon in Asia Minor, and that their language was a corrupted form of the Scythian (iv. 110-117). Strabo likewise places the Sauromatæ between the Tanais and the Caspian (ix. p. 492, 507), and speaks of the people west of the Tanais as Scythians.

The principal nations in European Sarmatia were—1, the Venedæ or Venedi, on the Baltic. 2, the Peucini, or Bastarnæ, in the neighbourhood of the Carpathian Mountains, who, as well as the Venedi, appear to have been of German origin. (Tac., 'Germ.,' 46.) 3, the Iazyges, Roxolani, and Hamaxobii, in the southern part of modern Russia. 4, the Alauri or Alani Scythæ, in the central part of Russia, in the neighbourhood of Moscow. The knowledge which the ancients possessed of these people was very small; they are universally represented as a nomad people with filthy habits. The people with whom the Romans were brought most in contact were the Iazyges, generally called Iazyges Sarmatæ, and sometimes Iazyges Metanastæ, because they were driven out of their original seats on the Euxine and the Palus Mæotis about the year A.D. 51. They settled in the country between the Danube and the Tibisis or Tibisus (Theiss), after driving out the Daci, and carried on for a short time war with the Romans. (Plin. iv. 25; Tac. 'Ann.,' xii. 29, 30.) They are frequently mentioned by subsequent writers as dangerous neighbours to the provinces of Pannonia and Mæssia.

SARNO. [PRINCIPATO CITRA.]

SAROS PATAK. [HUNGARY.]

SARSINA. [FORLÌ.]

SARTHE, a department in France, taking its name from one of the streams by which it is watered, the Sarthe, an affluent of the Mayenne, is bounded N. by Orne; E. by the departments of Eure-et-Loir and Loir-et-Cher; S. by Indre-et-Loire and Maine-et-Loire; and W. by Mayenne. Its length from north to south is about 62 miles; from east to west about 58 miles. The area is 2396 square miles. The population in 1841 was 470,535; in 1851 it amounted to 473,071, which gives 197'44 inhabitants to a square mile, being 22'86 above the average per square mile for the whole of France. The department is formed out of a portion of Anjou.

The surface is generally level. The highest hills are on the north-western border, about Sillé-le-Guillaume. The south-east side of the department is occupied by the formations of the cretaceous group. From beneath the cretaceous group, the formations between the chalk and the new red-sandstone crop out, and occupy the remainder of the department, except along the north-western boundary, where the granite rocks of the great primitive district of Bretagne make their appearance. Anthracite coal-mines are worked in the west of the department. Iron-mines also are worked; and there are several furnaces, and forges for manufacturing the metal. Freestone for building, black marble, sandstone, alates, millstones, granite, fullers' earth, ochre, and potters' clay are found. There is a salt-spring at La-Suze.

The department belongs wholly to the basin of the Loire. The principal river is the Sarthe, which touches the border of the department on the north side near Alençon, and flowing south-west separates it from the department of Orne, except near Alençon, where its course is beyond the boundary, to which however it soon returns. Several miles above Fréney it quits the border and flows in a winding channel south-east to Le-Mans, just below which it receives the Huisme on the left bank from the north-east. From this point the navigation commences, and the river flows south-west into the department of Maine-et-Loire. Its whole course on or within the border of this department is about 110 miles, for about 50 miles of which it is navigable. The Loir, a tributary of the Sarthe, crosses the department just within the south-eastern border: it joins the Sarthe in the department of Maine-et-Loire. Its course in this department is about 55 miles, for 35 or 40 miles of which, namely, from Château-du-Loir, it is navigable. Besides the Huisme and the Loir, the Sarthe receives the Bièvre and the Orne on the left bank; and the Geay, the Vègre, the Erve, and the Vaige on the right. The Loir receives the

Braye, the Elangort, and the One on the right bank; the Huisme receives several small streams. The rivers abound in fish; the Huisme and its affluents yield excellent trout. By the Sarthe and the Loir the department has about 100 miles of internal navigation.

Roadway communication is afforded by 7 imperial, 12 departmental, and 26 communal roads. The railway from Paris to Brest through Chartres is open to Le-Mans in the centre of the department, whence the line is in course of construction nearly due west to Rennes: lines are authorised to be laid down—one northward through Alençon, Argentan, and Falaise to the Paris-Cherbourg line between Lisieux and Caen; the other southward through Château-du-Loir to Tours, where the lines from Nantes and Bordeaux converge for Paris.

The climate is mild and healthy. The soil varies much. The part occupied by the formations of the cretaceous group presents little else than a succession of sands. Part of this tract is made to yield good crops of grain, and other parts are planted with pines (*Pinus maritima*). The rest of the department has a tolerably productive soil. About two-thirds of the area of the department are under the plough. The principal grain crop is of wheat; but oats, buckwheat, and maize are also grown, and rye in the sandy districts. A considerable quantity of hemp and flax is raised, and a great quantity of trefoil seed for exportation. The meadows and grass-lands occupy nearly 150,000 acres, and there are above 110,000 acres of heath or open pasture. The number of horned cattle is considerable. Sheep are numerous. Poultry and game abound; the former are sent in great numbers to the Paris markets. Bees are generally kept. The vineyards occupy about 25,000 acres: the wine is bad. The orchards and gardens occupy as great an extent as the vineyards. Cider is the common drink of the people; about 5,000,000 of gallons are made annually. Considerable quantities of fruit, chestnuts, and walnuts are grown. There are several druidical remains near Connerre, a small place near the Huisme.

The department is divided into four arrondissements as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Le Mans . . .	10	128	173,102
2. Mamers . . .	10	145	128,531
3. Saint-Calais . . .	6	60	68,269
4. La-Flèche . . .	7	80	103,160
Total . . .	33	413	473,071

1. In the first arrondissement the chief town is *Le-Mans*. [MANS, LE.] Among the other towns are—*Ballon*, population 2200, near the Orne; *Écomoy*, population 3700, near the Orne, an affluent of the Loir; *Sillé-le-Guillaume*, population 3000 for the whole commune; and *La Saze*, on the left bank of the Sarthe, over which there is a handsome bridge, population 2200. At Sillé-le-Guillaume linens are manufactured, and trade in corn, hemp, wool, seeds, poultry, cattle, &c., is carried on: Sillé-le-Guillaume has a well-preserved feudal castle built in the 14th century.

2. In the second arrondissement the chief town, *Mamers*, population 5960, between the Bienne and the Orne, was anciently fortified, and was taken in the 11th century by the Count of Belême, and afterwards by the Normans; but there are now scarcely any traces of fortifications. The town consists of two large squares, with a number of streets adjacent to or terminating in them. The houses are tolerably well built, chiefly of stone. The smaller of the two squares is occupied by a handsome covered market; the other by a large building, formerly a convent, now containing the offices of the sub-prefect and the mayor, the college, the public library, the theatre, the prison, and the barrack of the gendarmes. The manufactures are coarse linens, calico, hosiery, beer, leather, &c. Trade is carried on also in corn, wine, brandy, wax, cattle, and sheep. Near the town is an ancient camp. *Frémay-le-Vicomte*, or *Frénay*, population 3160, has a linen-hall, and a museum of natural history. The town is famous for the manufacture of fine linen. *Beaumont*, population 2320, on the Sarthe, an ill-built place 15 miles S.W. from Mamers, owes its origin and its distinctive epithet to the viscounts of Le Mans, who had a castle here, of which the remains serve as a prison. The townsmen manufacture druggot, serge, and prunella. There are two bridges over the Sarthe here. *La-Ferte-Bernard*, population 2583, on the Huisme, was the scene of a conference in 1189, between Henry II. of England and Philippe-Auguste of France. It was shortly after taken by Philippe: it was taken in 1424 by the English, under the Earl of Salisbury; and in the reign of Henri IV., in 1590, by the Prince of Conti. The town has a handsome gothic church, and an hospital. The old walls of the town remain; and there is a castle with keep and towers in pretty good preservation. The principal manufacture is of coarse checked linens for the colonies; linen-bleaching is also carried on; there are tile-works, and tan, flour, and fulling-mills. *Bonnétable*, population 5163 in the commune, is between the Orne and the Huisme.

3. In the third arrondissement the chief town is *St.-Calais*, anciently called Anille, from the brook on which it stands, not far from the right bank of the Braye; it received its present name from St.-Calais, who founded a monastery here in the 6th century. The town lies in a hollow, amid hills covered with scanty crops of corn, 29 miles E. GEOG. DIV. VOL. IV.

by S. from Le-Mans. It has an interesting gothic church and manufactures of serge and other woollens, cottons, linens, leather, and glass. The town has a tribunal of first instance and a college: population of the commune, 3804. *Vibraye*, population 3094, has iron-works, tan-yards, and an hospital. *Besse-sur-Braye*, population 2000, where cotton-goods, wax-candles, and paper are made. *Château-du-Loire*, situated on the Loire, built on the slope of a hill 22 miles S.W. from St.-Calais, population 3029, gets its name from an ancient castle of the counts of Anjou, erected in the 11th and demolished in the 18th century. The older part of the town is badly laid out, and is composed of steep, narrow, and ill-built streets; but the street, along which the road from Le-Mans to Tours passes, is straight and composed of neat stone houses with gardens; it traverses a handsome and regular square, planted with trees and serving as a public walk, on the site of the ancient castle. The rocks in the neighbourhood of the town are excavated so as to form cellars, and in many instances dwelling places inhabited by linen weavers, vine-dressers, and labourers. There are at Château-du-Loir an hospital, a theatre, public baths, and a college. Linens, leather, and cotton yarn are manufactured; cattle, wood, corn, and wine are sold. *Grand-Luce* (13 miles W. by S. from St.-Calais), on the Veuve, which flows into the Elangort, population 2354, was rebuilt after a fire in 1786. It consists of four regularly built streets which abut on a central square. Much trade in corn and cattle is carried on. *Bouloire*, on the Tortue, which joins a feeder of the Huisme: population, 2100.

4. In the fourth arrondissement the chief town is *La-Flèche*: population, 6543 in the commune. It is agreeably situated in the pleasant valley of the Loir, 25 miles S. by W. from Le-Mans. It consists of three principal streets, two of them parallel to each other running through the town for the distance of about half a mile, and the third at right angles to them; together with a few smaller streets or lanes. The two parallel streets are straight, wide, well-built, and well paved; one of them is partly lined by the extensive buildings of the military school. The principal public buildings are the town-hall, the parish church, and the military school just named. This school occupies a royal palace built by Henri IV., and afterwards bestowed by him on the Jesuits for a college. On the suppression of the Jesuits, in 1762, it was converted by Louis XV. into a military school; and after being suppressed at the revolution, was revived by Louis XVIII. Prince Eugene, Descartes, and the astronomer Picard were educated here while the Jesuits had the place. The buildings are arranged round five courts; the principal of which, with its adjacent garden, is very handsome. The principal gateway is adorned with sculptured ornaments and a bust of Henri IV. There is also a large park, which is embellished by the running water brought from a distance of two or three miles for the supply of the building. There is a handsome chapel in the institution, a library of 25,000 volumes, and a gallery of paintings. The town has a theatre and two public bathing establishments. The trade of La-Flèche consists chiefly of corn, hay, wine, poultry, and game. Linen, hosiery, gloves, leather, and glue are manufactured. *Le-Lude*, population 3295, on the left bank of the Loir, 12 miles S.E. from La-Flèche, consists of well-built houses, but the streets are very irregularly laid out. It is commanded by an ancient castle, whose massive quadrangular walls, situated on an eminence overlooking the Loir, and flanked by enormous round towers, one of them in ruins, present a striking appearance. The inhabitants trade in leather, and cattle. *Pontvallain*, population 2019, 14 miles E. from La-Flèche, near the Lons, has some trade in cattle and swine. An obelisk marks the spot near the town on which Bernard Duguesclin defeated the English in 1369. *Sablé*, population 4848, on the Sarthe, 16 miles N.W. from La-Flèche, was anciently a place of strength, but its fortifications have been entirely demolished. The streets are narrow and crooked; there is a small but pleasant boulevard raised like a terrace along the bank of the Sarthe, which forms a semi-circular bend round the town. There is a bridge over the river, built of marble quarried near the town, which, though in its rough state of a slate colour, becomes of a deep black with veins of white when polished. There is a handsome mansion on a hill above the town, built in the beginning of the last century, by Mansard, for the brother of Colbert, on the site of an ancient castle of the dukes of Maine. A considerable manufacture of gloves is carried on; and there is a good trade in corn, fruit, and the marble quarried near the town.

This department, with that of Mayenne, constitutes the diocese of Le-Mans, the bishop of which is a suffragan of the archbishop of Tours. It is in the jurisdiction of the Imperial Court Royale of Angers, and within the limits of the University-Academy of Caen, and in the 18th Military Division, the head-quarters of which are at Tours. It sends four members to the Legislative Chamber of the empire.

SARUM, OLD. [WILTSHIRE.]

SARUS, RIVER. [ANATOLIA.]

SARVITZ. [AUSTRIA.]

SARZANA. [GENOVA.]

SARZEAU. [MORBIHAN.]

SASKATCHEWAN. [AMERICA.]

SASSARI. [SARDEGNA.]

SATEREMS, RIVER. [OLDENBURG.]

SATIMANGALUM. [COIMBATORE.]

SATTARA. [HINDUSTAN.]
 SAUERLAND. [PRUSSIA.]
 SAUGUES. [LOIRE, HAUTE.]
 SAULGE, ST. [NIEVRE.]
 SAULIEU. [CÔTE-D'OR.]
 SAUMUR. [MAINE-ET-LOIRE.]
 SAUNDERSFOOT. [PMBROKESHIRE.]
 SAUVETERRE. [AVEYRON.]
 SAUVEUR-LE-VICOMTE. [MANCHE.]
 SAUX-MANGES. [PUY-DE-DÔME.]
 SAVANNAH. [GEORGIA, U.S.]
 SAVE, or SAU, RIVER. [AUSTRIA.]
 SAVENAY. [LOIRE-INFÉRIEURE.]
 SAVERDUN. [ARIEGE.]
 SAVERNE. [RHIN, BAS.]
 SAVIGLIANO. [COMI.]
 SAVIGNANO. [FORLÌ.]
 SAVIGNAC-LES-EGLISES. [DORDOGNE.]
 SAVIGNY. [LOIR-ET-CHEER.]
 SAVINES. [ALPES, HAUTES.]

SAVONA, an administrative division, province, and town of the Sardinian States. The administrative division contains the provinces of Acqui, Albenga, and Savona. The province of Acqui, which lies north of the Ligurian Apennines, was formerly included in the administrative division of Alessandria. It is described in a separate article. [ACQUI.] The rest of the administrative division lies between the Apennines and the Gulf of Genoa; it was formerly included in the duchy of Genoa, and now forms the provinces of Albenga and Savona. The province of Albenga, the most western part, lies between the province of Savona and the administrative division of Nizza; it forms the subject of a separate article. [ALBENGA.]

The area and population of the administrative division and its three provinces are as follows:—

Provinces.	Area in Square Miles.	Population in 1848.
Acqui	445	101,802
Albenga	263	59,993
Savona	811	78,906
Total	1519	240,701

The province of Savona is bounded N.E. by the province of Genoa, S.W. by that of Albenga, S.E. by the Mediterranean, and N.W. by the Apennines. The soil partakes of the general character of the western Riviera of Genoa, and produces abundance of fruit, oil, and wine. The climate is somewhat cold in winter. The Apennines near Savona are lower than the rest of the Ligurian Apennines, being only 1500 feet above the sea.

The province of Savona is divided into 38 communes. The capital is Savona, a walled town of 15,500 inhabitants, situated on the sea coast, about 30 miles S.W. from Genoa. It is the largest town along the western Riviera between Genoa and Nice. The narrow well-paved streets are frequented by an active busy people. The town carries on a considerable trade; the harbour, which was once good, was partly filled up by the Genoese in 1525-28, through commercial jealousy; it is still very safe, but only fit for vessels of 200 tons. Savona was made a bonding port for foreign goods and merchandise of all kinds except tobacco, in 1850. Savona is the residence of many noble and other substantial proprietors of the surrounding country; it contains some good palaces and several fine churches, among others a cathedral built in 1604, the former cathedral, which had been raised by Pope Julius II., when bishop of Savona, having been destroyed to make room for the citadel. The present cathedral is adorned with valuable paintings and sculptures. Near the cathedral is the Sistine chapel, founded by Pope Sixtus IV., uncle of Julius II., as a burial place for his family. In the Dominican church are an 'Adoration of the Magi,' and another painting by Albert Durer; and a magnificent 'Nativity' by Antonio Semini. The sanctuary of La-Madonna di Savona, situated 5 miles north-west of the town, among the Apennines on the road to Mondovi in Piedmont, has also some good paintings. Savona is the birth-place of Chiabrera, one of the best Italian lyric poets. His tomb is seen in the church of San-Giacomo.

Albissola, a pretty town on the sea-shore, between Savona and Genoa, has 3500 inhabitants, and several handsome villas of the Genoese nobility. Pope Julius II. was born at Albissola. *Noli*, a small town in a picturesque situation near the sea. *Cairo*, in the Apennines, has 3400 inhabitants. Near Cairo is the village of Milleseimo, famous in the history of Bonaparte's first Italian campaign, in 1796.

SAVOY (*Savoia* in Italian, *Savoie* in French), a country with the title of duchy, which belongs to the Sardinian monarchy. It forms part of the highlands of the Alps, and is geographically united to south-western Switzerland, being included in the basin of the Rhône. Savoy extends from 45° 4' to 46° 24' N. lat., 5° 37' to 7° E. long. The boundaries of Savoy are:—on the E. the great chain of the Graian and Pennine Alps, which divide it from Piedmont and the Valais; N. the Lemnan Lake; W. the Rhône, which divides it from France; and S.

an offset of the Cottian Alps, which, running westward from the group of Mont Cenis, divides the valley of Maurienne, the southern-most part of Savoy, from Dauphiné.

Savoy consists of several valleys formed by offsets of the Alps. It is divided into three basins: the northern basin, the waters of which flow northwards into the Lemnan Lake; the central basin, the waters of which flow by means of the Arve, the Fier, and the Lake Bourget westward into the Rhône; and the southern basin, which is drained by the Isère and its affluents. The Isère runs southward into France.

Savoy is divided into seven provinces:—1, Chablais, which comprises the southern coast of the Lemnan Lake and the numerous valleys which slope towards it. The Dranse, which rises in the mountains near the borders of the Valais, is the principal river of Chablais. 2, Faissigny, south of Chablais, consists chiefly of the long valley of the Arve, from its source in the Col-de-Balmes to a few miles below Bonneville, where the river enters the province of Carouge. The well-known valley of Chamouny and the romantic valley of the Giffre, belong to Faissigny. 3, Genevese, or Annecy, west of Faissigny, consists of the valley of the river Fier, an affluent of the Rhône, and the basin of the Lake of Annecy, the waters of which have their outlet in the Fier, and is bounded north by the canton of Geneva. 4, Alta Savoia, south of Faissigny, consists of the valley of the Arli, an affluent of the Isère, which flows from north to south. 5, Tarantasia or Tarentaise, south of Alta Savoia, consists of the long valley of the Isère, running from east to west, from its sources at the foot of Mont Iseran to the confluence of the Arli. Tarantasia is, next to Faissigny, the most Alpine part of Savoy, and the most interesting to mountain tourists. 6, Moriana, south of Tarantasia, consists of the valley of the Arc. The high road to Italy leads through the whole length of Moriana. 7, Chambéry, or Savoy proper, the most level and the most fertile part of Savoy, lies west of Moriana and Tarentaise, and south of Genevese. It is divided on the west from France by the Rhône and its affluent the Guier. The waters of Savoy proper find an outlet partly southward by the Isère, and partly by the Leisse and other streams which run westward into the Lake of Bourget, which lake enters the Rhône by a canal called that of Saviere. The Lake of Bourget lies 3 miles north-west of Chambéry; it is 10 miles long and 3 miles wide, and the surface is 700 feet above the sea.

The principal towns of Savoy are:—1, CHAMBÉRY, the capital of Savoy proper, and of the whole duchy. 2, ANNECY, the head town of the province of Genevese. 3, *Thonon*, which is noticed under CHABLAIS. 4, *Aix-les-Bains*, in Savoy proper, much frequented for its baths. [AIX.] 5, *Rumilly*, in the province of Genevese, has 4000 inhabitants. 6, *Moutiers*, the capital of Tarentaise, a small town with 2330 inhabitants, and a bishop's see, is situated on the Isère. Moutiers has salt-works for purifying the salt which is derived from the neighbouring springs of Salins, and also a school of mineralogy and metallurgy, with three professors, a cabinet of minerals, a library, and a chemical laboratory. The lead-mines of Pesel and Macot, in the mountains near Moutiers, are worked for the government. The mine of Pesel is situated at an elevation of 4500 feet above the sea, and that of Macot at the height of 6000 feet. The ore is sent to Confans, where it is smelted and purified. The mineral springs of La-Perrière, situated in the valley of the Doron, about three miles from Moutiers, are much frequented by invalids from Switzerland and France. The province of Tarentaise has numerous mines of anthracite, which are worked by the country people, and it is rich in marble of various colours. 7, *Bourg-St-Maurice* in Upper Tarentaise, on the road leading to Italy by the Little St-Bernard, is a town of 3300 inhabitants, and carries on considerable trade in cattle. Several large fairs are held here annually. From the village of Scez above Bourg-St-Maurice, the narrow valley of Tignes leads south-east to the sources of the Isère, at the foot of Mont Iseran, a noble pyramid 13,300 feet high, covered with perpetual snow and surrounded by glaciers. From Scez a road leads in an easterly direction to the pass of the Little St-Bernard, 7192 feet above the sea, and thence into the valley of Aosta. The pass is practicable nearly all the year round, but only for horses and mules. A Roman road constructed by Augustus led formerly from Aosta, or Augusta Prætoria, over the Little St-Bernard, and down the valley of the Isère to Vienne on the Rhône. Traces of this road are still visible in the valley of Aosta, but all vestiges of it have disappeared on the Savoy side. On the summit of the pass is an ancient column of cipoline marble, 15 feet high, which is called 'Colonne de Jove,' or of Jove, and near it is a circle of stones probably druidical. Tarentaise was the country of the ancient Centrones, who, with their neighbours the Salassi, long resisted the Roman arms, and were only subjugated in the time of Augustus. A village on the banks of the Isère, above Moutiers, bears the name of Centrone, and a little higher up, in the valley of Aixme, are several ancient Roman inscriptions. 8, the town of *St-Jean*, the chief place in the province of Moriana, has 3000 inhabitants, and a very old cathedral, in which lie buried some of the earlier counts of the house of Savoy. Moriana has mines of iron, copper, and lead.

The late king Charles Felix began the embankment of the three principal rivers of Savoy, the Arve, the Isère, and the Arc, by which means large tracts of fertile land have been reclaimed.

The population of the duchy of Savoy in 1848 was 583,812, of whom 152,468 inhabit the province of Savoy proper. The population

of the other provinces in 1848 is thus stated:—Alta-Savoia, 50,872; Moriana, 64,239; Tarentaise, 45,723; Annecy, 107,474; Faissigny, 105,474; Chablais, 57,562. A great part of the country is rocky and barren, and the male inhabitants are obliged to leave their homes in order to get a subsistence. Many of them when young resort to Paris for employment, and return to Savoy after a few years with the fruits of their industry. Cattle and sheep constitute the chief wealth of the Alpine districts. Savoy does not produce corn enough for its consumption. Wine is made in most parts, and some of it is very good. Silkworms are reared in Savoy proper, and fruit-trees are abundant.

The popular language of Savoy is a Romance dialect, like those of Western Switzerland, but the people of the towns speak good French.

[SARDINIAN STATES.]

SAWBRIDGEWORTH. [HERTFORDSHIRE.]

SAWLEY. [DERBYSHIRE.]

SAWSTON. [CAMBRIDGESHIRE.]

SAWTRY. [HUNTINGDONSHIRE.]

SAXE-ALTENBURG, a small duchy on the northern frontiers of the Thuringian Forest, consists of two principal divisions; the eastern along the banks of the Pleisse, and the western, which is traversed by the Saale. The two parts are separated by the principality of Gera, which forms part of the territory of Reuss. The eastern is bounded N.E. and S.E. by the kingdom of Saxony, S.W. by Weimar, W. by Reuss, and N.W. by Prussian Saxony; the western division is bounded N. by Prussian Saxony, E. by Reuss, S.E. and W. by Weimar, and S.W. by Coburg and Schwarzburg. The duchy lies between 51° and 53° N. lat., 11° and 18° E. long. The duchy is divided into two circles, of which the area and population are thus given:—Altenburg, area 243 square miles, population 86,010 in 1850; Saal-Eisenberg, area 264 square miles, population 46,728 in 1850; total area, 507 square miles; total population, 132,738. The climate is mild and salubrious. The country is hilly, richly wooded, and fertile. The highest points, the Dolenstein near Kahla, and the Buchberg, are however not above 1000 feet high. The rivers, which are small, and are tributaries of the Elbe, are the Saale, with the Orla and Roda, and the Pleisse, which is properly the river of the country, with its small tributary streams the Sprotta and Gerstenberg. There are several large lakes, and also mineral springs, the most celebrated of which is that at Ronneburg. The agricultural products are corn (particularly rye and wheat), pulse, potatoes, rape-seed, flax, and hemp. Much attention is given to the rearing of cattle; the sheep are of a superior breed, and the horses of a remarkably strong make; swine are abundant. Wild boars and deer are in considerable numbers. Fruit is plentiful. There are few minerals. A very fine porcelain earth is found in the neighbourhood of Altenburg, which supplies the famous porcelain manufactory at Gotha. Woollen cloths, stockings, and wooden-ware, are manufactured. There are considerable tanneries at Altenburg, Kahla, Eisenberg, and Lucka. The articles of export are corn, cattle, wool, butter, and timber.

The Duke of Saxe-Altenburg has one vote in the Germanic Confederation. Altenburg forms part of the ancient Osterland, and appears from a very early period to have been under the margraves of Meissen. It was formed into a separate principality in 1603. On the extinction of the house of Altenburg in 1672, the larger portion reverted to Ernest the Pious, duke of Gotha. From this period the principality of Altenburg was governed by the family of Saxe-Gotha, till it expired in the person of Frederick IV., in February, 1825. By the territorial compact among the three junior branches of the house of Gotha, namely, Meiningen, Hildburghausen, and Coburg, the duke of Hildburghausen, on the 15th November, 1826, resigned his own territories to Meiningen, and received in lieu the duchy of Altenburg, with the exception of the districts of Eisenberg and Kamburg. The principal towns in this duchy are:—1, *ALTENBURG*, which had 16,184 inhabitants in 1850. It is noticed in a separate article. 2, *Ronneburg*, a walled town, containing a ducal palace, two churches, and above 5000 inhabitants, who subsist by agriculture, mechanical trades, and manufactures of woollen cloths, pottery, porcelain, and leather. Near the town is a mineral spring. Black chalk for drawing is found in the neighbourhood. 3, *Eisenberg* is situated on a considerable eminence, about 24 miles W.S.W. from Altenburg. It is surrounded by walls, in which are four gates; and possesses a palace, three churches, an observatory, a town-hall, and a poorhouse. The number of inhabitants is about 5000, who manufacture woollens, ribands, leather, porcelain, household furniture, and carriages, with which they carry on a considerable trade.

SAXE-COBURG-GOTHA, a duchy in the southern part of Thuringia, is composed of two large and various smaller detached portions, which are surrounded by the territories of Prussia, Schwarzburg, Sonderhausen, Weimar, Electoral Hesse, Meiningen, and Bavaria. The principality of Coburg lies between 50° 8' and 50° 23' N. lat., 10° 49' and 11° 14' E. long., and that of Gotha between 50° 38' and 51° 20' N. lat., 10° 15' and 11° 2' E. long. The area and population are given under COBURG. The south part of Gotha is traversed by a large portion of the Thuringian Mountains, of which the loftiest points are, the Schneekopf, 3118 feet, the Inselberg, 2947 feet, with others of nearly equal elevation. This chain, extending in a south-easterly direction from Eisenach through Gotha to the frontiers of Reuss, where it receives the name of Frankenwald, is on the whole

nearly 70 miles in length, and from 4 to 6 miles in breadth. The rivers of Coburg are the Itz, Steinach, Rodach, and Nasslach; those of Gotha are the Hörsel, with the Emse, Ruhl, and Nema, the Unstrut, Gera, and Apfelstedt.

Agriculture is the principal occupation of the inhabitants, especially in the low lands, which yield abundance of corn, hops, vegetables, carrots for the making of sugar, flax, anise, caraway, poppy, and canary seed, and excellent fruit. The forests yield timber, potash, and pitch. The rearing of cattle is prosecuted with much activity; the sheep are generally of the Marino breed, and the horses strong and of a good make; swine and poultry, particularly geese, are plentiful. Iron is found near Friederichstadt; there are also coals, sandstone, millstones, marble, alabasters, gypsum, lime, potters'-clay, porcelain-earth, and salt. There is considerable manufacturing industry in Gotha; the chief articles are linen-yarn, ticking, twills, woollens, and cottons; tar and lamp-black; there are also manufactories of iron, steel, starch, tobacco, whitelead, soap, paper, porcelain, copper and iron utensils, and glass.

The exports from Gotha are timber, pine and other wood seeds, wool, coriander and anise seed, and oil, pitch, lampblack, peat, linen and cotton goods, metal and wooden wares. In addition to the exports, the duchy has a considerable transit trade, as the high road from Leipzig to Frankfurt passes through it.

Saxe-Coburg participates in the joint proprietorship of the University of Jena, and has several gymnasia, and numerous town, village, Sunday, training, commercial, and mechanics schools. The principality of Coburg has had a representative constitution since 1821, composed of 17 delegates; Gotha has had its chamber of representatives from an early period, which differs in its nature and arrangement from that of Coburg.

Coburg formerly belonged to the counts of Henneberg, but came by marriage into the Ernestine branch of the house of Saxony. The house of Gotha, properly so called, commenced in 1640, on the extinction of the Coburg and Eisenach houses of the Albertine branch of Saxony. Ernest the Pious received that portion in which Gotha was situated; he considerably augmented it by inheritance, and caused it to be erected into an independent principality by the German Diet. Ernest's eldest son, Frederick I., had Gotha and other neighbouring districts as his portion, and to preserve it from subdivision he established the law of primogeniture. His successors were great promoters of the arts and sciences, and laid the foundation of many noble collections. On the death of the last lineal descendant, in February, 1825, the duchy of Gotha was divided among the dukes of Saxe-Meiningen, Hildburghausen, and Coburg, the last named receiving the principality of Gotha, but it still retains its ancient and peculiar constitutional and political laws and customs. The town and duchy of Coburg are noticed under the article COBURG, and the town of GOTHA is described in a separate article.

SAXE-MEININGEN-HILDBURGHAUSEN, is a duchy composed of the ancient duchy of Meiningen, the principalities of Hildburghausen and Saalfeld, and some smaller districts, forming a compact territory, extending in a semicircle along the banks of the Werra, and skirted by the chain of the Thuringian Forest. It lies between 50° 13' and 50° 58' N. lat., 9° 57' and 11° 54' E. long., and has an area of 963 square miles: the population in January 1853 was 166,364. The duchy is inclosed by the territories of Bavaria, Coburg, Reuss, Weimar, Schwarzburg, Electoral Hesse, Gotha, and Eisenach. Being situated between the Thuringian and Fichtel chains, the character of the surface is mountainous: the loftiest points are the Bletsberg, 2760 feet high; the Klafarle, 2598 feet; the Gerberstein, 2184 feet; and other mountains of nearly equal elevation. Their valleys supply rich pasturage to numerous flocks and herds; they also contain many curious caverns, of which the most remarkable are the Zinselloch, the Grisch, and the Altensteinerhöhe.

The principal rivers are—the Werra, which, with many tributaries, traverses the whole duchy; the Saale, Itz, Rodach, Mils, and Steinach; the vales of some of these rivers are very picturesque. There are mineral springs near Liebenstein and Salzungen, and salt-springs near Friedrichshall and Neusulza. The productions are those of central Germany—grain of all kinds, fruits, vegetables, rapeseed, tobacco, timber, which is the staple of the country, game, fish, poultry, and honey. Among its mineral products are freestone and sandstone, slate, marble, porcelain and potters'-clay, copper, lead, iron, salt, coals, pitch, alum, and basalt.

Agriculture is the most important branch of industry. Fruit is cultivated to a great extent; cattle and sheep of the improved breeds are reared in all the districts; there are also large flocks of goats.

There is considerable manufacturing industry, particularly in the highlands and in the principality of Saalfeld, where there are many furnaces, works, mills, and glasshouses. The ordinary manufactures are coarse linens, sail-cloth, woollens, and cottons; there are also distilleries, breweries, and tan-yards. The exports are wood, sheep, horned cattle, tobacco, wool, leather, Sonnenburg toys, in which a large trade is carried on, woollens, glass, porcelain, and paints.

The University of Jena, being founded for the use of the states of the Ernestine line, is open to Meiningen, which also possesses several gymnasia and numerous schools.

The principal towns in the duchy are as follows:—*Meiningen*, on the

right bank of the river Werra, about 43 miles from Coburg, population about 6500, is the capital of the duchy, and contains the palace, in which are collections of art and natural history. The town has some fortifications, a house of assembly for the duchy of Saxe-Meiningen, gymnasium, and a normal school. Woollen- and linen-cloth are manufactured. *Saalfeld*, about 40 miles E. from Meiningen, population 5000, stands in the midst of the Thuringian Forest. The town is walled, and possesses the ruins of an old castle, erected in the 8th century. A modern residence, formerly occupied by the dukes of the Saxe-Saalfeld family, stands outside the walls. *Hildburghausen*, population about 4200, the former residence of the dukes of Hildburghausen, possesses a gymnasium, a burgher school, a Jews' school, an orphan asylum, and an asylum for lunatics. Cloth and papier-maché are manufactured. *Pörsch*, 11 miles E.N.E. from Saalfeld, population about 3800, has manufactures of woollen-cloth, leather, and porcelain. *Sonnenberg*, 12 miles N.E. from Coburg, has a population of about 4000, who manufacture wooden wares, musical instruments, and toys, which are exported to a large amount. In the vicinity is a quarry, from which slate-pencils are produced. *Bisfeld*, on the river Werra, 8 miles E. from Hildburghausen, population about 3000, possesses an ancient castle. The cotton manufacture is carried on.

The duchy of Saxe-Meiningen formerly constituted a part of the domains of the counts of Henneberg, and having passed by marriage to the house of Saxony, it came, after various territorial divisions, into the possession of Ernest the Pious, duke of Gotha. Ernest's third son, Bernhard, became the founder of the line of Meiningen in 1680. On the extinction of the house of Saxe-Gotha-Altenburg, in 1825, Meiningen received a considerable accession of territory, including the principalities of Hildburghausen and Saalfeld. Hildburghausen was founded by Ernest, sixth son of Ernest the Pious, in whose family it continued till 1826, when, by a family compact among the junior ducal houses, the reigning duke Frederick exchanged it for the duchy of Altenburg; since this period it has merged into the duchy of Meiningen, with the exception of a few districts which were ceded to Coburg.

SAXE-WEIMAR-EISENACH, a grand-duchy on the northern frontiers of the Thuringian Forest, consists of the principalities of Weimar and Eisenach, which are separated by Saxe-Gotha, and of the insulated district of Neustadt, besides various detached portions. Weimar lies along the banks of the Saale, and Eisenach on those of the Werra near the Thuringian and Rhön mountains. It extends from 50° 25' to 51° 27' N. lat., 9° 53' to 12° 18' E. long., over an area of about 1396 square miles (of which Weimar occupies about 690 miles, Eisenach 465 miles, and Neustadt 241 miles), and is bounded N. and N.E. by Prussian Saxony, E. and S.E. by Altenburg and Reuss, and S. and W. by portions of Schwarzburg, Coburg-Gotha, Meiningen, Bavaria, and Electoral Hesse.

Except in the district of Neustadt the soil is rich and well adapted to agriculture, wherever the gently undulating hills do not rise into mountain ridges, but the most elevated point, the Gikkelhahn near Ilmenau, does not attain a height of more than 2700 feet.

The principal rivers are—the Saale, Ilm, Elster Orla, Unstrut, and Gera, in Weimar, and the Werra, Hösels, Nessa, Ulster, and Felda in Eisenach, which are all tributaries of the Elbe and Weser. There are mineral springs near Berka and Ruhla.

The chief productions are wool, which is the staple article of commerce, grain of all kinds, vegetables, fruit, flax, hemp, rapeseed, hops, a small quantity of wine, pitch, tar, and lampblack. The mineral productions include manganese, alabaster, porcelain and potters'-clay, sandstone and freestone, iron, and salt. The rearing of cattle forms an important branch of industry; the horned cattle are mostly reared in Neustadt; and sheep of an improved breed in Weimar.

The population of Saxe-Weimar-Eisenach in 1853 was 262,524, in the following proportions:—Weimar, 132,424; Eisenach, 82,321; Neustadt, 47,779. Of the whole population of the duchy about 250,000 belong to the established Lutheran and the Reformed Protestant churches; about 10,000 are Roman Catholics, and about 1500 are Jews. Eisenach principality, with its capital, Eisenach, and its other principal towns, are noticed in the article EISENACH. The university is described under JENA. Of the other towns in the duchy the following may be named:—*Weimar*, capital of the principality of Weimar, and of the grand-duchy, is situated on the left bank of the river Ilm, about 13 miles E. from Erfurt. It stands in a pleasant valley, surrounded by hills, and contains a population of about 12,000. The town of Weimar is illustrious in the annals of German literature by the names of Göthe, Herder, Schiller, Wieland, Kotzebue, and others. The palace is finely situated in a beautiful park, and is fitted up with great elegance and taste. The grand-ducal library, founded in 1691, contains about 140,000 volumes, and is open to the public. The principal church contains the sepulchres of the reigning family. In this church are several fine paintings by Lucas Kranach. In the town are numerous educational institutions. A private company in Weimar publishes numerous maps, charts, and important geographical works. Besides the palace and the two churches, the chief public buildings are—the court theatre, the workhouse, the hospital, the library, and the new mews. The manufactures carried on are of small extent. The railway from Gotha to Halle passes Weimar.

Apolda, population 4000, about 9 miles N.E. from Weimar, possesses mineral springs, and manufactories of hosiery, woollen-cloth, kerseymeres, and linen. There are also bell foundries. *Geyssa*, population about 1800, is situated on the Ulster River, about 24 miles S.S.W. from Eisenach. *Neustadt*, 24 miles S.E. from Weimar, population 4250, is situated on the river Orla, which flows into the Saale. There is here a ducal residence. Woollen-cloth, linen, and leather are manufactured by the inhabitants. *Weida*, population about 4000, is situated on the rivers Auma and Weida, about 14 miles E. from Neustadt. In the duchy of Saxe-Weimar-Eisenach there are several gymnasia and lyceums, and numerous town and village schools; training schools for teachers; asylums for the blind and the deaf and dumb; a school for forest economy, free schools of industry, &c., besides many literary and scientific institutions. The court of Weimar has long been celebrated for its liberal encouragement of the fine arts.

The line of Weimar boasts its descent from the illustrious John Frederick of Saxony, who, on being deprived by Charles V. of his electoral dignity and dominions, had certain territories assigned to him in Thuringia. The founder of the house of Weimar is John, who was born in 1570, and whose original patrimony has been considerably augmented by purchase and the extinction of some of the collateral branches. At the Congress of Vienna Charles Augustus, the then duke, received an accession of territory with 77,000 subjects, and the dignity of grand-duke, which confers the title of royal highness.

SAXELBY. [LINCOLNSHIRE.]

SAXMUNDHAM. [SUFFOLK.]

SAXONY, a province in the kingdom of Prussia, situated between 50° 30' and 53° N. lat., 9° 50' and 13° 50' E. long., is bounded N. and N.E. by the province of Brandenburg; S.W. by the kingdom of Saxony; S. by Gotha, Reuss, Weimar, and Hesse Cassel; and W. by Hanover and Brunswick. It is divided into three governments, which, with their area and population, are as follows:—

Governments.	Area in Square Miles.	Population in 1846.
Erfurt	1,273	343,617
Magdeburg	4,466	674,149
Merseburg	3,994	724,686
Total	9,733	1,742,452

In 1852 the total population had increased to 1,828,732.

The province is composed of almost the whole of the portion of Saxony ceded to Prussia at the Congress of Vienna, to which the principalities lying to the north of the duchy of Anhalt and to the west of the Elbe and the Havel have been added. The three duchies of Anhalt, a great part of Schwarzburg, the bailiwick of Alstadt belonging to Weimar, and that of Kalvörde belonging to Brunswick, lie entirely within the territory of this province.

The principal river is the Elbe, which traverses the province from south to north, and is joined in the north at Werben by the Havel, and in the south by the Saale. The greater portion of the province, namely, the whole district of Magdeburg to its extreme south-western border, and the larger (or eastern) part of the district of Merseburg on the other side of the Saale, belong to the plains of Northern Germany, and contain gentle eminences, but no mountains. The western or smaller part of the district of Merseburg and that of Erfurt are more mountainous than level, for on the one side branches of the Harz Mountains and on the other side those of the Thüringer Wald run into it; yet this part likewise contains extensive and fruitful plains, and the mountains and hills which traverse it are nowhere of considerable elevation, except in the detached circle of Henneberg; on the south-west border of the province is the highest mountain of Northern Germany, the Brocken, which is 3500 feet above the sea.

The soil, which is generally fertile, supplies the numerous population with the most important articles of food. The province is unquestionably the most equally and the best cultivated in Prussia. Potatoes are very generally cultivated; pulse, oleaginous plants, culinary vegetables of all kinds, are amply sufficient for the consumption of the inhabitants; a considerable quantity of wine is made, and with beer and brandy, the usual beverages manufactured in the province, is mostly used for home consumption. In many parts of the government of Magdeburg wood is scarce, and there is barely sufficient anywhere except in the government of Erfurt. The breed of horned cattle is numerous, and Berlin is in part supplied from this province. The fine wool of the improved breed of sheep supplies not only the extensive woollen manufactures of the province, but furnishes a large overplus for exportation. The mineral products are—antimony, cobalt, iron, and copper; there are also lime, gypsum, alabaster, freestone, alum, and vitriol. The porcelain clay obtained near Halle is of very superior quality, and the salt from the saline springs furnishes a large supply. The manufactures are—woollens, leather, calico, and linen. There are several sugar-refineries in the province, tobacco-factories, and numerous brandy-distilleries. The exports are—wool, corn, woollen and cotton manufactures, brandy, copper, iron and steel wares, and salt. The government is traversed by several railways which connect it with Berlin, the Baltic, the Elbe, Belgium, and Central and Southern Germany. The provinces are described in separate articles, which

contain also notices of the towns. [ERFURT; MAGDEBURG; MERSEBURG; ASCHERSLEBEN; BURG; HALLE; HALBERSTADT, &c.]

SAXONY, KINGDOM OF. Taken in its most extensive sense, the name of Saxony formerly designated a very large tract in Northern Germany, extending from the Weser to the frontiers of Poland. At the peace of 1495 the emperor Maximilian I. divided Germany into ten circles, of which the extensive tract of country hitherto called Saxony formed three, namely, Westphalia, Lower Saxony, and Upper Saxony. The last of these comprised the electorates of Brandenburg and Saxony, the duchy of Pomerania, and several small principalities.

The kingdom of Saxony was formed out of the electorate of the same name. The duchy of Saxony, to which the electoral dignity and the office of hereditary marshal of the empire were attached, was however not part of the ancient German duchy of that name (which was composed of Lauenburg and a tract on the other side of the Elbe), but a Wend or Vandal province which Albert the Bear, margrave of Salzwedel, of the house of Ascania, had conquered and left to his son Bernhard. This Bernhard received from the emperor Frederick Barbarossa (after Henry the Lion had been declared under the ban of the empire) the dignity of duke of Saxony, to which were attached a part of Engern and Westphalia, extending from the Weser, which separated it from Eastphalia, westward to the Rhine. But Bernhard not being powerful enough to maintain the rights attached to his dignity, and to take possession of the duchy assigned to him in Westphalia, most of the Saxon allodial proprietors became immediate estates of the empire, by which the duchy was dissolved, and its name transferred to the country inherited by Bernhard from his father, to which from that time the ducal dignity was attached. The house of Ascania becoming extinct on the death of Albert III., in 1422, the emperor Sigismund invested Frederick the Warlike, margrave of Meissen, with the electoral title and the duchy of Saxony. He was succeeded in the electoral dominions by his son, Frederick the Mild, who reigned from 1428 to 1464. On his death his dominions were divided between his two sons, Albert and Ernest, who were the founders of the Albertine and Ernestine lines, the former of which still reigns in the kingdom of Saxony, and the latter is divided into the four branches of Saxe-Altenburg, Coburg-Gotha, Meiningen, and Weimar.

In the war with France, in 1793, Saxony furnished only a small contingent, and took no decided part; but in 1806 the elector sent all his troops to support the king of Prussia. The ruin of the Prussian power by the battle of Jena enabled Napoleon to gain the Saxons to his cause. Prussian Poland was added to the dominions of Saxony under the title of the grand-duchy of Warsaw, and the title of elector was changed to that of king. Further cessions from Austria in 1809 nearly doubled the territory of Saxony; but the adherence of the king to the cause of Bonaparte proved fatal to him in 1813, when the Russians occupied Poland, and with the Prussians made Saxony the theatre of the great struggle with the French emperor. In that year the battles of Lützen and Bautzen were fought, and were succeeded by the attacks on Dresden, the great battles of Leipzig, and the retreat of Bonaparte to the Rhine. The people of Saxony had hoped that their attachment to the cause of Germany, as proved by the desertion of their troops from the French army in the battle of the 18th of October, would secure the integrity of their territory. The fate of Saxony was to be decided in the Congress of Vienna, and it was at first proposed that the whole kingdom should be united with Prussia, for which a territory in Westphalia, with 300,000 inhabitants, was offered to the king as an indemnity, which was refused. At length it was decided that the kingdom should be divided, and on the 18th of May 1815 the king signed a treaty of peace with Prussia, by which he gave up more than half his dominions in point of extent, and nearly the half of the population, or a territory of 7880 square miles, with 845,218 inhabitants.

The present kingdom of Saxony lies between 50° 10' and 51° 28' N. lat., 11° 54' and 15° 5' E. long. It is bounded N.W., N., and N.E. by Prussia; E. and S. by Bohemia; S.W. by Bavaria; and W. by Reuss and Saxe-Altenburg. Its form is triangular, the base resting on the Riesengebirge and the Erzgebirge from the Neisse, on the border of Silesia, to the Frankenwald, on the north boundary of Bavaria; and the vertex extending a little to the north of the city of Leipzig. The length of the base is about 150 miles, and the height of the triangle, from a little north of Leipzig to the point where the meridian of 13° E. long. crosses the Erzgebirge, is about 75 miles. The area is 5752 square miles, and the population in 1852 amounted to 1,987,832. The inhabitants are chiefly of German descent; about 40,000 are of the Slavonic race. All except about 30,000 Catholics and 1000 Jews are of the Lutheran religion. The Slavonians were the original inhabitants, and their subjection was effected in the 10th century. They are now known under the name of Wends, and live apart from the Germans; they do not intermarry with them, though they inhabit the same towns or villages. Thus they have preserved their language and several peculiar customs. They are only found in that part of Saxony which is east of the Elbe, especially in Bautzen and in the vicinity of that town.

Surface and Soil.—The river Elbe, traversing the kingdom from south-east to north-west, divides it into two unequal portions, between which a considerable difference exists also in wealth and productive powers.

The eastern and smaller portion, which comprehends the south-western part of the country, formerly called Lusatia, is less favoured by nature. The most elevated part of the country lies contiguous to the boundary of Bohemia, and is known by the name of the Mountains of Lusatia. It does not however present a chain of mountains, but is an elevated flat, which towards the south descends into Bohemia with a rather rapid slope, but towards the north forms extensive plains, which are nearly level, lowering with an almost imperceptible slope. On these plains rise several masses of rocks in the form of small tablelands, and in some places there are numerous small conical hills. The base of the rocks is granite or gneiss, but the more elevated parts consist of basalt. The most elevated summits, proceeding from east to west, are—Mount Oybin and the Hochwald near Zittau, which rise respectively to 1680 and 2520 feet; Mount Lausche, which attains 2637 feet; the Schlossberg, near Stolpen, which is 1146 feet high; the Great Winterberg, on the right bank of the river Elbe, which is 1836 feet; the Lilienstein, on the right bank of the Elbe, opposite Königstein, which is 1338 feet high; Mount Catta, near Pirna, which attains 1176 feet; and the Porschberg, near Pillnitz, which has an elevation of 1182 feet above the sea-level. The western declivity of this region is intersected by numerous depressions, ravines, and valleys, and on account of its picturesque beauties is frequently resorted to by travellers. It is known by the name of the Saxon Switzerland, and extends along the Elbe from Pirna to the Winterberg, and from six to eight miles from the river. The northern boundary-line of this region may be indicated with tolerable exactness by a line drawn from Dresden eastward to Bautzen. It is in general a poor country, partly covered with forests of rather indifferent growth, and partly with heath, but there are tracts which make good sheep-walks. The sheep are noted for the quality of their fine wool. Agriculture is very limited; potatoes and oats succeed best, and in some parts flax. There is however a large tract of superior fertility, which occupies the most eastern part of the kingdom, on both sides of the Neisse, and constitutes a wide depression in the elevated region. The surface here is hilly, but in general it produces all kinds of grain, and nearly as much as is required for the consumption of the large and populous manufacturing villages which surround the town of Zittau on the east, north, and west. The plain of Bautzen, which lies along the northern base of the elevated region, is still more fertile, and supplies corn for the consumption of the manufacturing districts. Some coal and iron are found, especially in the neighbourhood of Zittau; and along the river Elbe there are some quarries of sandstone, the produce of which is exported.

The country which extends from the base of this region northward to the boundary-line of Prussia is a plain, on which there are a few isolated hills, among which the Keulenberg, near the town of Königbrück, attains the height of 1362 feet above the sea. The soil of this plain is sandy, or gravelly, and mostly unfit for cultivation: about half the surface is covered with woods, consisting almost entirely of coniferous trees, from which tar and pitch are made. In the cultivable tracts potatoes, oats, buckwheat, and millet, with some rye, are grown. The sheep-walks are extensive, but of inferior quality. Cattle, goats, and pigs are numerous.

The western or larger portion of Saxony, which is situated west of the river Elbe, is naturally divided into three regions, the mountainous, the hilly, and the plain. The mountain region lies within the Erzgebirge, extends over the northern slope of that range, and is bounded on the south by Bohemia. It is occupied with mountain masses, with rather steep declivities, which are furrowed in a direction from south to north by wide and open valleys, and in other directions by smaller valleys. The most elevated summit is the Fichtelberg, near 12° 50' E. long., 3966 feet above the sea-level. Nearly north of it stand the Pöhlberg, 2706 feet high; and farther east the Lugstein, 2934 feet. West of the Fichtelberg are the Cluversberg, which attains 3345 feet; and near Schöneck, the Rammelsberg and the Schneckenstein, respectively 3165 and 2886 feet high. A large portion of this region is covered with forests of beech and pine, which supply fuel for the numerous mines of this district. [ERZGEBIRGE.] In the valleys of this region, which are rather thickly inhabited, cultivation is limited to flax, potatoes, and oats; the population is chiefly supplied with grain from the regions lying farther north.

The region which extends northward along the northern base of the mountains as far as Meissen, exhibits an agreeable alternation of hills, vales, and plains of moderate extent. Its fertility in general is not great, though there are some productive tracts, among which the plains near Chemnitz and Zwickau are distinguished. But the whole region is cultivated with great care, as its agricultural produce finds a ready sale in the populous towns and villages of the mountain region. The winters are not severe enough to prevent the cultivation of the common kinds of grain. Some of the lower grounds, especially those along the Elbe, are noted for their orchards; and in the vicinity of the town of Meissen a considerable quantity of wine is made. Coals are found in extensive beds not far from Dresden, and in the vicinity of Zwickau. Sheep, cattle, and horses are abundant in these parts.

The northern portion of Saxony west of the Elbe is a plain, and constitutes the most southern part of the great plain which extends to the shores of the Baltic. It contains however more hills than occur farther north. The hills are isolated, and generally low, except the

Colmberg, west of Oschatz, which attains an elevation of 1134 feet above the sea-level. The general level of this district near the hilly region is about 600 feet, and where it borders on Prussia it varies between 290 and 860 feet. It is the most fertile portion of Saxony, and though it contains several tracts covered with heath, some extensive districts are distinguished by fertility. The most fruitful parts are the plains of Lommatsch, Meissen, and Leisnig on the Freyberger Mulda; the country surrounding the town of Leipzig, and the valley of the Elster. Agriculture is the principal occupation of the inhabitants, but it is united to the rearing of cattle and horses. Sheep abound in the less fertile tracts. The forests are here of small extent.

Climate.—The temperature of the northern plain does not differ much from that of the hilly region. The mean annual temperature in both regions is 47.5°. The winter is rather severe, the mean temperature being 30° or a little less. The mean temperature of spring is 49°, of summer is 62°, of autumn between 49° and 50°. The banks of the Elbe are the lowest parts of the region, and accordingly the temperature of Dresden and Meissen is from two to three degrees higher than those given in the above statement. The climate of the towns near the mountain region, as that of Freyberg and Chemnitz, does not materially differ from that of the countries farther north, but in the valleys the temperature is considerably lower. At Altenburg in the mountain region, 2475 feet above the sea-level, the mean annual temperature does not exceed 40°, that of the winter is 25°, of the spring 41°, of the summer 54°, of the autumn about 41°. The prevailing winds are from the west and south-west; those from north-west and from south and south-east are also common; northern, north-eastern, and eastern winds are rare. The annual rainfall is from 20 to 24 inches.

Rivers.—The principal river is the ELBE, which is navigable for large river boats through the whole of its course, as far as it lies within the boundaries of Saxony. It is joined, within Saxony, by a few small rivers, which are used to float down timber and fire-wood. The rivers which fall into the Elbe are the Black Elster, with its tributary the Röder, from the east, and from the west the Freyberger and the Zwickauer Mulda, which unite within Saxony, and the White Elster, with its tributary the Pleisse.

Productions.—The chief crops are corn, potatoes, rape-seed, hops, flax, hemp, chicory, tobacco, madder, woad, saffron, medicinal herbs, anise, coriander, poppy, &c. The meadows are most carefully cultivated, and yield several crops in the year. Spanish clover is much cultivated. Culinary vegetables are abundant, and large quantities are exported. With the exception of the mountainous district, Saxony resembles a vast orchard, the produce of which is a never-failing source of wealth to the inhabitants. The culture of the vine was introduced in the 11th century. The annual produce is about 2,400,000 gallons. Almost a fourth part of the country is covered with forests, consisting chiefly of pine and fir. Of other timber-trees the most common are the beech and the birch; the maple, the elm, and the ash are less common, and the oak very rare.

The breed of cattle has been very much improved within the last century. The horses are good. There are swine and goats in most parts of the country, and domestic poultry abounds. Among wild animals are boars, foxes, badgers, hares, lynxes, and wild cats; birds of prey, with the exception of eagles, which are seldom seen, are everywhere met with. There are also bustards, storks, heathcocks, pheasants, partridges, wild geese, ducks, and swans. The breeding of bees has declined. The breed of sheep has been gradually and greatly improved since 1765, by successive importations of merinos from Spain, so that there are above 2,000,000 sheep of the improved breed, and Saxony wool is preferred even to the Spanish.

The minerals are some gold, copper, iron, lead, tin, cobalt, arsenic, vitriol, bismuth, nickel, zinc, antimony, quicksilver, calamine, rock crystal, amethyst, carnelian, garnets, diamonds, jasper, chalcidony, Labrador stone, potters'-earth, fine porcelain clay, basalt, serpentine, granite, marble, alabaster, fluor-spar, sandstone, limestone, slate, porphyry, black amber, brimstone, alum, saltpetre, and coals. All the salt is imported from Prussian Saxony.

The manufactures are very important. The most important branch of linen manufacture is that of damask table-linen at Gross-Schönau (1000 looms). Thread-lace of extraordinary beauty is manufactured in the Obererzgebirge and the Voigtland. The annual value of the linen manufactures is 3,000,000 dollars. Woollen manufactures are very extensive, and those of cotton stuffs and cotton hosiery have rapidly increased in recent times. There are silk-manufactures on a small scale; numerous paper-manufactories; and tanneries, breweries, and distilleries in almost all the towns. The manufactures connected with the mines are of great importance, especially at Freiberg, where are also cannon and shot foundries, and smelting-works. Cobalt is made into smalts, and some places are noted for the manufacture of verdigris. The manufacture of straw bonnets, mats, &c., employs 10,000 hands. Meissen has become universally famous for the manufacture of porcelain and glass. Steam-engines, mill-machinery, tools, and toys are also manufactured in Saxony.

Commerce.—The centre of the commerce of the country is Leipzig. The whole foreign and domestic trade of Leipzig at three fairs amounts to from 20 to 22 million dollars. The book trade is likewise to the amount of some millions. The principal exports are fine woollen-

manufactures, linen, lace, &c.; thread, wool, worsted, hosiery, smalts, porcelain, straw-manufactures, woodenwares, glass, fruit, timber, toys, and mineral products. The imports are salt, cotton, silk, flax, hemp, colonial produce, salt and dried fish, fancy goods, &c. The value of the exports is said to exceed that of the imports by 3,000,000 dollars. The chief towns are all connected with each other and with the great cities of Germany by railroads.

Religion.—There is no state religion; the great majority of the inhabitants are Lutherans, but the royal family is of the Roman Catholic faith, and both religions are placed on an equal footing.

Education.—Saxony holds a very high rank with regard to the number and the excellence of its institutions for education. The lower classes are generally able to read and write. The number of printing-offices and booksellers greatly exceeds that in any other country of equal extent. In addition to the particulars on this score given under DRESDEN and LEIPZIG, we here mention the chief educational institutions of the kingdom:—University of Leipzig, 1; high schools at Grimma and Meissen, 2; gymnasia, 11; seminaries for schoolmasters, 4; mining academy, 1; institution for teaching the management of forests, 1; military schools, 2; deaf and dumb school, 1; agricultural school, 1; Academy of Arts at Dresden, 1; besides free schools for the poor in all the principal towns.

Revenue.—The revenue arising from the public estates, the regalia, and direct and indirect taxes for each of the three years of the financial period, 1852-1854, was estimated at 8,281,728 thalers, and the expenditure at the same amount. The public debt at the end of 1853 amounted to 42,781,528 thalers. The military establishment numbers about 26,500 men and officers, the greater part generally absent on furlough, except at the time of the annual exercises.

The constitution is a monarchy, with a representation divided into two chambers, without the consent of which no law can pass. The executive power is in the king and a responsible ministry. Some attempts were made to compel the king in 1849 to receive the constitution drawn up by the Frankfurt assembly. This the king refused, and the republicans of Dresden broke out into insurrection (May 3), which was crushed with the assistance of Prussia. [DRESDEN.] The crown is hereditary in the male line of the Albertine house of Saxony. Saxony is a member of the German Confederation, and as such furnishes a contingent of 12,000 men and a contribution of between 4000 and 5000 florins. It has the fourth place in the German Diet, between Bavaria and Hanover, and has four votes in the full council.

Divisions of the Kingdom.—The kingdom is divided into four provinces or circles, the area and population of which are as follows:—

Circles.	Area in Square Miles.	Population in 1852.
Dresden	1,607	507,705
Leipzig	1,336	446,826
Zwickau	1,782	735,557
Bautzen	967	297,744
Total	5,752	1,987,832

No country in Europe is more densely populated. On an average there are 345½ inhabitants to an English square mile, and in some parts of the country there are nearly 500 to the square mile. The principal towns are described under DRESDEN, LEIPZIG, LAUSITZ, CHEMNITZ, FREIBERG, PLAUEN, ZITTAU, BAUTZEN, MEISSEN, SCHNEEBERG, ANNABERG, PIRNA, &c.

SCAER. [FINISTÈRE.]

SCAMANDER. [TROY.]

SCANDERON, or ISKENDEROON, or ALEXANDRETTA, a sea-port town in the north of Syria, on the east shore of the Gulf of Scanderoon. It was founded by Alexander the Great, and called Alexandria ad Isum. It is a very unhealthy place during the summer months, being surrounded on three sides by large marshes, which cause intermittent fevers. One of the marshes has been recently drained, and the place is consequently less unhealthy than formerly; but still during summer the harbour is deserted for Latakia, a less convenient port considerably to the southward. It owes its importance to its being the seaport of Aleppo and of all northern Syria. Goods are conveyed to and from Aleppo by caravans of camels. The imports are corn, rice, salt, sugar, coffee, dye-stuffs, spices, and European manufactures; the exports consist chiefly of gall-nuts, silk, cotton, drugs, &c.

SCANDINAVIA, the ancient name of the large peninsula which forms the north-western portion of the continent of Europe, and comprehends the present Norway and Sweden. The small sovereignties which existed in this peninsula when it first began to be noticed in history (Pliny, 'Nat. Hist.' iv. 13), became united into the two monarchies of Sweden and Norway in the 12th and 13th centuries. When Denmark had acquired a more regular government, the famous Margaret, queen of Denmark, succeeded in uniting the crowns of Denmark, Sweden, and Norway in her own person. Norway was acquired by inheritance, and Sweden by conquest. By the union of Calmar (1397) these countries were never to be disjoined. Norway indeed remained united with Denmark up to 1814, but Sweden, was

separated from it in the middle of the 15th century. From that time the two countries of Scandinavia constituted separate states, until the year 1814, when Denmark was obliged to cede Norway to Sweden, and Norway submitted to the new order of things. Since that time the whole peninsula has been under the same king, but the two countries of Norway and Sweden have preserved their constitutions, which differ in every respect. [NORWAY; SWEDEN.]

SCANIA. [SWEDEN.]

SCARBOROUGH, North Riding of Yorkshire, a market-town and sea-port, a municipal and parliamentary borough, and the seat of a Poor-Law Union, is situated on the shore of the German Ocean, in 54° 17' N. lat., 0° 22' W. long., distant 40 miles N.E. from York, 217 miles N. from London by road, and 253½ miles by the Great Northern and York and North-Midland railways. The borough is governed by 6 aldermen and 18 councillors, one of whom is mayor, and returns two members to the Imperial Parliament. The population of the borough in 1851 was 12,915. The livings are in the archdeaconry of the East Riding and the diocese of York. Scarborough Poor-Law Union comprises 33 parishes, with an area of 81,460 acres, and a population in 1851 of 24,615.

From its name, which signifies a fortified rock, the town appears to have been of Saxon origin, and there is reason to suppose that it was also a Roman settlement. It was incorporated by Henry II. The town was in ancient times defended by strong walls, a moat, and earthen mounds. The castle, which before the application of artillery must have been impregnable, was built in the reign of Stephen. Here Piers de Gaveston, the favourite of Edward I., sought refuge from the exasperated barons, but was obliged to surrender for want of supplies, and was beheaded. During the civil wars the castle underwent two sieges by the parliamentary forces, the first of which lasted twelve months. It was afterwards dismantled by order of the Parliament; but on the breaking out of the rebellion in 1745 received a temporary repair. Barracks for 120 soldiers, and three batteries to protect the town and harbour, have since been erected.

The town is situated in a semicircular bay open towards the south and south-east, and protected towards the north and north-east by a high and steep promontory, with the old castle on its summit. It has risen gradually from the sands up the acclivity in successive tiers of streets; the upper and more modern part of the town being well built and handsome, and the streets wide and well paved. It is lighted with gas, and is supplied with water from a recently-constructed reservoir, capable of containing a million of gallons. St. Mary's church forms part of a much larger edifice, of which portions of a crypt and other remains appear in the churchyard. Christ church is of modern gothic architecture, with a tower and pinnacles. There are a neat chapel of ease, and chapels for Independents, Wesleyan, Primitive, and Association Methodists, Baptists, Christian Brethren, Quakers, and Roman Catholics. There are a Grammar school (which had 80 scholars in 1854), a Lancasterian school, National schools, a school of Industry, Denison's Charity schools, the Amicable Society's school for clothing and educating from 70 to 80 boys and girls, two infant schools, and a Roman Catholic school. The town possesses two public libraries, a mechanics institute, and a philosophical society, with a museum illustrative of the geology and natural history of the North Riding. The Oddfellows' Hall is a handsome structure of recent erection. Trinity House Hospital, the Merchant Seamen's Hospital, and Wilson's Marine Asylum are spacious and ornamental buildings; besides which there are Sedman's, Taylor's, and St. Thomas's hospitals, the Spinners' Asylum, and the Sea-Bathing Infirmary, supported by subscription, for the benefit of poor invalids. The other public buildings are the town-hall, an assembly-room, theatre, and custom-house, the borough jail, and the Union workhouse. One of the most remarkable objects at Scarborough is the Cliff Bridge, erected upon piers 75 feet high, over a chasm 400 feet wide, which separates the town from the Spa, between which places the bridge now forms a delightful promenade.

The town owes its prosperity to its mineral baths, and its advantageous position for sea-bathing. It has a beach of smooth sand, sloping gently to the sea, and the water, free from the influence of any large river, is of the greatest purity and strength. There are several excellent baths, and complete accommodation for marine bathing. The two mineral springs are on the margin of the sea, beneath the cliff, and are protected by a massive sea-wall, on which a spacious castellated saloon is erected; and there are various walks and ornamental grounds. The springs comprise carbonate and sulphate of lime, magnesia, and oxide of iron; they have a cooling and tranquillising influence, and are found beneficial in stomach complaints.

Scarborough Harbour is narrow at the entrance, but is easy of access, and commodious within. It has two piers, each 1200 feet long; at the end of one of the piers is a lighthouse. Scarborough is a bonding port, and has large bonding warehouses. It has a considerable foreign trade, principally with the Baltic, Holland, and Portugal: the imports being timber deals, hemp, flax, iron, brandy, and wine. There is an active coasting trade in coal, corn, butter, bacon, and salt-fish. Nearly 200 boats are employed here in the herring fishery in the season. Ship-building is carried on. Cordage and sail-cloth are manufactured. There are several coal-mines in the neighbourhood.

The ships registered as belonging to the port on December 31st 1853 were—Under 50 tons 62, tonnage 1767; above 50 tons 134, tonnage 32,079. During the year 1853 there entered at the port 274 sailing-vessels of 16,705 tons; and there cleared 27 sailing-vessels of 1657 tons, and 2 steam-vessels of 37 tons aggregate burden. A county court and quarter sessions are held in the town, and weekly petty sessions for the borough and the North Riding. Thursday is the market-day. Fairs, principally for cattle, are held on Holy Thursday and on Old Martinmas Day. The castle-hill, with an area of 19 acres, is more than 300 feet above the level of the sea, and terminates on three sides in a perpendicular rock, the fourth side towards the town being a steep rocky slope. The approach is defended by a wall, with a deep fosse. The keep of the castle is a square tower, nearly 100 feet high, with walls 12 feet thick.

SCARIFF, or SCARRIFF, County Clare, Ireland, a market-town and the seat of a Poor-Law Union, is situated on the river Scariff, about a mile from its entrance into Lough Derg, and on the road from Killaloe to Galway, in 52° 54' N. lat., 8° 32' W. long., 24 miles E. by N. from Ennis, and 120 miles W.S.W. from Dublin by road. The population in 1851 was 954. Scariff Poor-Law Union comprises 17 electoral divisions, with an area of 86,320 acres, and a population in 1851 of 21,947. The town consists of one street, which occupies the sloping bank of the river. It contains a Roman Catholic chapel. Petty sessions are held monthly in the town. There are 11 yearly fairs.

SCARPANTO, the ancient *Carpathus*, an island in the Mediterranean, about 30 miles long and 5 miles broad, lies between Rhodes and Crete. This island consists for the most part of bare and lofty mountains scored by hollows and ravines. The highest point, Mount Lartos, near the centre of the island, is 4000 feet high. The mountains contain iron and marble. It is mentioned by Homer (*Il.* ii. 676) under the name of *Kopwatos*, and is spoken of by Pliny (v. 36) as one of the Rhodian Islands. Strabo (x. 489, Casaub.) describes it as lofty, and 200 stadia in circumference; and says that it contained four towns, one of which was called *Nisyru*. The sea between Rhodes and Crete was called the Carpathian Sea, from the name of the island.

SCARPE, RIVER. [BELGIUM.]

SCHAFFHAUSEN, one of the Swiss cantons, is bounded N., E., and W. by the grand-duchy of Baden, and S. by the cantons of Thurgau and Zürich, from which it is separated by the Rhine. It is one of the smallest cantons of Switzerland. The area is only 115 square miles; and the population, by the census of 1850, was 35,300, of whom 1362 were foreigners and 21 vagrants, and all professed some form of Protestantism, except 1411, who were Catholics, and 9 Jews. The language of the country is a dialect of the German. The surface of the canton is hilly, and the soil is mostly calcareous. The general slope of the valleys is southward towards the Rhine, which drains the whole country. Agriculture constitutes the chief occupation of the people; the country produces corn, wine, flax, hemp, and fruits, especially cherries. The climate is mild, compared with other parts of Switzerland. The manufactures consist of leather, steel, cotton-spinning, and distilling of kirschwasser. The canton has iron-mines; most of the ore is smelted in the furnaces of Laufen, near the fall of the Rhine.

The canton is divided into six districts—Schaffhausen, Stein, Thayngen, Neunkirch, Unterhallau, and Schleithelm. The only towns of the canton are Schaffhausen, Stein, and Neunkirch, but there are many villages and hamlets. The government, since 1831, is democratic. All citizens of the canton who are 20 years of age are electors. Paupers, bankrupts, and criminals are deprived of the franchise. Foreigners who purchase the bourgeoisie, or freedom of one of the communes of the canton, become entitled to the elective franchise after five years. The Great Council consists of 78 members. The Little Council, or executive, consists of nine members chosen by the great council: the members must be at least 30 years of age. The president of the little council is styled burgomaster. Both the great and little council are renewed every four years. The revenues of the canton are derived from an income tax, a house tax, patents, cantonal forests, &c. There were 6222 land- and house-holders in the canton in 1850.

The chief town, *Schaffhausen*, is built on the side of a hill sloping to the bank of the Rhine, and about 1200 feet above the sea. The summit of the hill is crowned with a feudal castle in perfect preservation. It is surrounded by walls flanked with towers, and has a fort, the vaults of which are bomb-proof. The streets are irregular, and most of the houses are old-looking, but many are modern and handsome. The most remarkable buildings are the cathedral, the church of St. John, the town-house, and the arsenal. Schaffhausen has a college, a public library, a gymnasium, several elementary schools, an orphan asylum, and a savings bank. The population is about 7700. The Rhine is crossed by a common wooden bridge. Steamers ply between Schaffhausen and Constanz. Schaffhausen ('skiff-houses') was originally a hamlet of boatmen, and a place for unloading the goods which came down from the Lake of Constanz, the boats being obliged to stop here on account of the falls in the river below the town. In the 11th century, a large monastery being built in the neighbourhood, a town afterwards grew around it, which in the 13th century was walled, and obtained the rank of an imperial town. In

1330 it came into the possession of the house of Austria, but in the 15th century it recovered its independence, and allied itself to the Swiss cantons; in 1501 it was received as a member of the Confederation. *Stewa*, situated at the outlet of the Rhine from the Untersee, or Lower Lake of Constance, has a handsome bridge over the Rhine, about 1800 inhabitants, and some remarkable old buildings. It carries on a considerable trade in wine. *Neunkirch* is a small walled town with 1200 inhabitants, 5 miles W. from Schaffhausen.

SCHECHEM. [PALESTINE.]

SCHELDE. [BELGIUM.]

SCHELESTADT. [RHIN, BAS.]

SCHEMNITZ. [HUNGARY.]

SCHENECTADY. [NEW YORK, State of.]

SCHVENINGEN. [HOLLAND.]

SCHIEDAM. [HOLLAND.]

SCHIERMONICOOG. [FRIESLAND.]

SCHLACKENWALD. [EGER.]

SCHLESWIG (*Sleswig*), sometimes called South Jutland, is a duchy belonging to Denmark, situated between 54° 20' and 55° 20' N. lat., 8° 40' and 10° 5' E. long. It is bounded N. by Jutland, E. by the Little Belt, S. by Holstein, from which it is divided by the river Eider and the Kiel Canal, and W. by the German Ocean. The population in 1850 numbered 363,000. The area is 3534 square miles. It is in general a level country. A range of low hills enters it from Holstein, and, traversing it from south to north, passes into Jutland. The length, from north to south, is about 70 miles, and the breadth, from east to west, varies from 30 to 56 miles, not including the islands on the east and west coasts. On the west coast there are low and rich marsh lands, which are protected by dykes, 20 feet high, against the spring tides, which often rise to the height of 13 feet. As the sea in many places deposits alluvium, new dykes are erected from time to time, to secure these additions. The principal rivers are the Eider, the Widau, and the Aue. The east coast is not so low as the west coast, but is equally fertile. The climate is on the whole temperate and healthy, but damper and less salubrious on the west than on the east coast. The country produces corn, pulse, flax, hemp, rape-seed, hay, clover, garden vegetables, and potatoes. The breeds of horned cattle and horses are excellent. The country exports annually corn, great numbers of oxen and horses, and large quantities of butter and cheese. Fish too are an important article of exportation. Wood is scarce, both for building and fuel. There are limestone, chalk, slate, and turf, but no metallic minerals. The chief occupations of the inhabitants are agriculture, the breeding of cattle, and the fisheries. There are no manufactories except in the large towns, and these are of little importance. The most considerable are those of lace and stockings, in Tondern, Hüsum, Friederichstadt, and some other places. The inhabitants, who profess the Lutheran religion, are partly of German, partly of Danish, and partly of Frisian descent. According to the 'Royal Almanac' of 1854, 29,000 of the inhabitants speak Frisian; 122,000 Danish; 125,000 Low German; 36,000 a dialect half Danish half German; and 51,000, who though they ordinarily speak Danish, have adopted German as the language of the schools and churches.

The islands on the east coast are Arröe, ALSEN, FÖHR, and Femern. *Arröe* lies off the eastern coast, due south of the island of Funen, and at the south entrance to the Little Belt. It has an area of 32 square miles, and a population of about 7000. Its level surface is broken only by a lake, called *Wilt-see*. The soil is very fertile; but there are no trees on the island. *Arroekiöping*, on the eastern side of the island is the capital; it has a convenient harbour, formed by the opposite shore of the island of Deyerbe, with which Arröe is united by a bridge. The population of Arroekiöping is only about 1500. *Marstall*, a market-village, and fishing station, on the west coast, has also about 1500 inhabitants. *Femern* is separated from the north-east point of Holstein by a narrow channel, the Femersund; it is about 16 miles long and 12 miles broad, the area 63 square miles, and the population 9000. This island produces abundance of wheat, barley, and peas. The inhabitants manufacture large quantities of barley-groats and peeled barley for exportation; they likewise export annually 20,000 pairs of worsted stockings to Mecklenburg. The fisheries are very productive. There is a lighthouse, 100 feet high, on the island. The chief town is *Burg*, or *Borg*, which has 1700 inhabitants. On the west coast are *Römbe*, or *Röm*, 7 miles long by 3 miles wide; *Sylt*, 20 miles long, 15 miles broad, has 4000 inhabitants; most of the men are sailors and fishermen; the business of agriculture is chiefly performed by the women, who also manufacture worsted stockings. *Nordstrand* was a large island, which was visited by a dreadful inundation, October 11, 1634, when 6408 persons and 50,000 head of cattle perished, and the island was broken into fragments, of which only two, Nordstrand and Pellworm, have been secured by dykes. These islands are the resort of seals and water-fowl. Many thousands of these water-fowl are annually taken, boiled in vinegar, and packed in barrels for exportation. Between these larger islands there are many small ones, without dykes, the construction of which would be too expensive. They are inhabited by descendants of the Frislanders, who, during the inundations, have their abode on the Tumuli called Warfen, which were thrown up in remote ages, and on which the churches are built.

Sleswig, the chief town of the duchy, is situated in 54° 30' N. lat., 9° 35' E. long., in a pleasant country at the mouth of the river Sley, which forms a small shallow bay (Slie Fiord) obstructed by sandbanks. It is a long irregularly built town; the houses are mostly of brick, and resemble in neatness those of a Dutch town. The principal public buildings are the churches, of which the cathedral deserves notice on account of a carved wooden screen before the altar; the town-house, the orphan asylum, the poor-house, and the nunnery of St. John. Among the numerous public institutions are a cathedral school, and a deaf and dumb asylum. The population is about 12,000. There are manufactures of china, earthenware, lace, cambrics, thread, leather, sailcloth, woollens, starch, and refined sugar. On an island in the bay is the castle of Gottorp, formerly the residence of the dukes of Schleswig-Holstein. A little south of the town are remains of the famous fortified Danish wall, erected in the 9th century. The Sley has been rendered navigable, and the navigation by means of small vessels of 200 tons and under is considerable.

Besides APENRADE and FLENSBURG the following are the most considerable towns in the duchy:—*Eckernförde*, with 3500 inhabitants, has a good harbour on the east coast, and trades in corn. *Friedrichstadt*, on the Eider, a well-built town, founded by Dutch settlers, has 3000 inhabitants, who have manufactures of silk, cotton, hosiery, starch, and lackered wares. *Hüsum*, on the west coast, with 4500 inhabitants, has a grammar-school, distilleries of spirits from potatoes, breweries, manufactures of leather and tobacco, and a considerable trade in corn and cattle. *Tondern*, or *Tundern*, on the river Widau, has 3600 inhabitants. It has a good port, with trade in corn and cattle, an oyster-fishery, and manufactures of cotton and lace. *Tönning*, a seaport and trading town at the mouth of the Eider, has 2200 inhabitants.

The railway from Altona to Rendsborg is continued to Schleswig and Flensburg, whence a line through Hüsum runs to Tönning at the mouth of the Eider. From Hüsum a branch line runs direct to Rendsborg.

SCHLEUSINGEN. [ERFURT.]

SCHLUSSELBURG. [PETERSBURG, Government of.]

SCHMALKALDEN. [FULDA.]

SCHNEEBERG is a mining town in the circle of Zwickau, in the kingdom of Saxony, situated in 50° 38' N. lat., 12° 35' E. long., on a mountain called the Schneeberg, about a league from the western Mulde, from which there is a canal, on which timber is floated to Schneeberg. The town is said to have been built in 1471, when some new and very rich veins were discovered in the silver-mines that had been worked for a long period. On the partial exhaustion of the silver-mines, the attention of the people was devoted to cobalt and the manufacture of smalt. At present cobalt and silver are the chief products of these mines. Bismuth, lead, tin, and iron are likewise found in the neighbourhood. Schneeberg is a very well built town; the principal church, the handsomest in the province, and the largest in Saxony, is adorned with paintings by Lucas Kranach. Among the public institutions are a gymnasium, several schools, an orphan asylum, and an hospital. The inhabitants, about 8000 in number, manufacture bone-lace, blond, gold and silver lace, morocco paper, and lackered wares. There are also manufactures of chemicals, and beer breweries. Schneeberg is the seat of a mining-court, and the depository of the produce of the royal smalt-works at Oberschlema.

SCHÖNEBECK. [MAGDEBURG.]

SCHONEN. [SWEDEN.]

SCHOONHOVEN. [HOLLAND.]

SCHORNDORF. [JAXT.]

SCHWABACH, a thriving manufacturing town of Bavaria, in the circle of Middle Franconia, is built on the banks of the Schwabach, a feeder of the Regnitz. It is a well built town surrounded with walls, with four gates, and has one French Protestant and two Lutheran churches, two chapels, a synagogue, an hospital, a lunatic asylum, a house of correction, and a poorhouse. There are manufactures of cotton and of needles. The latter produces every week 4,000,000 common needles, 100,000 English darned, packing, and other needles, and employs about 500 workmen. There are also manufactures of gold and silver lace, plate, stockings, tobacco, paper, hats, sealing-wax, soap, and beer. The number of inhabitants is about 8000. The confession of faith of his party, drawn up by Luther for the German reformers at Schwabach, in October, 1529, is called the Schwabach Articles. The south German reformers refused to subscribe to them, on account of the strongly expressed opinion of the real presence in the Lord's Supper. These articles, which were adopted by the confederates at Schmalkalden, were a chief obstacle to the union of the parties of Luther and Zwingli.

SCHWARZBURG is a German principality consisting of two considerable portions detached from each other, of which the southernmost is called the Upper County (Ober-herrschaft), and the northernmost the Lower County (Unter-herrschaft). The Upper County (which has an area of 423 square miles) lies on the north side of the Thüringer-Wald, between 50° 34' and 50° 55' N. lat., 10° 50' and 11° 20' E. long. It is bounded by the Prussian territory and the Saxon duchies, and is traversed by the rivers Gera, Saale, Ilm, and Schwarza. The Lower County (area 274 square miles) lies between 51° 13' and 51° 25' N. lat., 10° 30' and 10° 17' E. long. It is almost surrounded by the Prussian

territories. It is watered by the rivers Wipper and Helbe. The total area of the two counties is 697 square miles, and the total population at the end of 1852 amounted to 129,885. The surface of the country is diversified with mountains, valleys, and plains, and is on the whole fertile. The Lower County is however more productive than the Upper, which is traversed by a part of the Thüringer-Wald. In the Lower County is the Kyffhäuser, 1458 feet high, and the Hainleite, a wooded mountain chain which begins at the river Unstrutt and extends 8 leagues to the west. The natural productions are corn, fruit, potatoes, flax, and pulse. The forests furnish timber for every purpose, and abound in game. The mineral productions are silver, copper, iron, lead, vitriol, sulphur, alum, saltpetre, salt, marble, alabaster, freestone, slate, potters'-clay, porcelain-clay, and lime. Oxen and swine are numerous; the breed of sheep has been much improved.

The family of the princes of Schwarzburg is very ancient, and is mentioned in the earliest period of the middle ages. It is now divided into two branches, Rudolstadt and Sondershausen, between which the two counties are thus divided:—

	Square miles.	Population in 1852.
Rudolstadt in { Upper County	285	54,228
{ Lower County	85	14,810
Total	370	69,038
Sondershausen in { Upper County	138	26,385
{ Lower County	189	34,462
Total	327	60,847

Schwarzburg-Rudolstadt had a revenue of 720,698 florins in 1854. The portion of the Upper County possessed by the prince is called the lordship of *Rudolstadt*, from its capital, a well-built town in a valley on the Saale. Within the walls is Ludwigsburg, the prince's palace, which contains some considerable scientific collections. There are in Rudolstadt two churches, a gymnasium, a theological seminary, and about 5000 inhabitants. In the Lower County the prince of Rudolstadt possesses the lordship of *Frankenhausen*, so named from its capital, which is situated on an arm of the Wipper, has two churches within the walls and two without, a palace, a Latin school, and 4700 inhabitants.

Schwarzburg-Sondershausen has a revenue of 501,000 thalers. The distinctive title of this branch is taken from the lordship of *Sondershausen*, which comprises the prince's portion of the Lower County, and is named from its chief town, which is situated in a pleasant valley on the Wipper. The palace, situated on an eminence, contains a good cabinet of natural history. The town has a theatre, a gymnasium, an orphan asylum, an hospital, and other public institutions. The population is 4000. In the Upper County the prince has the lordship of *Arnstadt*. This town has also a palace, a gymnasium, four churches, two hospitals, and 5000 inhabitants, who have some trade in timber and corn, and considerable breweries.

Both these little states have their courts and their ministries; and Austria, Prussia, and Switzerland have accredited envoys to Rudolstadt. They belong to the German Confederation; and have, with Oldenburg and Anhalt, the fifteenth place in the select council, and in the full council one vote each. The contingent of Sondershausen to the federal army is 451 men, and that of Rudolstadt 539 men. Rudolstadt has had ever since 1816 a representative constitution with an assembly of states, consisting of 18 deputies.

SCHWARZENBERG is a lordship in Middle Franconia, in the kingdom of Bavaria, from which the princes of Schwarzberg take their title. This illustrious family is one of the most ancient of the noble houses of Franconia. By an imperial diploma of December 8, 1740, the princely dignity was extended to all the male and female descendants of the family. The present possessions of the family in Bavaria, including the county or principality of Schwarzberg, are 130 square miles, with 10,000 inhabitants; in Bohemia 1655 square miles, with a population of 230,412; and in Styria 413 square miles, with a population of 16,113. All these possessions belong to the elder branch of the family. The second branch has also extensive possessions in Bohemia and in Hungary: in the latter country its estates extend over 440 square miles, with a population of 65,000.

SCHWARZWALD. [BADEN; WÜRTENBURG.]

SCHWATZ. [TROL.]

SCHWEDT. [BRANDENBURG.]

SCHWEIDNITZ, a fortified town of Prussian Silesia, is situated in 50° 47' N. lat., 16° 30' E. long., on the left bank of the Weistritz, in one of the most beautiful parts of Silesia, 35 miles by railway S.W. from Breslau, and has about 13,000 inhabitants, including the garrison. It sustained several sieges during the Thirty Years' War; was taken in 1757 by the Austrians, in 1759 by the Prussians, in 1781 by the Austrians. The Prussians afterwards recovered the town and held it till February 1807, when it was taken after a month's siege by the French, who blew up the greater part of its defences. Among the public buildings are two Roman Catholic churches, one of which has a spire 327 feet high; two Lutheran churches, a convent of Ursuline nuns,

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large barracks, an hospital, a poor-house (which was formerly a castle), and an orphan asylum. The town has a Protestant gymnasium, and manufactures of woollens, linen, leather, starch, gloves, hats, silk, ribands, paper, beer, spirits, and vinegar. The corn, cattle, and wool are much frequented. Not far from the town are copper-works.

SCHWEITZ. [SWITZERLAND.]

SCHWERIN. [MECKLENBURG.]

SCHWYZ, a Swiss canton, which has given its name to all Switzerland. It is the wealthiest and most populous of the forest cantons (Schwyz, Uri, and Unterwalden), which were the first to assert their independence in January 1308, and to form a confederacy, which repulsed the force of the house of Austria at Morgarten; the men of those cantons became known by the name of Schwyzern, or Schweizer, which name continued to be applied to the Confederation in general after it was enlarged by the successive junction of other cantons; and lastly, the whole country formerly known in the Roman times by the name of Helvetia has been called Schweiz, or Schweizerland. [SWITZERLAND.]

The canton of Schwyz lies on the west side of the high Alps of Glarus, of which the Glärnisch, 9000 feet high, is the loftiest summit. It consists of several long valleys between lower offsets of the Alps, the summits of which are from 4000 to 6000 feet high, and of a plateau or table-land in the centre of the canton. The principal valleys are the Wäggi Thal in the north, the Sihl Thal in the middle, and the Muota Thal in the south. The waters of the northern part of the canton of Schwyz run in a north direction into the Lake of Zürich; those of the central part flow north-west by the river Sihl into the Limmat; and those of the southern part run southward into the Lake of Luzern. Besides bordering on those two lakes, the canton embraces within its territory the southern part of the Lake of Zug, and it also entirely incloses the small Lake of Lowerz, which is about two miles long and one mile wide, and the waters of which have an outlet southward into the Lake of Luzern. North-west of the Lake of Lowerz, and between it and the Lake of Zug, is the valley of Goldau, between Mount Rigi and the Rossberg. On the 2nd of September 1806 an enormous fragment of the Rossberg detached itself from the mountain, and rolled down into the valley, which still exhibits marks of this catastrophe.

The canton of Schwyz is bounded E. by Glarus; N.E. by St. Gall, from which it is separated by the river Linth; N. by the Lake of Zürich; W. by Zug, from which it is separated by the ridge of Morgarten and by the Rossberg; S.W. by Luzern, the group of the Rigi lying on the borders of the two cantons; and S., partly by the Waldstätter Lake, or Lake of Luzern, which separates it from Unterwalden, and partly by the canton of Uri, an offset of the Alps called the Rosstock, from 6000 to 7000 feet high, forming the boundary. Its area is 338 square miles. The population numbers 44,168, all Catholics but 155, who are Calvinists, and all native Swiss except 198. None of the mountains of Schwyz are covered with perpetual snow, the cold is therefore not so severe as in the other Alpine valleys, and cattle, which number about 20,000, are able to feed in summer as far as the summits. There are also a few sheep, and large herds of swine and flocks of goats. In the district of Einsiedeln the breeding of horses is attended to. A considerable quantity of cheese and butter is made. Corn is only partially cultivated; potatoes are a common article of food; flax and hemp are produced in several districts; artificial grass is sown in some places. There are vineyards near the borders of the Lake of Zürich, but cider is the common drink of the people. Kirschwasser is distilled. The forests form a considerable source of wealth. The canton exports butter, cheese, timber, firewood, cattle, horses, sheep, and pigs. It imports corn, wine, brandy, salt, coffee, sugar, and manufactures of various sorts. The manufactures of the canton consist chiefly of linens, potash, soap, walnut-oil, wax-candles, tobacco, and gunpowder. There are also some breweries, and many saw-mills and lime- and brick-kilns.

The people of Schwyz are remarkable for their square athletic forms and muscular strength. Most of the houses are built of wood, covered with tiles, and warmed by stoves. The total number of land- and house-owners in the canton, at the census of March 1850, amounted to 5994. There are elementary schools in the various communes. There is a college or gymnasium in the town of Schwyz, and a clerical seminary at Einsiedeln. There is also at Einsiedeln a deaf and dumb school. The language of the people is Swiss-German.

Schwyz, the capital of the canton, is situated at the junction of the valley of Muota with two other valleys, not quite 3 miles distant from the Waldstätter Lake. The curiously-shaped mountain called Mythen, nearly 6000 feet high, rises immediately north-east of the town, and seems to threaten to overwhelm it by its fall. The country around Schwyz is beautiful and very fertile, and the scenery is splendid. Schwyz is an open town: it has two good streets, a large square, a church dedicated to St. Martin (which is one of the finest in Switzerland), two or three convents, a college, a town-house, an hospital, a library which is rich in works relative to the history of the country, a cabinet of medals, and 2414 inhabitants. In the burying-ground annexed to the parish church is the monument of Aloys Reding, who fought bravely for the independence of his country against the French in 1798-99. The parish church contains the rich banner given by Pope

Julius II. to the Swiss troops which he had taken into his pay in the war of the Holy League.

Einsiedeln, situated about 10 miles N. from Schwyz, is a thriving place, with a good paved street, numerous shops, inns, and 2397 inhabitants. The Benedictine abbey of Einsiedeln was founded in the 10th century; it stands outside of the town, is a square building three stories high, and 476 feet long and 414 feet wide, with spacious gardens and numerous offices and outhouses. The church has several fine altars. The library of the monastery contains 26,000 volumes.

Gersau, a small town on the shore of the Waldstätter-See, was formerly a distinct republic, the smallest in Europe, with a population of about 1300, but it is now united to the canton of Schwyz. It manufactures silks, leather, and potash.

Lachen, the head town of the district of the March, on the south shore of the Lake of Zürich, 18 miles N.E. from Schwyz, has a handsome church, a town-house, some iron-forges, several mills, and about 1500 inhabitants. *Arth*, a pretty little town at the south extremity of the Lake of Zug, has a good parish church, a library in the Capuchin convent, and about 1300 inhabitants.

The cantonal government is democratic. All citizens who have completed their 18th year, and who are neither bankrupts nor under a sentence of degradation, are members of the Landgemeinde, or General Assembly, which meets in the valley of Rothenthurm, in the month of May, every other year, or oftener if required. The landgemeinde appoints the landamman, or president of the canton, the statthalter, or lieutenant, and the treasurer; it sanctions or rejects the projects of law or bills which are laid before it by the great council, and examines the financial accounts of the canton. The votes are taken by show of hands, and a simple majority decides. The Great Council consists of 108 members, who are elected by the various districts in proportion to their respective population for the term of six years. The Cantonal Council consists of 36 members, including those of the executive commission. It meets four times a year under the presidency of the landamman. The Cantonal Tribunal, or Supreme Court of Justice, consists of 14 members, besides supplementary ones, named by the various districts for the term of six years. In every district there are district councils, with their respective landamman, statthalter, treasurer, and other officers for the district, besides district tribunals. Every citizen from 19 to 50 years of age belongs to the militia. Every commune has a society of riflemen, and meetings for firing at the target. The canton returns two members to the National Council or Diet of Switzerland. [SWITZERLAND.]

SCIGLIANO. [CALABRIA.]

SCILLY ISLANDS, a group of islands about 30 miles W. by S. from the Land's End in Cornwall, lying between 49° 51' and 50° N. lat., 6° 11' and 6° 30' W. long. The aggregate area is 8560 acres. The population in 1851 was 2627. The group forms one parish, in the archdeaconry of Cornwall and diocese of Exeter.

The ancient condition of these islands has been the subject of much discussion. That at some remote period, antecedent to authentic history, they may have been united to the main, and have been separated from it by the incroachment of the sea, is not improbable. The space between them and the mainland is occupied by softer rocks, if we may judge from an insulated limestone rock, called the 'Wolf,' and hard as they are, they are themselves diminishing in size. At present there are more than 140 islands, but only six of them are inhabited. These are—St. Mary's, on the east side of the group; Treseo, north-west; St. Martin's, north-east; St. Agnes, south; Bryher, north-west; and Sampson, west.

The islands form a compact group, of about 30 miles in circumference, surrounded by a deep sea, from which they rise for the most part abruptly, with rugged sides. Between the islands the depth of the sea is much less; and in several parts extensive flats, some of them dry at low water, extend from island to island. The islands and rocks consist almost entirely of granite, but there are in St. Mary's Island some beds of porphyry and some of chlorite containing pyrites. Detached stones of gypsum and alabaster are found in Treseo, St. Martin's, and St. Mary's. The granite is very liable to decomposition, and presents some interesting geological phenomena. The shores are covered in some parts by a coarse sand, the detritus of granite, occasionally agglutinated into a kind of sandstone; in other parts by a fine shining white sand. The climate is milder and more equable than that of Cornwall, but the islands are subject to dense fogs and to sudden and violent storms. Few days of perfect calm occur in the course of the year, and during the greater part of it the wind blows from various points between north-west and south-west.

St. Mary's, population 1668 in 1851, is the most important island. It consists of two portions, the smaller of which, called 'the Hugh,' is united to the other part by a low, sandy isthmus, on which stands *Hugh Town*, the capital of the group. The shore is generally steep, and there are some small inlets or coves, besides St. Mary's Pool, on the north side, and Port Cressa on the south side of the isthmus of Hugh Town. The island is about 8 miles in circumference. The soil is generally good, and produces excellent crops of corn and potatoes. Hugh Town consists of a principal street, very crooked, and of several lanes, alleys, and courts. A handsome church in the gothic style, with a tower, was completed in 1838, at a cost of 1500*l.* The

Wesleyan Methodists have a place of worship. Most kinds of handicraft are exercised in the island. A pier 430 feet long and 20 feet broad, extends into St. Mary's Pool. A small building, called the court-house, is used by the council appointed by the proprietor of the islands; beneath it are a small prison and a butcher's stall, which receives the name of the market-house. The other principal buildings are the steward's house and the post-office. About a mile from Hugh Town, eastward, is the hamlet of Old Town, once the principal place in the island, and still containing about 200 inhabitants, chiefly fishermen. Small cottages are dispersed over the island, occasionally grouped three or four together; one little group is called London, another Bristol. The old church, with the graveyard, is near Old Town. The Hugh is a steep hill rising about 110 feet above the level of the sea; it is fortified by lines having a circuit of more than a mile, with 18 bastions or batteries, and inclosing a small fort and barracks for the officers and troops. There are two schools, supported by the Christian Knowledge Society, and another school with a small endowment.

Treseo, population 416 in 1851, the island next in importance, is inhabited chiefly by pilots and fishermen. Most of the houses are on the north-east side, near the beach, opposite a harbour called Old Grinsey harbour, and form a village called Dolphin Town. In the south part of the island is a fine sheet of fresh water, half a mile long and a furlong broad. Near this lake are the remains of a religious house. The Abbey, a mansion recently erected by Augustus Smith, Esq., the lessee of the islands, stands also near the lake. Treseo has a small church, a Wesleyan meeting-house, a mission-house of the Society for the Promotion of Christian Knowledge, and a small unoccupied fort or block-house. There are a stone tower called Oliver's Castle, now deserted, and the ruins of a fortress called King Charles's Castle. On the north side of the island is a remarkable subterranean passage called Piper's Hole. The Society for the Promotion of Christian Knowledge supports here a clergyman and a day-school.

St. Martin's, population 211 in 1851, is about 6 miles in circumference. It is chiefly inhabited by pilots and fishermen. The houses form three groups: Higher Town, on a hill rising from a bay on the south shore; Middle Town, in the centre of the island; and Lower Town, near the south-west point of the island. *Higher Town* consists of nearly 50 small houses, built of stone and thatched, with a small church. About the middle of the 17th century, the island was uninhabited; but there are indications that at an earlier period it was fully peopled. The soil is chiefly waste land, or common pasturage. On St. Martin's Head, at the eastern end of the island, is a tower 20 feet high, with a conical top, built on an earthen mound, and designed as a landmark for seamen. A day school is maintained by the Society for the Promotion of Christian Knowledge, and an infant school by the Society of Friends.

St. Agnes, population 204 in 1851, has a very irregular outline; it is surrounded by rocks, and the shore is rocky and almost inaccessible, but the soil is the best cultivated and most productive in the whole group. It consists of two parts—St. Agnes proper and the Gugh, separated from each other at high water, but connected, when the tide is out, by a narrow isthmus of sand. The houses in St. Agnes are scattered about without regard to order or general convenience. There is a small church. The Society for the Promotion of Christian Knowledge has a day school on the island, and there are two infant schools. A lighthouse stands on the highest point of the island, about 50 feet above the level of the sea: it is 52 feet high, surmounted with a lantern of 20 feet additional height, with a revolving light.

Bryher, population 118 in 1851, extends about a mile and a half from north to south, with an average breadth of scarcely half a mile: it consists of several steep hills connected by tracts of low land, a considerable part of which is in cultivation. On the east side of the island, between it and Treseo, is New Grinsey harbour, formed by the shores of the two islands and by the flats, fordable at low water, which in one part connect them. Some of the houses are grouped in what is called the town of Bryher; and there is a church. *Sampson*, population 29 in 1841, and 10 in 1851, lies south of Bryher, with which, as well as with Treseo, it is united by flats fordable at low water. The few inhabitants support themselves by fishing, making kelp, and occasionally acting as pilots. In *St. Helens* are the remains of a church, supposed to have been the first ecclesiastical building in Scilly.

The natural produce of the Scilly Islands consists of a thin short grass intermixed with chamomile, heath, and dwarf furze; fern and moss are found near the shore. The soil is commonly a black peat, mingled with granitic particles; though sandy, it bears in many places good crops of potatoes and barley. Wheat and rye are also grown. The produce of the islands, which might easily be increased, is barely sufficient for the inhabitants. There are no timber-trees, and no fruit-trees, except in a few sheltered spots in St. Mary's. Garlic is much cultivated, and most kinds of vegetables and flowers which grow in England succeed here. The cattle and horses are small and poor: their food consists partly of sea-weed for cattle, and furze for horses. The sheep are of a peculiar breed and small size; hogs are numerous; poultry scarce and poor; and rabbits not so numerous as formerly. Wild birds, especially sea-birds, are numerous; but the puffin, once very plentiful, is now seldom seen. Fish are less numerous in the

surrounding sea than formerly; small sharks are sometimes observed in the summer months, and porpoises are frequently seen.

The Scilly Islands belong to the duchy of Cornwall, and were long held on lease by the lords Godolphin, and after them by the Duke of Leeds; the present lessee is Augustus Smith, Esq. The lessee has usually appointed a council of twelve to exercise a civil jurisdiction, but persons charged with capital offences are taken to Penzance to the justices of the county of Cornwall. The council holds a monthly court at Hugh Town. A military commandant at St. Mary's, and a collector of the customs, are appointed by the authorities in London. Two clergymen, employed by the Society for the Promotion of Christian Knowledge, are stationed here; they reside at St. Mary's and Treaco respectively: when they cannot visit the churches on the other islands, the service is performed by the clerks. The society also supports schools on the principal islands; and distributes bibles, prayer-books, and other religious books. The Baptists have some preaching stations in the islands.

The islanders are generally able to read and write; their pronunciation, though not unmarked by provincialism, is more correct than from their remote situation would be expected. Their general condition is poor; their employments are agriculture, kelp-making, fishing, and pilotage. Sailing packets ply regularly twice a week between Hugh Town and Penzance. Besides the Wolf, other dangerous rocks, as the Bucks, Rennel, and Leven Stones, lie in the course. Near Leven Stones, a floating light has lately been stationed by the Trinity House. A light-house has been erected on Bishop Rock, in the south-west part of the group.

The Scilly Islands are generally considered to have been the Cassiterides of the Greeks. But it seems probable that the western extremity of Cornwall must be included in the term Cassiterides, and that the chief supply of tin was derived from it, for there are no traces of workings in the islands sufficient to countenance the opinion that much tin was ever obtained from them.

From the time of the Romans, who used them occasionally as a place of banishment, there is no notice of the islands in history until their conquest by Athelstan, king of England, who expelled the Danes about the year 938. Of their ancient importance these islands retain little trace. There are some primeval monuments; but the early inhabitants appear to have been replaced by others of Saxon origin, as indicated by their names, language, and customs. The Scilly Islands are not enumerated as part of the duchy of Cornwall, in the original grant of that duchy to the eldest son of the king of England. (12 Edward III.) Part of the islands, and the churches in all of them, belonged to the abbey of Tavistock; but it was not until the Spanish wars in the time of Elizabeth that the islands attracted much notice. In the great civil war they were long held for the king by Sir John Greenville, or Granville, who fitted out armed vessels, which made several captures. At length, in 1651, a formidable armament, under Admiral Blake and Sir George Ayscue, effected the reduction of the islands. Sir Cloudesley Shovel was lost on the rocks which form the south-western portion of the group, with his own ship and some others, on their return from Toulon, in 1707.

SCINDE. [SINDE.]

SCIO. [CHIOS.]

SCIOTA, RIVER. [MISSISSIPPI.]

SCITUATE. [RHODE ISLAND.]

SCLAVONIA. [SLAVONIA.]

SCONE. [PERTSHIRE.]

SCOTIA, NOVA. [NOVA SCOTIA.]

SCOTLAND. The general description of this part of the kingdom will be found under the head of GREAT BRITAIN. Under the different counties are mentioned the more remarkable historical events of which each has been the theatre, with occasional notices of, or references to, the early settlers. We propose here briefly to recapitulate the leading facts in reference to the settlement of Scotland, and the prominent points in its history till its establishment as a kingdom.

We first hear of the Scots as a people inhabiting Ireland, which island they in the 5th century divided with the Hiberni, the previous inhabitants, over whom however they acquired so decided a superiority as to be enabled to give their name to the country, which was exclusively called Scotia from the 5th to the 10th century. In the beginning of the 6th century a colony of Scots from the north of Ireland emigrated to North Britain, and effected a settlement in the district now constituting Argyleshire, to which they gave the name of Dalriada, it is said, from their leader Riada. Here the Dalriadic Scots—the 'Scoti qui Britanniam incolunt,' as they are called by Bede, remained for more than 300 years, during which the rest of the island to the north of the friths of Forth and Clyde formed the kingdom of the Picts, which, while governed by one king, was divided into two populations, the Northern or Highland Picts, and the Lowland or Southern Picts—the Septentrionales and Australes Picti of Bede.

The Pictish king, Angus MacFergus, in 736, effected a conquest of Dalriada; and a line of Pictish princes reigned there till 819, when the Dalriadic family recovered their ancestral dominions. A victory obtained by Constantine MacFergus, a descendant of Angus, in 789, established the superiority of the southern Picts, and, being followed

by a reign of 30 years, enabled Constantine to introduce the principle of succession by descent, and to make the monarchy hereditary in his family, instead of its being as formerly to some extent elective.

In 843 the whole of North Britain was united under the sceptre of Kenneth MacAlpin, originally king of the Scots of Dalriada, but thenceforth styled king of the Picts. Throughout the 10th century, North Britain, ruled as one kingdom by the successors of Kenneth MacAlpin, was known by the name of Albania, undoubtedly the same with Albion, or Albin, which is the most ancient name attributed to the island, and that by which the Gael of Scotland distinguish it to this day. About the middle of this century however, we find the name Scotland began to be applied to North Britain; and from the commencement of the 11th century the people are designated the Scots simply, and not the Scots of Britain, or of Albania, by way of distinction from the main body of the nation, which had been till now considered as settled in Ireland.

Scotland proper at this date comprised only that part of the island to the north of the Forth and Clyde. But the south of modern Scotland, in whole or in part, was also occasionally comprised under the same name. It may be divided into three districts:—1, Lodonia, comprehending the Lothians and other counties to the south, formed, from the middle of the 5th century, a part of the Anglo-Saxon kingdom of Bernicia, and the people appear to have been mainly Angles from that date. The Northumbrian king Egfrid transferred it to the Picts, and it was formally surrendered by Edgar to the Scottish king Kenneth IV., in 971. 2, Strathclyde, comprehending, besides Lanark, Renfrew, and the northern half of Ayrshire, at least the town and rock of Dumbarton, then called Alcluyd, which was its capital. This was a Cymric or Welsh kingdom, and remained independent of the Scottish crown till the defeat of its last king, Dunwallon, by Kenneth III., in 973. 3, Galloway, which comprised the modern counties of Kirkcudbright and Wigton, together with the southern portion of Ayrshire. Its history is very obscure; but it is spoken of as having been a Pictish country so early as the 6th century, and the English historians notice the Picts of Galloway as appearing in the Scottish array at the battle of the Standard, fought in 1138. The district of Cumbria, lying within what is now called England, was made over to Malcolm I., king of the Scots, by the Saxon king Edmund I., in 946, and being held as an English fief, constituted an appanage of the Scottish crown from that date down to the year 1072.

The Orkney and Western Islands had been taken possession of by the Norwegians in the end of the 9th century. Sigurd, the earl of Orkney, and Thorstein the Red, who claimed the sovereignty of the Western Isles, leaguely together, made a descent upon the mainland in Scotland in 894, and, quickly overrunning the greater part of the districts of Caithness, Sutherland, Ross, and Moray, established there a Norwegian principality, which was maintained, though with much contention, till the expulsion of the Norwegians in 993. This expulsion was effected by Malcolm, Maormor of Moray, who a few years after, by the defeat and death of Kenneth V., obtained possession of the throne under the title of Malcolm II. On his death a faction raised to the throne another Malcolm, the son of Kenneth. This Malcolm MacKenneth, immediately after his accession, proceeded to dispossess Sigurd's son Thorfinn of Caithness, with which he had been invested by his maternal grandfather; and a long war followed between the Scottish king and the Norwegian earl, which terminated, in 1034, in the defeat and death of the former: events which were forthwith followed by the complete subjugation of Scotland, as far north as the Frith of Tay, by Thorfinn, whose kingdom thus founded lasted for 30 years.

On the death of Malcolm MacKenneth, the part of the country that remained unsubdued acknowledged as his successor Duncan, son of his daughter Bethoc, whose father Crinan, commonly designated Abbot of Dunkeld, is believed to have been one of the chiefs of the Northern Picts. Duncan, in 1040, during a temporary absence of Thorfinn, marched upon the dominions of that prince, and made his way as far north as Moray without encountering resistance. At this point he was opposed, not by the Norwegians, but by the Gaelic inhabitants, who were commanded by Macbeth, the Maormor of Moray, who, attacking Duncan near Elgin, defeated and slew him, and assumed the title of King of Scotland. Macbeth in the south, and Thorfinn in the north, reigned till the year 1054, when Macbeth was attacked by a Saxon force, under Siward, earl of Northumberland, which had been obtained from Edward the Confessor by Duncan's eldest son Malcolm, who after his father's death had taken refuge at the English court. This invasion terminated in the expulsion of Macbeth from the country south of the friths of Forth and Clyde, and the establishment of Malcolm (surnamed Canmore, or Great Head), as king of that part of Scotland. The authority of Malcolm continued to be confined to the Lothians till 1058, when a second Saxon invasion drove Macbeth as far north as Lumphnan in Aberdeenshire, where he was overtaken and slain in battle. Thorfinn held his ground till his death in 1064, and it was not till 1085 that the whole of Scotland (except perhaps Caithness) was brought under subjection to Malcolm.

The reign of Malcolm Canmore terminated in 1093, and his death immediately gave rise to a new conflict between two opposite prin-

ciples of succession to the throne—the population of the Lowlands, now to a great extent Saxon, supporting the claim of Duncan, the son of Canmore; the Celtic tribes of the north asserting the right of Malcolm's brother, Donald Bane, in conformity with what is called the system of tanistry, which, brought by the Dalriads from their former country, Ireland, had probably till now regulated the succession in the royal family, both in their first seat and since they had succeeded to the Pictish crown. In entering upon his contest with Duncan, Donald Bane was assisted by Magnus Barefoot, king of Norway, to whom at this time belonged the Western Islands. This alliance enabled Donald in the first instance to carry everything before him, and the establishment of his authority is said to have been immediately followed by the expulsion of all the Saxons who had settled in the Lowlands of Scotland during the late reign; but after a few months Duncan came against him with a numerous army from England, permission to raise which he had probably obtained from William Rufus, and Donald was obliged to give way. It appears however that even Duncan was not able to protect the Saxon settlers who had thus returned with him; he found it necessary to drive them all out of the country, a concession to the popular cry however by which he gained nothing, for as soon as his subjects found him thus deprived of foreign protection they put him to death, and replaced his uncle on the throne. Two years afterwards another English army, conducted by Edgar Atheling, again overpowered Donald, and set the crown on the head of Edgar, a brother of Duncan. That result finally decided the contest between the two principles of succession, and also the struggle for supremacy between Celtic and Saxon Scotland. Edgar, whose accession took place in 1097, was succeeded by his brother Alexander I., and he by his brother David I., whose reign extended to the year 1153. On the accession of Malcolm the Maiden, a child only in his 11th year, attempts were made by the Highlanders to maintain, in opposition to the feudal heir, the claim of William, a grandson of Malcolm Canmore's eldest son Duncan; but this new pretender was wholly unsuccessful.

It was not however till fully two centuries later that the rule of the king of the Scots was completely established over the whole of Scotland. The native chiefs appear for some time to have retained possession of those districts which had formed part of Thorfinn's kingdom; the rest of the country, and the whole of it south of the friths, acknowledged the king of Scotland. The Saxon inhabitants perfected their Saxon institutions; the country was divided into earldoms, and sheriffs and county courts were established over the entire kingdom, except the extreme north. From the reign of Alexander's successor, David I., we are to date the introduction of Norman institutions into Scotland. Of the great Highland chiefs, the earls of Moray continued to be the most formidable till the year 1161, when that ancient line was stripped of its power and its possessions by Malcolm the Maiden, and the title it had enjoyed was transferred to the earls of Mar. From the cession of the Hebrides by the Norwegians in the year 1266, the most powerful family of the north came to be that of the Macdonalds, the Celtic chiefs of these islands, who styled themselves Lords of the Isles; but their strength, which had been broken by the defeat of Donald, lord of the Isles, at the battle of Harlaw, fought in 1411, was destroyed by the effective measures taken to curb the Highland chiefs by James I. From this epoch may be dated the complete reduction of Celtic Scotland under the sceptre of the Saxon king of the Lowlands. The lordship of the Isles was finally extinguished by the forfeiture of the last lord in 1493.

SCOTTER. [LINCOLNSHIRE.]

SCULCOATES, East Riding of Yorkshire, a suburb of Kingston-upon-Hull [HULL], which has been made the seat of a Poor-Law Union. Sculcoates Poor-Law Union contains 18 parishes and townships, with an area of 45,004 acres, and a population in 1851 of 44,059.

SCUTARI, a town on the Asiatic shore of the Bosphorus, facing Constantinople, of which it may be considered as a suburb. It is built on the slope of a hill, and has eight fine mosques and magnificent burying-grounds planted with cypresses. Many of the wealthier Turks of Constantinople choose to be buried at Scutari, from an old tradition that their race will one day be driven out of Europe. There are also fine country-houses and kiosks in the neighbourhood. The late sultan Mahmud built handsome barracks at Scutari for his regular troops. One of the best views of Constantinople is from the hill just above Scutari. The population is estimated at from 35,000 to 60,000 inhabitants. The place is one of considerable traffic, being the great thoroughfare between the capital and the Asiatic provinces of the empire. The town occupies the site of the ancient *Chrysopolis*. Its present name is a corruption of its Persian name *Uskudar*, which means 'courier,' as the place has been from remote ages a post-station for Asiatic couriers, and a rendezvous for caravans and travellers proceeding from Constantinople eastward. One of the greatest attractions of Scutari is the convent of the howling and dancing dervishes. The sultan Mahmud's barracks were occupied by the British troops on their advance to the Crimea in 1854, and have since been converted into an hospital for the British army.

SCUTARI (*Skodré* in Albanian, and *Iskander* in Turkish), a considerable town of Northern Albania, and the capital of a pashalik, is situated at the southern extremity of the Lake Zenta or Lake of Scutari, where the Boyana issues from it, and about 18 miles from the coast of

the Adriatic. It is a fortified town, and has two castles. The population of Scutari is variously reckoned at from 16,000 to 40,000, more than one-half of whom are Catholics. Scutari has manufactures of arms and of woollen and cotton goods, an arsenal, a large bazaar, barracks, several mosques, and Catholic and Greek churches. The fishery on the lake constitutes a valuable branch of industry. The Lake of Scutari is about 16 miles in length from north-west to south-east, and from 3 to 5 miles in breadth, and it contains several small islands. The lake lies in the high land of Albania, and is surrounded by offsets of the chain of Mount Scardus; on the north it borders on Montenegro.

SCYLLA. [CALABRIA.]

SCYTHIA was a name originally given to a part of Europe, and was for a long time restricted to that country. This Scythia, which is described as a square of 4000 stadia by Herodotus (iv. 101), extending from the Ister to the Palus Mæotis, and from the sea (the Pontus) to the Melanchlæni. There is considerable difficulty in determining the boundaries of the Scythia of Herodotus; but it may be said in general terms to have comprised the south-eastern part of Europe, between the Carpathian Mountains and the Tanais or Don. According to the account of Herodotus the Scythians were an Asiatic, perhaps a Mongol people, who were driven from their settlements to the north of the Araxes by the Massagetae, and after crossing that river descended into Europe, and drove out the Cimmerians from the country, which was afterwards called Scythia. The date of their migration into Europe may be determined with tolerable accuracy, if the irruption of the Cimmerians into Lydia in the reign of Ardyas (about B.C. 640) was the immediate consequence of their defeat by the Scythians. (Herod., i. 15.) The general and genuine name of the Scythians is said to have been Scoloti; the name of Scythæ or Scythians was given to them by the Greeks. (Herod., iv. 6.)

The only two important events in the history of Scythia mentioned by Herodotus are, 1st, the invasion of Media by the Scythians in the reign of Cyaxares (B.C. 635-595), and their conquest of Asia as far as the confines of Egypt, which they held for 28 years; and, 2ndly, the invasion of Scythia by Darius, the son of Hystaspes, in which the Persians were unsuccessful.

In subsequent times the Scythians lost all their power. The Getæ conquered a great part of the west of their country, and the Sarmatæ pressed upon them from the east; the latter people eventually obtained possession of the greater part of Scythia, and gave their name to the whole country. [SARMATIA.] In the time of Pliny ('Hist. Nat.,' iv. 25) the Scythians had become extinct as a people: their place was occupied by the Germans and Sarmatians, and the Scythian name was confined to the most remote and unknown tribes to the north.

The name of Scythia began to be applied to the northern parts of Asia in the Macedonian period. When the Macedonians found on the Jaxartes nations resembling the Scythians, they gave the name of Scythia to this part of Asia, and thus an Asiatic Scythia was supposed lying to the east of the true one.

In the time of Ptolemy the name of Scythia was given to the country between Asiatic Scythia and Serica or China: it was bounded on the south by India. Its limits to the north were undefined. It was divided into two parts by the Imaus, Hindu-Koosh, or Bolor-Tagh. The western part was called Scythia intra Imaum, and the eastern Scythia extra Imaum.

SEAFORD. [SUSSEX.]

SEAFORTH. [LANCASHIRE.]

SEAHAM, a small sea-port in the county of Durham, is situated in 54° 50' N. lat., 1° 20' W. long., distant 16 miles E.N.E. from Durham, and 290 miles from London by the Great Northern and North-Eastern railways. The population of the township in 1851 was 729, that of the ecclesiastical district of Seaham Harbour was 3538. The living of Seaham is a vicarage; that of St. John's, Seaham Harbour, is a perpetual curacy, in the archdeaconry and diocese of Durham. The town has been very much improved of late years, chiefly in consequence of the well-directed efforts of its proprietor, the Marquis of Londonderry. Several public buildings have been erected, including a district church, a literary and scientific institute, and schools. Much coal is shipped from the quay.

SEARA, or CEARA. [BRAZIL.]

SEATON. [CUMBERLAND.]

SEATON CAREW. [DURHAM.]

SEATON SLUCE, or SEATON DELÁVAL. [NORTHUMBERLAND.]

SEBASTOPOL, or SEVASTOPOL. In the article CRIMEA we have given an account of this town as it was. Recent events have raised it in interest, but must have greatly altered its appearance, and our account would hardly apply to its present state. In October, 1854, the bombardment of it was commenced by the allied French and English; the defence has been certainly vigorous and skilful; the allied armies, particularly the English, suffered dreadfully from disease during the winter, but in June, 1855, the assaults became more successful, and several of the Russian outworks were taken by the allied forces. We may add that the little promontory upon a part of which Sebastopol stands, is a spot of classical and historical interest. Here stood the temple of Diana, in which Iphigenia, the daughter of Agamemnon, was a priestess; here also was the Eupatoria, founded by a general of Mithridates the Great, king of Pontus, and the able opponent of the Romans; while Balaklava (*Bella Chiave*, the 'beautiful quay')

was the seat of the commerce of the Genoese, who for a time exercised great authority throughout the whole Chersonesus.

SEBENICO. [DALMATIA.]

SEBERGHAM. [CUMBERLAND.]

SEBRAO. [SUNDA ISLANDS, *Timor Group*.]

SEBSEWAR, or SUBZAWAR. [PERSIA.]

SECCHIA. [Po.]

SECLIN. [NORD.]

SEDAN. [ARDENNES.]

SEDBERGH, West Riding of Yorkshire, a market-town, and the seat of a Gilbert's Poor-Law Incorporation, in the parish of Sedbergh, is situated in a sheltered and fertile vale, in 54° 20' N. lat., 2° 30' W. long., distant 78 miles W.N.W. from York, and 263 miles N.N.W. from London. The population of the township of Sedbergh in 1851 was 2235. The living is a vicarage in the archdeaconry of Richmond and diocese of Ripon. Sedbergh Poor-Law Incorporation contains the three townships of Sedbergh parish, with an area of 52,882 acres, and a population in 1851 of 4574.

Besides the church there are in Sedbergh places of worship belonging to Wesleyan Methodists, Quakers, and Independents. The Free Grammar school was founded by Dr. Roger Lupton, provost of Eton. The endowment amounts to about 600*l.* a year; and there are 3 fellowships and 10 scholarships in St. John's College, Cambridge, for students from this school. In 1854 the school had 90 scholars. There are also National and British schools, and several parochial charities.

SEDFIELD, Durham, a market-town, and the seat of a Poor-Law Union, in the parish of Sedfield, is situated on an eminence in 54° 39' N. lat., 1° 26' W. long., distant 11 miles S.S.E. from Durham, and 252 miles N.N.E. from London. The population of the township of Sedfield in 1851 was 1362. The living is a rectory in the archdeaconry and diocese of Durham. Sedfield Poor-Law Union contains 23 parishes and townships, with an area of 43,953 acres, and a population in 1851 of 8501. The parish church, dedicated to St. Edmund, is one of the handsomest in this part of the county: it has parts in early English, decorated, and perpendicular styles. The Wesleyan Methodists and Roman Catholics have chapels. The Grammar school is free to 14 boys; in 1854 it had 70 scholars. The market is held on the first Friday in each month for hogs. Fairs are held on the first Fridays in April and October.

SEDGLEY. [STAFFORDSHIRE.]

SEDLITZ. [BOHEMIA.]

SEEZ. [ORNE.]

SEGEBERG. [HOLSTEIN.]

SEGESTAN. [SEISTAN.]

SEGNÉ. [FROSINONE.]

SEGO is the capital of Bambarra, a country situated in that part of Africa which is called the Sédan. The town stands on both sides of the river Joliba, near 13° N. lat. and 5° W. long. Mungo Park states that the Sego properly consists of four distinct towns, two on the northern bank of the river, called Sego Korro and Sego Boo, and two on the southern bank, called Sego Soo Korro and Sego See Korro. They are all surrounded with high mud walls; the houses are built of clay, of a square form with flat roofs; some of them have two stories, and many of them are whitewashed. Besides these buildings there are many Moorish mosques. The streets are narrow. Park estimated the number of inhabitants at about 30,000. The king of Bambarra resides at Sego See Korro. At several places there are canoes belonging to the king for conveying people over the river. Sego carries on a considerable commerce. The surrounding country is well cultivated. [BAMBARRA; NIGER.]

SEGORBE. [VALENCIA.]

SEGOVIA. [CASTILLA LA VIEJA; NICARAGUA.]

SEGRE, RIVER. [CATALUÑA.]

SEGRÉ. [MAINE-ET-LOIRE.]

SEGURA. [MURCIA.]

SEHWUN. [HINDUSTAN.]

SEINE, the Roman *Sequana*, a river in France, rises in the heights of Langres, near the town of Chauceaux in the department of Côte d'Or, and flows north-west past Chatillon-sur-Seine, Bar-sur-Seine, Troyes, Romilly, Montereau, Melun, Corbeil, Paris, Mantes, Elbeuf, Rouen, and Havre, just below which it falls into the sea: its whole course is about 470 miles. Its source is 1426 feet above the level of the sea; at Troyes it is 331 feet above the same level; at the junction of the Loing between Montereau and Melun, 184 feet; at Corbeil, 147 feet; and at Rouen, 111 feet. Its principal affluents on the right bank, in the order in which they join, are the Aube, the Marne, the Oise, and the Epte; and on the left bank the Yonne, the Loing, the Eure, and the Rille. The Seine and its tributaries abound in fish; the sturgeon, the salmon, the sole, the shad, the eel, the smelt, and other fish are caught in it.

By means of a lateral canal between Marilly and Troyes, and locks to avoid the fall at Nogent-sur-Seine, the river is navigable from its mouth to Troyes, a distance of 370 miles. Large river barges and small steamers ply on the Lower Seine and as high as Paris; and recently a vessel has sailed direct to Paris from Rio Janeiro without breaking bulk. The tide ascends the Seine as far as Rouen, to which city ordinary sea-going vessels of 300 tons and under ascend. The navigation of the Seine and its tributaries is facilitated by the canals

of Oureq, St.-Denis, and St.-Martin, which connect the Oureq with the Seine at Paris and at St.-Denis, and by some short cuts; it is connected with that of the Saône and Rhône by the Canal-de-Bourgogne, which connects the Yonne, between Auxerre and Joigny, with the Saône at St.-Jean-de-Loosne; and with that of the Loire by the Loing Canal, which connects the Seine with the two canals of Orléans and Briare, of which the former joins the Loire just above Orléans, the latter at Briare. The canal of St.-Quentin and the Oise connects the Seine with the Schelde. The total navigation of the Seine and its tributaries is about 900 miles in length.

The Seine has a generally slow current; and its sinuities, especially below Paris, are very great, and tend to render the navigation tedious. The lowest bridge over the river is at Rouen. The shifting sands at the mouth of the river, and the shoals in its bed, formerly impeded the ascent of larger vessels than from 250 to 300 tons. Recently great works have been constructed between Villequier and Quillebeuf, to confine the current in the estuary of the river to a narrower bed; thus a greater depth of water has been obtained, and the increased force of the stream has swept the passage clear of sands. The facilities afforded by this river for the supply of various articles for the markets at Paris are of great importance: corn, flour, wine, hay, wool, hemp, hides, fire-wood, timber for building, coal, sandstone, millstones, and iron are brought down from the districts above the capital; while corn, flour, wine, cider, butter, fish-oil, flax, hemp, wool, pitch, resin, drugs, colonial produce, and manufactured goods are carried up from places below the city. Between 4000 and 5000 sea-going ships, besides coasters, enter and leave the harbours of Rouen and Havre annually.

The scenery in the upper part of the river is tame and monotonous; but from Paris to Rouen, and still more from Rouen to the sea, it presents a more interesting appearance. The Seine is not subject to great overflows.

SEINE, the metropolitan department of France, is surrounded by the department of Seine-et-Oise. It lies between 48° 43' and 48° 58' N. lat., 2° 30' and 2° 33' E. long., and is nearly circular in form. Its greatest length is 18 miles, its breadth 16 miles; its area is 184 square miles. The population in 1841 was 1,194,603; in 1851 it amounted to 1,422,065, giving 7728.61 to a square mile. Although the smallest of the French departments, it exceeds them all in amount and density of population. Of the area, 103.3 square miles are inclosed by the great bastioned wall lately erected around Paris. [PARIS.]

The surface of the department is tolerably level; some heights, as those of Montmartre and Chaumont on the north side of Paris, rise to the height of 270 or 300 feet above the valley of the Seine. Mont-Valerien in the west of the department, the highest hill in the neighbourhood, is not more than 448 feet above the sea-level. The department is occupied by the tertiary formations inclosed within the chalk basin of Paris. These formations include limestone, gypsum, and marl. They yield excellent building-stone, of which there are immense quarries in the plain of Montrouge, and excellent plaster. Fine clays for porcelain and pottery are raised at Sèvres and various other points of the department; also sand for glass-foundries. There are mineral waters at Auteuil and Passy; the latter, which are chalybeate, and valued for their astringent and tonic qualities, are the only ones which are frequented.

The department belongs altogether to the basin of the Seine. That river traverses it from south-east to north-east in a very winding course. The Marne enters the department on the east side, and has a winding course of fifteen miles before it joins the Seine. Both these rivers are navigable throughout. The Oureq Canal enters the department on the north-east side, and runs about six miles to the basin of La-Villette, from which the canals of St.-Denis and St.-Martin communicate with the Seine. The St.-Maur Canal shortens the navigation of the Marne, above Charenton, by avoiding one of its longest reaches. All the great French railways cross the department converging on Paris, where they are connected by a circular railroad. [FRANCE, vol. ii., col. 1077.] Fifteen imperial highways concentrate on the metropolis; many of them, planted near the city with double rows of lofty trees, form noble avenues to Paris. The department is traversed also by 81 departmental and several communal roads.

The department contains about 120,000 acres, a large portion of which is laid out in gardens for the growth of vegetables, fruits, and flowers for the supply of the capital. The quantity of corn produced in the department, when its limited area is taken into account, is very far above the average of the departments in every species of grain which is cultivated in it; and in potatoes it exceeds the average of the departments, even without taking its limited area into the account. But little wine is made, and that little is bad. A great number of horses, asses, and dairy cows are kept. Montreuil, two or three miles east of Paris, is celebrated for its peaches; Grand-Charonne, close to Paris on the east, for its grapes; and Fontenay, four miles south-west of Paris, for its strawberries and roses, which latter are grown for the apothecary and the perfumer, and give to the place its designation of Fontenay-aux-Roses. Nanterre, in the north-west of the department, is also celebrated for the growth of roses. Vitry-sur-Seine, on the left bank of the Seine, above Paris, is surrounded with nursery-grounds for rearing fruit-trees and ornamental trees.

The park of Vincennes, east of Paris; the forest of Bondy, on the north-east; and the Bois-de-Boulogne, on the west of the city, are

crossed by fine drives in various directions, and afford agreeable and much-frequented walks to the Parisians. The Bois-de-Boulogne especially has been greatly embellished by the emperor Napoleon III. with fountains, jets-d'eau, &c.

For the manufactures and commerce of the department the reader is referred to the article on PARIS.

The department is divided into 3 arrondissements, which, with their subdivisions and population, are as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Paris		1	1,052,262
2. St.-Denis	4	37	233,792
3. Sceaux	4	43	135,011
Total	8	81	1,422,065

1. The first arrondissement is coterminous with the city of PARIS. The largest suburbs of Paris, Batignolles, Belleville, Passy, La-Villette, &c., are technically in the second arrondissement.

2. In the second arrondissement the chief town, *St.-Denis*, is the subject of a separate article. [DENIS, Str.] *Aubervilliers*, formerly *Notre-Dame-des-Vertus*, a short distance S.E. from St.-Denis, has a handsome church, and about 2500 inhabitants. It was the headquarters of Henri IV., during the siege of Paris; and was the scene of some hard fighting in 1815. *Auteuil*, a pretty village of about 4000 inhabitants, is situated on the eastern edge of the Bois-de-Boulogne on a hill above the right bank of the Seine, and within the great bastioned wall of Paris. *Batignolles*, a rapidly extending suburb adjoining Paris on the north-west, has a population of about 20,000. It stands on high ground part of the plateau of Monceaux. *Belleville*, the great resort of the working population of Paris on holidays, stands on high ground to the north-east of the city, and has a population of above 20,000. In this suburb are numerous schools and industrial establishments, and public gardens and wine-shops without number. *Boulogne*, on the western side of the Bois-de-Boulogne and near the right bank of the Seine, has a handsome parish church, and about 6000 inhabitants. *Chapelle-St.-Denis*, between Montmartre and La-Villette, and within the bastioned wall of Paris, is a large manufacturing suburb, with about 16,000 inhabitants. Markets for the sale of milk-cows, pigs, calves, and fat cattle are held here. *Charonne*, a suburb of Paris, lies to the south-east of the cemetery of Père-Lachaise, and has about 5000 inhabitants. *Clichy-la-Garenne*, south-west of St.-Denis, on the right bank of the Seine, near the Versailles railway; has several establishments for the manufacture of white-lead, sal-ammoniac, glue, catgut, printing and other paper, cardboard, small shot, lead-pipe, and sheet-lead, and about 4000 inhabitants. *Courbevoie*, on the left bank of the Seine, and on the Versailles railway, is a well built place with about 6000 inhabitants. *Montmartre*, immediately north of Paris, is built on a high hill of gypsum, has a church which dates from the 12th century, and a manufacturing population of about 7000. *Nanterre*, a small place of about 3000 inhabitants, and the birthplace of *Sainte-Genève*, is situated west of Courbevoie, on the railway to St.-Germain. *Neuilly*, about 5 miles S.W. from St.-Denis, stands on the Seine, which is here crossed by a beautiful stone bridge of five arches. The houses of the town are generally modern and well built. The population of the commune is about 10,000. The château of Neuilly, the usual residence of the late king Louis Philippe, was destroyed during the revolution of 1848. *Pantin*, on the Ourcq Canal, E. of La-Villette, stands in a plain, and comprises a number of well-built country-houses. There are manufactories for cotton and woollen yarn, in which steam-power is employed; gypsum is quarried, and there are lime-kilns. The chief trade is in corn, flour, wine, brandy, vinegar, and plaster of Paris. Population 2300. *Passy*, a fashionable suburb of Paris, above the right bank of the Seine, between Auteuil and Chaillot, has mineral springs, and 6800 inhabitants. *Romainville*, south-east of Pantin, has 5000 inhabitants. *Surmeux*, between the left bank of the Seine and Mont Valerien, is situated near the Versailles railway, and has a population of 2200. *La-Villette*, between the Ourcq Canal and Chapelle-St.-Denis, and near the north-eastern angle of the great bastioned wall of Paris, is a large suburb, with about 12,000 inhabitants, who manufacture soap, paper, spirits, beer, chemicals, oil, sugar, &c.

3. In the third arrondissement the chief town is *Sceaux*, situated on a hill a few miles S. of Paris, in 48° 46' 39" N. lat., 2° 18' E. long., and has a tribunal of first instance and about 2000 inhabitants. *Sceaux* formerly had a noble mansion and park belonging to the Duke of Maine, and after him to the Duke of Penthièvre. During the Revolution it was sold, and demolished by the purchaser; and the extensive park, of more than 800 acres, broken up for agricultural purposes, with the exception of the garden of the menagerie, which was purchased by some private individuals, and thrown open as a pleasure-ground for the public, still remains. The town is pleasantly situated, and has a number of good houses, and a handsome church. At some distance east of the town, and near the left bank of the Bièvre, the cattle-market of *Sceaux* is held. *Arcueil*, a village between Sceaux and Paris, has 2800 inhabitants, and an aque-

duct which supplies the fountains in the south part of Paris with water. *Bercy*, N.E. of Sceaux, and within the bastioned wall of Paris, is a large suburb on the right bank of the Seine, and has about 8000 inhabitants. It is the great entrepôt for wine, brandy, and oil for the supply of Paris, and contains large sugar-refineries, vinegar-works, timber-yards, and tan-yards. *Bourg-la-Reine*, a well-built village, situated in a hollow about a mile E. from Sceaux, near the left bank of Bièvre, has 1500 inhabitants. *Condorcet*, who committed suicide here in 1794, is buried in the churchyard. *Charenton-le-Pont*, along the east banks of the Seine and Marne, has 3500 inhabitants, a lunatic asylum, and foundries for the manufacture of steam machinery. The bridge across the Marne connects Charenton with *Maisons-Alfort*, situated in the fork between the Seine and the Marne, and famous for its veterinary college. *Choisy-le-Roi*, a well-built village of 3200 inhabitants, stands on the left bank of the Seine and on the Orleans railway, about 5 miles S. from Paris. *Fontenay-aux-Roses*, a village N. of Sceaux, is famous for the culture of rose-trees, strawberries, and other fruits: population about 1100. *Fontenay-sous-Bois*, at the north-east angle of the park of Vincennes, has a handsome church, and above 3200 inhabitants. *Gentilly*, an ancient village consisting of two parts, Petit-Gentilly and Grand-Gentilly, which are now separated by the great bastioned wall of Paris: population of the commune about 10,000. In Grand-Gentilly is the vast lunatic asylum (formerly prison) of Bicêtre, which is outside the wall. *Grenelle*, a suburb of Paris on the left bank of the Seine, has a theatre, a handsome church, and about 4000 inhabitants. *Issy*, S. of Grenelle, and outside the bastioned wall, has a population of 2700. Near it is *Vanves*, which is a station on the Versailles railway, and has 2500 inhabitants. *Jery*, near the left bank of the Seine, between Grand-Gentilly and Charenton, has a manufacturing population of 6900. *Montreuil-sous-Bois*, is about a mile N.N.E. from Vincennes, on a fertile hill. There is a mansion with a fine park, and there are a number of country-houses. Leather, porcelain, and beehives are manufactured. The gardens of this place are unrivalled in the department for the growth of peaches, strawberries, cherries, flowers, and vegetables of all kinds. Large gypsum quarries are worked: population, 5400. *Montrouge*, a southern suburb of Paris, has about 8000 inhabitants. *Vaugirard*, W. of Montrouge, has a botanical garden, and about 13,000 inhabitants. It lies within the bastioned wall, and contiguous to the inner enceinte of Paris. *Vincennes*, on the northern edge of the Park of Vincennes, is about 2 miles E. from Paris, and has about 6000 inhabitants. It is a well-built town. The castle of Vincennes is an ancient fortress; the walls form a large and regular parallelogram surrounded with ditches and strengthened by eight square towers besides the donjon. The donjon, also square and very lofty, with towers at the angles, stands in the middle of the west side of the fortress. The castle of Vincennes has undergone great alterations, and its ancient features have been intermingled with modern structures. The *Sainte-Chapelle* is a fine Gothic building commenced by Charles V., and restored after the return of the Bourbons. It contains the monument of the Duke d'Enghien, who was shot at Vincennes, in the ditch of the castle, by order of Napoleon. This fortress is used as a military post, an artillery-school, an arsenal depot of artillery, and a state prison. The castle was saved from the allies in 1815, by the firmness of the governor, General Daumenil, who threatened, if reduced to extremity, to blow it up. *Vitry*, near the left bank of the Seine, and N. of Choisy-le-Roi, has numerous country-houses and nursery-grounds, and 2500 inhabitants. A little west of it is *Villejuif*, a pretty place situated on a hill, in which building-stone, millstone, and gypsum are quarried: population 1500.

The department constitutes the diocese of the archbishop of Paris. It is in the jurisdiction of the High Court, and within the limits of the University-Academy of Paris; and in the first Military Division, of which the head-quarters are at Paris. It returns 9 members to the Legislative Chamber of the French empire.

(*Dictionnaire de la France; Annuaire pour l'An 1853; Annuaire du Commerce; Official Papers.*)

SEINE-ET-MARNE, a department of France, bounded N. by the department of the Oise, N.E. by that of Aisne, E. by those of Marne and Aube, S.E. by those of Yonne and Loiret, and W. by Seine-et-Oise. Its greatest length from north-north-east to south-south-west is 74 miles; its greatest breadth 45 miles. The area is 2281.7 square miles. The population in 1841 was 333,311; in 1851 it amounted to 345,078, giving 151.23 inhabitants to a square mile, or 23.35 below the average per square mile for the whole of France. The department is named from its two chief rivers, and formed out of portions of Brie and Gâtinais, divisions of Champagne and Ile-de-France.

There are no mountains in the department, nor any hills of considerable elevation; the highest are in the southern part. The surface is generally undulating. The south-east part is occupied by the formations of the cretaceous group; the rest by the tertiary formations of the Paris basin. Good building-stone is quarried at Château-Landon and Nemours, and sandstone fitted for pavement in the neighbourhood of Fontainebleau. The best millstones in Europe are dug at La Ferté-sous-Jouarre, on the Marne, and good alabaster is quarried. Peat is dug in some parts; and sand, which is valuable for making flint glass, is procured near Fontainebleau. There are mineral waters at Provins.

The department is included in the basin of the Seine, which river crosses it from east to west, forming a crescent, convex towards the south, and passing by Bray, Montereau, and Melun; it is navigable throughout. The Marne also crosses the department from east to west, not far from the northern boundary; its channel is very winding, and navigable throughout; it passes La Ferté-sous-Jouarre, Meaux, and Lagny. The Yonne has a small part of its course in this department, just above its junction with the Seine, which takes place on the left bank of the latter river, at Montereau: it is navigable in all that part which belongs to the department. The Loing crosses the southern boundary near Château-Landon, and flows northward past Nemours and Moret, into the Seine, which it joins on the left bank; it is not navigable, except in those places where it forms part of the line of the Loing Canal. The Suzain, the Bez, and the Lunain, feeders of the Loing, have part of their course in this department. The Yères rises in the department, and flows westward past Rosoy and Châlaines into the adjacent department of Seine-et-Oise, where it joins the Seine: it receives the Yvron. The Essonne, another feeder of the Seine, just touches the south-west border. The Marne receives the Petit Morin and the Grand Morin on the left bank, and the Ourcq on the right bank; only a part of the course of these rivers belongs to this department. The Ourcq and the Grand Morin are navigable; the former throughout that part of its course which belongs to this department, and the latter from above Crécy. The Grand Morin receives the Aubetin. In the central and eastern districts of the department are a number of pools, in which vast numbers of fish are bred.

There are two canals in the department, that of Loing, which follows the valley of the Loing, and unites the Loire with the Seine; and that of Ourcq, which follows the valleys, first of the Ourcq and then of the Marne, to the village of Annet, between Meaux and Lagny, and then leaves the valley of the Marne to take another direction to Paris. It opens a communication between the Ourcq and Paris, and is especially designed to supply the capital with water. The total inland navigation of the department amounts to about 225 miles.

Common roadway accommodation is afforded by 10 state roads, 88 departmental, and 25 communal roads. The department is traversed by the Paris-Strasbourg railway, which passes through Meaux and La Ferté-sous-Jouarre by the Paris-Dijon line, which passes Melun, Fontainebleau, and Montereau; and by the branch from Montereau to Troyes. A line has been recently authorised to be laid down from Paris across the department, through Rosoy and Provins to join the Troyes line at Nogent-sur-Seine, just beyond the eastern border, in the department of Aube.

About two-thirds of the surface of the department are under the plough. The quantity of wheat grown is more than twice the average quantity produced in the other departments. The produce in barley also is double the average of the whole kingdom. Rye, oats, and potatoes are grown in comparatively small quantities. So great however is the preponderance of the wheat crop, that the department is enabled to export from one-fourth to one-third of its harvests; the greater part of what is exported is sent to Paris. Hemp and flax, peas, beans, beetroot, and all kinds of pot herbs are also cultivated.

The quantity of meadow and grass land is above 80,000 acres; and there are about 23,000 acres of heath or common, or other uninclosed pasturage. A great number of horses are kept. The number of horned cattle is considerable; but it is a dairy rather than a grazing country, though a great number of cattle, veal calves, and sheep are fed for the Paris markets. In the number of cows it far exceeds the average of the departments. The cheese known as the Brie cheese is made in large quantities, and is in high repute. The number of sheep is very great, nearly a million consisting of merinos, cross-breeds, native-sheep, and English long-woolled breeds. Poultry is very abundant and excellent.

The vineyards occupy 46,000 acres; the quantity of wine produced is very great, but the quality very inferior; yet some of the best table grapes in France are grown at Fontainebleau, and other places in this department. The gardens and orchards occupy above 18,000 acres. Some cider is made in the arrondissement of Melun. The woods occupy about 256,000 acres, of which 40,000 acres are included in the forest of Fontainebleau. The oak timber of this forest is very good, and it abounds in game.

The industrial products comprise paper, pottery, porcelain, printed calicoes, cotton yarn, leather, window-glass, &c. The glass factory of Bagneaux near Nemours turns out glass cylinders and globes of the largest size, also optical and common glass. The commerce of the department is confined chiefly to agricultural produce, wool, cattle, charcoal, and wood.

The department is divided into five arrondissements, as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Melun	6	97	62,205
2. Fontainebleau	7	100	78,917
3. Meaux	7	151	94,038
4. Coulommiers	4	77	54,984
5. Provins	5	99	54,932
Total	29	527	345,076

1. Of the first arrondissement and of the whole department the chief town is MELUN. Among the other towns, which are small, are Chaumes, near the Yères, a few miles N. by E. from Melun, population 1685; Brie-Comte-Robert, also near the Yères, population 2700; and Tournaï (population 1765), between the Yères and the Marne. Brie-Comte-Robert derives its distinctive epithet from Robert, Count of Dreux, brother of Louis VII., and lord of the town. Robert, son of this count, built the castle of Brie, of which the ruins remain. This castle was in the middle ages the object of frequent attack. There is an elegant church of Gothic architecture, which dates from the 13th century, and contains several remarkable tombs. There is also an hospital, almost as ancient as the church. The town is pleasantly situated, and has a considerable weekly market. There are brick-yards and tile-yards, tan-yards and curriers' shops. Considerable trade is carried on in corn, quills, and Brie cheese. Brie-Comte-Robert was the capital of Brie-Française. Tournaï is a pleasant town, with two fine mansions and parks, and several country-houses in the environs.

2. In the second arrondissement the chief town is FONTAINEBLEAU. Among the other towns is Château-Landon, population 2236, situated on a hill above the Suzain, a feeder of the Loing, 17 miles S. from Fontainebleau. There are quarries in the neighbourhood of hard stone susceptible of a polish like marble. The triumphal arch de l'Étoile in Paris is built of this stone. Spanish white is made in the town, and trade is carried on in corn and wine. The town is ancient; Childebert founded here the abbey of St-Séverin, and Louis le Gros, A.D. 1119, resided in a castle from which the town takes its name. The church of Notre-Dame, consecrated in 1548, contains some remarkable wood carving. Montereau, or Montereau-Fault-Yonne, population 4450, is on the site of the Roman Condatis. It afterwards obtained the name of Monasteriolum, from a religious establishment which formed the nucleus of the modern town. Montereau has acquired historical celebrity from being the scene (A.D. 1419) of the assassination of Jean sans Peur, duke of Bourgogne or Burgundy. The town and a strong castle which had been built here, were taken, A.D. 1420, by Henry V., and the duke of Bourgogne; it was retaken by the French, A.D. 1438. In the civil wars of the 16th century it was repeatedly taken and retaken. On February 18, 1814, a body of allied troops were defeated here by Napoleon. The town is situated at the junction of the Troyes railroad, 12 miles E. from Fontainebleau, at the junction of the Seine and Yonne, both of which are navigable, and crossed by good stone bridges. There are a collegiate church of considerable antiquity, a modern town-hall, and an hospital. The houses are tolerably well built, and there is a pleasant public walk along the Yonne. Earthenware, tiles and other pottery, and leather are manufactured; and trade is carried on in corn, flour, and firewood, for the supply of Paris. Moret, population 1672, 6 miles by rail from Fontainebleau, is surrounded by a dilapidated wall with three gates: there is one suburb. It has a ruined castle, which belonged to the great Sully, and a tolerably handsome Gothic church, at the dedication of which St. Thomas-a-Becket officiated. The streets are straight and clean, and the houses well built. There are several flour-mills and some tan-mills; and trade is carried on in horses, cattle, wine of middling quality, corn, flour, potatoes, wood, and paving-stones. The Loing Canal passes close by the town. Nemours, population 3547, stands 9 miles S. from Fontainebleau, in a pleasant valley on the river Loing, which is crossed by a fine bridge. It is walled, and has four suburbs; the streets are well laid out, and the houses well built. The ancient castle of the dukes of Nemours is yet standing, flanked by four towers, and surrounded by a ditch. In front of the castle is a square of some extent. The banks of the Loing Canal, which passes near the town, and of the river, afford some pleasant walks. There is a bridge over the canal. The parish church, formerly the conventual church of the Augustinian friary of St-Jean, is a large and handsome building, with a fine steeple; but it yields in antiquity to the church of St-Pierre in one of the suburbs. The hospital is attended, like most of the hospitals of France, by the Sisters of Charity. There are several tan-yards and hat manufactories, tan-mills, flour-mills, a brick and tile-yard, lime-kilns, marble-works, and a brewery. Vinegar is made, and trade is carried on in corn, flour, wine, cheese, wood, iron, coal, &c. There are two considerable weekly markets and five yearly fairs. There is a public library of 10,000 volumes deposited in the castle.

3. In the third arrondissement the chief town is Meaux, which occupies the site of the ancient *Latinum*, capital of the Meldi, whose name it afterwards took. It is situated in 48° 57' 40" N. lat., 2° 52' 54" E. long., 25 miles by railroad E.N.E. from Paris, and has tribunals of first instance and of commerce, ecclesiastical and communal colleges, and 8356 inhabitants in the commune. It is built on the Marne, and near the Ourcq Canal. The town is well but irregularly built. The cathedral of St-Etienne, founded in the 11th century, although uncompleted, is considered a masterpiece. It consists of nave, transept, aisles, choir, and sanctuary. Only one of the towers of the façade is finished. In the choir is a white marble monument of Bossuet, who was bishop of Meaux, and of whom some memorials are still preserved in the episcopal residence. In 1854 his tomb was opened, and the body of the great orator was found almost in a perfect state of preservation; his face was still recognisable from his portrait. Meaux

has a public library of 13,000 volumes, a town-hall, cavalry barracks, two hospitals, and a theatre. Cotton fabrics, pottery, flour, leather, saltpetre, and glue are the chief industrial products. There are important markets for corn and cheese, wool, cattle, and poultry. The ramparts of the town are planted with trees, and form agreeable public walks. Among the other towns are—*La Ferté-sous-Jouarre*: population 4 105 in the commune. It is pleasantly situated on the Marne, in which river there is a small island close to the town, 12 miles by railroad E. from Meaux. Round the town are a number of country seats and houses, and near it, on the right bank of the Marne, is the castle of Barre, flanked with towers, and commanding a beautiful prospect. There is an hospital. The chief trade is in the excellent millstones which are quarried near the town, and which are deemed the best in Europe. About 1200 pairs of these millstones are exported yearly, some of them to England and America. Woolecombers' cards, leather, iron, woollen-yarn, tiles, and pottery are manufactured; and boats are built for the navigation of the river. There are lime- and plaster-kilns and nursery-grounds near the town. Trade is carried on in corn, wood, and charcoal for the supply of Paris; and in cattle, sheep, and wool. On a hill above the town is the village of *Jouarre*, with a population of 2722. *Lagny*, population 2212, on the Marne, is pleasantly situated on the left bank of the Marne, over which there is a bridge, amid vine-covered hills and green pastures, 10 miles S.W. from Meaux, on the Paris-Strasbourg railway. There are a handsome fountain, an hospital, and several flour-mills. Considerable trade is carried on in corn, flour, wood, hemp, cattle, and cheese. *Dammartin*, population about 1800, a pretty little town on the road from Paris to Soissons, 12 miles N.W. from Meaux, stands on the slope of a hill which commands an extensive prospect. There are some pleasant shady walks, occupying the site of the former castle of the counts of Dammartin. There is a gothic church, built by Antoine de Chabannes, lord of Dammartin and minister of Charles VII. He is buried in the choir. There is an hospital. Lace is made here, and trade is carried on in corn, wine, and cattle. Dammartin has a good corn-market and important sheep fairs.

4. In the fourth arrondissement the chief town, *Coulommiers*, an ill-built place, is situated in a pretty country, on the Grand-Morin, 27 miles N.N.E. from Melun, and has 4151 inhabitants in the commune. It has a tribunal of first instance, flour- and tan-mills, tan-yards, and some commerce in corn, wool, hides, cattle, and cheese. Among the other towns are—*La Ferté-Gaucher*, which is agreeably situated on the Grand Morin, 10 miles E. from Coulommiers, and has an hospital, tan-yards, a tan-mill, and manufactures of serge and paper. In the neighbourhood are tile-yards and lime-kilns: population 2100. *Rebais*, a small place north of Coulommiers, which was formerly famous for its Benedictine abbey, founded by St. Ouen A.D. 634, and demolished at the time of the first French revolution: population, 1100. *Rosoy*, 11 miles S. by W. from Coulommiers, is a walled town, with about 1600 inhabitants. The walls are flanked with towers, and planted with fine trees. It has a parish church remarkable for the rich and delicate architecture of the interior, and an hospital.

5. In the fifth arrondissement the chief town, *Provins*, is 29 miles E. from Melun, and has tribunals of first instance and of commerce, a college, and 5958 inhabitants. It is a town of considerable antiquity. In the middle ages this was one of the principal manufacturing and trading towns in France; the chief manufactures were woollen-cloth and leather. Provins occupies an extensive area, part of which consists of gardens, vineyards, and fields, and is divided into two parts, the Upper Town on the west side, surrounded by walls, of which the greater part are standing; and the Lower Town, which is also surrounded by walls, except where it is contiguous to the Upper Town. Two small streams, the Vouzie and the Durtein (which unite to form a feeder of the Seine), pass through the town. The Upper Town has streets narrow and winding, and houses ill-built and decayed from age. There are several remarkable ruins, among which are those of the old fort, the citadel, the old castle, the chapel of St. Thibaut, the palace of the counts of Brie-Champagnaise, now occupied by the college, and the tower and church of St. Quiriace. The church of St. Quiriace, now the parish church of the Upper Town, is remarkable for its size and the beauty of its architecture: the choir has the same dimensions as that of the cathedral of Notre-Dame at Paris. It was begun in the 12th century, but has never been completed. The Lower Town, which is well laid out and well built, contains two churches, a general hospital, and cavalry barracks. Besides these buildings Provins has a civil and military hospital, a school of mutual instruction, a large corn-market, and several fountains. The manufactures are druggets and linsey-woolsey, earthenware, and conserve of roses. The Provins roses, from which the conserve is made, were brought from the East in the 13th century by Thibaut, count of Champagne, on his return from the crusade. There are chalybeate springs, which are well frequented in the season. Among the other towns, all of which are small, are *Bray-sur-Seine*, 11 miles S. from Provins, on the left bank of the Seine, which is here crossed by a stone bridge of 22 arches; population, 1800; and *Nangis*, a well-built market-town of 2200 inhabitants, 14 miles W. from Provins, with a gothic church of solid architecture; and two towers, the remains of the ancient castle of the marquises of Nangis: the park attached to the castle still remains.

This department constitutes the diocese of Meaux. It is included

in the jurisdiction of the High Court, and within the limits of the University-Academy of Paris; and is in the 1st Military Division, the head-quarters of which are in Paris. It returns three members to the Legislative Chamber of the French empire.

SEINE-ET-OISE, a department in France, bounded N. by the department of Oise, E. by Seine-et-Marne, S. by Loiret, W. by Eure-et-Loir, and N.W. by the department of Eure. The department of Seine is entirely inclosed by this department. The greatest length of Seine-et-Oise, from north-west to south-east, is about 70 miles; the greatest breadth, at right angles to the length, 52 miles. The area of the department is 2163.5 square miles. The population in 1841 was 470,948; in 1851 it increased to only 471,882, which gives 218.11 inhabitants to a square mile, being 43.53 above the average per square mile for the whole of France. The department is formed out of portions of the province of Île-de-France, and is named from its two chief rivers.

The surface is undulating; the hills, which are of only moderate height, being of gentle slope, and admitting of cultivation to the summits. A narrow strip along the western border is occupied by the cretaceous formations, and the rest of the department by the tertiary formations of the chalk basin of Paris. Excellent freestone for building, lithographic stones, gypsum, chalk, marl, potters'-clay, and peat are dug. There are mineral waters at Enghien-les-Bains; in the valley of Montmorency, 12 or 13 miles north of Paris; and at Montlignon, in the same neighbourhood.

The whole department belongs to the basin of the Seine, which river enters the department on the east side, not far from Corbeil, and flows through it in a north-western direction, but with many remarkable bends, until it finally quits it below the junction of the Epte. All the course of the river between these points does not however belong to this department, but part of it belongs to that of Seine, which, as already observed, is inclosed by this. The Marne has a small part of its course in the eastern part of this department; and the Oise flows for some miles through the northern part, from above Beaumont-sur-Oise to its junction with the Seine. These are the principal rivers, and all three of them are navigable throughout this department. Of smaller streams, the Yères and the Epte flow into the Seine on the right bank, and the Essonne and the Orge on the left: in the west of the department is the Yeagre, a feeder of the Eure. The Ourcq Canal crosses the east side of the department, from the department of Seine-et-Marne to that of Seine. The department is crossed by all the great lines of railroad which converge on Paris [FRANCE, vol. ii., col. 1077], and by the lines that connect the capital with Versailles, St. Germain, and Corbeil. The department is also traversed by the 26 great lines of high roads which lead to Paris from all parts of France; by 52 departmental roads; and by a great number of communal roads.

The climate is temperate and healthy. The soil, generally speaking sandy and by no means fertile by nature, is rendered productive by manure. About 906,000 acres, or about two-thirds of the area of the department, are under the plough. The principal crops are—wheat, barley, rye, mixed grain, oats, vetches, lentils, potatoes, and all kinds of pot-herbs. Pulse of every kind and hemp are cultivated.

The meadow and grass lands amount to 50,000 acres. The number of horses is very considerable. The ass is common. The number of milk-cows is very great; they are chiefly house-fed; their milk contributes to supply Paris and Versailles. The number of oxen and of bulls is small. Veal-calves are fed. Sheep are very numerous, and of good breeds.

The vineyards occupy about 41,000 acres: the wine is of inferior quality. Market-gardening is a profitable occupation; the gardens and orchards occupy above 22,000 acres. Filberts, walnuts, figs, peaches, apricots, cherries, strawberries, grapes, apples, pears, and other common fruits are grown abundantly and in great perfection. The apple and pear are cultivated in the north-west of the department, where the vine does not thrive, for making cider and perry which form the common drink of the inhabitants.

Poultry and fish are abundant; game has become rare. Bees are kept in some places. The streams and pools abound with fish, especially the trout, eel, carp, pike, and perch; the tench, barbel, roach, gudgeon, and bleak are taken, the last for its scales, which are used in the manufacture of imitation pearls. Leeches are obtained in some places.

The department is divided into six arrondissements, which, with their subdivisions and population, are as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Versailles . . .	10	114	149,846
2. Mantes . . .	5	127	58,483
3. Rambouillet . . .	6	119	67,509
4. Corbeil . . .	4	93	60,638
5. Fontainebleau . . .	7	161	94,077
6. Étampes . . .	4	69	41,329
Total . . .	36	683	471,882

1. Of the first arrondissement, and of the whole department, the chief town is VERSAILLES, which is united to Paris by two railways.

Among the other towns are—*Argenteuil*, on a hill above the Seine, 12 miles N.N.E. from Versailles: population, 4377. *St-Germain-en-Laye*. [GERMAIN-EN-LAYE.] *Meulan*, a station on the Paris-Rouen railway, 19 miles N. by W. from Versailles: population, 2000. *Poissy*, a station on the Paris-Rouen railway, 10 miles N. from Versailles, on the left bank of the Seine, with a large cattle and sheep market and 4000 inhabitants. *Rueil*, or *Rueil*, a pretty town, 5 miles N.N.E. from Versailles, with a population of 7284 in the commune, and a handsome church, which contains the tomb of the empress Josephine, whose residence, Malmaison, stands between the town and the Seine. *St-Cyr*, a small place of 1800 inhabitants, 3 miles W. from Versailles, and on the railway to Chartres, is famous for its special military school. [CYR, ST.] *Sèvres*, built at the foot of a hill, above the left bank of the Seine, 5 miles E. from Versailles by railway, is celebrated for its porcelain manufactures: population about 5000. *St-Cloud*. [CLOUD, ST.] *Meudon*, on the high ground above Sèvres, and a station on the Paris-Versailles railway; population of the commune, 3174. Besides the imperial palaces of St-Cloud and Versailles, there are many châteaux, parks and beautiful country residences in this arrondissement. At *Marly*, near Rueil, are the aqueduct and immense forcing machinery for raising the water that supplies the magnificent water-works of the park of Versailles.

2. In the second arrondissement the chief town is *Mantes*, which stands on the left bank of the Seine, 34 miles by railway W.N.W. from Paris, and has an ecclesiastical school, three hospitals, several tan-yards, breweries, and flour-mills, and a population of about 6000, including the suburb of Limay, on the right bank of the river. Among the other towns are *Houdan*, 16 miles S. from *Mantes*, on the road from Versailles to Dreux, population 2000; and *Rosny*, a village on the left bank of the Seine, 4 miles N.W. from *Mantes*, on the Paris-Rouen railway, population about 700. The Seine opposite *Rosny* contains several islands, in one of which is the château in which Sully was born, and to which he and Henri IV. retired after the battle of Ivry. At *Rosny* is the junction of the Cherbourg railway with the Paris-Rouen line. On the right bank of the Seine, below *Rosny*, are the ruins of the castle of Roche-Guyon, from which there are beautiful views of the valley of the Seine.

3. In the third arrondissement the chief town, *Rambouillet*, is situated on the railway to Chartres, 30 miles W. from Paris, 18 miles S.W. from Versailles, and has a tribunal of first instance and 3257 inhabitants. It is a clean well-built town. In the palace of *Rambouillet*, which stands in a fine park and gardens laid out by Le Nôtre, Francis I. died in 1547. The Forest of *Rambouillet* is traversed in all directions by fine roads. Charles X., in his flight from Paris in 1830, took refuge for a short space at *Rambouillet*. Among the other towns are *Dourdan*, 12 miles S. by E. from *Rambouillet*, in the valley of the Orge, and near the forest of *Dourdan*, population 2400; and *Montfort-l'Amaury*, an ancient place with only 1800 inhabitants, 9 miles N. from *Rambouillet*, remarkable for the ruins of its ancient castle, the seat of the ancestors and descendants of Simon de Montfort. The ruins have been cleared of rubbish and planted with trees, so as to form shady promenades. Of the castle of *Dourdan*, which, with its domain, formerly belonged to the Bourbons, there remain the keep and eight other towers, united by a curtain flanked with bastions and girt by wide deep ditches.

4. In the fourth arrondissement the chief town, *Corbeil*, is situated 18 miles by railway S. from Paris, on the left bank of the Seine, at the mouth of the Essonne, and has a corn-market, large flour-mills, and manufactures of Cashmere shawls, cotton stuffs, pottery, &c.: population of the commune, 4645. A bridge across the Seine connects the town with *Corbeil-Vieux*, on the right bank. Among the other places of note are *Arpajon*, formerly called *Châtres*, a pretty town of 2234 inhabitants, surrounded by fine shady walks, 10 miles W. from *Corbeil*: *Essonne*, one mile W. from *Corbeil*, population 3600; *Longjumeau*, a pretty village on the Orléans road, population 2000; and *Mont-l'Héry*, an ancient well-built walled village, between *Longjumeau* and *Châtres*, population 1700. There was formerly a very strong castle at *Mont-l'Héry*, of which the keep, 108 feet high, still remains. Louis XI. was defeated by Charles of Burgundy in a bloody battle fought near *Mont-l'Héry* in 1465.

5. In the fifth arrondissement the chief town *Pontoise* is situated on the right bank of the Oise, 18 miles from Paris by the railway to Amiens, and has 5370 inhabitants in the commune. It is a well-built old town, with narrow streets, and remains of an old castle, and inclosing walls. The town, which is named from the 'bridge over the Oise,' has a tribunal of first instance, a college, a public library, an agricultural society, a theatre, a school of mutual instruction, and several private schools. Steel ornaments, clocks and watches, mineral acids and other chemical preparations, starch, cotton-yarn, and leather are manufactured; and trade is carried on in corn and flour for the supply of Paris, gypsum, and cattle. There is a great number of corn-mills on the Oise, or on the Viosne, a small stream which here joins the Oise. Among the other towns are *Beaumont*, on a high hill above the Oise, 12 miles N.E. from *Pontoise*, population 2000; *Gonesse*, the birthplace of Philippe Auguste, in a rich wheat district, in the east of the department, population 2000; *Isle-Adam*, a station on the Paris-Amiens railroad, 7 miles N.E. from *Pontoise*, population 1700; and *Montmorency*, or *Enghien*, 10 miles by railway S.E. from *Pontoise*, GEOG. DIV. VOL. IV.

population 2100, is on a hill commanding the picturesque and beautiful valley of *Montmorency*. The streets are steep, but there are some good houses. The market-place is large but irregular, with a market-house in the middle. The parish church is a gothic building of the 16th century. Near the town is the *Hermitage*, a small house, celebrated as the retreat of Jean Jacques Rousseau, and of the musical composer Grétry, who died here in 1813, and is buried in a tomb in the garden. In the valley near the Lake of *Montmorency*, or pond of *St-Gratien*, are mineral springs and baths.

6. In the sixth arrondissement the chief town is *Étampes*. *Milly*, E. of *Étampes*, on the south-eastern border of the department, has a good corn-market, and above 2000 inhabitants.

The department constitutes the diocese of Versailles, and is under the jurisdiction of the High Court, and within the limits of the University-Academy of Paris. It is in the 1st Military Division, of which Paris is head-quarters. It sends 4 members to the Legislative Chamber of the French empire.

(*Dictionnaire de la France; Annuaire pour l'An 1853; Annuaire du Commerce; Official Papers.*)

SEINE-INFÉRIEURE, a department of France, is bounded N. and N.W. by the British Channel; S.W. by the department of Calvados, from which it is separated by the Seine; S. by the department of Eure, from which also it is in some places separated by the Seine; S.E. by the department of Oise; and N.E. by that of Somme. It lies between 49° 17' and 50° 4' N. lat.; 0° 5' and 1° 45' E. long. Its greatest length is 76 miles; its greatest breadth from north to south is about 45 miles. The area is 2332.7 square miles. The population in 1841 was 737,206; in 1851 it amounted to 762,039, giving 326.676 to the square mile, or 152.092 above the average per square mile for the whole of France. The department is formed out of several districts of Normandy, and named from its comprising a portion of the basin of the Lower Seine.

The department is almost entirely included in the district occupied by the cretaceous formations. The coast has a rounded outline, presenting no remarkable headland except Cape la-Hève; it is lined nearly throughout by chalk cliffs, broken at intervals by the openings through which the rivers fall into the sea: the only harbours along the coast are formed by these openings. The cliffs vary in height from 150 to 700 feet, which elevation they attain near *Fécamp*. None of the hills are very lofty: the principal are a remote branch from the Ardennes, which cross the department from the east side to Cape la-Hève, which forms their termination, and separate the waters which flow into the Seine from those which flow into the English Channel; they consist of chalk. Marl abounds in several places, and sand, which is used in the manufacture of glass. Brick-clay, pipe-clay, and clay suited for sugar-refiners, for making crucibles, earthenware, and fine porcelain, are procured; limestone and sandstone are also obtained, and there is marble of various kinds, but in small quantity. A small quantity of peat is obtained, and iron-stone is said to have been formerly procured near *Forges-les-Eaux*, on the east side of the department, between *Neufchâtel* and *Gournay*. There are mineral waters at *Forges-les-Eaux*, *Aumale*, *Gournay*, and *Rouen*.

The department, south of the range of hills mentioned above, belongs to the basin of the Seine, which first touches the department on the south side, and has the remainder of its winding course (97 miles by the river, and only 48 miles in a direct course) navigable throughout, upon or within the boundary of the department. The principal feeders of the Seine are the Epte and the Andelle, of which two only the sources and the upper part of their course belong to this department, the Cailly, the Austreberte, the Bolbec, and the Lézarde, all small streams which fall in on the right bank. Of the streams which flow into the Channel the principal are, proceeding from east to west, the Bresle, which bounds the department on the east side, the Yères, the Arques, which receives the Béthune and the Eaulne, the Seye, or Scie, the Saanne, and the Durdan. The length of the Bresle, which is the most considerable of them, may be estimated at 35 miles.

The department is traversed by the railroad from Paris to Rouen, where there are lines to Havre and Dieppe. A new line has been recently authorized from Rouen to Bernay, where it joins the Paris-Cherbourg line. Common roadway accommodation is afforded by 13 state roads, 28 departmental roads, and a great number of communal roads.

The climate is moist, especially along the coast and on the eastern side of the department. The soil is varied, but generally fertile. Two-thirds of the department are under the plough. Agriculture is on the whole flourishing. The mode of cultivation in the peninsula of Caux, formed by the Seine and the English Channel, which constitutes the arrondissement of Havre, is much like that of French Flanders. The farmer is distinguished by his neatness, by the comfortable furniture of his house, the plantations of oaks, elms, beeches, and pines round his homestead, and the neatness and productivity of his garden, inclosed by a quickset hedge. The rotation of crops is usually triennial, and the fallow of the third year has been generally superseded by a crop of trefoil, flax, peas, vetches, rape, &c. The manures employed are dung, marl, and gypsum. Thrashing-machines have been introduced.

The produce of the department in corn is very considerable. In wheat it considerably exceeds the average produce of the departments

of France; in barley, oats, rye, maslin, and in potatoes, the produce falls short of the average. Peas, beans, vetches, lentils, turnips, rape, cole, hemp, and flax are cultivated. The principal corn districts are in the centre of the department. The eastern side has a greater proportion of pasture; the cultivation of the oleaginous seeds, rape, cole, &c., characterises the coast, and the banks of the Seine are altogether less productive than the other parts, although possessed of much picturesque beauty. The corn produce does not suffice for the large population of the department.

The meadows and grass-lands occupy about 70,000 acres, and the heaths and open pastures about 45,000 acres. The grass-lands are chiefly in the valleys and along the banks of the rivers. The number of horses is very great; they are the only animals employed in agriculture. They are good for draught and other labour. Horned cattle also are very numerous, but of inferior breed to those of the departments of Calvados and of La-Manche. The number of sheep is considerable. The native sheep have been replaced by mixed breeds, which give a tolerably fine wool. But as may be expected the fleece is of less consideration with sheep-farmers than the carcasses, where the population is so dense. The sheep-pasture on the downs along the coast, especially in the neighbourhood of Dieppe, supply excellent mutton. Goats are not common, but those of Tibet have been tried with success. Swine and poultry are abundant; the pullets of the district of Caux and the ducks of Rouen are in high repute. The Seine abounds in salmon, sturgeon, soles, eels, &c. Large flats of barks, between 30 and 90 tons, with crews of from 15 to 30 in number, are employed in the mackerel, oyster, and herring fisheries.

There are no vineyards in the department, but the quantity of orchard and garden ground is 150,000 acres. The apple and pear are the fruits chiefly cultivated; the cider and perry made from these constitute the principal drink of the common people. Walnuts are grown in the east of the department.

The woodlands occupy about 170,000 acres. There are few extensive woods, but innumerable small plantations round the farm-houses and in the hedge-rows, which serve to supply the wants of the farmer. Turf is the fuel used by many, but pit-coal is largely imported by manufacturers and others. The oak, the beech, and the hornbeam are the trees chiefly grown; but the ash, the elm, the birch, the fir, the aspen, the maple, the chestnut, the wild cherry, and the lime-tree are also common.

The department is distinguished for its numerous and valuable industrial products, comprising all articles of cotton manufactures, broadcloths, flannel-erge, linen, and mixed cloths, lace, watch and clock movements, pottery, window-glass, bricks, sugar, silks, chemical products, leather, &c. There are numerous and extensive bleach-works, cotton printing-works, metal-foundries, steam machine-mills, and shipbuilding-yards. Rouen is the great centre of the cotton manufacture, the different processes of which are carried on in extensive factories worked by steam-machinery; hand-loom weaving is also carried on in almost every hamlet and house. The linen of Fécamp is in high repute. The commerce with the interior of France and with foreign countries is very extensive and important. [ROUEN; HAVRE; DIEPPE.]

The department is divided into five arrondissements, as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Rouen	15	186	256,329
2. Dieppe	8	168	113,357
3. Le-Havre	9	122	166,261
4. Neufchâtel	8	144	84,204
5. Yvetot	10	169	139,988
Total	50	759	762,039

1. In the first arrondissement are—**ROUEN**. *Caudec-le-Elbauf*, 12 miles S. from Rouen: population, 6000. *Darnetal*, 24 miles E. from Rouen: population, 6000. [ELBAUF.] *Barentin*, population 2500, and *Pavilly*, population 2700, both N.W. of Rouen, in the Aустreberta. Pavilly has manufactures of soft-soap, linen, paper, and cotton-yarn; and the townsmen carry on trade in grain, linen, flax, and cattle and poultry. There are several large villages: as *Denville*, population 4100; *Maromme*, population 3000; and *Malanay*, all on the Cailly; *St. Martin du Vivier* and others near Rouen, the inhabitants of which are engaged in the cotton manufacture, of which Rouen is the centre.

2. In the second arrondissement are—**DIEPPE**; **EU**; and **Tréport**, a small sea-port, with a tide-harbour, connected by a canal with Eu, from which it is about two miles distant. The town has about 3100 inhabitants, chiefly engaged in the fisheries and the coasting trade. Vessels of 800 tons can enter Tréport. There are wet docks and baths in the town. Tréport, Eu, and some adjoining hamlets have been recently incorporated, so as to form one town, to be called Tréport, the total population of which is above 10,000.

3. In the third arrondissement are—**HAVRE**. *Bolbec*, a well-built manufacturing town, 18 miles by railroad N.E. from Havre, is situated on the slope and at the foot of a hill above the river Bolbec, and has 10,000 inhabitants, who manufacture cotton and woollen stuffs of various kinds, and leather, and trade in corn, horses, and cattle.

Étretat, a coast village and bathing-place, situated in a hollow between the cliffs, about 12 miles from Havre, has a handsome church and about 1800 inhabitants, engaged chiefly in the oyster and herring fisheries. The oysters of Étretat are in high repute; they are brought from the Bay of Cancale, and fed in what is called an oyster-park, cut in the rock, and flooded by a mixture of fresh and salt water. A ruined chapel near the sea is supposed to date from the 8th century. The roadstead of Étretat is deep, well sheltered from all winds that blow from west to north-west through south, and has a good bottom. It has been more than once in contemplation to form a great naval harbour here. *Fécamp*, situated in a long narrow valley screened by steep cliffs several hundred feet high, at the mouth of the river Fécamp, is a sea-port town, 22 miles N.N.E. from Havre, and has 10,000 inhabitants. The harbour, formed by jetties, is frequented by fishing-craft, Baltic timber-vessels, and colliers. The principal structure is the handsome church of Notre-Dame, which dates from the 13th century. The town has a tribunal of commerce, a school of hydrography, cotton-mills, sugar-refineries, tan-yards, ship-building yards, &c. Vessels are fitted out for the herring, cod, and mackerel fisheries. There is also an active coasting trade. *Harfleur*, a small village of about 1700 inhabitants, near the mouth of the Lézarde, on the right bank of the Seine, was in the middle ages an important harbour and fortress, enriched by industry and commerce. In its prosperity Harfleur was attacked, and, after a vigorous defence, taken by the English under Henry V. (1415), who expelled the inhabitants and re-peopled the town with English. It was gallantly retaken (1433) by the surrounding peasantry; taken again by the English in 1440; and finally wrested from them about ten years afterwards by Charles VII. of France. The former harbour is now dry, and above a mile of unhealthy marsh separates the town from the Seine; but small boats come up the Lézarde to the town when the tide is in. There is a beautiful gothic church, the elegant tower of which is crowned by pinnacles at the angles, and by an octagonal spire connected with the pinnacles by flying buttresses. This church was built by the English as a memorial of the victory of Agincourt. *Lillebonne*, situated at the foot of a hill in a wooded valley watered by the Bolbec, 19 miles E. from Havre, was the *Julsobona* of the Romans, the chief town of the Caleti. Five Roman roads met here. A great number of Roman antiquities have been found at Lillebonne, and new researches are continually increasing the number; among the most important are the remains of a theatre, an aqueduct, and several tombs, besides medals, statues, and other antiquities. The dukes of Normandy had a castle here, the ruins of which are worthy of notice from their extent. An old circular tower, probably the keep, is said to have been built by William the Conqueror; its wall is full 10 feet thick. The town has 5100 inhabitants, who manufacture cotton-yarn, calico, and leather, and trade in cloth, groceries, hardware, and cattle. There are two yearly fairs. The valley of the Bolbec, between Lillebonne and the town of Bolbec, is studded with cotton-factories and tan-yards. *Montivilliers*, in the valley of the Lézarde, 6 miles N.N.E. from Havre, with above 4000 inhabitants, had in the middle ages a wealthy abbey, of which the church remains. The tower is of Norman architecture of the 11th century; the rest of the building is of various dates, but handsome as a whole. The town is neat and beautifully situated. There are, besides the above-mentioned church, a Calvinist chapel. The townsmen, who were eminent in the 14th century for the manufacture of woollen cloth, carry on the same manufacture now, and they also make lace, cotton-yarn, leather, and paper. There are linen bleach-grounds and a sugar-refinery.

4. In the fourth arrondissement are—*Neufchâtel*, population 3486 in the whole commune, distinguished as Neufchâtel-en-bry, is on the slope of a hill near the right bank of the Bethune, in a hilly and woodland country affording good pasturage, 26 miles N.E. from Rouen, and has tribunals of first instance and of commerce, and manufactures of woollen cloth, hosiery, leather, beer, and glass. The town is not well built; it has an hospital and a prison. It was formerly capital of the district of Bray, and was repeatedly taken by the English or by the contending parties in the civil strifes of France. There was a castle built by Henry I. of England, which gave name to the town. Previously it had been a mere village named Drien Court. Trade is carried on in flour, butter, and in the little cream-cheeses of the district, called Neufchâtel cheeses. *Aumale*, population 1793, on the Bréle, 12 miles E. from Neufchâtel, on the slope of a hill above the Bréle. It is famous for the battle between the forces of the League, under the Duke of Parma, and the army of Henri IV., who was wounded in the action, and had a narrow escape for his life. *Forges-les-Eaux*, population 1700, on a hill near the forest of Bray, 12 miles S. by E. from Neufchâtel, has mineral springs. Crucible earth of the best kind is found here. *Gournay*, population 3200, 24 miles S.E. from Neufchâtel, is situated on the Epte, and has a tribunal of commerce, a good butter market, and manufactures of linen, leather, porcelain, and glass. It is thought to have originated prior to the settlement of the Normans. During the existence of the duchy of Normandy, it was of importance as a frontier town towards the domains of the French king. It is a small clean well-built town, surrounded with a pleasant boulevard. The church of St. Hildevert was built between the end of the 11th and the 13th centuries, and the

architecture varies with the date of erection; the interior is of Norman architecture, but in the west front the pointed arch is used. The heart of Blanche of Castille, St. Louis's mother, was deposited in this church. *St-Saens*, on the Arque, 9 miles N.W. from Neufchâtel, population 2500, has manufactures of linen, glass, leather of various kinds, and glue; there are twelve yearly fairs; trade is carried on in corn, wood, cattle, and hides.

5. In the fifth arrondissement the chief town, *Yvetot*, is situated in a fertile plain, 23 miles by railway N.W. from Rouen, and has tribunals of first instance and of commerce, and about 10,000 inhabitants. The town is old; the principal street is nearly $2\frac{1}{2}$ miles long, and lined with timber-framed houses roofed with slates. It was formerly a place of great trade. The sires of Yvetot are styled kings in old chronicles, and an edict of the exchequer of Normandie qualifies them with this title. Yvetot has linen and cotton factories, and a considerable trade in cattle, sheep, and agricultural produce. *Allouville*, about 4 miles from Yvetot on the road to Havre, though only a village of 1300 inhabitants deserves mention on account of its oak, which is about 900 years old, 15 yards 3 feet in girth near the ground, and nearly 9 yards at the height of a man's head. Branches from two to three yards in circumference spring out from the trunk, and cover a vast space. The trunk of this enormous tree is hollow; the interior wainscotted and painted in marble colours, was fitted up as a chapel, and dedicated to Notre-Dame de-la-Paix in 1696. The top of the oak is formed into a bell-tower, and is surmounted by an iron cross. *Caudebec*, 6 miles S. from Yvetot, on the right bank of the Seine, has a population of 2700. It was formerly the capital of Caux, and was often taken by the English in the wars of the 15th century. The old fortifications that baffled for six months the skill of the great Talbot, have entirely disappeared. *Caudebec* has a harbour lined with quays, but it is little frequented by shipping. *Doudeville*, 8 miles N.W. from Yvetot: population, 3700. *St-Valery-en-Caux*, a small sea-port with a tribunal of commerce, and about 6000 inhabitants, is pleasantly situated 18 miles N. from Yvetot. The mackerel, herring, and cod fisheries are carried on with great activity. There is a good deal of business done in linens and cotton goods: and Baltic and Norway timber for shipping, wine, brandy, &c., are imported.

The department constitutes the diocese of Rouen: it is under the jurisdiction of the High Court of Rouen, and within the limits of the University-Academy of Caen. It is included in the 2nd Military Division, of which the head-quarters are at Rouen. It sends 6 members to the Legislative Chamber of the French empire. There are several fine ruins in this department, among which we can only mention the abbey of Jumieges on the banks of the Seine below Rouen, and the remains of the castles of Rouen, Dieppe, and Arques.

SEINE-MARITIME, a department in France, recently constituted with Havre for its chief town, extends along the coast of the English channel from the Seine to the Bresle. It is formed out of the coast portion of Seine-Inférieure, which bounds it on the south. The Bresle separates it from the department of Somme. It is divided into five arrondissements, Havre, Fecamp, Yvetot, Dieppe, and Tréport. Étretat and Criel, a small coast village, west of Tréport, are made chief towns of cantons. The tribunal of commerce of St-Valery is suppressed, and that of Yvetot transferred to the more important town of Bolbec.

A change has also been made in the limits of Seine-Inférieure, to which that portion of the territory of the department of Eure that lies east of the Seine to the Epte is added. Seine-Inférieure, by this arrangement, has Seine-et-Oise to the south-east; and out of the new territory two new arrondissements, Elbouf and Gournay, are chiefly formed. At Gournay, the railways authorised to be made from Amiens to Rouen, and from Beauvais to Tréport through Aumale, are to meet. In the absence of any official return, it is useless to offer any conjecture as to the area or the population of the new department; though these may be very nearly ascertained by consulting the articles EURE and SEINE-INFÉRIEURE, which have been described as they stood previous to the recent alterations.

SEISDON, a hundred in Staffordshire, which has given name to a Poor-Law Union composed of several parishes in the south division of the hundred. Seisdon Poor-Law Union contains 12 parishes and townships, with an area of 43,574 acres, and a population in 1851 of 13,857. The Union workhouse is at Tettenhall, about two miles north-west from Wolverhampton, and about eight miles north-east from the village of Seisdon.

SEISTAN, called also *Segestan*, is a province, or rather a country, situated in the eastern part of the table-land of Iran, and inclosed within the boundaries of the kingdom of Afghanistan. Taken in the larger signification which is sometimes given to it, Seistan comprehends the countries between 30° and $32^{\circ} 30'$ N. lat., 61° and 65° E. long., a space the area of which considerably exceeds 36,000 square miles.

On the north of Seistan is the extensive mountain-region known to the ancients under the name of Paropamisus, and called by modern geographers the Mountains of Hazareh and Eimack, from the name of two tribes which occupy the most elevated part of it. On the east is the Plain of Kandahar, which may be considered as the eastern prolongation of that of Seistan, though it constitutes a different political division, and is excluded from this notice. On the south is the Desert

of Beloochistan. [BELOOCHISTAN.] The western boundary is formed by a chain of lofty hills, which appears to extend across the table-land of Iran nearly south and north.

Surface.—The Plain of Seistan, with the adjacent valleys, and the Plain of Kandahar and its dependencies, constitute a closed basin. No water which descends on it ever reaches the sea. The southern part of the plain is a desert, large tracts of which are level and without vegetation. In a few places the soil is impregnated with salt. The country is inhabited by some tribes of Beloochees, who wander about with their herds.

The country on the north of the Helmund slopes to the south, not regularly, but in a series of terraces. The basin of the Lake of Seistan is the lowest terrace, in which consequently all the waters that descend into the plain and the surrounding mountains are collected. The whole of this tract approaches to the nature of a desert. The surface generally consists of a hard earth, mixed with rocks and low hills: the soil, except in the bottoms of the rivers, is of a very indifferent quality. These plains supply herbage and water during great part of the year to the numerous herds of camels and sheep of some tribes of the Dóranees. There are permanent villages among the cultivated lands, but by far the greater part of the inhabitants are scattered over the face of the country in tents. As the mountains of Hazareh are covered with snow for several months, they give origin to many rivers, which in the season when the snow melts become deep and rapid streams, and run southward either to the Helmund, or fall into the Lake of Seistan. The water of these rivers is used to irrigate the bottoms of the river valleys, and thus a portion of this region is fitted for cultivation, and produces abundant crops.

The Lake of Seistan is called by the natives *Hamoon*, a name which designates a plain covered by a sheet of water. It bears also the distinctive name of the Lake of Koh-i-Khwajeh, from a hill which is surrounded by the lake, and which is not far from its eastern bank. It is the *Aria Palus* of the ancients, to which another name it bears, *Zarab*, has some resemblance. The lake extends (between 61° and 62° E. long., and 31° and 32° N. lat.) about 70 miles from south-south-west to north-north-east, and has an average breadth of 18 miles, except towards its northern extremity, where it widens to more than 30 miles. In these wider parts of the lake there formerly existed a separate lake, called *Dúk-i-Teer*, which was divided from the Hamoon by an isthmus of moderate width, but not many years ago the Helmund changed its course, and instead of carrying its waters to the great lake, it sent them to the *Dúk-i-Teer*, and the isthmus was carried away by the waters, so that the two lakes are now only one. The *Dúk-i-Teer* is a large sheet of water thickly studded with reed-topped islands, its depth averaging about 4 feet, and having a very muddy bottom. Along its northern banks the water is not so deep, and the reeds are not in patches, but cover the whole surface. Here and there patches of blue water appear between the reeds, but it is only towards the south-west that there is a large sheet of water clear of rushes and reeds. The water of the Hamoon, although salt, is generally used.

The level country which surrounds the Hamoon may be called the Plain of Seistan Proper. On the west it extends to no great distance from the banks of the lake, and seems to be sterile. On the north and east it stretches to the distance of 20 or 30 miles, and to the south-east and south 50 miles and more. It is entirely composed of flats, with the exception of one hill, and in its whole extent not a stone is found, except a few rounded pebbles in the beds of the rivers. The soil is either the light earth of the desert, or the still lighter alluvial deposit of the rivers. Ruins of ancient towns are traceable in several parts.

Rivers.—All the rivers which originate on the southern and western slope of the mountains that surround the Plain of Seistan on the north and east, fall into the Hamoon. They partake of the nature of mountain torrents, at one time of the year rushing down with great violence, almost black with mud, and at others being either quite dry, or flowing in a clear, languid, and shallow stream. The largest of these rivers are the Helmund, the Khash-rood, the Furrak-rood, and the Adrascond. The *Helmund* is noticed in the article AFGHANISTAN (vol. i. col. 89). When about 15 miles from the lake it divides into several arms near Khwajeh Ahmed. The Helmund, in the dry season, is never without a plentiful supply of water; during the swell it comes down with astonishing rapidity, and is said to be equal in size to the Jumna. Its course probably exceeds 400 miles. The *Khash-rood* falls into the *Dúk-i-Teer* at no great distance from the new mouth of the Helmund. This river rises in the lower declivity of the mountains of Hazareh, and flows within their range south-east. It enters the plain near Dilaram, and then runs south-west to its embouchure. The course of the Khash-rood exceeds 100 miles, but in summer it is nearly dry. The *Furrak-rood*, which falls into the north-eastern extremity of the old Hamoon, rises likewise in the lower declivities of the mountains of Hazareh, towards the western extremity of the mountain region, and its course is mostly to the south-west and south. It enters the lake about 20 miles south of Laush. Its course exceeds 100 miles. This river is nearly dry for the greater part of the year; water is however confined in many places by bunds or natural hollows, and is always to be found by digging a few feet into the bed, which is the case with most of the rivers of this part of Asia. During the spring it is a broad and rapid river. The *Adrascond*, or *Heri-rud*,

falls into the Hamoon, about 12 miles west of the Furrâh-rod, and is about the same size. This river waters the Plain of Herat, through which it runs from east to west, rising a considerable distance east of that town. It afterwards turns to the south-east, and crosses the high-road from Kandahar to Herat, about 50 miles south of the latter. After flowing east by south through the Plain of Subzawer it sweeps round to the west, but gradually turns to the south, in which direction it enters the Hamoon. The *Ibrahim-loom* drains a part of the country between the Khash-rod and the Furrâh-rod, and terminates in a marsh.

The Vale of the Helmund contains a fertile strip of ground, called the Gurmair, or hot country, of about two miles average width. It stretches along the bank of the river, and is a rich tract, well cultivated, and full of orchards, in which the mulberry-tree is very plentiful. The vales of the Khash-rod and Furrâh-rod contain numerous inhabited places. Their vales are traversed by the wild hordes of the Beloochees. The Vale of the Adrasound is only to a small extent capable of cultivation.

Climate.—Our information respecting the climate of Seistan is very scanty. The heat in summer is oppressive. For nearly half the year a strong steady wind blows from the snowy mountains which lie to the north. This wind is confined to a breadth of about 80 miles, between the range of hills west of the Hamoon and the town of Khash. During the prevalence of this wind the days are very hot, but the nights are generally cold. It affects the eyes of the inhabitants, particularly by the dust which it raises, and which is mixed with particles of salt. During the three months of the winter the weather is very pleasant, and similar to that in the north-west part of Hindustan. Snow rarely falls in Seistan. The climate however is generally unfavourable to human life, which is mainly to be attributed to the immense quantity of stagnant water, especially in the vicinity of the Hamoon.

Productions.—Wheat, rice, and some coarser grains, are cultivated. Cotton is extensively raised: the plant is not half the height of the Indian one, but it bears a large pod. Large water-melons are raised in enormous quantities on the margin of the Hamoon. The largest tree in the Plain of Seistan Proper is a prickly pomegranate. The Gurmair is well stocked with mulberry-trees.

There is hardly a horse in the country. The mortality which prevails among them is generally attributed to the irritation produced by the flies, with which the country swarms at certain seasons. The few horses which are kept for state are tended with the greatest care in dark stables, from which they only come out on important occasions, except during the winter. Camels are numerous in the Gurmair, and in the desert to the south-east of Seistan proper. Sheep and goats constitute the principal wealth of the pastoral tribes which inhabit the deserts. The sheep are of the broad-tailed kind. Mules and asses are numerous, and thrive well. The cattle are of good size, and much valued in the neighbouring countries. The more common wild animals are wolves, jackals, hyenas, porcupines, hedgehogs, and kangaroo-rats. The skins of the otters are exported to Bokhara. The marshy and rocky parts of the Hamoon shelter innumerable wild hogs, which are very destructive to the fields. They are hunted with trained dogs, which are large, strong, bold animals. Wild asses and deer abound in the desert which lies between the Hamoon and the hills west of it. In these hills leopards are met with, and in the desert north of the Helmund there are antelopes. Water-fowl in incredible numbers appear during the time of the inundation. Geese, ducks, and teal are domesticated. Fish are plentiful in the rivers as well as in the Hamoon. Mosquitoes are very troublesome during the hot season.

Common salt is the only mineral which abounds in Seistan. It is found in patches in various parts of the desert. Saltpetre may be obtained in numerous places. The plain of Furrâh is a saltpetre marsh.

Inhabitants.—The country north of the Helmund and the Gurmair is inhabited by tribes of the Dóranees [AFGHANISTAN], but in some parts of the desert it seems that the Beloochees have settled. Of Seistan proper the original inhabitants appear to have been Tajiks. Two considerable tribes called Shekrukes and Surbundes, from Persian Irak, subsequently settled in the delta of the Helmund. The tribes of the Beloochees, which are settled on both sides of the Helmund as far as Seistan proper, and also occupy the southern banks of the Dák-i-Teer, formerly lived in tents, and subsisted by pasturage and pillage; but they have now applied themselves with industry and success to husbandry, and have adopted the dress and manners of the other tribes of Seistan.

Towns.—*Dooshak*, which by Captain Conolly is called *Dushtuck*, in Seistan proper, contains about 2000 houses, and is built on the ruins of a much larger place, which is called Jellalabad. Other important towns noticed by travellers are *Boorji*, *Chuling*, and *Sekoha*, which appear to be large and well-built towns. In the vale of the Furrâh-rod two considerable places are named, *Laush* and *Furrâh*. Furrâh is stated to be a very large walled town, with some commerce. The most important places in the vale of the Khash-rod seem to be *Kuddeh* and *Khash*.

Government.—Seistan, as a province of the kingdom of Afghanistan, is governed by a *haukim*, who collects the revenue and commands the

militia, and a *sirdar*, who commands the regular troops. Their authority is considerable in the populous districts, where the power of the heads of the tribes is not great; but among the Beloochees and other nomadic tribes their influence is small.

Seistan constituted a great part of the province Aria of the Persian empire; but as none of the great thoroughfares of Asia traverse this part, we are very little acquainted with the state in which it was at that time. No European traveller visited this country before 1788, when George Forster, in his 'Journey from Bengal to England,' in passing along the road leading from Kandahar to Herat, travelled along its northern boundary. In 1810 Captain Christie traversed it from south to north, departing from Nooshky in Beloochistan, and passing through the lower vale of the Helmund to Furrâh and Herat. Events in Afghanistan in 1839 and subsequent years have somewhat added to the information we possess in reference to these countries.

SELBORNE. [HAMPSHIRE.]

SELBY, West-Riding of Yorkshire, a market-town, and the seat of a Poor-Law Union, in the parish of Selby, is situated on the right bank of the river Ouse, in 53° 47' N. lat., 1° 6' W. long., distant 14 miles S. by E. from York, 181 miles N.N.W. from London by road, and 175 miles by the Great Northern railway. The population of the town in 1851 was 5109. The living is a perpetual curacy in the arch-deaconry and diocese of York. Selby Poor-Law Union contains 24 parishes and townships, with an area of 47,830 acres, and a population in 1851 of 14,365.

The town is tolerably well built, paved, lighted with gas, and supplied with water. The Ouse is navigable to Selby for vessels of about 200 tons burden. An excellent timber bridge crosses the Ouse, and opens to permit vessels to pass. The town possesses a town-hall, built in 1825, and a neat building for public meetings, assemblies, &c., erected in 1841. There is a fine old gothic market-cross. The church is part of an abbey of Benedictine monks, which was founded by William the Conqueror in 1068, and was the only mitred abbey, except St. Mary of York, north of the Trent. The church is a magnificent cruciform structure, about 300 feet long, and 60 feet wide. The south transept was destroyed near the close of the 17th century by the fall of the upper part of the central tower. The nave is a fine specimen of Norman architecture; the choir is decorated; beyond it is a very beautiful lady chapel. There are places of worship belonging to the Wesleyan and Primitive Methodists, Independents, Baptists, Quakers, Unitarians, and Roman Catholics; a Free Grammar school, Free schools, the Feoffee's school, and schools supported by the Wesleyan Methodists and Roman Catholics; also a mechanics institute and a news-room. A canal from Selby joins the Aire and Calder navigation, and thus communicates with Leeds. There is a branch custom-house at Selby, so that vessels can proceed direct to any part of the kingdom. Iron- and brass-founding, boat- and barge-building, sail-making, the manufacture of rope- and shoe-thread, brewing, and tanning are carried on. The market on Monday is a considerable one for agricultural produce. Fairs, chiefly for cattle, are held on Easter Monday, the Monday after June 21st, and October 11th; and a wool fair on the first three Fridays in June. Petty sessions and a county court are held in the town. Henry I. was born at Selby in 1068.

SELEUCEIA, a town of Assyria, on the right bank of the Tigris, and a few miles to the south of the modern Baghdad, was built by Seleucus Nicator, in the form of an eagle with extended wings. (Plin., vi. 30.) It became, at the expense of Babylon, the most important city in the east; but declined in population after the foundation of Ctesiphon by the Parthians, on the eastern bank of the Tigris. It contained, in the time of Pliny, 600,000 inhabitants. A republican institution was given to it by Seleucus, which it retained under the Parthians. (Tacit., 'Ann.,' vi. 42.) It was burnt by the Romans in the expedition of Trajan into the east, (Dion Cass., lxxviii. 30), and again by Lucius Verus, the colleague of Aurelius, at which time it contained 500,000 inhabitants. (Dion Cass., lxxi. 2; Eutrop., viii. 5.) It was also taken by Severus (Dion Cass., lxxv. 9), from which time it seems to have been almost abandoned by its inhabitants. Julian found it completely deserted. (Amm. Marcell., xxiv. 5.) The ruins, which are described in Rich's 'Residence in Koordistan,' are very extensive. The northern and the southern walls still remain. In the area are some heaps of ruins, but the greatest quantity are outside the limits of the inclosure to the westward.

SELGE. [PYSIDIA.]

SELKIRK. [SELKIRKSHIRE.]

SELKIRKSHIRE, an inland county in the south of Scotland, is bounded N. by Edinburghshire, E. and S.E. by Roxburghshire, S. and S.W. by Dumfriesshire, and W. and N.W. by Peeblesshire. A small detached part of the county lies just beyond the eastern boundary, entirely surrounded by Roxburghshire. The county lies between 55° 20' and 55° 42' N. lat., 2° 48' and 3° 18' W. long. In form the county is very irregular; the greatest length is from south-south-west to north-north-east, 28 miles; its greatest breadth, at right angles to the length, is 16 miles. The area is 266 square miles, or 170,303 acres. The population in 1841 was 7990; in 1851 it was 9809. The county returns one member to the Imperial Parliament.

Surface, Hydrography, Communications.—The whole county is hilly, but especially the southern and western parts, which are the

highest, the direction of the principal streams being from south-west to north-east. The hills vary in height from a few hundred feet to 2000 feet. Windlestraw Law (2295 feet), at the northern extremity; Blackhouse (2370 feet); Minchmoor (2280 feet), on the borders of Peeblesshire; and Ettrick Pen (2200 feet), on the south-west boundary, are the only hills which exceed 2000 feet in height.

The county is comprehended in the basin of the Tweed, which crosses it in the north from west to east, quitting it at its junction with the Gala. About 10 or 12 miles of its course belong to Selkirkshire. The *Ettrick* is the county river; it gave to the district its former name of Ettrick Forest. It rises in the south-west corner, and flows in a north-east course till it joins the Tweed on its right bank, on the east border of the county; its course is about 30 miles. The *Yarrow* rises on the western border, and has its course nearly parallel to the Ettrick, until it reaches Yarrow Ford, where it turns to the south-east and joins the Ettrick a little above Selkirk; its course is about 20 miles, including the lochs of the Lows and St. Mary, through which it flows. The *Gala*, which has the greater part of its course in Edinburghshire, and the *Cawdor*, belong to the northern part of the county; they flow south-east, and join the Tweed on the left bank: the Gala on the border of the county, the Cawdor a little above it.

The principal lochs are those of the Lows and St. Mary, separated from each other by a very narrow neck of land. They are both expansions of the Yarrow, which enters the loch of the Lows at its upper end and quits that of St. Mary at its lower end. The Lows is a mile long, a quarter of a mile broad, and about 70 feet deep; St. Mary's is 3 miles long, half a mile broad, and from 80 to 90 feet deep. They are at an elevation of 560 feet above the level of the sea. The lochs are stored with pike, perch, and trout. The rivers abound with good salmon and trout, and contain barbel and other fish.

The principal road is the great road from Carlisle to Edinburgh, which passes through Selkirk and Galashiels. A branch parts from it at Selkirk, and passing by Yair Bridge, reunites with the main road at Crosslee, 9 miles N. from Selkirk. A road from Glasgow to Kelso and Berwick crosses the county, following the valley of the Tweed. The Edinburgh and Hawick railway passes the border of the county and has a station at Galashiels.

Geology, Mineralogy, &c.—The mountains have been described as "one large high bed of grauwacke and clay-slate, now cut by the larger streams into long-shaped divisions, and cross-cut by the smaller streams to a less depth, and into smaller and rounded divisions." The hills are generally ridge-shaped and rounded on the tops, having acclivities of from 10° to 30°. The projecting ridges on one side of a valley usually have a corresponding recess on the opposite side. The west and south-west sides of the transverse or smaller valleys are generally the steeper. The strata for the most part dip to the north-east, but with various degrees of inclination. At New House Lynna, 7 miles above Selkirk, the rocks which form the bank of the Ettrick rise to a surprising height perpendicularly; both here and at Newark on the Yarrow the strata are remarkably curved. On the western side of the county, towards Peeblesshire, extensive strata of porphyry are found alternating with thin strata of slate and granite. Shell-marl occurs abundantly near Galashiels, and was extensively used for manure, until superseded by the introduction of lime. Granite and whinstone are abundant.

Soil, Agriculture, &c.—The arable land of the county lies on an elevation of from 280 to 800 feet: none of it therefore is the best as to climate. Wheat abounds in the lower districts, and has been raised, at the height of 700 feet, to what would be called a good crop in the Lothians; and considerably higher, near to the head of Ettrick, oats, turnips, barley, and clover hay thrive in regular rotation. ('New Statistical Account of Scotland.') The soil is light and dry, and the harvest comparatively early. The quantity of land constantly under tillage is small, the dampness of the climate rendering the county more appropriate for pasturage.

The cattle are chiefly of the Teeswater breed. Highland cattle are also grazed on the hills. Black-faced sheep are reared on the high pasturages, where they are found to thrive best. Cheviots and Leicester have been introduced. Considerable attention is paid to breeding. The most improved modes of culture and the best implements have been introduced. The houses of the tenants have generally been rebuilt in better situations and in better style than before. The food and clothing of the people have been both considerably improved. The banks of the streams are generally well-wooded, and often picturesque. Planting has been considerably extended. The indigenous wood is chiefly oak (cut down periodically for the bark), ash, elder, birch, elm, hazel, hawthorn, mountain-ash, &c.

Divisions, Towns, &c.—The county contains nine parishes or parts of parishes. Of these only two, Ettrick and Yarrow, are wholly included in the county. The only towns are Selkirk and Galashiels.

Selkirk, a royal burgh and market-town, and the county town, lies on the right bank of the Ettrick, 36 miles S.S.E. from Edinburgh. The population in 1851 was 3314. In the middle ages Selkirk was a town of some importance. The town was burnt by the English soon after the battle of Flodden, and in the civil war of Charles I. Montrose was here surprised and routed by the Covenanters under David Lealy in 1645. Selkirk has one principal street, expanding in one part into a triangular market-place, with a conspicuous public well in the centre.

The town contains many good houses. The parish church is in the town; and there are two chapels for United Presbyterians, and one each for the Free church, the Independents, and the Episcopalians. The town-hall has a spire 110 feet high. Close to the town are flour-mills, some stocking-loom, a fulling-mill, and a small tan-yard. There is a small-prison for the burgh and county. In the town are the parochial school, the Burgh school, two endowed schools, a savings bank, a parochial library, two subscription libraries, and a reading-room.

Galashiels, a considerable manufacturing town, is situated on the right bank of the Gala, just above its junction with the Tweed, about 6 miles N.E. from Selkirk, and 33 miles S. from Edinburgh by the Hawick railway. The population in 1851 was 9918. A bridge over the Gala connects the town with the village of Buckholmside in Roxburghshire. The church is a gothic building of considerable size; and there are two chapels for United Presbyterians, and one each for the Free Church and the Independents. Part of the town is included in the burgh of barony of Galashiels. There are the parochial school; a subscription school; two libraries, a reading-room, and a savings bank. Galashiels has long been distinguished for its woollen manufactures, the most considerable of the kind in the south of Scotland. For a considerable period coarse cloths were chiefly made, such as are worn by shepherds and mechanics, popularly known as 'Galashiels grays'; fine broad-cloths are now produced; and a hall has been established for the sale of the various fabrics.

History and Antiquities.—This part of Scotland appears to have belonged originally to the Gadeni. On the retreat of the Romans it was overrun by the Anglo-Saxons of Northumbria. At this time it was a forest, and had few settled inhabitants. With the exception of the Catrail [ROXBURGHSHIRE], there are very few British or Roman remains. Near the south-eastern border are a few hill-forts, with a square Roman camp in the midst of them; and there are traces of two camps and of a Roman road in Galashiels parish. After the cession of the southern part of Scotland by the Anglo-Saxon princes, the Scottish kings had a residence at Selkirk. It was probably established as a county before the death of Alexander II. It belonged in the 16th century to the Douglasses. In 1503 the hereditary sheriffdom was granted to Murray of Falahill, whose descendants held it till the abolition of hereditary jurisdictions. Several castles were erected in this county: there was one at Selkirk early in the 12th century, which was occasionally used as a royal residence; and near it was another castle, called Oldwark; but of neither of them is there now any remains. The ruins of Oakwood and Newark (that is, New-work, as distinguished from Old-work), both near Selkirk, are yet standing.

Statistics: Religious Worship and Education.—According to the Returns of the Census in 1851 there were then in the county 15 places of worship, of which 5 belonged to the Established Church, 5 to the Free Church, 2 to United Presbyterians, and 1 each to Independents, Glasites, and the Evangelical Union. The number of sittings provided in 10 of these places of worship was 8413. Of day schools there were 24, of which 15 were public schools with 946 scholars, and 9 private schools with 392 scholars. There were eleven Sabbath schools with 711 scholars.

Savings Bank.—In 1853 the county possessed one savings bank, at Selkirk. The amount owing to depositors on November 20th 1853 was £200,112. 6d.

SELLES-SUR-CHEV. [LOIR-ET-CHEV.]

SELMÁS. [PERUA.]

SELSEY. [SUSSEX.]

SEMENDRIA. [SERVIA.]

SEMISOPOTSHNY. [ALEUTIAN ISLANDS.]

SEMLIN (Zemlin, Zimonig), a fortified town in the Austrian Military Frontier, is situated in 44° 50' N. lat., 20° 25' E. long., on the right bank of the Danube at its confluence with the Save, on the declivity of a mountain opposite to the Turkish fortress of Belgrade, from which it is separated by the Save. It consists of the inner town and the suburb Fransensthal, and has about 10,000 inhabitants, who are chiefly Serbs and Greeks, with a few Germans, Jews, and gipsies. In the inner town there are some good streets with stone houses, but on the whole it is by no means a well-built place. The gipsies live in a wretched quarter. There are five Catholic and two Greek churches, a synagogue, an hospital, and a theatre. Semlin is the seat of a Greek protopapas, and the residence of the Austrian commander of the district. It is the chief point of communication between the Austrian and Turkish dominions, and contains the greatest quarantine establishment on the Austrian frontier. At the east end of the town is the great market-place, where two rows of palisades used to separate the dealers, to prevent any hazardous communication; but the strictness of the quarantine regulations have been in recent years greatly relaxed. There are many shops in the town. The transit trade is very important. The exports to Turkey, Bohemia, and Moravia are woollen-cloths, porcelain, and glass; the imports from Turkey are cotton-yarn, Morocco leather, hare-skins, lamb-skins, honey, and meerschaum pipes.

SEMUR. [CÔTE-D'OR.]

SENECA FALLS and LAKE. [NEW YORK, State of.]

SENEGAL is the name of a large river in Western Africa, which enters the Atlantic by two embouchures between 15° 50' and 16° 30' N. lat. It is the largest river of Senegambia, and with its tributaries

drains nearly half the surface of that country. The largest of its branches are the Ba Woolima and the Ba Fing. The last-mentioned river, which is considered the principal branch, rises, according to the statement of Mollien, near 10° 30' N. lat., 10° 45' W. long., in the mountain range which incloses the elevated table-land of Foota Jallon on the south. The Ba Fing flows first from north to south, but it soon turns eastward, and passes at a little distance to the south of Timbo, the capital of Foota Jallon. Soon afterwards it runs north, and in that direction it traverses the south-eastern portion of the plain of Foota Jallon. After a course of hardly more than 80 miles it enters the mountains which divide Foota Jallon from the Wilderness of Jallon Kadoo. The Ba Fing is joined by some large tributaries, of which the Furkooma runs more than 150 miles. The course of the Ba Fing to its junction with the Woolima exceeds 400 miles. The other great branch of the Senegal, the Ba Woolima, rises above 350 miles from the source of the Ba Fing, to the north-east, at the eastern extremity of the mountain range which separates Senegambia from Súdán, and at no great distance from the banks of the Joliba, or Quorra, near 13° N. lat., 6° 40' W. long. Its course is first to the north-west, and then nearly west, at a short distance from the mountains, until it joins the Ba Fing, after having run more than 300 miles. From the south it is joined by the Kokorro, which exceeds 200 miles in length. The union of the Ba Fing with the Ba Woolima takes place near 14° 10' N. lat., 10° 30' W. long., and from this place the river is called Senegal. About 15 miles below the union of its branches, the Senegal contains a cataract, called the Feloo Falls, which, according to the statement of Golberry, is 80 feet high. In this part the river runs north-west, but it soon turns to the west, and, at the distance of about 100 miles below Feloo Falls, it is joined from the south by the Ba Faleme, which flows more than 100 miles, and is navigable for a considerable distance from its mouth during the rainy season. On leaving the mountainous and hilly country of Senegambia, the Senegal enters a plain which extends to its very embouchures. In this plain its course is first to the north-west and afterwards to the west. In this part its course is extremely tortuous, the windings of the river being so numerous as to make its course double the length which it would have if it ran in a straight line. In that part of its course which lies to the west, the Senegal divides into two large arms, which reunite after having been separated for a distance exceeding 100 miles. These two arms inclose two islands, called Bilbos and Morfil, which have an average width of six miles, and are separated from one another by a narrow arm of the river. The northern or principal arm preserves the name of Senegal, and the southern is called Morfil, or the River of Elephants' Teeth, on account of the great number of elephants which are said to live on its banks. After the two arms of the Senegal have reunited, it flows chiefly in one channel for more than 60 miles, but in approaching the sea it divides, near Fasf, into two arms, which afterwards reunite. The smaller of these two arms is called the Sagueraí. The principal arm divides again within six miles of the sea. The larger branch, or the proper Senegal, turns south by west, and, flowing nearly parallel to the beach, gradually approaches the sea. Between the river and the Atlantic there is a strip of low land, nearly level, and covered with sand: it is called the Point of Barbary, and gradually diminishes in width, so that opposite the island and town of St. Louis it is less than 300 yards across. About five miles farther south it terminates at the mouth of the river. The tract of land inclosed by the Senegal and Sagueraí consists of many islands, two of which are of considerable extent, and separated from one another by an arm which branches off from the Sagueraí and joins the Senegal. The northern island is called Bequio, and the southern Bifeche. These islands are entirely covered with wood, and in the wet season a great portion of them is laid under water. The course of the Senegal, as far as it runs southward, is nearly 40 miles long; but its waters in few places run in one channel, the middle of the river being occupied by a string of islands, some of which are several miles in length, and in some places more than half a mile in width. A bar has been formed across the mouth of the river, on which there is very little water, except at one place, where the currents have forced a passage through the sands: this is called the Pass of the Bar: it is generally about 250 yards wide and 15 feet deep, but these dimensions are subject to change. Only vessels drawing 12 feet of water can pass through this entrance of the river, as the surplus is necessary for the pitching of the vessels which is produced by the strong swell of the sea. The mouth of the river was formerly two miles farther south than it is at present. In 1812 an unusually extensive inundation opened the present mouth through the narrow sands of the Point of Barbary; and the old mouth was almost entirely filled up with sand.

As a navigable river the Senegal is far inferior to the Gambia; for the Gambia has no such obstacles at its mouth, and the Senegal is much inferior to it in depth, and so full of shoals that it cannot be navigated by large river-barges in the dry season. The ascent of the Senegal is only practicable in the wet season, and even then the voyage is slow and tedious, partly on account of the rapidity of the current, and partly because of the numerous windings. The river begins to rise some weeks after the rains have set in, generally in the first week of June; sometimes it attains the height of 40 feet above its lowest level at Bakel, but lower down it does not rise so high. It attains its

highest level in the month of August, and begins to fall about the middle of September. In November or the beginning of December it again enters its bed. The inundations produced by the rise appear to be most extensive along the lower part of its course, especially where the islands of Bilbos and Morfil occur.

SENEGAMBIA is a term adopted by geographers to indicate a part of the western coast of Northern Africa, but it has not always been applied to the same extent of country. Originally it was only used to indicate the countries which lie between the Senegal and Gambia, from the names of which two rivers the term has been composed, or rather, only the tract between the European establishments on the banks of these rivers, for the country itself was almost entirely unknown in Europe nearly to the end of the last century. It is true that this part of the African coast was visited by Hanno, the Carthaginian admiral, and that it was again discovered by the Portuguese in the 15th century, between 1444 and 1469. [AFRICA, vol. i., cols. 105, 107.] The Portuguese also formed several commercial establishments near the mouths of the principal rivers, but they were neglected after the route to the East Indies had been discovered by Vasco de Gama (1497). The French and the English next tried to get a footing there, and the French acquired the Senegal about 1675, and the English the Gambia in 1688. They formed settlements at the mouths of these rivers, and their merchants began to trade on the banks, forming depôts for their goods at certain places. The remotest French commercial establishment was at St. Joseph, or Makannah, not very far below the Feloo Falls, and the English advanced by degrees to Baraconda, some miles below the last rapids of the Gambia. In the year 1788, an association was formed in London for promoting the discovery of the interior parts of Africa. The year before, the settlement of Sierra Leone had been made for the negro slaves who had obtained their freedom in the West Indies. Since that period the interior of Western Africa has been explored by several travellers, among whom may be named Houghton in 1790-91, Winterbottom in 1794, and Mungo Park in 1795-97 and in 1805. After the peace of 1814, the British government sent out an expedition for the purpose of opening a trade between the countries on the Joliba and the settlements on the Gambia. Though this expedition did not accomplish its object, it traversed a great part of Senegambia in different directions (between 1817 and 1820), and collected much interesting information. Denham and Clapperton succeeded in penetrating from Tripoli, through the Great Desert, to Bornou in Súdán, whence they advanced as far westward as Sackatu (near 5° E. long.). Before these journeys were accomplished, Laing set out (1822) from Sierra Leone, and reached the town of Timbo. The French also commenced to explore these countries. Mollien, departing (1818) from St. Louis, traversed the whole country between the mouth of the river Senegal and the sources of the Gambia, crossing the routes of the British travellers. He went as far as Timbo. Caillié, in his great journey, traversed the country between the river Nuñez and Sierra Leone in 1827, and after having passed the Ba Fing, or Senegal, not far from its source, reached Timbuctoo, and returned to Europe by the Great Desert, and through the empire of Marocco.

By these numerous journeys, a tolerably exact notion has been obtained of the natural features and productive powers of the countries of Western Africa which are drained by the rivers whose mouths are found between the embouchure of the Senegal (16° 30' N. lat.) and the island of Sherboro (7° 30' N. lat.). These countries may be regarded as separated into two unequal parts, the northern and larger of which may be called Senegambia, and the southern and smaller part Sierra Leone. The dividing-line between these two countries begins at Cape Verga, whence it extends in an east-north-east direction to the sources of the river Nuñez, and thence eastward to those of the rivers Rio Grande and Gambia. Towards the east Senegambia is supposed to comprehend all the countries drained by the numerous upper branches of the Senegal, and to extend to the high land which separates them from the countries on the banks of the Upper Joliba. A continuous ridge of high land extends along the northern side, and close to the banks of the Ba Woolima, or eastern branch of the Senegal, from its source to its junction with the Ba Fing, or western branch; and this ridge constitutes the north-eastern boundary of Senegambia. Farther west the valley of the river Senegal, which is bordered on the north by the great desert of the Sahara, is considered to be the most northern country belonging to Senegambia. The Atlantic Ocean washes its western shores, constituting a coast-line which probably exceeds a thousand miles in length. The countries inclosed within these boundaries cover an area exceeding 200,000 square miles.

Surface.—Senegambia comprehends a lower and a higher country. The lower country lies along the shores of the sea, and the higher extends over the interior. Though the higher region is generally the more fertile and more populous, the several parts of both regions differ greatly in fertility.

The Country between the Senegal and Gambia.—The valley of the Lower Senegal consists properly of the bottom which extends along its course on both sides of the river from its mouth to Bakel. It is subject to inundations during the rainy season, during which the river in some places rises 40 feet above its lowest level. In some places this bottom is perhaps not more than 5 or 6 miles wide, but in

others it spreads out to 15 or even 20 miles. As the subsoil consists of a light sand, which is covered with alluvial matter, it opposes little resistance to the rapid current of the river, and hence the Senegal frequently divides its waters, and forms arms which again reunite. These arms of the river, called 'marigots,' are almost countless on the southern banks of the river west of 13° W. long. The whole bottom is of great fertility. In its natural state it is covered with forests, mainly consisting of trees of immense size, which occupy the greatest part of it, the cultivated places being neither numerous nor extensive, though they yield rich crops of rice, millet, maize, cotton, and tobacco. The population is small in number.

Between the mouth of the Senegal and that of the Gambia, and nearly at an equal distance from each, lies Cape Verd (14° 40' N. lat.), a wide projecting promontory. Its western extremity is a mass of rocks of moderate elevation and volcanic origin. In its character it greatly resembles the Cape Verd Islands, which are nearly 500 miles from it in the Atlantic Ocean. The northern descent of this isolated mass is rather steep, and at its eastern extremity are two hills rising about 600 feet above the sea: they are called 'mamelles,' or papa, and serve as a beacon to mariners. The central parts of this tract have a moderately fertile soil, which is well cultivated, and produces cotton, millet, and French beans. The uncultivated districts are used as pasture-grounds for cattle, or are covered with briars. This small tract contains about 10,000 inhabitants.

The country between Cape Verd and the mouth of the Senegal greatly resembles that part of the Sahara which extends from that river northward to the Bay of Arguin. Along the sea there is a low sandy beach, lined with sandbanks, on which there is so little water that it cannot be approached by the smallest boat. The country adjacent to the shores is a dead level, covered with a fine loose sand, which it is quite impossible to travel across, except where it has been covered and consolidated by the sea during the flood. It is destitute of vegetation. During the rainy season the soil is drenched with water, and during the dry season is subject to dense fogs and heavy dews, which fall at sunset, and moisten and penetrate like the drizzling rains of Europe. But no stream of running water is formed by this abundant moisture. This flat sterile tract occupies the whole coast to the distance of about two miles from the sea. At the back of it rises an unbroken ridge of sandy downs, which are likewise destitute of vegetation. The low grounds farther east are almost entirely covered with water during the rainy season, but in the dry season a great portion of the swamps is dried up, and as the alluvial soil is of great fertility, it produces rice and indigo, with large quantities of manioc and yams.

The country contiguous to the shores of the Atlantic, between Cape Verd and the mouth of the river Gambia, has a coast-line which is well defined, but does not extend in a straight line. It is also broken by several watercourses. The low beach is covered with mangrove-trees. The country rises gradually from the beach to the distance of 30 or 40 miles. The whole tract, in its natural state, is covered with tall forest-trees, but a considerable portion of it is under cultivation, producing rice, maize, and millet in abundance. The cattle which pasture on the cleared grounds are of great size. All these products, together with pigs and poultry, are taken from these parts to the French and English settlements, especially to Goree. There are several small harbours on this coast. This part of Senegambia probably contains from 300,000 to 400,000 inhabitants.

To the east of the countries hitherto noticed lies the table-land of the Jaloofs, which is of great extent, occupying the whole country between the valleys of the Senegal and Gambia from 13° to 16° W. long. The interior of this vast region has not been visited by travellers, and appears to be only inhabited by some wandering tribes during the rainy season, on account of the pastures which are found there at that time. Towards the mouth of the Senegal the declivities of the elevated ground approach very near to the river. Travellers have observed that the surface of these declivities is almost entirely covered with a reddish sand, which absorbs abundance of moisture without acquiring the least degree of fertility. Still there occur some tracts of moderate extent which are inclosed by higher grounds, in which the waters of the rainy season collect, and give to the sand a mixture of mould which so far fertilises these tracts that millet can be cultivated on them. In these depressions villages are situated, but only at great distances from each other. Water is obtained from wells, which vary from 20 to 80 yards in depth. In some places large forests of acacias are found. The most fertile portion of this inhospitable region is the north-eastern declivity, where the surface is much less level, and in many places interspersed with high hills and short ridges, between which there are many tracts of considerable extent, on which millet, cotton, and indigo are cultivated. On the pastures which occur in these tracts large herds of cattle are fed. Near the only two rivers by which this region is drained, the Saldi and Guiloom, large tracts are covered by ferruginous rocks, but the inhabitants have turned them to account, having in many places furnaces to smelt them for the purpose of extracting the iron. This part of the table-land, though much less fertile than the adjacent valley of the Senegal, appears to be no less populous.

South-east of the table-land of the Jaloofs begins the higher country, which does not however immediately rise into mountains, but the

western districts consist of numerous hills and short ridges, rising to a moderate elevation. A range of mountains which runs along the western banks of the Ba Faleme may be considered as the boundary-line between the hilly and mountainous country. The hills, consisting mostly of ferruginous rocks, from which iron is extracted, are for the most part thinly covered with low stunted wood, little of which is fit for anything but fuel. The valleys and level grounds which are inclosed by these hills are mostly cleared for cultivation. The beds of numerous torrents intersect the valleys in every direction: they are dry in the dry season, but during the rains they conduct the water which is collected on the high grounds to the Faleme and Gambia. Towards the source of the Faleme the country, though more elevated, is much less broken, and there occur some extensive plains, which are partly covered with woods and partly with jungles of bamboo. A very small part of them is cultivated, and they are the haunts of wild beasts, especially of elephants and lions. Millet, maize, rice, cotton, and indigo are cultivated. Numerous tamarinds, boobabs, and other fruit-trees are scattered over the valleys, and many parts of the country are very picturesque. The inhabitants are tolerably rich, which is partly owing to the circumstance that the most frequented commercial road between Súdán and the European establishments on the coast passes through this region.

The mountain region extends over the western portion of Senegambia, including all the countries situated on and between the numerous rivers which, by their confluence, form the Senegal. This region appears to be surrounded on the south, east, and north by a continued range of mountains. The inclosed region seems to be occupied by rocky ridges, which consist almost entirely of iron-stone and slate, with a very thin covering. In the valleys, which in some parts are extensive, a good deal of alluvial soil is found; and in these places millet, maize, and other grains are cultivated. On the southern district is a wilderness, which extends upwards of 100 miles from east to west, and is inhabited by wild beasts. This region is rich in metals. Excellent iron is obtained by the negroes from the iron-stone; and there are several places where gold in considerable quantities is collected.

The Valley of the Gambia and the Country south of it.—The country situated immediately on the banks of the Gambia, as far as Pisania, consists of a level alluvial tract extending about two miles from the river. It is subject to annual inundations during the rains. A great part of it is swampy, or covered with mangrove-trees; in other places the ground has been cleared, and is cultivated with rice. At the back of this low tract the country rises to a moderate elevation above the level of the river when swollen by the rains. The soil is very various. Though often sandy, it is rather fertile; but sometimes it consists of a hard yellow clay, mixed with small quartz pebbles, and is of indifferent quality. Boobabs, tamarinds, and rhamnus lotus, and other fruit-trees are grown in several places; but the principal objects of cultivation in the cleared grounds are manioc, maize, cotton, indigo, and French beans.

The coast-line between Cape St. Mary, situated at the mouth of the Gambia, and Cape Verga, is extremely low, and is intersected by numerous channels, which form many islands. It is said that the space between the Gambia and Nuñez is occupied by an archipelago of low islands, but the mud banks which surround these islands towards the open sea are so dangerous to large vessels that a part of the coast between the river Compoonee and the Rio Grande has never been surveyed, and is laid down on our maps at random. Though these islands do not contain fresh water, they are not only inhabited but populous. It seems that the inhabitants use the palm-wine as a substitute for water. They cultivate some roots and rice, but chiefly occupy themselves with making salt, an important article of commerce in these parts of Africa, as all the salt consumed in Súdán is either obtained from the Sahara or from this coast. This low archipelago constitutes the outer edge of a level and low country, which extends to a great distance inland. It seems for the most part to be composed of alluvial soil, and the large rivers which traverse it divide into many arms, several of which reach the sea, whilst others reunite. The whole country to a great distance from the shore is of great fertility, but in general is very little cultivated. In some places there are forests from which supplies of timber are obtained, and savannas which serve as pasture-ground for large herds of cattle.

At the back of this low plain, between 14° 30' and 13° W. long., lies a more elevated country, constituting a kind of second terrace. Its surface is slightly undulating. The soil of this country, so far as it is known, has a considerable degree of fertility. The inhabitants cultivate rice, millet, and maize, with cotton, indigo, and several roots and fruit-trees. Large herds of cattle, sheep, goats, and pigs are kept, and poultry and bees are extensively reared. Honey and wax are great objects of trade.

The mountain range south of the Gambia begins a little west of 13° W. long. The valleys in this district have a fertile soil, but cultivation is not much attended to. Between the Gambia and Rio Grande the mountain ridges appear to approach 13° W. long., but south of the last-mentioned river they do not pass much to the west of 14° W. long., except that a ridge approaches the river not far from Kade. These mountains, which are called the Tangui and the Badet mountains, are very little known. Their elevation seems to

considerable, but they do not appear to rise above the line of trees. The mountains are mostly bare, their surface consisting of iron-stone, grayish ashes, and yellow sand; in some places they exhibit traces of volcanic action. The valleys are covered with large trees. The inhabitants are mostly herdsmen.

The table-land of Fouta Jallon consists properly of a plain of considerable extent, surrounded by higher grounds, and chiefly by lofty mountains. From north to south it extends about 80 miles, and perhaps still more from east to west. The surface is diversified by gentle hills. The elevation of this plain can hardly be less than 2000 feet above the sea. In the mountains which inclose it on the south, and which appear to be connected with the Kong Mountains, are the sources of the Ba Fing, the principal branch of the Senegal, and the waters issuing from them run above a thousand miles before they reach the sea. This river forms many rapids in its course. The greatest part of the plain is converted into a temporary lake at the end of the rainy season, but this is very favourable to the growth of rice, which is extensively cultivated. Indian corn is also grown, but millet, to the growth of which humidity is not favourable, is seldom seen. Oranges, papaw-trees, and bananas are abundant, and there are many large forest-trees. Cattle are numerous. This is the best cultivated and the most populous part of Senegambia. The inhabitants derive considerable advantages from the commercial road through their country, which connects the countries south of the Joliba with Sierra Leone.

Rivers.—Besides the Senegal and Gambia [GAMBIA COLONY; SENEGAL], which are the largest rivers of Senegambia, the country south of the Gambia is drained by two rivers, which are navigated to a considerable distance from their mouth: these are the Rio Grande and the Nuñez, or Kakoondea. The *Rio Grande* is stated to originate on the western declivity of a range of mountains, the waters from the eastern slope of which form the most remote branch of the Gambia, near 10° N. lat., 11° W. long. As far as its course lies within the mountain region it is joined by numerous tributaries, among which however the Coomba only is a considerable stream, and its course is rapid. At a distance exceeding a hundred miles from the sea the river divides into several branches. That branch which continues to flow in a western direction is commonly called on our maps Rio Grande, but the native name is Butolah. Its mouth is opposite to Bulama Island, which belongs to the group of the Bissagos, or Bijooga Islands. [BISSAGOS.] That arm which runs northward from the point where the bifurcation takes place is called Jeba River. Having continued in that direction about 50 miles, it turns westward and divides again at the Portuguese settlement of the same name. This branch is navigable for small vessels from Jeba to the sea, and for larger vessels from a point about 5 miles above Bissao. The most northern arm, which is called the Cacheo River, is navigable for small vessels to the settlements of Cacheo. The river *Nuñez*, or, as it is called by the natives, *Kakoondea*, is much inferior in size: its whole course probably does not exceed 250 miles, while the Rio Grande runs more than 400 miles; but it offers a safe navigation to a great distance from the sea. It rises in that chain of hills which separates Senegambia from Sierra Leone near 13° W. long. In the upper part of its course it is full of rapids and falls. It becomes navigable for vessels of moderate size above the settlement of Debuco, or Rebuco, and up to this place the tide ascends. The river has three channels at its mouth, two of which are navigated by vessels. They are separated from one another by an island called Sandy Island.

Climate.—The commencement of the rainy season varies between the 1st of April and 1st of June, and its termination is between the 1st and 31st of December. The rains in July and August are heavy, and are frequently accompanied by violent gusts of wind, called tornadoes, attended with thunder. In September the rains are generally slight, and tornadoes with heavy rains are comparatively rare. Tornadoes occur at the beginning and termination of the rainy season. The prevailing winds during this season are from the south-west to the west and north-west; towards the end of November from the north-east and east, and they immediately produce a great change in the face of the country. The grass soon becomes dry and withered; the rivers subside rapidly, and many of the trees shed their leaves. About this period the 'hamattan' is generally felt, a dry and parching wind which blows from the north-east, and is accompanied by a thick smoky haze, through which the sun appears of a dull-red colour. This wind passes over the sandy plains of the Sahara, where it acquires an extraordinary degree of dryness, parching up everything which is exposed to it. It is however considered healthy, especially by Europeans. During the long rainy season the air is loaded with moisture. The hamattan quickly changes this state of things, and many persons who have fallen ill during the rains recover in a short time. But it produces chaps in the lips, and afflicts many of the natives with sore eyes. The easterly winds of the dry season extend to the shores of the sea as far south as Cape Verd. But south of it westerly and north-westerly winds prevail, except in some places where there is a regular alternation of land- and sea-breezes.

Senegambia has long been noted for the great degree of heat to which it is subject all the year round. But it does not appear to be subject to a greater degree of heat than other countries situated in the same latitude, except those tracts which lie along the banks of the

river Senegal, and consequently in the vicinity of the Sahara. At the French settlement of Bakel, on the river Senegal, about 300 miles from the sea in a straight line, the thermometer occasionally rises to 110° in April and May, which are the hottest months of the year, and sinks in December to 56.25°. In the parts of Senegambia which are remote from the coast, the hottest part of the year is during the last months of the dry season and at the beginning of the rains; but on the coast the rains immediately depress the temperature several degrees. On the coast the range of the thermometer generally varies between 65° and 95°, and rarely attains 100°. The mean annual temperature is 79.7°.

Productions.—A country with such a climate and extensive tracts of great fertility must be capable of producing all kinds of tropical vegetable products. Hemp is cultivated to a considerable extent, and made into ropes and cords, in which state it is brought to the European settlements. The grains which are chiefly cultivated are rice, maize, and millet. Besides these grains there are cultivated for food the ground-nut, mandioc, yams, bananas, and a variety of vegetables. Cotton and indigo are grown in many places; the latter grows wild. The forests, which are very extensive, contain several trees, the fruits of which are used as food. The most remarkable is the butter-tree. Among trees used for commercial purposes are the African teak, the mahogany-tree, the mangrove, and others. The mimosa from which the gum is obtained is common on the table-land of the Jaloofs, though less so than north of the Senegal. There are some trees which yield caoutchouc. Cassia, cardamoms, and orchil are obtained from the interior. Along the sea-coast, and also on the islands, and in the low flat country between the Rio Nuñez and the Gambia, different kinds of palms are found in great abundance; palm-oil and palm-wine are important articles of domestic economy.

The domestic animals do not differ from those of Europe, except that a few camels are kept in the desert of the Jaloofs and in the countries near the Sahara. Horses are numerous and the breed is good. Black cattle are numerous and of great size. Butter in a melted state is a considerable article of inland trade, and hides and horns are largely exported. Sheep and goats are confined to some tracts, but pigs and fowls are reared everywhere, the negroes being generally fond of pork. Among the wild animals the elephant occupies the first place, and supplies nearly all the ivory which is exported from the English and Portuguese settlements on the Gambia, Rio Grande, and Nuñez. The hippopotamus abounds in all the rivers, especially in the Senegal. There are lions, leopards, and panthers. The striped hyena is very common. The wild animals which are used for food are the buffalo, the wild boar, which is of prodigious size, deer of different kinds, antelopes, the hare of the Cape, and porcupines. Alligators frequent all the rivers, and the boa is found in the lower marshy country. Among the birds the white heron is one of the most beautiful. Guinea-fowls, turtle-doves, and wood-pigeons are abundant. Turtles are numerous on some of the islands. There are several kinds of large ants; their hills resemble the huts of the negroes.

Little is known of the mineral wealth of Senegambia; but it would seem that the greater part of the mountains are mainly composed of ironstone, and that iron exists there in inexhaustible quantity. The natives are also acquainted with the art of extracting the metal, and there are furnaces in some parts. Gold is found in those parts which lie between the affluents of the Upper Senegal, as in Bambook, Fooladoo, Manding, &c. It occurs mostly in the form of small grains in an alluvial soil.

Inhabitants.—The inhabitants of Senegambia belong properly to the negro race. But the Moors have entered Senegambia in considerable numbers, and mixed with the most populous tribes of the negro race. These tribes are known under the names of Foulahs, or Foolahs, Jaloofs, or Jaloofs, Mandingoes, and Serrawollies; and they occupy the more elevated part of Senegambia, leaving to the other minor tribes only the low country which extends along the sea from the mouth of the Gambia to Cape Verga.

The nations among which the Moors have settled have partly embraced the Mohammedan religion. The structure of their body differs also more or less from that of the true negro race. The inhabitants of Bondoo, who are a mixture of Foolahs, Mandingoes, Serrawollies, and Jaloofs, are described as of middle size, well-made, and very active; their skin of a light copper-colour, and their faces of a form approaching nearer to the European type than any of the other tribes of Western Africa, the Moors excepted. The women vie in point of form with the handsomest women in Europe, and they have very delicate features. The different tribes speak different languages; but that of the Foolahs and Mandingoes is generally understood by all of them. In respect of commerce and civilisation they are far more advanced than the other black tribes. There are schools in almost every town for the instruction of youths who intend to make the Mohammedan religion their profession, in which they are instructed in reading and writing Arabic from the Korán. Their habitations are rather small, but they are kept clean and neat. Both sexes are dressed in a very decent manner.

The smaller nations, who exhibit in their bodily structure the true negro type of the Ethiopian race [AFRICA, vol. i, col. 124], have remained in a low state of civilisation. They cultivate some rice, but

in a very unskilful and slovenly way. They have plenty of pigs and fowls, but few cattle, and no other domestic animals. They generally wear only a piece of cloth about their loins. Their huts are extremely dirty. They are ferocious in their manners, treacherous, cruel, and oppressive; and a tribe of the Bagoes are complete pirates.

Political State of Society.—It appears that little authority has been introduced among the smaller tribes. They do not keep slaves, and have adopted the practice of selling their prisoners of war to the slave-traders. The larger tribes have established regular government, with a king and a hereditary nobility. Each town or district is under a chief. It would also seem that certain revenues—as, for instance, the presents received from the merchants who traverse the country with goods—are divided among these petty chiefs. But the king has the power of making war and peace. All these nations keep a considerable number of slaves. The government of Footatoro is a kind of theocratical republic.

Political Divisions and Places.—The whole country along the sea, from the mouth of the Senegal to Cape Verd, and as far inland as the western declivity of the table-land of the Jaloofs, is subject to the king, or Dámel of Kayor, who resides in the town of Macaya. The inhabitants are Jaloofs. Within the boundary of this state is the town of Cogue, which is a commercial place, as two roads unite here, one leading southward to the Gambia, and the other eastward to Footatoro. It has 5000 inhabitants, and many Moors are settled there. The numerous villages on the rocky peninsula of Cape Verd constitute an aristocratical republic, governed by a senate, which is composed of the chiefs of these villages.

Between Cape Verd and the mouth of the Gambia are the small states of Baol, Sin, and Barra. The French have a commercial establishment at the town of Albrada, the residence of the king of Barra. East of Barra is the small state of Badiboo.

North of Barra and Badiboo is the state of Salum, which extends westward to the sea, where it occupies both sides of the river Joombas. The capital Cahore is built on its banks, and small vessels can ascend as far as the town. It has some commerce with the French settlement of Goree. Among other small states situated in the lower region, between the Senegal and Gambia, are those of Yanimaroo, Katoba, Wooli, Walo, Burba, Jaloof, and Footatoro. The last named state, which is more extensive than most of the others, is divided among seven chiefs, who form a council, and elect a marabout, or priest, for their king, who however can do nothing without the consent of the council, and reigns only during its pleasure. It frequently happens that this chief of the federative aristocracy is changed two or three times in a year. The capital of Footatoro is Chuloigna. Sedo and Canel are rather large towns. The inhabitants are chiefly Foolaas.

In the mountain region and contiguous to the western and southern banks of the Senegal is Galam, which comprehends the country from the Falls of Feeloo (10° 30' W. long.) westward, but does not extend to a great distance from the river. It is densely inhabited, a string of towns occurring along the banks of the river, among which Tuabo, Makanna, and Mussala are considerable places. The inhabitants are mostly Serrawollies; they are distinguished by their manufacture of cotton stuffs, to which they give a fine and permanent blue colour. Between Galam and Wooli on the Gambia is Bondoo, the most powerful state in these parts of Senegambia, which is probably owing to the king, whose title is Alamy, being less dependent on the chiefs of the villages and towns. The inhabitants, who are a mixture of Jaloofs, Foolaas, Serrawollies, and Mandingoes, are much occupied in trade and manufactures. The most important places are Boolibany and Fattecoonda. East of Bondoo and south of Kajaaga is Bambouk, which is noted for its gold-mines. [BAMBOUK.]

The other states which lie farther east and south in the most elevated part of the mountain region and between the numerous tributaries of the Senegal, are much less known than those hitherto described. The most extensive are Foolado, the ancient country of the Foolaas, who however were expelled from it by the Mandingoes, with the towns of Koeena, Keminoom, and Bangassi; Manding, the native country of the Mandingoes, which comprehends the most eastern portion of the mountain region, and has several mines of gold, with the towns of Sibidooloo and Kamalia; Jallon Kadoo, the uninhabited wilderness which extends between the sources of several branches of the river Senegal; Konkodoo on the Ba Fing, or principal branch of the Senegal, which has some rich mines of gold, with the town of Konkroma; Satadoo, with the capital of the same name; and Dentilla, with the towns of Baniserile and Kirwani, which is inhabited by very intelligent agriculturists, and where there are several smelting-furnaces. On the river Gambia are the small states of Neola, with the town of Tambacunda, and Tenda, with the town of Jallacotta.

It does not appear that there is any large kingdom or state south of the Gambia, with the exception of that of Foota Jallon. Indeed as this state has subjected the tribe of the Landamas, who inhabit the country between that river and the Nuñez, and rendered it tributary, it may be said that its dominions extend to the very shores of the sea. The principal seat of its power is the well cultivated and populous plains of the elevated table-land of Foota Jallon, where the capital, Timbo, not far from the sources of the Senegal, contains 7000

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inhabitants, and several other towns contain from 3000 to 5000 inhabitants. Most of the inhabitants are Foolaas, but in the fastnesses of the mountains there are still some small native tribes of negroes. In the country which extends between Foota Jallon and the coast, each village appears to have a chief, but no political connection subsists among the villages.

European Settlements and their Trade.—The European settlements in Senegambia are strictly commercial. The settlers have not acquired the property of any land, except the place on which they have settled, and no cultivation is carried on by them or their people, except at a few spots which are rather gardens than plantations. Each of the three European nations which have formed settlements has taken possession as it were of one of the three large rivers, the French of the Senegal, the English of the Gambia, and the Portuguese of the Rio Grande. Each has built a fortress on an island not far from the mouth of the river, which serves as a safe place of deposit for goods which are imported, and from which the productions of the country are shipped. The merchants set out from these places in large river boats with their goods at certain seasons of the year, and ascend the rivers as far as they are navigable. They stop at certain points to which the natives bring their productions to exchange for European manufactures.

The principal French settlement is St. Louis, a town containing about 15,000 inhabitants, of whom about 800 are whites. It is built on a sandy island, about two miles long and a quarter of a mile wide on an average, which is about five miles from the mouth of the river. Only vessels drawing less than 12 feet of water can sail up to the town, as there is a bar across the mouth of the river. [SENEGAL.] The French have also two small fortresses on the banks of the Senegal, one at Podhor, at the western extremity of the island of Morfil, and the other at Bakel, or Baquelle, in the kingdom of Lower Galam, not far from the junction of the Faleme with the Senegal. Between Podhor and St. Louis there are several places to which the Moors of the tribes of the Traza and Braknas bring at certain seasons the gum which they collect in the mimosa forests of the south-western districts of the Sahara. Such places are called markets, and are only inhabited during the stay of the Moors. The most frequented are the Escaladu-Désert and the Escaladu-Coq, or Braknas. The French have also a fortress on the island of Goree, near Cape Verd [GOREE], and an establishment at the mouth of the river Casamanza, which enters the sea between the Gambia and the Rio Grande.

The English settlements are principally on the Gambia. [GAMBIA COLONY.]

The Portuguese settlements are dispersed along the banks of the different arms of the Rio Grande and on the Casamanza. The principal settlement is Bissao, a well-built fort and town on a large and fertile island of the Jeba branch of the Rio Grande. It has about 3000 inhabitants, and an excellent and spacious port: the population consists chiefly of mulattoes and blacks. Higher up the same branch of the Rio Grande is Jeba, with a population short of 1000 inhabitants, which likewise consists of blacks and mulattoes. On the southern branch of the Rio Grande is Bolula, a mercantile establishment, and on the northern or Cacheo branch the town of Cacheo, a considerable place with a harbour, which however is only accessible to vessels drawing 10 feet of water, as a bar runs across the mouth of the river. In the country of the Feloops, between the Cacheo branch of the Rio Grande and the Gambia, the Portuguese have several settlements, as at Zinghinchor and Mahia Kakonda on the Casamanza River, and at Vintang on a small river which falls into the Gambia. To all these places the natives bring ivory, wax, hides, horns, and some gold, the greater part of which is shipped to England from Bissao and Cacheo. Many Portuguese have settled in this country as agriculturists, and have married black women. The number of mulattoes in these parts is considerable.

Nearly all the articles of commerce which are exported from the European settlements in Senegambia are brought from the interior by small caravans or cañas, which sometimes proceed to the coast, but generally stop at certain places where commercial establishments are found, and take in exchange for their goods, fire-arms, powder, India goods, coral, amber, glass beads, iron, tobacco, rum, and cutlery. Though a great part of Senegambia is rich in iron-ore, the process of obtaining the metal from it is so rude and requires so much labour, that many of the natives prefer buying it from Europeans.

Commerce with Sudan and Timbuctoo.—A considerable commerce is carried on between Senegambia and the countries farther east. The principal articles of trade are salt, slaves, and gold. A large portion of gold collected in the countries situated on the banks of the upper branches of the Senegal goes to Timbuctoo, and thence to the countries on the south of the Mediterranean. The cañas by which this commerce is carried on follow two routes. The most northern departs from the Senegal in the kingdom of Kajaaga, or Upper Galam, to which country the traders go from all parts of Senegambia. Hence the road runs east-north-east to Yarra, and then east to Benown in Ludamar. From Benown it continues east through countries which are little inhabited on account of their sterility, to Walet in Beroo. From Walet it again passes through deserts, until it approaches the Joliba near Baracanga, whence it continues at a short distance from the banks of the river to Timbuctoo. The southern caravan-route

leads from the banks of the Gambia through Neola, Dentila, and Konkodoo, to the great wilderness of Jallon Kadoo, which, having traversed from west to east, it passes over the mountain range between Kamalia and Bammakoo. At Bammakoo the goods are embarked on the Joliba, and descend to Yamina, Sego, Sansanding, Jenneh, and Timbuctoo.

(Mungo Park, *Travels in the Interior Districts of Africa*; Mollien, *Travels in Africa to the Sources of the Senegal and Gambia*; Gray and Dachard, *Travels in Western Africa*; Caillié, *Travels through Central Africa to Timbuctoo*; *London Geographical Journal*.)

SENEZ. [ALPES, BASSES.]

SENLIS. [OISE.]

SENNNA is a country on the eastern coast of Africa, and a portion of that region which on our maps is called Monomotapa, and has acquired some fame on account of the rich mines of gold which it contains. It is situated between 16° and 20° S. lat., 30° and 37° E. long., and is stated to cover a surface of 43,200 square miles. It forms the capitaney of the Rios de Senna, the only territory that the Portuguese really possess on the east coast of Africa; their other possessions, as Mozambique, Pemba, &c., consisting only of fortified towns, to which no territory, or only a very small territory, is annexed. This capitaney is bounded E. by the sea, S. by the mountains of Sofala, and it extends to the kingdoms of Quiteve and Barne, which inclose it on the west. To the north of it is the independent kingdom of Moraves, from which it is chiefly separated by the course of the river Zambesi.

The shores of Senna are low, and continue so for some distance inland, but the country gradually rises as we proceed westward. At the distance of 150 to 180 miles from the sea there are some low mountain ranges, separated into two portions by the plain through which the river Zambesi runs. A great part of the country west of these ranges appears also to be a plain, the surface of which is hilly. Towards the western boundary, near 30° E. long., the country is covered with mountains.

Senna is well watered; numerous small rivers descend from the adjacent mountains, all of which join the Zambesi. This river, whose course probably exceeds 800 miles, originates in the countries west of Senna, of which we have no account. Its upper course within Senna is from south-south-west to north-north-east, but it gradually turns more to the east. It is in many places upwards of three miles in breadth. From the town of Teté downwards it is navigated, though the navigation is very tedious in the wet season, owing to the rapidity of the current, and in the dry season on account of the numerous shoals and the deficiency of water. Above Teté the Zambesi enters the flat country, but it runs between high rocky banks until it enters the low country at the distance of about 50 miles from the sea in a straight line. In the low country it divides into two branches at Maroero, of which the northern is called the river Quillimane, and the southern Luabo, and both branches are navigable. A large branch separates from the Luabo not far from the place of division, and bisects the delta of the Zambesi, falling into the sea at nearly an equal distance from the mouths of the Quillimane and Luabo. It is called the Melambey, from a place near its mouth. The embouchures of the Luabo and Quillimane are about 60 miles from one another. Where these rivers flow through the level tract, they form numerous islands, occasioning a very rapid current in many of the narrow intervening channels.

The delta of the Zambesi and the low country near the sea consist of a flat, which is marshy, and covered with mangroves to low-water mark. Higher up the ground is cleared to a considerable extent, and the country abounds in villages; but towards the place where the river divides into arms, nearly the whole surface of the country is covered with rushes and bamboos, interspersed with extensive swamps. A few isolated trees, a species of palm, are scattered over this unwholesome waste. The more elevated part of the country, about the town of Senna and higher up the river, is an extensive plain, which descends towards the banks of the river with a gentle slope.

The rainy season commences in the beginning of November, and continues to the end of March. When the rain fully sets in, the river soon rises above its banks, and inundates the contiguous country to the distance of several miles inland. During this period the heat is very oppressive, but not unwholesome in the higher parts of the country, except in the vicinity of lakes.

The cultivated grains are rice, maize, millet, and wheat. The sugar-cane seems to succeed well. Coffee is grown in the more elevated country. Indigo grows wild. The cotton-ahrub is cultivated by the negroes, but only for home consumption. Vegetables are grown in considerable quantities. A kind of grass is cultivated as food: before it is quite ripe, it is plucked, dried, and haked in a large wooden mortar, and then ground between two rough stones. The meal thus obtained is made into a porridge, which is generally eaten with fish. The fruit-trees are tamarinda, oranges, cocoa-nuts, palms, and mango-trees. Among the forest-trees is a species of cotton-tree of a gigantic size, frequently measuring 60 feet in circumference. The wood is used for canoes in preference to any other, as not being subject to the attack of worms. Large boats 50 feet long are made of a single tree hollowed out.

The wild animals are elephants, rhinoceroses, lions, hippopotami, alligators, monkeys, and deer; but there are probably many others, which have been overlooked by the few persons who have visited this country. There are the common domestic animals. Fish is very plentiful in the river, and constitutes one of the principal articles of food of the negro population. Bees are very common, and wax is an article of export.

Gold and iron are the only metals which are known to exist in abundance. Gold is chiefly found in the mountains of Sofala, and in those which surround the colony on the west; and it does not appear that this article is brought from the kingdom of Moraves, but it is obtained in those of Quiteve and Barne. Iron is obtained in abundance from the southern districts of the colony, and also from the kingdom of Moraves; the hoes with which the slaves till the ground are made of it. Marble is got in the hills which run parallel to the coast. The population consists of a few Portuguese and mulattoes, and a great number of blacks. According to the statement of the governor of Rios de Senna, the number of the whites and mulattoes in 1810 did not exceed 500. The negroes are partly free and partly slaves of the whites and mulattoes. The colony is divided into several districts, each under a Portuguese governor, who collects from the free negroes the taxes in kind, consisting of bees-wax, fowls, meat, vegetables, and rice.

The only harbour in the colony which is visited by vessels is that of Quillimane, about 8 miles from the sea, on the northern arm of the Zambesi. This town, with the other Portuguese settlements, Senna, and Teté, are described in the article MOZAMBIQUE COAST.

SENNAAR is a country situated in the north-eastern parts of Africa, on the banks of the Nile, and at the junction of its two great branches, the Bahr-el-Azrek (Blue River) and the Bahr-el-Abiad (White River). It was formerly an independent state, and one of the most powerful in that part of Africa; but it now constitutes a part of the Egyptian province called Beléd-es-Súdan (or country of the blacks). This province comprehends all the countries which lie on both sides of the Nile south of Wadi Halfah, or the second cataract (near 22° N. lat.), with the exception of Abyssinia, and consequently comprises those countries which are known by the collective name of Nubia and Sennaar, to which must be added Kordofan. The most important part of Beléd-es-Súdan is Sennaar, and the seat of the provincial government has been fixed at Kharútm, a town built in modern times at the confluence of the Bahr-el-Abiad and Bahr-el-Azrek. The boundary lines of Sennaar are imperfectly known; and they have varied considerably at different times. The present area is estimated at about 60,000 square miles. On the north is Dar Shendy, a part of Nubia, on the east some wandering tribes, on the south-east Abyssinia, on the south the mountain tribes of the Nuba, and on the west is Kordofan.

Surface and Soil.—The most fertile portion of this country is that part which lies between the two great branches of the Nile, and is called the Island of Sennaar. At its southern extremity, between 11° and 12° N. lat., is a mountain region called Jebel Fungi. This region seems to constitute a link of that great chain which appears to traverse Africa in its whole width from east to west, near 10° N. lat., and which is called by Abulfeda and Edrisi Jebel-al-Komri, or the Mountains of the Moon. The information collected from the natives assigns to this range rich mines of gold and iron, both of which are worked. This part of Sennaar is a plain, on which only a few isolated hills rise. The greater part of this plain appears to be formed by the alluvial deposit of the rivers. It is nearly a dead level, and the Bahr-el-Azrek rises during the floods to within two and three feet of the summit of its banks, and the Bahr-el-Abiad in most parts spreads over a large tract of country. The soil is in general very good, and in some parts of excellent quality, though there are also tracts which are nearly sterile. Dhurra is sown at the end of the rainy season, but in general only so much is grown as is necessary for the maintenance of the population. The most northern part of the peninsula has little wood, and is less fertile than the southern. The bottom along the banks of the Bahr-el-Azrek is narrow, and similar to that in Egypt, being hardly more than two miles wide on an average. During the inundations it is annually covered with a deposit of rich earth, and is exceedingly fertile. But the valley of the Bahr-el-Abiad is of a different description. The low flat along its banks is of greater extent, generally measuring four miles across, but it is chiefly sandy and sterile, and after the inundation grass springs up, a production nearly unknown in the valley of the Bahr-el-Azrek and Nile. The flat country which lies at the back of these banks of the Bahr-el-Abiad is also inundated to a considerable extent. The woods which cover this tract contain many timber-trees of large size, especially on the western side of the river.

The country west of the Bahr-el-Abiad belongs principally to Kordofan [KORPOFAN]; south of it is a mountain region, whose general appellation seems to be Jebel Nuba, from a nation which inhabits its fastnesses; this mountain region is said to be rich in gold and iron. The most northern offsets of this region are called Jebel-Dair and Jebel Minmin, and approach within 26 miles of Obeid, the capital of Kordofan. The tribes inhabiting these mountains have not yet been subjected to the sway of the Pasha of Egypt, though the level country forms a part of Beléd-es-Súdan. That part of this

country which belongs to Sennaar is not equal in fertility to the island of Sennaar, part of the soil being light and too sandy.

The peninsula between the Bahr-el-Azrek and the Atbara, or Astaboras of the ancients, the largest of its confluent, is also a flat country. The plain extends southward to the country of the Shangallas, which belongs to Abyssinia, where it terminates at the mountain region of Habesh. In this plain are several isolated mountains which are the retreat of the nomadic tribes of the Shukeriehs and Bisharies, who cannot be dislodged from them, and wander about in the plains with their herds as long as they find pasture, retiring towards the end of the dry season to the uncultivated banks of the Atbara, where they still find grass when the vegetation of the plain has withered, and where they wait for the setting in of the rains. In general the soil of the plain is tolerably good, and after the rains will produce dhurra. The Shukerieh Arabs also cultivate some patches.

Rivers.—The more important rivers, the Bahr-el-Azrek and Bahr-el-Abiad, with their chief tributaries, are mentioned under NILE.

Climate.—In spring the thermometer at noon rises to 100° and 118°; but it is said that it attains a greater height about the summer solstice. The regular rainy season generally begins in the middle of May, or the beginning of June, and continues to the end of September. But some rains occur even in the beginning of April, which are generally attended by hard gales from the north or north-east. Before the rains regularly set in, two or three times in the spring hurricanes occur. The wind comes from the south-east. After blowing tremendously for ten or twenty minutes, the atmosphere assumes a blood-red colour, which is soon succeeded by total darkness, which lasts about a quarter of an hour. The hurricane usually subsides at the end of two hours from its commencement; but the air is loaded with sand for two or three days afterwards.

Productions.—The grain most cultivated is dhurra, or millet, and it is an article of great inland trade. Wheat is also cultivated. The cultivation of the sugar-cane seems to be confined to a few places. In the kitchen-gardens there are grown onions, red-pepper, bahmiyeh, a mucilaginous vegetable, chick-peas, kidney-beans, cucumbers, and some plants which are not found in Europe; cotton and tobacco are grown as objects of commerce; near the town of Sennaar there are lemon-trees. The timber on the banks of Bahr-el-Abiad is used for boat-building. The boats are built of acacia. In the desert between Sennaar and Kordofan there is a thorny shrub, called askanit, the fruit of which is used as food. The fruit of the allobd-tree is considered a dainty, and constitutes an article of trade. The fruits of the monkey-bread (*Adansonia digitata*), the doum-tree, and nebeck-tree are considered as very good.

Horses are more numerous in Sennaar than in the countries farther north on the banks of the Nile. The chief wealth of the numerous nomadic tribes which inhabit the uncultivated districts of the country, consists in their camels, cattle, sheep, and goats. The camels are killed for food. The cattle are of good size. The sheep and goats are without wool or hair. Fowls are plentiful in some places. Wild animals are very numerous. The elephant is found as far north as 14° 30' N. lat., and in some parts in great numbers. The giraffe is abundant in Atbara. The animals whose flesh is used as food, and which are very plentiful, are mountain goats, antelopes, wild cattle, wild asses, and hares. There are several kinds of hyenas and monkeys. The rivers are inhabited by the hippopotamus and the crocodile. From the skin of the hippopotamus whips are made, which are a considerable article of trade. The flesh of the crocodile is eaten. Birds are numerous. Water-fowl are plentiful on the banks of the Bahr-el-Abiad. Ostriches are abundant in the desert, especially in that tract which separates Sennaar from Kordofan; their feathers are a considerable article of trade. Wild Guinea-fowls are numerous. An immense quantity of honey is collected in these countries, especially on the islands of the Bahr-el-Abiad, and it is a considerable article of trade.

Gold and iron exist in the Jebel Fungi, and iron is also found in the desert which divides Sennaar from Kordofan. There are some salt works on the Bahr-el-Abiad, but most of the salt used in Sennaar by the rich is brought from Boeydha in Nubia. The poor use a brine as a substitute, which they procure by dissolving in hot water lumps of a reddish-coloured saline earth, which they obtain from the nomadic tribes of the Atbara.

Inhabitants.—The inhabitants of Sennaar are either free cultivators or 'mowelled.' The latter are a peculiar race; they are descendants of slaves, who from generation to generation live at large, and pay their masters monthly a part of their gains. If the slaves of two masters marry, their children become the joint property of their masters. In appearance there is no difference between the slaves and the free population. The slaves have usually a darker complexion, but some of them are light-coloured and handsome. The language spoken by the natives is the Arabic.

In the interior of Sennaar, south of 14° 30' N. lat., are the Bukarah Arabs, who have maintained their independence. On the western banks of the Bahr-el-Abiad is the Beduin tribe of Husaniyeh, which extends southward nearly to 13° 30' N. lat. They are generally fine men, a shade lighter than those of Sennaar, and the females are not so dark as the males. South of the Husaniyeh Arabs are the Shilluks. The few individuals of this nation who have been seen by Europeans were clumsily formed, their legs being too short for the size of the

trunk. The heads of some were shaved; the hair of those unshorn was curled and woolly. Their countenances are harsh and savage; their cheek-bones high, and noses narrow near the root, but broad and flattened towards the nostrils. The incisor teeth of the lower jaw had been extracted. The only weapons they had were sticks, shields, and spears of a rude construction. They speak a language different from that of their neighbours. They wear no covering, and worship the sun and moon. Opposite the Shilluks, on the eastern banks of the Bahr-el-Abiad, live the Denka, who were originally the same nation, but they are now quite distinct, and constantly at war. The principal wealth of both nations consists of cattle.

The peninsula of Atbara is the residence of two powerful tribes, the Bisharies, or Bishareen, and the Shukerieh. The former occupy the northern portion of the country. [BISHAREEN; NUBIA.] The Shukerieh are handsome men, with fine countenances, tall, and not black. They are proud, but more polished and less debauched than the Bisharies. They do not speak Arabic. Though these two tribes derive their subsistence chiefly from the produce of their herds of camels, cattle, sheep, and goats, they repair to the banks of the Atbara immediately after the inundation to sow dhurra, and remain there till the harvest is gathered in. During the hottest part of the summer, when the grass is dried up in the desert, they again descend to feed their cattle on the herbage on the borders of the stream.

Government.—The pasha of Egypt maintains a regiment of infantry and two regiments of cavalry in Beléd-es-Súdan, and governs the province by a sandjar, who resides in the town of Khartúm. But only a small portion of the country is immediately subject to the governor, nearly the whole being subordinately under the authority of native sheiks.

Towns.—The most populous place at present is *Khartúm*, situated at the confluence of the two great branches of the Nile. It has become a place of importance, in consequence of having been made the residence of the governor. The houses are built partly of sun-dried bricks and partly of dhurra-stalks. The former capital was *Sennaar*, which was destroyed when the Egyptians occupied the country in 1822, and in 1829 it consisted of a heap of ruins, except a few houses which were inhabited by some merchants. The town was afterwards rebuilt, and the inhabitants resumed their manufacturing industry. Among the manufactures are mats with beautiful devices made of split doum-leaves, and dyed of various colours, conical straw-covers for plates in elegant patterns, silver-stands for coffee-cups in flagree, warlike weapons, as spears, knives, &c., and amulets, which are worn for security from every kind of disease and casualty. There is a well-furnished bazaar. *Wady-Medinah* and *Missalemieh*, between Sennaar and Khartúm, carry on some commerce with the adjacent country. At *Monktrah*, on the Bahr-el-Abiad, are the dockyards in which boats are built for the pasha of Egypt, but it contains no inhabitants except the workmen employed in their construction. In the interior and within the mountain-region of Jebel Fungi is the town of *Goleh*, which is said to be equal in size to Sennaar, and to be noted for its iron-ware.

Manufactures.—That branch of industry in which the Sennaarese are most distinguished is leather, which is of the best quality, and much superior to that made in Egypt or Syria. This leather is worked into different articles, which have an extensive sale in the valley of the Nile and in Arabia. The most important of these articles are camel-saddles, sandals, and leathern-sacks. Where dates grow cords and ropes are made of the fibrous interior bark of the palm date-tree, and in some places of reeds. The shields made of the skins of the rhinoceros and giraffe are used all along the Nile and across the mountains as far as Cosseir and Kenneh in Upper Egypt. Cotton-cloth is made by the women for domestic use, but it constitutes also a considerable article of trade in Northern Africa, under the name of damour. The workers in gold, silver, and iron are very skilful, and execute their work neatly with very simple tools. Pottery is made to a considerable extent in Sennaar. In some places coloured straw-hats are made with great neatness, and they are sent to different countries in the neighbourhood.

Commerce.—The province of Beléd-es-Súdan is the seat of an extensive commerce. Its commercial relations with the interior of Africa extend as far as Begharmi. The caravans which depart from these places go as far as Cairo. Numerous pilgrims from the interior of Africa pass through Shendy and Sennaar on their road to Suakim on the Red Sea, and by the same way many products of the country and of the interior of Africa are sent to the coasts of Arabia, where they are partly exchanged for the goods brought from Hindustan and the Indian Archipelago, while European goods reach Abyssinia and the eastern countries of Súdan by the way of Egypt. Two caravan-routes lead to the port of Suakim on the Red Sea; one from Sennaar and the other from Shendy. There is a much frequented caravan-road from Shendy to Cairo, which for a considerable space follows the course of the Nile. At the village of Daraou, about 10 miles N. from Assouan, on the east bank of the river, the caravan-road terminates, and the goods are embarked on boats to be conveyed to Cairo and other places of Egypt. The common route between Shendy and Sennaar lies along the banks of the Nile and the Bahr-el-Azrek, but there is a shorter road through the desert, which runs nearly due south from Shendy to Abouharras at the confluence of the Bahr-el-Azrek

with the Rahad. Two caravan-roads lead from Sennaar to El-Obeid in Kordofan. From El-Obeid the route passes westward to El-Tusher, the present capital of Dar-Fur, and thence to Kobbe and Kubkabiya. The common commercial road from Sennaar to Gondar in Abyssinia runs in an east-south-eastern direction to Ras-el-Fil, where the merchants of both countries meet and exchange their goods.

Few of the articles imported into Sennaar are brought from European markets. The principal articles imported from Egypt are the sembil and mehleb, both of which are in great request in Súdán, the former as a perfume and medicine, and the latter as a condiment. The sembil is the *Valeria celtica* or *Spiga celtica* of the Italians, and is chiefly grown in the southern provinces of the Austrian dominions; it is sent from Venice and Trieste to Alexandria. The mehleb is brought from Armenia and Persia, and shipped at Smyrna and other ports of Asia Minor for Egypt. It appears to be the fruit of a *tillia*. Sugar is brought from Upper Egypt, and soap from Syria, where it is manufactured. From Egypt are also imported many manufactured articles, as takas (a sort of coarse cambric dyed blue), white cotton stuffs with red borders made at Mehalla in the Delta, melayes (a blue striped cotton cloth), linen made at Siout and Manfaloot, and sheepskins dressed with the wool on, which are often dyed blue and red, and are used as saddle-cloths for the horses, dromedaries, and asses of the natives, and as carpets for the women's apartments. Beads of wood, of coloured glass, coloured agate, coral, and amber are imported to a considerable extent. Paper, made in Genoa and Leghorn, goes to Dar-Fur and other countries farther west. Brass-wire is in great demand, as it is used for ornamenting the lances by twisting it round different parts of the shaft. Of hardware, the most saleable articles are common razors, files, thinblades, scissors, needles, nails, steels to strike fire with, and sword-blades. The sword-blades are made at Solingen on the Rhine. Tar is imported to make water-skins waterproof, and to rub the backs of the camels. Silver trinkets for female ornaments, such as bracelets and ear-rings, are imported in great numbers; most of them go to Dar-Fur. Looking-glasses of Venetian and Trieste manufacture, with gilt covers, are a considerable article in the Egyptian trade.

The principal article of export is slaves. They are partly imported into Sennaar from Abyssinia, Kordofan, and Dar-Fur, and partly taken from the mowelled, or native slaves of the country. Damour, or cotton-stuff, is always in great demand, as the cotton manufactories of Sennaar and those of Begharmi furnish the greater part of north-eastern Africa with articles of dress. Gold is partly got from the mines in the Fungi and Nuba Mountains, and partly from Abyssinia. Other important articles of export are ivory, mostly from Dar-Fur, rhinoceros horns, musk, whips and other articles of leather, ebony, the coffee brought from the western districts of Abyssinia, honey, and ostrich feathers. India goods reach Sennaar by the way of Jidda and Suakim. They consist of different sorts of cambric from Surat and Madras, of coarse muslins from Bengal, of spices, especially cloves and ginger, of India sugar, the beads called reyah, and sandal-wood.

The inland trade of Sennaar is very active, partly in consequence of the great number of caravans which continually traverse the country, and create a great demand for camels, and partly on account of the different productions of the several parts which constitute the province of Beléd-es-Súdán. No gold currency is in use among the merchants of Sennaar except unstamped pieces or rings of pure gold. They are of different sizes, from 30 paras (2d.) to 240 piastres (3s.); and during the whole time the market lasts an officer sits with the scales before him, and weighs gold gratis for all persons. Spanish dollars are current. In some parts the beads are used as small coin.

History.—The ancient history of Sennaar is very little known. It appears that it once formed a part of the empire of Abyssinia, and at a later period of Nubia. In the 13th or 14th century it was wrested from Nubia by a family which came originally from Teyssafaan, a country in Súdán; and at one time that family was in possession of nearly all Nubia, the whole country from the second cataract to the mountains of Fungi being subject to them. On the east their empire included Suakim and a large tract of the coast of the Red Sea, and on the west it extended beyond Kordofan. In the course of time the sovereigns, called 'muk', became too indolent to transact business, and appointed a vizier, who soon possessed himself of all the power, though he continued to pay outward respect to the muk. This took place about two centuries ago, and since that time the power of Sennaar has been decreasing, and several chiefs have become nominally and really independent. In 1822 the country was invaded by the army of Mohamed Ali under Ismael Pasha. The vizier made no resistance, but obtained good terms for himself, by which the southern part of Sennaar, which lies within the mountains of Fungi, was left to him as a vassal of the pasha of Egypt, and the muk was reduced to the station of a private individual.

(Burckhardt, *Travels in Nubia*; *London Geographical Journal*, vols. ii. v. ix. x.)

SENNECEY-LE-GRAND. [SAÔNE-ET-LOIRE.]

SENOUCHES. [EURE-ET-LOIRE.]

SENS, an archiepiscopal city in France, in the department of Yonne, the chief town of the fourth arrondissement, is situated in 48° 11' 54" N. lat., 3° 17' 12" E. long., on the right bank of the Yonne, 250 feet above the level of the sea, 70 miles S.E. from Paris by the Lyon

railway, and has tribunals of first instance and of commerce, a college, and 10,355 inhabitants in the commune. It occupies the site of the ancient *Agenticum*, which was afterwards called *Senones* from the name of the people to whom it belonged, and thence is derived the modern Sens. *Agenticum* or *Senones* became under the Romans the chief town of *Lugdunensis Quarta*, or *Senonia*. It became at the end of the 1st century of the Christian era the seat of a bishop, and afterwards of an archbishop. In the middle ages it was the capital of a county, which was united to the crown by the kings Robert and Henri I. The archdiocese of Sens is now united to that of Auxerre. The archsee of Sens-et-Auxerre is co-extensive with the department of Yonne; the province of the archbishop comprises also the sees of Troyes, Nevers, and Moulins.

The town is of an oval form, surrounded by ancient walls now partly destroyed. Some of the large stones of the foundation bear Roman inscriptions. Of the nine gates of the city, three belong to the middle ages, and the rest are modern. The streets, with the exception of that through which the Paris and Lyon road passes, are narrow and crooked, and the houses generally ill-built. There are two bridges over the Yonne, which is joined by the Vannes on the south side of the town. The principal public buildings are the cathedral, which is a large gothic structure of various dates, remarkable for the size and good effect of its interior, for its painted windows, and for the height of its tower; and the college, which is a modern structure. The cathedral is nearly as large as the metropolitan church of Notre-Dame in Paris. In the apse end, behind the Grand Altar, is a spirited representation of the martyrdom of St. Savinien, first bishop of Sens. In the middle of the choir is a white marble monument of the Dauphin (father of Louis XVI.) and his wife Maria Josepha. In one of the chapels of the nave is a beautiful sculptured altar-piece, representing the principal scenes of the Passion. In one of the suburbs is a church dedicated to St. Savinien, which dates from the 11th century. Many houses in the town date from the 14th and 15th centuries, and many of them are adorned with sculptures. There are public baths, a theatre, an hospital, an ecclesiastical seminary, and some pleasant public walks.

The chief manufactures are of glove- and shoe-leather, cotton-yarn, straw and chip hats, woollen stuffs, polished steel, glue, beer, candles, spirits, tiles, and earthenware. The chief trade is in corn and flour for the supply of Paris, wines, wool, hemp, tiles and bricks, bark, leather, tan, timber, &c. Linen is bleached. Sens has a public library of 6600 volumes, and a museum.

SEPULVEDA. [CASTILLA LA VIEJA.]

SERAING. [LIÈGE.]

SERAMPOOR. [HINDUSTAN.]

SEREGIPE DEL REY. [BRAZIL.]

SERETH, RIVER. [AUSTRIA.]

SERINAGUR, or SIRINAGUR. [CASHMERE.]

SERINGAPATAM. [HINDUSTAN.]

SERK, or SERCQ. [GUERNSEY.]

SERPA. [ALEMTEJO.]

SERPUCHOW. [MOSCOW, Government of.]

SERRA CAPRIOLA. [CAPITANATA.]

SERRAVALLE. [GENOA.]

SERRÉS. [ALPES, BASSES.]

SERVAN, ST. [ILLE-ET-VILAINE.]

SERVIA, or SERBIA, a political division recently formed by decree of the emperor of Austria, consisting of portions of South Hungary and Slavonia. It is styled the *Woiwodschaf of Servia* and *Temeswar Banat*, and includes the Banat of Temeswar (comprising the counties of Bacz Bodrogh, Torontal, Temes, and Krasso, in other words, the territories of the Baczka and the Banat), and the Syrmian districts of Ruma and Illok. The emperor is styled *Grand-Woiwode*, and the actual governor *Vice-Woiwode*, who resides in Temeswar, and is assisted by a ministerial commission and a native administrative council. The *woiwodschaf* is divided into 5 districts. It has an area of 11,528 square miles, drained by the Maros, the Temes, the Theiss, and the Danube. The population amounts to 1,426,221 Serbs, Wallachs, Germans, and Hungarians. [CROATIA; HUNGARY; TEMESWAR.]

SERVIA (*Syrr, Serbie*), nominally an eyalet or province of European Turkey, in reality a tributary principality governed by an hereditary prince, was an integral part of European Turkey till the beginning of the present century. It is bounded N. by the Danube and the Save, which separate it from Austria, E. by Wallachia and Bulgaria, S. by Rumili and Albania, and W. by Bosnia, from which it is separated by the Drina, an affluent of the Save. The length of Servia from east to west is about 145 miles, from north to south about 150 miles. It lies entirely in the basin of the Danube, which river is joined by the Save, and afterwards by the Morava, which crosses the centre of Servia from south to north, receiving numerous affluents; those on its western or left bank come from the Mounts Stalatz, an offset of the Dinaric Alps which divide the waters of the Morava from those of the Drina, and those on its eastern bank from the Bulgarian Mountains which are offsets of the Balkan range. Servia is a country of mountains and valleys, in great part covered with ancient forests. The country has excellent pastures, in which are reared numerous herds of cattle. The population of Servia is about a million, mostly belonging to the Greek Church. The Servians, or Serbs, are a branch

of the Slavonic race, and their language is one of the most polished dialects of the Slavonian.

The principal towns of Servia are—*Semendria*, situated at the confluence of the Jassava with the Danube, a fortified town, with about 22,000 inhabitants: *BELGRADE*: *Poserovats*, or *Passerovits*, a regularly built town of 4000 inhabitants, in the lower part of the valley of the Morava, is celebrated for the treaty signed here by Prince Eugene in 1718, which deprived the Turks of Hungary, Little Wallachia, and part of Servia: *Zabatz*, or *Schabacs*, a fortified town with 12,000 inhabitants, near the mouth of the Dubrava in the Save: *Ujitzs*, near the borders of Bosnia, a town of 6000 inhabitants, carrying on a considerable trade: *Vallievo*, a neat little town, with 1500 inhabitants, on the Kolumbara, at the foot of the Medvedniak Mountains, nearly due south of Zabatz: *Kragojewatz*, a small town in the south of Servia, near the junction of the two Moravas, where a diet of the representatives of Servia proclaimed, in 1830, Milosch and his heirs princes of Servia: *Gladova*, or *Kladova*, on the Danube, in the east of the principality: population, 3000. The citadel of Gladova, called Feth Islam, is garrisoned by the Turks.

The soil in general is very fertile, but a large part of the country is in a state of nature, still unreclaimed, and covered with magnificent forests of oak and other timber-trees. The plains of the interior are in parts well cultivated, and yield fine crops of wheat, barley, maize, oats, rice, hemp, flax, tobacco, &c. The cleared parts of the valley of the Morava are especially productive of fine maize, and in proof of the natural fertility of the soil, it is enough to say that wild sainfoin grows luxuriantly along the road that ascends the valley. Cotton is grown in some of the valleys, and vineyards are planted in favourable situations. The best wines are those grown in the valley of the Morava, and those of Semendria, in the valley of the Jassava.

The face of the country is described as generally beautiful in the extreme; "Hills and woods, glades and streams, succeed in an endless chain, each link a perfect landscape," says the author of 'Frontier Lands of the Christian and Turk.' The population is for the most part scattered over the country in hamlets and villages; and substantial farmhouses, with extensive offices, are sometimes seen apart from the villages. The country abounds with game. Horses and horned cattle are bred in great numbers. Swine are countless. They feed wild in the oak-forests, and are exported in immense numbers to Hungary and Slavonia, where they are fattened and sent to Vienna and other towns of Germany. The fields in parts of the country are inclosed by hurdles to keep out the swine, which rove about half wild. Snakes and lizards are in parts very numerous. Mosquitoes and marsh fever render the low grounds, which in parts skirt the Save, uninhabitable.

The country is said to be rich in minerals, but of this source of wealth, as of the more readily worked wealth of the oak forests, little or no advantage is taken. Iron-ore is found at several points; very rich copper-ore is found at Madenbek in an offset of the Balkan near the eastern frontier. Silver is also found here. Salt is procured at several points. Agriculture and cattle and swine breeding seem the chief occupations. The people seem generally to enjoy a kind of rough prosperity, and to be in a state of material progress. The Servian princes have opened some good roads, the principal of which are those that cross the lower part of the principality from the frontier of Wallachia to Belgrade, and the road up the valley of the Morava from Belgrade and Semendria to Nissa. These lines are chiefly macadamised, in parts made with gravel.

"The Serbs," says the author of 'Frontier Lands,' before quoted, "are in figure the finest race I ever saw"—a fair people, of good, in many instances, of colossal stature, with blue eyes, light hair, and open countenances. The houses in the towns are in general well built, but in the villages and hamlets they are constructed in some instances with wattles plastered with mud, more generally of rough planks. Under the Turkish rule they enjoyed almost unlimited liberty as long as they paid their taxes; but under the rule of their princes this liberty has been vastly curtailed, by the introduction of the passport and quarantine systems, and of intricate custom-house regulations, which would be simply ridiculous as childish imitations of some of the great neighbouring states if they were not so detrimental to the progress of an otherwise promising country.

The principality is in spiritual matters subject to the archbishop of Belgrade, or Semendria, and to the bishops of Zabatz, Timok, and Ujitzs, who are paid by the government, the archbishop receiving 5000 dollars, and each of his suffragans 2500 dollars a year. The number of priests is about 652, who are paid by the parishioners. The number of monks is small. In 1840 there were 80 elementary schools, with about 1000 scholars; in 1850 there were 260, which with the college of Belgrade, had an aggregate of 8000 pupils. About 20 students are sent to Kieff, in Russia, to study theology, and about double that number are educated in the universities of Western Europe, chiefly in France. There is only one printing-press in the whole country, and that belongs to the government.

The revenues of the principality are estimated at a million dollars a year. The militia consists of two battalions of infantry of 1000 each, a squadron of cavalry 200 strong, and 300 artillerymen. But as the Serbs are eminently a martial people, it is estimated that the country could equip 150,000 foot and 10,000 horse.

The country of Servia under the Roman empire formed the province

of Mœsia Superior. It was invaded by the Goths under the emperor Valens, and some centuries later by the Servi, a tribe of Slavonians, to whom were allotted some grounds south of the Danube by the emperor Leo VI., in order to oppose them to the Bulgarians, who threatened the very existence of the empire in the 10th century. By degrees the Servians encroached also upon the territories of the empire, and in the 12th century the emperor Manuel Comnenus was obliged to fight against them in order to check their incursions. During the subsequent decay of the Eastern Empire, and its conquest and partition by the Latins, the Servians established themselves firmly in the country of Mœsia, forming an independent principality under a prince styled Despot, in the same manner as the neighbouring Slavonian states of Bosnia and Croatia. Murad I., sultan of the Ottomans, married a daughter of the Despot of Servia; but several years after, the Servians, Hungarians, and other Christian nations near the Danube, alarmed at the progress of the Turks in Albania, collected a large force under Lazar, Despot of Servia, and marched against Murad, who met the Christian army in the plain of Kossova, near the frontiers of Albania, A.D. 1389, and defeated it with dreadful slaughter, but was himself killed by a Servian noble, Miloah Obelóvitz, Lazar's son-in-law. Lazar was taken prisoner and killed by the Turks in revenge for the death of their own sultan. In the following century Sultan Murad II., who had married the sister of George, Despot of Servia, turned his arms against his brother-in-law about the year 1440, overran Servia, took the fortress of Semendria, and obliged George to take refuge at Ragusa, from whence he made his way to Hungary, where he joined the gallant Hunnyades, and through his assistance recovered part of his territories. At last Mohammed II., after taking Constantinople, finally conquered Servia, which he annexed to his empire, with the exception of Belgrade, which was bravely defended by the Hungarians under Hunnyades, and was only taken (in 1522) by Solymán the Great. Servia continued a province of the Turkish empire till 1717, when Prince Eugene, at the head of an Austrian army, took Belgrade and conquered a part of Servia, which was ceded by the sultan to Austria by the peace of Passarowitz, 1718. But in the subsequent war of 1739 the Austrians, being worsted by the Turks, lost Servia, and gave up Belgrade also by treaty. Marshal Laudon retook Belgrade in 1788, but Austria gave it up again to the sultan by the peace of Ssistova in 1791.

About the year 1804 the Servians, availing themselves of the revolt of Passwan Oglu, pasha of Widin, rose in arms throughout the country against the Porte. They chose for their leader George Petrowitsch, surnamed Kara, or the 'black,' a countryman who, having taken a part in a former unsuccessful insurrection in 1787, had fled into the Austrian territories, and served in the Austrian army in the campaign of 1788-9. After the peace in 1791 Kara George had returned to his country and resumed his profession of herdsman and grazier. He was stern and taciturn, but courageous and robust. In January 1806 two numerous Turkish armies, one from Bosnia under Bekir Pasha, and the other from Nissa in Rumili under Ibrahim, pasha of Scutari, entered Servia. Kara George had no more than 10,000 men, but they were determined, and knew well the country and the intricacies of its forests. He kept in check both armies, and in the month of August defeated the pasha of Bosnia, and drove him back across the Drina with great loss. He then turned rapidly against the pasha of Scutari, who proposed a truce. But the truce not being ratified by the Porte, George surprised and took Belgrade, except the citadel, which surrendered in 1807. Servia was now free from the Turks. A sort of military government was formed, consisting of the chief proprietors of the various districts, each of whom was at the head of a body of cavalry formed of his tenants and friends. These officers assembled once a year, about Christmas, at Belgrade, to deliberate, under the presidency of Kara George, upon the affairs of the country. A senate of twelve members, one elected by each district of Servia, constituted the permanent executive. Mutual jealousies and dissensions soon broke out between the principal governors and Kara George. The latter, in order to strengthen his power, undertook the invasion of Bosnia in 1809, whilst Russia was at war with the Porte. He proved unsuccessful, and was obliged to retire into Servia, protected by a diversion made by a Russian corps on the side of the Danube. In 1810 he defeated Kurschid Pasha, who had advanced from Nissa with 30,000 men, and soon after he routed another army from Bosnia, and drove it back across the Drina. He availed himself of these successes to obtain from the diet of 1811 more ample powers, and a sort of ministry, which resided continually near his person. The Porte proposed to acknowledge Kara George as Hospodar of Servia, on condition that the Turks should garrison all the fortresses and keep the arsenals and arms. It was easy for persons acquainted with Ottoman policy to foresee what would be the results of such an arrangement. The negotiations lasted till 1813, when the news of the success of Napoleon I. in Germany freed the Turks from the fear of Russia, and stimulated them to make a last effort against Servia. Two Turkish armies advanced, drove before them some Servian corps, and carried several strongholds. Kara George, losing on a sudden his firmness, crossed the Danube and took refuge in Austria, and afterwards in Bessarabia. Universal discouragement followed, and the Turks occupied the whole country and entered Belgrade. Servia became again a pashalik. Milosch Obranowitsch, originally a swineher-

alone kept up the insurrection about Jagodino, in the southern districts, but was at last obliged to accept the amnesty offered by the pasha for himself and followers. The Turks however having contrived to get into their hands the leaders of this last insurrection, shot a number of them, regardless of the amnesty, and impaled thirty-six of them at Belgrade, in front of the pasha's palace in 1815. Milosch himself effected his escape: he ran to the mountains, and the insurrection began afresh. Having assembled the Heyduks and the rugged and emigrants of the former insurrection, he attacked the kiaya, or lieutenant of the pasha, who had advanced against him from Belgrade at the head of 10,000 men. The kiaya was defeated with the loss of his artillery and baggage. The pasha came out of Belgrade with the rest of his troops, and was likewise defeated, and obliged to retire to Keupri under an escort given him by Milosch. Kurechid, pasha of Bosnia, sent another army under his lieutenant Ali, who was defeated, taken prisoner, and sent back to his master with presents. Milosch afterwards went himself to the camp of Kurechid Pasha to undertake negotiations of peace. The only article upon which they could not agree was that Milosch wished the Servians to remain armed, to which the pasha would not consent. When Milosch rose to mount his horse, the pasha's janizaries fell upon him, but Ali, who had been so generously treated by Milosch, interposed, representing that Milosch had come spontaneously and under a safe conduct, which ought not to be broken. Ali's firmness saved Milosch, who was allowed to depart. The negotiations continued; Servian deputies were sent to Constantinople, and at last a firman of peace came, appointing another pasha friendly to the Servians. The forts of Belgrade, Zabatz, Ujltza, Semendria, and Sokol were to remain in the hands of the Turks, but the Servians retained the administration of the country, their senate, and they alone taxed themselves. Meanwhile Kara George was living in Besearabia, where he seems to have entered into the Russian schemes for overthrowing Turkey. He retired to Servia with some confederates, with a design of raising the standard of insurrection, and was betrayed, it is said at the instigation of Milosch, into the hands of the Turks, who put him to death as he slept in a hut.

Milosch restored with some modification the constitution established by Kara George. He created a provincial administration; every district or knef has its kneven, or civil officer, and every great division or province has its obar-kneven, all of whom are paid by the treasury. Judicial courts were established in the various districts. A code, based mainly on the French code, was compiled. The clergy were made amenable to the same courts as the laity. Belgrade has a small Turkish garrison, and is the residence of a pasha, who has no direct authority in the affairs of the country. Servia pays a fixed amount of tribute to the Porta, which is yearly delivered by the prince into the hands of the pasha. The natives of Servia are allowed to trade all over the Ottoman empire, when furnished with Servian passports. By an imperial Hatti Sherif, issued in 1830, religious liberty, hereditary succession in the family of Milosch, the formation of a national militia, the right of erecting schools and hospitals, and the administration of public justice were among the privileges confirmed to, or conferred upon, the Serbs. For several years after this Milosch gave himself up to amassing wealth; when the senate established by the new constitution determined to examine the public accounts, he suddenly retired to Semlin. He soon returned however, and fomented a revolt against the senate. His complicity being discovered, he resigned his post, and withdrew to Bucharest. He was succeeded by Prince Milan, after whose death Prince Michael, the second son of Milosch, became ruler of the Serbs. Michael after a short period of power was deprived of the princely functions, for practices similar to those of his father: and Alexander, son of Kara George, the present ruler of Servia, was raised to the princely dignity.

The senate of Servia consists of 17 members chosen for life, from the most influential persons in the principality; they are irremovable by the prince, on whom they form a constitutional check. Since 1850 no Turk is allowed to hold real property in Servia, or to reside in it, except in one or other of the five fortresses before named. The Serbs are said to be favourable to the views of Russia, to which power they are akin in blood, language, and religion, and to whose intrigues they are mainly indebted for their favourable relations with the Porta.

SERVIAN. [HÉRAUL.]

SESIA, RIVER. [Pé.]

SESIA, VAL DI, or VALSESIA. [NOVARA.]

SESSA. [LAVORO, TERRA DI.]

SESTOS, the chief city of the Thracian Chersonesus, was situated on the Hellespont. Theopompus says that Sestos was a small but well-fortified town, which was connected with the port by a wall of 200 feet; and that, owing to its position, and the current from the Propontis, it commanded the channel. At the close of the great Persian war the town was besieged by the Athenians, and the inhabitants, after being reduced to the greatest straits by famine, opened the gates. The capture of Sestos (B.C. 479) terminated this great campaign, which was signalled by the victories of Salamis, Plataea, and Mycale; and with this event the history of Herodotus closes. (Strabo, p. 591; Herod., ix. 121; Thucyd., i. 89.)

SESTRI DE LEVANTE and DI PONENTE. [GENOA.]

SETANG, RIVER. [BRMA.]

SETTEF. [AŁOŁKIA.]

SETTLE, West Riding of Yorkshire, a market-town, and the seat of a Poor-Law Union, in the parish of Giggleswick, is situated in a mountainous district near the left bank of the river Riddle, in 54° 4' N. lat., 2° 18' W. long., distant 54 miles W.N.W. from York, 235 miles N.N.W. from London by road, and 258 miles by the North-Western railway. The population of the township of Settle in 1851 was 1976. The living is a perpetual curacy in the archdeaconry of Craven and diocese of Ripon. Settle Poor-Law Union contains 31 parishes and townships, with an area of 154,591 acres, and a population in 1851 of 13,782.

The town is situated at the foot of a limestone rock upwards of 200 feet high, called the Castleberg. The parish church is at Giggleswick, on the opposite side of the river, over which there is a stone bridge. In the town is a neat church in the early English style, built in 1338. The Wesleyan and Primitive Methodists, Independents, and Quakers have places of worship. There are National and Infant schools, a literary society, a mechanics institute, a news-room, and a savings bank. The Public Buildings is an Elizabethan edifice, erected in the market-place in 1852. Cotton-manufactures are carried on; the machinery is worked by water-power. Ropes and paper are made. The land in the neighbourhood, which is chiefly used for grazing, is exceedingly rich. The market is held on Tuesday; fairs for cattle are held frequently, and pleasure fairs twice or thrice in the year. A county court is held in the town.

SETUBAL. [ESTREMADURA, Portuguese.]

SEVASTOPOL. [CRIMEA; SEBASTOPOL.]

SEVENOAKS, Kent, a market-town, and the seat of a Poor-Law Union, in the parish of Sevenoaks, is situated in 51° 16' N. lat., 0° 11' E. long., distant 17 miles W. from Maidstone, and 23 miles S.S.E. from London. The population of the town of Sevenoaks in 1851 was 1850. The living is a vicarage in the archdeaconry of Maidstone and diocese of Canterbury. Sevenoaks Poor-Law Union contains 16 parishes and townships, with an area of 67,488 acres, and a population in 1851 of 22,095.

The town is situated on an eminence which forms the northern brow of the chalk-marl and greensand range of high lands, in the midst of a fertile and well-cultivated district. The streets are lighted with gas. The church is a spacious and handsome edifice, with a lofty square tower; it is chiefly in the perpendicular style. There are places of worship for Wesleyan Methodists and Baptists. The Grammar school, founded in 1418 by Sir William de Sevenoke, or Sennocke, a founding brought up by some charitable person in this town, is free to boys for classics only, and has two exhibitions of 65*l.* a year each: in 1854 there were 8 scholars on the foundation. This school, and a large range of almshouses founded at the same time by Sevenoke, is under the government of a corporation consisting of two wardens and four assistants. An endowed school, founded by Lady Margaret Boswell, provides for the instruction of 200 children. The market is on Saturday, chiefly for corn; a market held on the third Friday of each month for cattle has declined. There are two yearly fairs.

Adjoining Sevenoaks is Knole Park, one of the finest mansions in the kingdom. It is very spacious, of different dates, and contains a large and valuable collection of paintings, as well as much curious old furniture; it stands in a noble park of 800 acres, well stocked with deer and abounding with stately trees, especially beeches: both mansion and park are open to the public.

SEVER, ST. [LANDES.]

SEVERAC-LE-CHATEAU. [AVYRON.]

SEVERE, STE. [INDRE.]

SEVERN. The Severn is the finest, and, next to the Thames, the largest and most important of British rivers. The original name of the Severn was *Hafren*, of which Severn is only a corruption. It was subsequently called by the Romans *Sabrina*, a name given to it, as is said, in consequence of the fate of Sabra, or Sabrina, who was the daughter of Loocrine, king of Britain, by Estrildis, a captive virgin, in order to unite himself to whom Loocrine had divorced his former queen Gwendolen. On the death of the king, Gwendolen assumed command, and caused Sabrina and her mother to be drowned in the Hafren, which from that time received her name. Milton, in his *Comus*, has made Sabrina the goddess of the river.

The Severn rises on the western border of MONTGOMERYSHIRE, from a chalybeate spring on the eastern side of Plinlimmon, at a very considerable elevation, and within a very short distance from the sources of the rivers Wye and Rhiedol. It flows eastward about 12 miles to Llandiloes, as far as which place it still retains the original British name of Hafren. At Llandiloes the Severn receives the waters of the Clywedog; and thence it inclines to the north-east by Newtown and Welshpool; near the latter place it becomes navigable for small boats and barges. Some distance below Welshpool it is joined by the Vyrnwy, and about a mile lower quits Montgomeryshire.

Previous to entering SHROPSHIRE, the Severn inclines to the east, and this is its general direction through the vale of Shrewsbury. From the town of Shrewsbury, which it nearly surrounds, it takes a south-eastern course through Coalbrookdale to Bridgenorth, and enters Worcestershire a short distance above the town and port of Bewdley. The principal tributaries of the Severn in Shropshire

are—on the right bank, the Meole or Red-Brook, which enters at Shrewsbury, the Ound, Mar-Brook, and Bore-Brook; and on the left, the Perry, Tern, Bell-Brook, and Worf. The Severn receives the whole of the waters of the interior of Shropshire, and its course through that county is between 60 and 70 miles. From Bewdley the river runs southward to Stourport, where it receives the Stour on the left, and about 8 miles lower down the Salwarpe joins it on the same side. Five miles farther it reaches Worcester. Two miles below this city the Severn receives a considerable accession of water from the right bank by the junction of the river Teme, the principal part of whose course is in Worcestershire, but which rises in Radnorshire, and flows through portions of Herefordshire and Shropshire. Still flowing nearly south, the Severn passes Upton, and quits Worcestershire at Tewkesbury, where it receives the Avon, and enters Gloucestershire. [Avon, Upper.]

From Tewkesbury the river again changes its direction, and gradually inclines to the south-south-west, which direction it chiefly follows for the remainder of its course. A mile above the city of Gloucester the stream divides into two channels, which unite a little below Gloucester, forming the rich tract of land called Alney Island. The Frome joins it before reaching Newnham. A short distance below Newnham the channel widens considerably; and although it retains the name of river as far as the mouth of the Bristol, or Lower Avon, it is rather the estuary than the river. The total length of the Severn, from its source in Montgomeryshire to the Bristol Channel, is about 200 miles.

In the ancient division of Britain, the Severn appears to have formed the boundary between the territories of the Silures and the Ordovices on the west, and the Dobuni on the east. In the subsequent divisions of counties, it has scarcely anywhere been employed as a line of separation.

In the commencement of its course, the valley of the Severn is narrow, and supplies little pasturage; below Llanidloes it gradually opens, and is from one to two miles wide, and tolerably productive. The range of the Plinlimmon Hills, which, extending west, comprises the Long Mountain, and terminates in the Breidden Hills, separates the drainage of the Severn from that of the Wye, Teme, Clun, &c. By this range also the course of the Severn is deflected to the north. On the west and north-west the Berwyn Mountains separate the tributaries of the Severn from those of the Dovey and the Dee.

In respect to navigation, the Severn has long been of very great importance. It supplies the means of transporting the produce of mines and manufactories of various descriptions lying in the vicinity of the river to the sea, to North Wales, and the towns and remote districts of the counties through which it flows. Along the greater part of its course the use of the Severn as a navigable river has been impeded by fords and shoals, and by the deficiency of water in drought, and the superabundance of it during rainy seasons. The whole of the Severn navigation, extending upwards of 160 miles, is free from tolls.

The commercial importance of the Severn has been much increased by its connection with several canals, which are here enumerated:—the Stroudwater Canal, which commences at the Severn near Framiload, between Gloucester and Newnham, and terminates in the Thames and Severn Canal, thus uniting our two greatest navigable rivers; the Gloucester and Berkeley Canal, which shortens the navigation from the Severn near Berkeley, to Gloucester; the Gloucester and Ledbury Canal; the Worcester and Birmingham Canal; the Droitwich Canal, which runs along the valley of the Salwarpe; the Staffordshire and Worcestershire Canal, which commences at Stourport, on the Severn, and, following the course of the Stour, joins the Birmingham and Liverpool Junction Canal; the Shropshire Canal, which with its branches is used for transporting the produce of the manufacturing district of Coalbrookdale to the Severn, which it joins at Coalport; the Shrewsbury Canal, originally formed to convey coal to that town from Ketley in Shropshire, and since extended by a branch through Newport to the Birmingham and Liverpool Junction Canal before mentioned; and the Worcester and Birmingham Canal. The Montgomeryshire Canal commences in the Severn at Newtown, and passing Welshpool, communicates with a branch of the Ellesmere Canal, but as the Severn is not navigable as high as Newtown, this canal can hardly be included as one of the connecting links in the Severn navigation.

The fish found in the Severn are salmon, shad, lampreys, roach, dace, gudgeon, bleak, flounders, eels, lamperns, evers, chub, carp, trout, grayling, tench, and perch. Salmon were formerly plentiful, but are now scarce, although there are no weirs upon the river to impede the ascent of the fish.

A short distance above the point where the Severn merges in the Bristol Channel, it receives the Wye, which, although inferior in its size and the length of its course to the Severn, is much superior in point of picturesque scenery. The Wye has its source on the border of Montgomeryshire, and on the mountain of Plinlimmon, about 2 miles south-west from the source of the Severn. Taking a south-east direction, it receives a number of little tributaries, and quits Montgomeryshire and enters Radnorshire between the village of Llangergid and the town of Rhyader, at the distance of 18 miles from its source. Its course through Radnorshire is in a generally southern direction,

and will be found described under that county. At Glasbury the river inclines to the north, but on entering Herefordshire flows south-east. The river is navigable from Hereford, and indeed in the winter, and whenever there is a depth of water, barges ascend to within a short distance of Hay, for the conveyance of timber, &c. For a short distance the river divides Herefordshire first from Gloucestershire, and subsequently from Monmouthshire, and then enters the latter county, under which its further course will be found described. The spring-tides at Chepstow rise to a great height. [CHEPSTOW.] The length of the course of the Wye is about 130 miles. Its scenery throughout is almost without a rival among the rivers of Great Britain.

Owing to the isthmus or neck of land above the mouth of the Wye, and the projection of Aust Cliff on the opposite shore, the width of the Severn is here only one mile, while higher up, as was before stated, it expands to between two and three miles. At this narrow part of the estuary is the principal passage, called Aust Ferry, or Old Passage, from Somersetshire to Monmouthshire and South Wales. About four miles lower down is the New Passage, which is considerably wider, and not so much frequented.

The estuary of the Severn receives the drainage of about 5900 square miles, namely:—the Severn, 4500; the Wye, 1400. The Severn is charged with a larger amount of turbid sediment than any other river in Europe, the result of its own long course and the courses of its tributaries through tracts of marl and soft sandstone. This fine sediment is in some places deposited on its banks towards the mouth, and the quantity thus deposited is increased by artificial means. The mud is encouraged to accumulate upon lines of pile and oyster, which, as the tide retreats, retain the sediment. Upon these, other lines of oyster-fencing are placed, until new land is raised to a considerable height. On the other hand, the sudden rising of the tides has occasioned great damage to the low lands, to guard against which sea-walls, piles, and other precautionary means have been adopted. The inundations in the years 1608, 1687, 1703, and 1737, are recorded to have produced great devastation.

The Bristol Channel, commencing with the estuary of the Severn, separates Monmouthshire and South Wales from the counties of Somerset and Devon, and terminates in St. George's Channel. Its width from King's Road, the mouth of the Lower Avon, to the opposite coast, is about 5 miles. It then rapidly widens to about 12 miles, but is again slightly contracted between the southern point of Glamorganshire and the western part of Somersetshire. It again expands, forming, on the Welsh coast, Swansea and Caermarthen bays, and, on the coast of Devonshire, Barnstaple, or Bideford Bay. The width at its termination in St. George's Channel, taken from St. Gowan's Head on the coast of Pembrokeshire to Hartland Point in Devonshire, is about 40 miles. The coast-line, both on the Welsh and Devonshire sides, is extremely irregular. Lundy Island [DEVONSHIRE], and Caldy Island [Pembrokeshire], are noticed elsewhere. From Hartland Point to King's Road is about 90 miles; it appears that the tide travels over this distance in about an hour and a half. The tide increases as it advances. At Chepstow the tide rises 48 feet higher than at Lundy Island.

The 'bore' which enters the Severn is 9 feet high, and is produced, as in other places, by the depth and quantity of water on the inland side not allowing the surface there to be immediately raised by means of the transmitted pressure. The greatest velocity of the tidal current through the 'shoots,' or New Passage, is 14 miles an hour. This occurs lower down two hours after high-water, but as the Severn is approached the difference of time is diminished, according to the general observations on this subject.

SEVILLA, an old province of Spain, included in the great territorial division of Andalusia, is bounded N. by Estremadura, W. by Portugal, S.W. and S. by the Atlantic Ocean, E. by the province of Granada, and N.E. by the province of Cordova. It is situated between 36° 4' and 38° 13' N. lat., 4° 20' and 7° 18' W. long. The greatest length from north to south is about 150 miles; from east to west, about 180 miles. The area is 8989 square miles. The population in 1849 was 921,908. It is now divided into the three following modern provinces:—

Provinces.	Square Miles.	Population in 1849.
Sevilla	8989	420,000
Cadix		258,448
Huelva		153,462
Total	8989	921,908

A general description of the provinces comprised in Andalusia is given under that head. [ANDALUSIA.] The modern province of Sevilla occupies the inland portion of the old province; Cadix occupies the portion adjacent to the coast south of the estuary of the Guadalquivir; Huelva the portion adjacent to the coast north of that estuary. Sevilla is flat in the centre, hilly in the south, and mountainous in the north. Cadix is entirely hilly and mountainous. Huelva is flat and swampy on the south, but rises into the mountains of the Sierra Morena on the north-west.

Towns.—The city of Sevilla is the capital of the province.

[SEVILLA.] *Alcala de Guadaira*, 7 miles S.E. from Sevilla, contains an old Moorish castle, and has an extensive trade in grain. Population, 6700. *Algeciras*, in the province of Cadiz, a well-built seaport town on the west side of the Bay of Gibraltar, is 6 miles from Gibraltar by water, and 14 miles by land round the head of the bay. The population in 1845 was 11,077. The houses are low, but very clean and white, and the balconies and lattices of the windows, painted green, have a very pretty effect. The town contains a military hospital of the first class, and is defended by a battery called the Fuerte de Santiago. *Antequera*, 45 miles W.S.W. from the city of Granada, to which province it belongs, is situated near the eastern boundary of the province of Sevilla. It stands in a fine plain, near the south bank of the Guadaljorce, and contains six churches and several charitable institutions, and had in 1845 a population of 17,030. It is chiefly an agricultural town, but has manufactures of baize, paper, silk, and cotton. *Aracena*, in the province of Huelva, 60 miles N.W. from Sevilla, lies in a hollow among mountains. An eminence crowned by a ruined castle overlooks the town on the south, woody slopes overhang it on all sides, and the craggy ridges of the Sierra Morena rise high above at no great distance. The town is remarkably clean, and contains three churches. The population in 1845 was 4370. *Ayamonte*, in the province of Huelva, 27 miles W. by S. from Huelva, is situated on the slope of a lofty hill, at the point where the river Guadiana enters the sea. It is a fortified town, opposite to Castro-Marin in Portugal. It contains two churches, and had in 1845 a population of 6500. It has a small fishing port, and has some manufactures of soap and coarse earthenware.

Cadiz is the capital of the province of Cadiz. [CADIZ.]

Carmona, in the province of Sevilla, 16 miles E.N.E. from the city, occupies the brow of a lofty hill overlooking a wide and uncultivated plain. It is inclosed by old Moorish walls, which, on the eastern side especially, are flanked by numerous square towers of exceedingly massive structure. It contains a ruined fortress and a church with a remarkable tower; and had in 1845 a population of 13,072. In the time of the Moors this town was considered the key of Sevilla, and sustained a long siege previous to the capture of that city by the Christians. *Constantina*, in the province of Sevilla, 40 miles N.N.W. from the city, half encircles a steep isolated eminence, on which the castle is erected. The town consists mainly of one long street, and contained in 1845 a population of 6986. During the Peninsular War the castle was repaired and strengthened by the French, and was held by them as an important post in the line of communication between Andalusia and Estremadura. *Ecija*, in the province of Sevilla, 45 miles E. by N. from the city, stands on the left bank of the Jenil, on the high road from Cordova to Sevilla, in a fine plain, which produces abundance of corn and olives. The town contains several churches and hospitals, and has a beautiful alameda (public walk) on the bank of the Jenil, planted with trees and adorned with fountains and statues. There are manufactures of coarse woollens, linens, and leather. The population in 1845 was 28,370. It was named Colonia Augusta Firma by the Romans, and several Roman inscriptions and other antiquities have been found. *Huelva*, capital of the province of Huelva, 65 miles W. by S. from Sevilla, occupies the lower part of a declivity at the mouth of the Rio Odiel, and at the head of a shallow estuary formed by the discharge of the Rio Odiel and Rio Tinto into the Atlantic Ocean. The population in 1845 was 7173. *Jerez*, the modern Spanish spelling of *Xeres*. *Manzanilla*, in the province of Huelva, 30 miles W. from Sevilla, is situated in a plain which produces abundance of wheat, maize, and olives. Population, 2038. *Moguer*, in the province of Huelva, 12 miles E. from that town, stands on the left bank of the Rio Tinto, on the slope of a ridge which bounds the valley on the south. The town consists of a few long streets diverging from a common centre, and it has a small port. The population in 1845 was 6592. The old Franciscan convent in which Columbus was hospitably entertained and assisted by the prior in 1484, is preserved as a national monument. From 3000 to 4000 butts of wine are produced in the district and shipped to Xeres to be used in the manufacture of sherry. *Osuna*, in the province of Sevilla, 40 miles E.S.E. from the city, stands on the declivity of a hill crowned by a castle. It is a handsome town of semicircular form, containing 3 or 4 churches, 4 hospitals, 2 barracks, and a population of 17,556. It had a university which was abolished in 1824. There are some fine promenades in the vicinity. The extensive plain in front of the town is exceedingly fertile, and produces large quantities of grain, chiefly barley, olives, almonds, capers, the esparto rush, and some inferior wine. *Palos*, in the province of Huelva, 10 miles E. from Huelva, a small town with a small port on the estuary of the Rio Tinto, is distinguished as the place whence Columbus sailed on his first voyage of discovery, Aug. 3, 1492. The town contains about 1000 inhabitants. *Puerto de Santa Maria*, commonly called El Puerto (the Port), in the province of Cadiz, 6 miles N.E. from that city, is a large seaport-town, at the mouth of the Rio Guadalete, just outside the Bay of Cadiz. The mouth of the river forms the harbour, and a bar at the mouth prevents the entrance of large vessels. The Calle Larga is a handsome street about a mile in length, but the rest of the streets are narrow and badly paved. The population in 1845 was 17,930. Steamers ply regularly between this port and Cadiz, and it supplies Cadiz with most of the water required for drinking. The Bodegas, or wine-stores,

are lofty buildings with very thick walls, lit by narrow apertures. The thickness of the walls is in order to secure an even temperature for the wines, which are stored in long ranges of casks piled over each other tier above tier. *Puerto Real*, in the province of Cadiz, 5 miles E. from that city, is a clean seaport-town of well-built houses with flat roofs. It has a spacious market-place surrounded by stone arcades. It has a small port in the Bay of Cadiz, with a good pier and wharfs. It has manufactures of leather, and exports salt. Population, 3871. *San Lucar de Barrameda*, in the province of Cadiz, 15 miles N. from that city, is a seaport-town at the mouth of the Guadalquivir, on the southern shore. The town stands on a narrow flat bordering the river, and partly on a rising bank which overlooks it, the houses of the upper town rising above each other in terraces, and presenting a very picturesque appearance. An old Moorish castle crowns the brow of the hill. It contains 3 churches, 4 hospitals, and the buildings of several suppressed monasteries. The population is about 17,000. San Lucar exports wine, brandy, oil, and fruits, but its commerce is very small compared with what it was formerly. *Tarifa*, in the province of Cadiz, 55 miles S.E. from that city, stands on the most southern point of Spain, on the Strait of Gibraltar. It is divided by a ravine traversed by a periodical torrent, which entering from the east passes out at the west end. The town is surrounded by walls, and the houses are strongly built, standing on terraces which rise above each other from each side of the ravine. Where the torrent passes out two massive structures form part of the walls, whence a sandy neck of land, and then a causeway, joins the town to an island, or rather promontory, about 2000 yards in circumference, with perpendicular sides. The town is also defended by an old castle, and has barracks, storehouses, tanneries, potteries, and a profitable anchovy fishery. The population in 1845 was 8116. It was successfully defended by the British against an assault of the French troops under Victor and Laval, Dec. 30, 1811. *Utrera*, in the province of Sevilla, 18 miles S.S.E. from the city, a large and thriving town, principally inhabited by the wealthy landed proprietors and farmers, who cultivate the extensive corn-lands of the plains of Sevilla, and also manage the rich salt-marshes near the mouth of the Guadalquivir. These marshes feed great numbers of cattle, including the fine bulls for which Andalusia is celebrated. The town stands around a fortified inclosure, and has a Moorish castle. The streets are wide, and are kept clean by running streams. It contains a town-hall, covered market, prison, hospitals, and some remarkable churches. It has manufactures of soap and leather. The population in 1845 was 12,712. *Xeres (Jerez) de la Frontera*, in the province of Cadiz, 7 miles N.N.E. from Puerto de Santa Maria, and 11 miles E. by S. from San Lucar, is the town whence, by a corrupt pronunciation, the name Sherry is derived. The town is situated on an eminence about 2 miles north from the Guadalete. The streets of the old part of the town are narrow, ill-paved, and filthy; the modern part is tolerably well built. It contains 8 churches, one of which is collegiate, and 4 hospitals. It has an old fort, and there are remains of an old wall. The population in 1845 was 33,104. The finest Spanish wine is produced in the neighbourhood of Xeres. The bodegas, or wine stores, are similar to those at Puerto de Santa Maria. The annual produce of the Xeres district, together with those of Puerto de Santa Maria and San Lucar, is about 95,000 butts, or about 10,000,000 gallons.

SEVILLA (written *Seville* by the English), a city of Spain, capital of the territorial division of Andalusia, of the ancient province of Sevilla, and of the modern province of the same name, is situated in 37° 22' N. lat., 5° 48' W. long., on the east bank of the Guadalquivir, 70 miles N.N.E. from Cadiz. The river is here crossed by a bridge of boats connecting the city with the suburb of Triana, and is navigable thus far for vessels of 100 tons burden, but ships drawing more than 10 feet of water load and unload 8 miles lower down. Sevilla is the see of an archbishop, the residence of a captain-general, and the seat of a criminal court of justice. The population in 1845 was 84,927.

Sevilla is surrounded by Moorish walls, which are flanked by numerous towers, and have many gates. The form is circular, and the area is about five miles. The walls are constructed of tapia, a sort of concrete made of mortar, rubble, and stones, put moist in wooden frames, where it consolidates into a block fit for building, and becomes by length of time excessively hard. The portion near the Cordova Gate affords the most perfect specimen in Spain. Walls of tapia are still constructed in the ancient manner both in Andalusia and Barbary. The streets are for the most part exceedingly narrow, a labyrinth of lanes hardly wide enough to allow the passage of a single carriage. More than half of the city is of Moorish construction, and the best houses are still those built by the Moors or on their models. They have generally a large paved court ornamented with fountains and flowers, and surrounded by columns supporting galleries and rooms above. It is usual for the family to inhabit the ground-floor in summer, and the upper stories in winter. In summer a large canvass awning is drawn over the court by day, and beneath this shade the family usually sit and receive visitors. Of late years several new streets have been laid out in straight lines and with handsome modern houses. The Alameda Vieja, the old public walk, planted with trees, and decorated with fountains and statues, is a spacious promenade at the north-west angle of the city. It is now however comparatively deserted for the beautiful walks called Las Delicias, formed on the

bank of the river, extending southward, and planted with trees, shrubs, and flowers. Another modern promenade is called El Paseo de Christina. The great square, near the centre of the city, formerly called the Plaza de San Francisco, but now the Plaza de la Constitución, is very picturesque, with its arcades and balconies. The Plaza del Duque is the fashionable nocturnal promenade during the summer months. There are other squares, and a large Plaza de Toros (bull-arena), which is capable of accommodating about 14,000 spectators.

All or nearly all the public edifices worthy of note in Sevilla stand at the southern extremity, a short distance from the river, and within sight of each other. Here are the Cathedral, the Giralda, the Alcazar, the Lonja, and (outside the wall) the royal tobacco-manufactory.

The Cathedral occupies the site of the grand mosque of the Moors. It was commenced in 1349, and was opened for divine service in 1519. It is an imposing structure, of large size and grand proportions. It is the largest and finest cathedral in Spain. It is an oblong square, preserving the form of the original mosque; the length is 382 feet, the width 265 feet. The exterior exhibits various styles of architecture. The walls are supported by massy buttresses. There are 93 windows, some of which are painted, and the most beautiful in Spain. The windows are profusely ornamented with mouldings and tracery. The western façade remained in an unfinished state till 1827. Four rows of enormous clustered columns, eight in each row, divide the interior into a nave and six aisles. The roof of the nave is 134 feet above the pavement. The aisles are 38 feet lower, the two exterior being railed off, and formed into chapels. The choir is separated from the body of the church by a richly-wrought reja, or grating of iron. Over the entrances to the choir on each side are the two grand organs, one of which is stated to contain 5300 pipes, and to have 110 stops, being 50 more than the stops of the great organ at Haarlem. The Retablo of the high altar is a magnificent carving in wood. It is divided into 44 compartments. It was designed by Dancaert in 1442, and completed in 1550. The carvings represent sacred subjects from the Bible. Behind the high altar is the Capilla Real, a large gloomy chapel, containing the tomb of Fernando III., who took the city from the Moors. The other chapels, in all about 26, contain many of the finest works of the best masters of the Sevillian school, as Murillo, Zurbaran, Roelas, Pacheco, Cano, Morales, Vargas, Navarrete, and others.

The Giralda, a lofty square tower of Moorish architecture, which originally formed part of the ancient mosque, serves now as a belfry to the cathedral. It was built about 1198. It was originally only 250 feet high; but in 1568 Fernando Ruiz, an architect, raised it 100 feet higher. On the top is a statue of Faith, of gilt bronze, which, though 14 feet high, and of the enormous weight of 3600 lbs., turns on a pivot and acts as weathercock, thus giving its name Giralda to the tower, from the Spanish word 'girar,' to turn. The ascent to the belfry is not by stairs, but by an inclined plane which goes round and round, and is of easy ascent. This tower and the Court of the Orange-Trees (Patio de los Naranjos) are the only remains of the ancient Moorish mosque, which in point of size and magnificence equalled that of Cordova. Attached to the cathedral is a very valuable library called the Biblioteca Colombiana, from the name of the founder Fernando Columbus, the son of the great navigator, who bequeathed to it upwards of 20,000 volumes.

The edifice which after the cathedral most attracts the attention of travellers is the Alcazar (Al-Ksar), or royal palace of the ancient Moorish kings, which, though modernised by the Christian kings, still preserves much of its original beauty. In its present state it is a compound of Gothic and Moorish architecture. The principal hall, called La Sala de los Embajadores (Hall of Ambassadors), is as fine as that in the Alhambra. It is fifteen yards square, and three times that height. The pavement is of marble, the ceiling is painted blue and gold, and the panelling of the wainscots is formed of painted tiles. The gardens which surround the palace are very beautiful. In one of the rooms on the ground-floor are several statues, inscriptions, and other remains of antiquity, which have been found on the site of the ancient Italica, the birthplace of Trajan and Hadrian, which is contiguous to Sevilla.

Sevilla contains other buildings remarkable either for their antiquity or architecture. La Torre del Oro (the Tower of Gold) is so called because the ships laden with the precious metals at the time of the discovery of America, deposited their cargoes there. La Lonja, or Exchange, is a magnificent building, erected by Philip II. in 1523, over which are the archives of the colonies. The Casa de Pilatos, or palace belonging to the dukes of Alcalá; the archbishop's palace; the town-hall; the theatre; the naval college; the cannon-foundry; the prisons; the barracks; 11 hospitals; and the tobacco-manufactory, an immense building 600 feet in length by nearly 500 feet in breadth, inclosing twenty courts, and employing about 3000 persons, chiefly females, are among the chief edifices of Sevilla. The aqueduct called the Caños de Carmona, was originally constructed by the Romans, and afterwards repaired by the Moors: it conveys water from Alcalá.

Sevilla is said to have at one time contained 140 churches and wealthy convents. It now contains about 30 parish churches, of which some are remarkable for their architecture. Many of the conventual buildings still remain, and have been converted to secular uses. In that of La Merced have been collected the pictures and

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other works of art which have been removed from the other suppressed monasteries.

Sevilla has a university, founded in 1502; an academy of painting, sculpture, and architecture; a literary and scientific institution, named the Lyceó, and several other establishments for the diffusion of knowledge and education. The trade, which was very considerable, greatly declined at the separation of the Spanish colonies from the mother country; but it has since somewhat revived. Oil, wine, corn, hemp, flax, liquorice, but above all lemons and oranges, are annually exported in great quantities by the Guadalquivir. There is also an active fishery on the river. The imports are hides and flax from the Baltic, iron from the Asturias, and colonial produce from Cuba. The silk manufacture is of some importance. The other manufactures are woollen and linen goods, hats, soap, earthenware, leather, nitre, and ironmongery.

Steam-boats ply daily between Sevilla and Cadiz.

Sevilla, under the Romans, became a colony with the title of Colonia Julia Romula. It was afterwards held by the Goths till 712, when it was taken by the Moors, who made it a Kalifate, or kingdom. In 1247 the city was besieged by Fernando III., king of Castilla, and taken, after fifteen months, Nov. 23, 1248. From that period Sevilla formed part of the dominions of the king of Castilla, till the whole of Spain became one kingdom.

(Ford, *Handbook of Spain*; Townsend, *Journey in Spain*, and other volumes of more recent travels. There are three good histories of Sevilla—Morgado, *Historia de Sevilla*, Sev., 1587, fol.; Rodrigo Caro, *Antigüedades y Principado de Sevilla*, 1634, fol.; Ortiz y Zuñiga, *Anales Eclesiásticos de la Ciudad de Sevilla*.)

SEVRES, DEUX, a department of France, bounded N. by Maine-et-Loire, E. by the department of Vienne, S.E. by that of Charente, S.W. by that of Charente-Inférieure, and W. by that of Vendée. Its greatest length from north to south is 79 miles; from east to west about 41 miles. The area of the department is estimated at 2316.5 square miles. The population in 1841 was 310,203; in 1851 it was 323,615, giving 139.7 inhabitants to a square mile, or 34.88 below the average per square mile for the whole of France. The department was formed out of Upper Poitou, and is named from two rivers which traverse it.

The department is traversed by a chain of low granitic hills, which extends from the central group of Auvergne to the mouth of the Loire, bearing in part of its course the name of the Heights of Gâtine. These hills enter the department from the department of Vienne on the south-east side, and extend into the department of Vendée on the west side; they separate the basin of the Loire from the basins of the Charente, Sèvre-Niortaise, and Lay. The average height of these hills is about 450 feet. So much of the department as lies north-west of a line drawn from Fontenay in the department of Vendée eastward to St.-Maixent, and from thence northward, by Parthenay and Thouars, is occupied by the primary and lower secondary formations. The east and south of the department are occupied by the oolitic formations. Iron is found at various parts, and coal on the Vendean border. Marble, antimony, freestone for building, and mill-stones are dug. There are some mineral-waters, but none of great repute.

The portion of the department which belongs to the basin of the Loire is drained by the Sèvre-Nantaise, the Thouet, and the Dive, which last skirts the eastern border. The *Sèvre-Nantaise* rises in the Gâtine Hills, west of Parthenay, and, flowing north-west through this department and that of Vendée, throws itself into the Loire opposite the city of Nantes. It is not navigable. The *Dive* is navigable for a short distance. The *Thouet* receives the Cebron, the Thouet, the Argenton, and some other streams. The rest of the department is drained by the Boutonne and one or two other feeders of the Charente, and by the Sèvre-Niortaise and its feeders the Mignon, the Autise, and the Vendée. The *Sèvre-Niortaise* rises north of the town of Melle, near the source of the Béronne, a feeder of the Boutonne, and runs in a very tortuous course, and in a general western direction, past the town of Niort, from which it takes its distinctive name. From its junction with the Mignon to its mouth, in the Pertuis-Breton, it divides the department of Vendée from Charente-Inférieure. It is navigable for barges up to Niort; but in its lower course vessels of 100 tons go up with the tide to Marans [CHARENTE-INFÉRIEURE]; and by a canal vessels of even 300 tons can reach that town. The river flows in its lower course through an alluvial and marshy soil, in which it divides into several arms, many of which unite at Marans. The marshes in this part of its basin have been extensively drained and formed into polders. The Mignon is navigable for 7 miles above its junction with the Sèvre-Niortaise. There are many ponds and marshes in the Gâtine Hills.

The department is crossed by 9 imperial, 9 departmental, 5 military, and a great number of communal roads. It has no railways, but the Paris-Bordeaux line between Poitiers and Ruffec runs close upon the eastern boundary.

The temperature in the northern part of the department is colder than in the southern. In the southern part the winters are mild. The south-eastern part is considered the healthiest; in the north fevers and inflammation of the lungs are common; and the inhabitants of the marshy parts are affected by skin diseases.

The soil varies much; part of it is unproductive; one-third of the best land is constantly in fallow; yet the grain-harvest exceeds the consumption of the department. The area of the department is about 1,500,000 acres, of which two-thirds are under the plough. The chief productions are wheat, rye, barley, oats, flax, and hemp. The vine is grown chiefly in the south-west part, where the vintage is converted into brandy. In the north-eastern part about Thouars some tolerable white wine is grown, but in small quantity. The vineyards occupy above 50,000 acres; the gardens and orchards about 24,000 acres. Fruit-trees succeed very well except among the hills; the walnut is extensively cultivated. A considerable portion of heath is in the valley of the Sèvre-Nantaise, where the land is very poor. On the pasture lands and open heaths a great number of cattle is fed. The breed of horned cattle is very good, and a considerable number are sent into Normandy, there to be fattened for the markets which supply Paris. Sheep are also numerous, but the wool is of ordinary quality. The asses and mules which are bred in the neighbourhood of Melle are considered to be among the best in Europe. Swine and poultry are numerous.

The principal industrial products comprise shoe and glove leather (which are prepared in the neighbourhood of Niort, whence vast quantities of shoes and boots are exported), oil, vinegar, brandy, pottery, woollen-cloth, iron, and paper.

The department is divided into 4 arrondissements, which, with their subdivisions and population, are as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Niort	10	95	105,948
2. Bressuire	6	91	69,388
3. Melle	7	98	77,849
4. Parthenay	8	75	70,430
Total	31	359	323,615

1. Of the first arrondissement and of the whole department the chief town is NIORT. Among the other towns are the following: *Conzelonges*, near the Autais, 15 miles N.W. from Niort, has a good corn-market, and a population of 2000. *St. Maixent*, on the slope of a hill on the right bank of the Sèvre-Niortaise, 14 miles N.E. from Niort, has a college and 4320 inhabitants, who manufacture woollen stuffs, and trade in corn, wool, and cattle. The town is ill laid out, and the houses are ill-built, but the public walks are agreeable, and the neighbourhood, which is very fertile, abounds with picturesque scenery. *Rohan-Rohan*, also called *Frontenay*, is on an elevated site between two small streams, the Guirande and the Courance, 11 miles S. from Niort, and has about 2300 inhabitants. A branch of the family of Rohan took the title of Rohan-Rohan from this town.

2. In the second arrondissement the chief town, *Bressuire* (population 2622), stands in a hilly country 35 miles N. from Niort, on a feeder of the Argenton, and has a handsome church, an ecclesiastical school, woollen and cotton manufactories, and a tribunal of first instance. The college is at *Thouars*, a town of 2244 inhabitants, on the slope of a hill above the Thouet, 15 miles N.E. from Bressuire. Thouars was a place of strength in the time of Pepin in the 8th century; and the English, when masters of Poitou, made it yet stronger; it was however taken from them by Duguesclin in 1372. It is surrounded partly by the river and partly by walls, and has two handsome churches, a college, two hospitals, and a handsome castle or mansion built by the Duchess de la Trémouille in the time of Louis XIII.: there are three public walks. Woollens, linens, hats, and cutlery are made; and trade is carried on in corn, hemp, horses, mules, and oxen.

3. In the third arrondissement the chief town is *Melle*, an ill-built town on a hill above the Béronne, 17 miles E.N.E. from Niort: population 2676. Melle has a college, a tribunal of first instance, some manufactures of coarse woollens, leather, paper, &c., and a considerable trade in corn, seeds, cattle, wool, and mules of fine breed. It is situated in a beautiful and fertile country, of which, from its situation on a hill, it has a commanding prospect. *Chef-Boutonne*, an ancient village near the source of the Boutonne, has a population of 2366, who manufacture serge, drugget, earthenware, and leather. *Lezay*, E.N.E. from Melle, on the Dive, has tile-works, and 2500 inhabitants in the commune, who are engaged in agriculture and in breeding horses and mules. In the neighbourhood are several large mansions or châteaux. *La-Mothe-Saint-Héraye*, 8 miles N. from Melle, near the source of the Sèvre-Niortaise, is pleasantly situated, and has flour-mills, and 2650 inhabitants, who manufacture coarse woollens and leather, and trade in seeds, flour, cattle, horses, and mules. The castle of La-Mothe, the finest specimen of turreted architecture in Poitou, was demolished in 1842.

4. In the fourth arrondissement the chief town is *Parthenay*, which is situated in a hilly well-wooded country, 33 miles N.N.E. from Niort, and has a college, a tribunal of first instance, and 4621 inhabitants in the commune. Parthenay is an ill-built place: it suffered materially in the English wars, the religious wars of the 16th century, and the Vendean war. It stands on a slope on the right bank of the Thouet.

There are some manufactures of woollen yarn, coarse woollens, and leather; and considerable trade in corn and cattle is carried on. Parthenay was the capital of the Poitevin district of Gâtine. At *Azéville*, a tolerably handsome town of 2000 inhabitants, on the right bank of the Thouet, there is a fountain which sends water into every house in the town, and gives rise to a stream which drives a mill at a very little distance from its source. It has the ruins of an ancient castle and of a monastery. Woollen-stuffs, hempen cloth, linen, and leather are manufactured; and trade is carried on in clocks and watches, sheep, wool, wine, brandy, corn, and flax. *Moncoustant*, 16 miles W.N.W. from Parthenay, near the Sèvre-Nantaise, has above 2000 inhabitants. *Thézemay*, E. by N. from Parthenay, and near the eastern boundary of the department, has about 2100 inhabitants in the commune.

This department, with the adjacent department of Vienne, forms the diocese of Poitiers, the bishop of which is a suffragan of the archbishop of Bordeaux. It is in the jurisdiction of the High Court and the University-Academy of Poitiers, and it belongs to the 15th military division, the head-quarters of which are at Nantes. It returns two members to the Legislative Chamber of the French empire. The Calvinists have five churches in Niort, Melle, St.-Maixent, La-Mothe, and Lezay; and seven meeting-houses in other places in the department.

SEYCHELLES, a group of islands in the Indian Ocean, situated between 3° 40' and 4° 50' S. lat., 55° 10' and 56° E. long. These islands rest on a bank of coral and sand, which extends from north to south about 200 miles, and from east to west from 30 to 40 miles. It is a kind of platform in the sea, on which the superstructure of the islands has been raised. The general depth of water on the bank varies between 12 and 40 fathoms. The number of islands altogether is about 30, but most of them are small. They afford many excellent harbours, which are never visited by tornadoes, and may at all seasons be considered perfectly safe. The largest islands are—Mahé (30,000 acres), Praslin (8000 acres), Silhouette (5700 acres), Digue (2000 acres), and Curieuse (1000 acres). The total population is about 7000, of whom about 600 are whites; the rest are blacks and coloured persons.

The surface of the islands is irregular, presenting a diversity of hills, rocks, and ravines, without any considerable extent of level ground. The rocks are granitic. The soil is generally thin, but good, and produces wild fruits and vegetables in abundance. Among the natural productions are cocoa-nuts, pine-apples, cucumbers, and red pepper. But the most remarkable production is the coco-do-mar, or Seychelles cocoa-nut, formerly supposed to be produced at the bottom of the sea, whence it took its name. The nuts weigh from 20 to 25 lbs. each, and contain a white jelly-like substance, which is eaten, but is tasteless. The shells, the fibrous covering, the leaves, and stalks of this palm-tree, are all used for various purposes. Another production is the Mahé wood, which is not inferior in colour and solidity to mahogany, and is equally well-adapted for cabinet-work, but is not found in sufficient quantity to allow of much being exported. The grains most cultivated are rice and maize. Mandioc is also grown, as well as cotton, coffee, tobacco, and the sugar-cane. Cattle and sheep are in considerable numbers. The climate is fine and healthy, and the heat not oppressive. The thermometer varies between 64° and 84° Fahr.

The island of Mahé is about 16 miles in length, and from three to four miles in width. The rugged chain of granitic hills which extends through its centre is in its highest parts about 400 feet above the sea. The town of *Mahé*, which is the residence of the government agent, is on the north-east side of the island. It is irregularly built, in a small glen, and contains only a few good houses. It is not far from a deep bay inclosed by a semicircle of tolerably high land. A few small vessels belong to the island, and many large schooner-rigged boats and numerous canoes. The smaller islands are only visited occasionally to obtain cocoa-nuts or turtles.

The Seychelles were partly explored in 1743, by order of Mahé de la Bourdonnais, then governor of Mauritius. About the year 1768 the French formed a colony on the island of Mahé. The Seychelles were captured by the British in 1794, but were not occupied till the capture of Mauritius in 1810. By the treaty of Paris, in 1815, they were ceded to the British, together with Mauritius. They are under the governor of Mauritius. [MAURITIUS.]

SEYNE. [ALPES, BASSES.]

SEYNY. [POLAND.]

SEYSSEL. [AIN.]

SEZANNE. [MARNE.]

SEZZE. [FROSINONE.]

SFAX. [TUNIS.]

SHAFTESBURY, or SHASTON, Dorsetshire, a market-town, a municipal and parliamentary borough, and the seat of a Poor-Law Union, is situated in 51° 2' N. lat., 2° 12' W. long., distant by road 27 miles N.N.W. from Dorchester, 105 miles W.S.W. from London. The population of the municipal borough in 1851 was 2503; that of the parliamentary borough was 9404. The borough is governed by 4 aldermen and 18 councillors, one of whom is mayor; and returns one member to the Imperial Parliament. The livings are in the archdeaconry of Dorset and diocese of Salisbury. Shaftesbury Poor-Law

Union comprises 19 parishes, with an area of 36,493 acres, and a population in 1851 of 18,029.

Shaftesbury is supposed to be the Caer Palladwr of the Britons. It appears to have been a station of the Romans. It was burnt by the Danes and restored by King Alfred. The name was variously written before it was fixed in its present form, which is sometimes altered into Shaston, or, in closer resemblance, Shafton. In the reign of Athelstan there were in the place two minis and an abbey of Benedictine nuns. To this abbey the body of King Edward the Martyr was conveyed after his murder at Corfe Castle. The possession of this relic attracted many visitors, and among others Canute the Great, who died at Shaftesbury in 1086. In 1313-14 Elizabeth, wife of Robert Bruce, king of Scotland, was detained as a prisoner in the abbey. Shaftesbury was incorporated in the reign of James I. From the time of Edward I till the passing of the Reform Act the borough returned two members to Parliament.

The town is built on a hill rising abruptly in the midst of a fertile district, and commanding an extensive view of the counties of Dorset, Somerset, and Wilts. It is lighted with gas and partially paved. St. Peter's church, in the middle of the town, consists of a nave and chancel, with aisles, and a square embattled tower: it is a building of considerable antiquity, much defaced by modern alterations. Trinity church, which is united in the same benefice with St. Peter's, was rebuilt in 1842, in the early English style. It stands in a spacious churchyard, laid out with rows of lime-trees. St. James's church is a neat building, consisting of a nave and chancel, and an embattled tower. St. Rombald's, or Rowald's, consists of a small nave and chancel, with a low square tower of modern date. The Independents, Wesleyan Methodists, and Quakers have places of worship. There are National, British, and Infant schools; also an endowed Blue-Coat school, in which 20 boys are clothed and educated for four years and then provided with a liberal sum for apprenticeship. In the vestry-room of Trinity church is an excellent theological library, established by the aid of the late Dr. Bray, for the use of the neighbouring clergy. The town has a public reading-room, a savings-bank, and some parochial charities. The town-hall is a handsome edifice, erected at the expense of the Marquis of Westminster. The trade of the place is limited to the sale of agricultural produce, particularly of butter and cheese, from the fine grazing lands of the district. There is a weekly market on Saturday, and fairs are held on the Saturday before Palm-Sunday, June 24th, and November 23rd. Quarter and petty sessions and a county court are held in the town.

SHAGNAN. [BADAKHSHAN.]

SHAHEE, LAKE. [PERSIA.]

SHAHJEHANPOOR. [HINDUSTAN.]

SHAMAKHEE. [GEORGIA, ASIATIC.]

SHANAGOLDEN. [LIMERICK.]

SHANG-HAE, or SHANG-HAI, a sea-port in China, the most northerly and most important of the ports opened to foreigners, is built on the left bank of the river Woo-sung, which is properly only the channel by which the waters of the Lake Tahoo, or Tai (the Great Lake), are discharged into the sea, in 31° 25' N. lat., 120° 40' E. long. The population of the city is somewhat under 150,000, but the suburbs are also densely peopled.

Though the course of the Woo-sung scarcely exceeds fifty miles, it brings down a great volume of water, is very deep, and readily navigable. Opposite the town of Shang-hae, which is about ten miles from its mouth, the depth in the middle of the stream varies from 6 to 8 fathoms, so that the largest vessels can come up to the harbour, and unload alongside of the commodious wharfs and large warehouses which occupy the banks of the river. At this place the Woo-sung is nearly half a mile wide. Two forts defend the mouth of the river; and on the city side of the river is a quay more than two miles long, and protected by two batteries.

The city, which is very large, is surrounded by a wall nearly three miles and a half in circuit. A canal extends around the exterior of the wall, and from it three canals traverse the city, lesser branches diverging from them in various directions. The streets are narrow, and many of them are paved with small tiles, similar to Dutch clinkers, which make a more agreeable footing than the slippery granite with which other towns in China are paved. In every part of the city are joss-houses, or temples, belonging to the various sects, though little sanctity appears to be attached to them. There are also several benevolent institutions, as the Jung-jin-tang, or Hall of Benevolence, a hospital, providing lodging and medical aid for the sick, burial for the unclaimed dead, and education for the young; a foundling hospital, &c. The government offices are not remarkable. There are in the city a mint, and considerable manufactories of vegetable oils, oil-cake, iron-ware, glass, paper, and flowered silk of a peculiar kind. There are several very large ice-houses in the city. The shops in Shang-hae are generally small, but wares of all descriptions, European as well as Chinese, are exhibited for sale; the specimens of Chinese skill and ingenuity are of almost endless variety, and many of much costliness. Du Halde, in his 'Description of China,' says, that in this town and its neighbourhood 200,000 weavers are occupied in making plain cottons and muslins; and Lindsey adds, that the nankeen cloth from Shang-hae is said to be the best in the empire: but late events have produced many changes.

As a commercial city Shang-hae is the most important on the coast of China. Its wharfs are crowded with vessels from all parts of China, Singapore, Borneo, Java, &c., as well as with the larger craft of Europe and America: it is said that as many as 3000 junks may be at times seen lying off Shang-hae, and 400 have been counted entering the port in a week. Our surprise at the great amount of native commerce will cease if we consider that there is no harbour on the Chinese coast between 30° and 35° N. lat., or between the bay of Ningpo on the south, and the peninsula of Shantung on the north. On this tract of coast the two largest rivers of China, the Yellow River and the Yant-se-kiang, enter the sea, and they bring great quantities of earthy matter, which they deposit along the coast, and thus render the whole tract inaccessible to boats beyond the size of a fishing-berge. The Woo-sung is the first river south of the Yant-se-kiang which is deep enough for the purposes of navigation, and hence the whole maritime commerce of this tract is concentrated at Shang-hae. The country which lies at the back of the coast is the most populous part of China, and contains many very large towns, among which those of Soo-tsheou-foo and Hang-tsheou-foo, both far more populous than Shan-hae, and there are others which contain considerably over 100,000 inhabitants, among which is the ancient capital of China, Nanking. [NANKING.] According to the Chinese census the country between 30° and 35° N. lat., extending from the sea about 200 miles inland, and comprehending the ancient province of Ki-an-gnan, or the present provinces of Ngan-hoë and Keang-soo, contains, on a surface not exceeding 70,000 square miles, a population of more than 40,000,000, or about 600 inhabitants to each square mile. Such a population cannot subsist on the produce of the soil even in the high state of agriculture by which this region is distinguished above all other parts of China. That portion of the immense quantity of grain carried into the port of Shang-hae which is not consumed in the town and its neighbourhood, is conveyed to the centre and even the western districts of China Proper, by the numerous canals which are connected with the Imperial Canal, or Yoon-ho, and the two great rivers above-mentioned. The exports consist of black- and green-teas, camphor, drugs, cotton, and manufactured goods, and the inhabitants pay for the food which they obtain from other countries by supplying their inhabitants with cotton, silk, and linen fabrics. Very large quantities of opium are imported. Sugar, edible birds'-nests, &c., are brought from the Eastern Archipelago; and cotton and woollen goods, hardware, &c., from England.

Shang-hae was captured by the English in 1842. In 1853 it fell into the hands of the rebels [CHINA, vol. ii. col. 483], but has since been retaken by the Imperialists. Since 1842, when the port was thrown open to foreigners, and British and American consuls allowed to reside at Shang-hae, a larger number of merchants, chiefly natives of England and the United States, have formed establishments there, and their residences and places of business make quite a new town. Many of their houses are of a superior class, and their gardens, for which Shang-hae has always been famous, rival and even surpass those of the Chinese. The progress of the rebellion has a good deal interfered with the prosperity of the place, and the English and American merchants have found it necessary to repel by force the encroachments of the Imperialists, and even to attack their entrenched camp.

SHANKLIN. [WIGHT, ISLE OF.]

SHANNON, a river of Ireland, one of the largest in the kingdom, has a course of 220 miles, and affords a navigable line of communication, which nearly intersects Ireland from north to south. It rises about 20 miles east from Sligo, and expanding at intervals into lakes, falls into the sea between the Loop and Kerry heads, 56 miles below Limerick. The Shannon is the outlet for the waters of an immense tract of country, and it gives facilities for commercial intercourse, not only by its communication with the sea, but also with the metro polis by means of two canals. This river must be viewed under two distinct heads, as it is locally known under two distinct names, namely—the Lower Shannon, including that portion of the river below Limerick, which is connected with the external commerce of the country; and the Upper Shannon, from its source down to Limerick, which is connected with its internal commerce.

The source of this noble stream is generally considered to be a circular basin of about 20 feet in diameter, situated at the southern base of the Cuilcagh Mountain, in Cavan county, whence it flows in a deep dead sluggish stream into Lough Allen, in the county of Leitrim [LEITRIM, County of], a small basin about 8 miles long and 3 to 4 miles broad, lying in the midst of a coal district, and 115 feet below the level of the source. Other small streams fall into this lake, almost any one of which may be considered the parent of this great river. Of these the largest are the Owenmore and the Dorbally, which join the Shannon before falling into the lake.

Leaving Lough Allen, the river is so obstructed by shallows, that a canal, passing to the eastward of it was cut, and since improved by the Shannon Commissioners, from its southern extremity near Drumshambo, to Battle-Bridge, a distance of nearly 5 miles; on this, as on most of the canals cut for the Shannon navigation, the fall is overcome by locks. From this point the river runs in a southerly direction, with a mid-channel depth varying from 5 to 20 feet, for 6 miles, when it receives the Boyle River from Lough Gara and Lough Key. By the removal of shoals, and the construction of a regulating weir and a lock at Knockvicar, near the entrance to Lough Key, the river has

been rendered navigable to within a mile of the town of Boyle. A mile below this point stands the town of Carrick-on-Shannon, where a quay-wall and harbour have been formed, and two miles farther occurs a small expansion called Corry Lough, whence the course of the river is tolerably straight and good as far as Jamestown, a distance of two miles. Here a weir has been formed, and a shallow circuitous bend is avoided by a canal two miles in length. On this canal there is a lock 110 feet long and 30 feet broad. From a mile below this canal nearly down to Ruskey are a series of small lakes surrounded by low hills, with diversified and in some parts well-wooded scenery. At Ruskey there is a regulating weir and lock. Two miles and a half below Ruskey the Shannon enters Lough Forbes [LONGFORD], which has an average depth of 7 or 8 feet, and has been cleared of its only obstruction, a shoal of small extent near the centre, where the lake is contracted to a breadth of only 350 yards. The removal of other shoals, and the construction of a weir and lock at Tarmonbarry, where a commodious wharf has also been formed, complete the upper navigation as far as Richmond Harbour, the grand depôt of the Royal Canal Company, near the village of Cloondra. Between this and Lanesborough, a distance of seven miles, the river is of an average breadth of 250 yards. At Lanesborough the Shannon is crossed by a stone bridge, with a swing-bridge for the passage of vessels. Above and below the bridge the river has been deepened, and by an improved channel the navigation here enters Lough Rea. [ROSCOMMON, County of.] Lough Rea is the second expansion of the Shannon in point of magnitude, as it is in order, from the mouth; it extends 16 miles in a north and south direction, and reaches within two miles of Athlone. From Lough Rea to Athlone, where the river was formerly much obstructed by eel-weirs and shallows, great improvements have been made; the channel has been deepened, and a regulating weir constructed, with a lock 170 feet long by 40 feet wide. There is also a spacious landing wharf, and a new bridge has been erected, with a swivel bridge over the line of navigation. Between this place and Lough Derg the river makes two large bends, and dividing itself into various branches forms islands, some of which are of considerable size. At Shannon-bridge, a military station 13½ miles below Athlone, the river has been deepened, the bridge underpinned and opened by a swivel-bridge, and an extensive landing wharf has been formed. A little lower the Suck enters the Shannon. In consequence of the recent improvements the waters of the Shannon have here been so much kept within their proper channel, as to relieve nearly 19,000 acres from flooding. The Suck, which forms the division between the counties of Galway and Roscommon, is a very fine river, and appears at its junction scarcely inferior to the Shannon itself, of which it is the largest tributary. It rises near Castlereagh, in the county of Roscommon, and has a circuitous course of about 60 miles, receiving in its passage a number of tributary streams. The Shannon receives at Shannon Harbour the Brosna from King's County, and the Grand Canal from Dublin. Immediately opposite is a branch of the canal, which runs up to Ballinaloe. About five miles lower, above the falls of Meelick and Killogue, which are the greatest in the whole line above Killaloe, a regulating weir, with a lock 170 feet long by 40 feet wide, and having a fall of 8 feet, has been erected. From below the falls, where it is joined by the Lower Brosna, the river affords a wide channel, generally above 20 feet deep, and marked out by beacons, to the entrance of Lough Derg, a distance of nine miles. The shores between Loughs Rea and Derg are low, consisting of lands of a rich calcareous nature, producing large crops of rank coarse grass, and affording pasturage for cattle. These rich lands are generally backed by bog-land elevated from 20 to 30 feet above the river, and towards Athlone by low rounded isolated limestone hills. There are few places where good firm land comes down to the river's edge. About a mile below Portumna the river enters Lough Derg, which is 20 miles in length, and varies in breadth from three-quarters of a mile to three miles direct distance, with large bays on both sides, which in some places cause an expanse of seven or eight miles. The scenery of this lake is very beautiful, especially towards the southern extremity, where it lies between hills of considerable elevation terminating abruptly on the lake. All the north-western shore, which forms part of the county of Galway, is low and abounds in bog-land. The Tipperary shore, which forms all the eastern side of the lake, is greatly diversified in appearance and character; to the north it consists of rounded limestone-hills, which are chiefly used for pasture, while to the south the mountains are higher, more abrupt, and consist of slate formation, which is worked to great advantage. The opposite shore, part of the county of Clare, is of like formation. Lough Derg contains few islands, but it abounds in rocks and dangerous shoals, and the shores, like those of Lough Rea, are difficult of approach from being so shallow and stony. The greatest depth is 120 feet; the southern portion is generally much deeper than that to the northward. The bottom is of marl, which is dredged up in great quantities for manure. At Mount Shannon, on the western shore of the lough, a pier and wharf have been constructed for the accommodation of the steamers plying on the river. At Killaloe, about a mile below Lough Derg, the channel has been deepened, and a regulating weir, 1180 feet long, has been raised across the river. From this place to Tarmonbarry, at the entrance of the Royal Canal, a distance of 85 miles, steamers of 200 horse power are daily plying, and the lakes are traversed by

tug steamers, towing trade-barges of from 60 to 100 tons burden. At Killaloe is the chief depôt and dockyard of the inland department of the Dublin Steam Navigation Company.

The Limerick navigation, which includes that part of the river between Killaloe and the city of Limerick, has a fall of 97 feet, which is overcome by a canal at each end and two regulating weirs. A series of falls below Killaloe-bridge is passed by a canal two miles long, cut close by the river on the Clare side. The rapids at O'Brien's bridge and at Parteen have been deepened, a weir and lock have been constructed at Corbally and World's End, a tracking bridge has been erected over the river at Plassey, and by the removal of numerous shoals the bed of the river has been rendered available to the utmost for the navigation of trade-barges. The communication with the Lower Shannon and the harbour of Limerick is completed by a canal a mile long. Immediately above Limerick the river divides into two branches, forming King's Island, on which the old town stands, with the cathedral, castle, and other public buildings. Just above the reunion of these two branches is the last fall of the river.

Under the name of Lower Shannon is comprehended that part of the river below Limerick which is navigable for sea-going vessels. This estuary is easy of access, and its approach is free from dangers; the entrance between the Loop and Kerry Heads is seven miles wide, and on Loop Head stands a lighthouse, showing a bright fixed light, at the height of 270 feet above high water. About 10 miles to the eastward is a kind of second entrance between Kilkadran and Beal Points, which is contracted to one mile and a half; and off Beal Point a dangerous sandbank extends nearly half a mile, which still further reduces the navigable channel. On Kilkadran Point is a lighthouse, which exhibits a fixed red light 133 feet above the sea, and inside this point is the small bay of Carrigaholt, which affords good shelter for small vessels. A few miles east from Carrigaholt Bay a landing quay and pier have been formed by the Shannon Commissioners at Querrin Creek. Above this there is anchorage in every part of the Shannon, though Scattery Island, Tarbert, Labasheda, and Foynes are the only places which offer good shelter from the prevailing westerly winds. On the Clare shore, opposite Scattery, stands the village of Kilrush. [KILRUSH.] A little above Foynes, on the opposite coast of Clare, is the new pier of Kiltteery, near which are a number of small islands, lying in the western entrance of the river Fergus, and more than half way up the Shannon towards Limerick. Below this the river presents a different appearance from that above the confluence of the Fergus; the land on both sides is high and bold, with a beach either of shingle or gravel beneath, and the channel is free from dangers; whilst above this point the land is so flat and low, that, with little exception, the whole shore on each side is one continued line of embankment. For eight or nine miles below Limerick the river is so shallow, that at low water every vessel must lie aground; but the channel has been recently improved by the removal of shoals and rocks, and has been carefully marked out by beacons.

At Limerick a very fine range of quays has been constructed, and a weir has been formed across the river below the town, with a lock to admit vessels at high water, so as to constitute a floating dock of the whole river above the weir.

Several rivers join the Lower Shannon, among which the Fergus deserves some notice, as it is navigable for vessels of 200 to 250 tons at high water as far as Clare, 9 miles from the Shannon, where a landing-wharf has been built by the Shannon Commissioners. About 9 miles below Limerick the Maigne falls into the Shannon on the Limerick side; though narrow, it is free from obstructions, except a rocky bar across the entrance, and is freely navigable for boats of 40 or 50 tons deeply laden as far as Adare, about 8 miles from its mouth. There are numerous other streams, many nearly dry at low water, though accessible at high water.

The spring-tides in the Shannon rise from 17 to 18 feet, the neap-tides about 14 feet; the velocity, which at the mouth does not exceed a mile an hour, increases as the river becomes narrower to upwards of three miles during the ebb at spring-tides; in consequence of which the young flood has so much resistance to overcome, that when it does so it rushes up almost like a bore, and the water rises during the first hour's flood as much as seven or eight feet, by which time a great portion of the mud-banks become covered, and from having a more expanded space to vent itself in, the velocity diminishes.

The improvements of the Shannon, which were begun by grants from the Irish Parliament and continued by the Directors-General of Inland Navigation, were in 1839 placed under the direction of commissioners, appointed under the Act 2 & 3 Vict. c. 61. The cost of the works was upwards of half a million of pounds sterling. The control of the navigation was transferred to the Board of Public Works. The navigation is opened for traffic throughout its whole length, from the upper extremity of Lough Allen to the city of Limerick, a distance of 143 miles, forming with the Boyle and Strokes-town branches a river and canal communication of 158 miles, of which 129 miles are adapted to the navigation of large steamers.

SHANNON BRIDGE. [KING'S COUNTY.]

SHAP. [WESTMORELAND.]

SHAPUR. [PERSIA.]

SHARDLOW, Derbyshire, a village and the seat of a Poor-Law

Union, in the parish of Aston-upon-Trent, is situated on the left bank of the river Trent, which here forms the boundary of the county, in 52° 52' N. lat., 1° 21' W. long., distant about 6 miles S.E. from Derby, and 120 miles N.N.W. from London. The population of the township and ecclesiastical district of Shardlow in 1851 was 1121. The living of Shardlow is a perpetual curacy in the archdeaconry of Derby and diocese of Lichfield. Shardlow Poor-Law Union contains 46 parishes and townships, with an area of 72,630 acres, and a population in 1851 of 32,318. The population is chiefly agricultural. Plaster or gypsum mines give employment to some of the inhabitants of Shardlow and Aston.

SHARNBROOK. [BEDFORDSHIRE.]

SHAT-EL-ARAB. [PERSIA.]

SHAWNREETOWN. [ILLINOIS.]

SHEEPSHED. [LIMONESTERSHIRE.]

SHEEPWASH. [DEVONSHIRE.]

SHEERNESS, Kent, a town in the parish of Minster-in-Sheppey, is situated at the north-west point of the Isle of Sheppey, on the right bank of the river Medway, at its junction with the Thames, in 51° 27' N. lat., 0° 44' E. long., distant 20 miles N.N.E. from Maidstone, and 47 miles E. by S. from London. The population of the town of Sheerness in 1851 was 8549. The living of Sheerness is a perpetual curacy in the archdeaconry of Maidstone and diocese of Canterbury.

In the time of Charles I. the site of the town was a swamp, at the extremity of which, after the Restoration, a fort was built and mounted with twelve guns, to secure the passage up the Medway. When the Dutch war broke out, it was intended to augment the fortifications; but on the 10th of July 1667 the Dutch forced their way up the Medway, beat down the defences, and took the fort, which was incomplete. It was soon restored on an enlarged scale, and has been from time to time augmented by additional works; and a dockyard, which has been made one of the finest in Europe, was established. In 1798 the mutiny of the fleet at the Nore excited great alarm. In 1827 Sheerness suffered from an extensive conflagration.

The town consists of three parts—Sheerness proper, including the fortresses and dockyards, and the suburbs of Blue-town and Mile-town: an outer line of fortifications comprehends Blue-town within its inclosure, but not Mile-town. The place has been much enlarged within the last few years. It is lighted by gas, and partially paved. The garrison, or fortress, occupies the extreme point of the island; the principal batteries front the Thames. A large fleet of ships in ordinary generally lies off Sheerness. The wharf fronts the Medway. The dockyard, store-houses, sail-lofts, &c., occupy an area of 60 acres. Close to the dock-gates is a handsome chapel, the appointment to which is in the Board of Admiralty; and in Mile-town is a new gothic church. There are places of worship for Wesleyan Methodists, Baptists, and Roman Catholics; a National school for boys and girls; and a savings bank. A county court is held in the town. Saturday is the market-day. The trade is chiefly dependent on the dockyard; but some shipments are made to London of corn and seed, the produce of the Isle of Sheppey, and the oyster-fishery is prosecuted to some extent. There are copper-works at a little distance. Sheerness is resorted to in summer for sea-bathing. A long jetty has been carried out into the river for landing passengers.

SHEFFIELD, West Riding of Yorkshire, a market-town, a municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parish of Sheffield, is situated near the junction of the river Sheaf (from which the town is named) and three other rivers with the Don, in 53° 22' N. lat., 1° 28' W. long., distant 50 miles S.S.W. from York, 162 miles N.N.W. from London by road, and 162½ miles by the Great Northern railway. The population of the borough of Sheffield in 1851 was 135,310. The borough is governed by 14 aldermen and 42 councillors, one of whom is mayor; and returns two members to the Imperial Parliament. The living is a vicarage in the archdeaconry and diocese of York. Sheffield Poor-Law Union contains 4 townships, with an area of 10,950 acres, and a population in 1851 of 103,626.

Sheffield became a parliamentary borough and acquired the privilege of returning two members under the Reform Act. It received a charter of incorporation as a municipal borough on August 24th 1843. In population and commercial importance it is the second town of the county. With the exception of the single level outlet towards Doncaster, Sheffield is encompassed by an amphitheatre of hills pleasingly diversified in their appearance and culture. The manor of Sheffield is mentioned in Domesday Book. In the early part of the reign of Henry I. it was in the possession of the family of De Lovetot, who had here their baronial residence. They founded a hospital, called St. Leonards (suppressed in the reign of Henry VIII.), upon an eminence still called Spital Hill, established a corn-mill, erected a bridge over the Don, and fixed here the nucleus of a town, which from the natural advantages of the locality afterwards rose into importance. In 1296 Edward I. granted a charter to hold a weekly market and an annual fair in Sheffield. Sheffield had about this time acquired a reputation for iron manufactures, especially for falchion heads, arrow piles, and an ordinary kind of knives called whittles. The leading branches of industry in the place became permanently settled here before the introduction of steam, which has since been employed to sustain and extend them. Sheffield Manor acquired celebrity in the

reign of Elizabeth by the imprisonment there of Mary, queen of Scots. After being for some time confined in Tutbury Castle, in Staffordshire, she was, in 1570, removed to Sheffield Castle, and shortly afterwards to the Sheffield manor-house. She left Sheffield in 1584, having spent fourteen years of her imprisonment in this neighbourhood. The Duke of Alva caused many artisans to emigrate from the Netherlands into England, where they were well received by Queen Elizabeth, and the general rule was adopted of settling all of one craft in one spot. The workers in iron were, by the advice of the queen's chamberlain, the Earl of Shrewsbury, settled on his own estate at Sheffield, and the neighbourhood from this time became known for the manufacture of shears, sickles, knives of every kind, and scissora. In 1616 the Sheffield estates passed by marriage into the possession of Thomas Howard, earl of Arundel, who, on the restoration of Charles II., was restored to the title of Duke of Norfolk, forfeited by his ancestor in the reign of Elizabeth. In 1624 the cutlers obtained an act of incorporation. In the contest between Charles I. and the Parliament, Sir John Gell, with troops from Derbyshire, took military possession of the town and castle; but the Duke of Newcastle, at the head of the royal army, having taken Rotherham by storm, marched to Sheffield, when the Parliamentarians fled into Derbyshire. A garrison was left in Sheffield Castle under Major Thomas Beaumont, who held the town and castle till after the battle of Marston Moor, when, being besieged by 12,000 Parliamentary infantry, the castle was obliged to capitulate on August 10th 1644. It was then demolished by order of Parliament. No vestiges of it remain; but the names of Castle-Hill, Castle-Green, and Castle-Folds, still indicate its site.

Though Sheffield maintained its staple manufactures, it did not, during the 17th century, increase much in commercial importance. With the 18th century the business of the town began rapidly to make progress. In 1700 the town-hall was built, where the town business was transacted and the sessions held. In 1751 the river Don was made navigable to Tinsley, within three miles of Sheffield, but it was not till 1819 that the water communication was continued to the town by the opening of the Sheffield and Tinsley Canal. It was however in the latter half of the 18th century that the town made its most rapid advances. The art of silver-plating, invented by an ingenious mechanic named Thomas Bolsover, was so extensively applied here as to be soon generally known as Sheffield plate; the composition called Britannia metal was also invented and very largely manufactured here; lead-works and silk- and cotton-mills were established; and the merchants opened for the first time a direct communication with the continent; while towards the end of the century steam-power was employed in the manufactures of the town. Stage-coaches too were started to run to London; a bank was opened in the town; shambles and market buildings were erected; and reservoirs were formed in the neighbourhood for supplying the town with water.

During the present century Sheffield has been steadily advancing in prosperity and importance, and now displays all the features of a manufacturing town of the first class. As most of the merchants and principal manufacturers reside in the country, there are few dwelling-houses of a superior grade, but of late the shops in the principal streets have been rendered more ornamental, various good public buildings have been erected, and the general appearance of the town has been much improved. The streets are all well paved and lighted with gas. Sheffield in 1851 possessed 70 places of worship, of which 26 belonged to Methodists, 23 to the Church of England, 10 to Independents, 4 to Baptists, and one each to Quakers, Unitarians, Roman Catholics, Irvingites, and Jews. The total number of sittings provided was 44,189. The old parish church, a spacious cruciform gothic structure, 240 feet long by 130 feet broad, with a tower and lofty spire rising from the intersection, stands near the centre of the town. In the interior are several interesting monuments and pieces of sculpture. St. Paul's, erected in 1721, and St. James's, in 1789, are in the Grecian style. St. George's, built by the Parliamentary Commissioners in 1825, at a cost of more than 14,000*l.*, is a handsome and commodious edifice, in the style of the 14th century, with a fine western tower 139 feet high. The Roman Catholic chapel, opened in 1850, is in the decorated style, and cost about 8000*l.* It is cruciform, with a tower, surmounted with an elegant crocketed spire 200 feet high. The Royal Free Grammar school, founded in 1649, free to 30 boys for classics, has an income from endowment of about 150*l.* a year; it is under the care of a head and three other masters, and had 80 scholars in 1854. Wesley College, an extensive and handsome range of buildings, erected in 1838 at a cost—including the price of six acres of land, used as pleasure-grounds—of about 15,000*l.*, has accommodation for about 250 boarders. It is under the care of a governor, who is also chaplain, a head master, and 16 other teachers. The number of scholars in 1853 was 150. The Collegiate Proprietary school, founded in 1835, is under a principal and 8 other teachers, and had 79 scholars in 1854. A Charity school, founded about 1710, supports, clothes, and educates about 100 boys; another, founded about 1786, provides instruction, clothing, and maintenance for 70 girls. There are several National, British, and Infant schools; three Wesleyan day schools; a Roman Catholic school; the People's College; a Ragged school; a School of Design; the Sheffield Library, established in 1771, which has about 20,000 volumes, and about 280 subscribers; the Mechanics and Apprentices Library, commenced in 1824, which

has about 8000 volumes and about 700 subscribers; a literary and philosophical society, with a museum; an athensium, with reading-rooms, library, &c.; a mechanics institution and lyceum, with library, reading-rooms, lecture-room, &c.; and a Church of England instruction society, with classes, a library, a book-club, and a museum.

The public buildings consist of the town-hall; the Cutlers'-hall; the corn-exchange, erected in 1830 by the Duke of Norfolk, who owns the ground upon which a large portion of the town is built; the new market-hall, or the Norfolk market, opened on Christmas eve, 1851, a spacious structure 296 feet by 115 feet, with a roof of iron and glass, erected by the Duke of Norfolk at a cost of about 40,000*l.*; the fire-office, the assay-office, the assembly-rooms and theatre, the music-hall, two news-rooms, and the public baths. The cemetery is an extensive and well laid-out piece of ground of about 14 acres in extent, on the slope of a hill about a mile from the town. The botanical gardens, which are of considerable extent, are for beauty of situation unrivalled.

Among the charitable institutions are the General Infirmary, a noble building, on the north-west side of the town, with fever wards erected near it; the dispensary, and the Shrewsbury hospital, established and munificently endowed by the Earl of Shrewsbury, and which has been re-erected on a new site in a simple yet elegant style of architecture. In this hospital 20 poor men and 20 poor women have dwellings and weekly allowances. Hollis's hospital for poor women, widows of cutlers, provides for 17 almshouses and a governor, allows stipends to several clergymen and schoolmasters, and sustains a school for 70 children. The Licensed Victuallers' Asylum, near Grimsthorpe, erected in 1848, consists of a row of neat cottages in the Tudor style. Several valuable charities are under the management of the Cutlers' Company. There is a savings bank in the town.

There are two public bodies which are in possession of property applicable to the benefit and general improvement of the town, namely, the town trustees and the church burgesses. The principal manufacture of Sheffield is that of cutlery in all its branches, indeed of everything that can be fabricated of iron or of steel. The vast buildings used for grinding by steam form one of the peculiarities of Sheffield. Of the artisans of the town the spring-knife makers and the table-knife makers form the largest classes. Silver-plate and plated goods form also one of the staple manufactures of Sheffield. Its plated goods have a deserved reputation for strength and durability. Brass-foundries are numerous. Britannia metal, a superior kind of pewter composed of tin, antimony, and regulus, forms a cheap article of common use and great consumption, the manufacture of which occupies many hands. A superior but more costly kind of white metal called German silver is also largely wrought. Brushes, buttons, combs, and optical instruments are made here to a considerable extent; and there are various other manufactures connected with the staple commodities of the town, such as cabinet-case makers, engravers, haft and scale pressers and cutters, powder-flask and shot-belt makers, silver-refiners, wood-turners, &c. There are also many mercantile houses, some of which confine themselves to the home markets, while others export to the Continent, to Brazil, the Cape of Good Hope, and various other parts of the world, but far beyond any other in importance, to the United States of America. Quarter and petty sessions and a county court are held in the town. Tuesday and Saturday are the market days; fairs are held on the Tuesday and Wednesday in Trinity week, and on the 28th of November.

In the vicinity of the town are many pleasant walks, and numerous good mansions, occupied by Sheffield merchants and other wealthy persons. About a mile E. from the town is the large village of *Attercliffe*; population of the ecclesiastical district of Attercliffe, 3000 in 1851. The inhabitants are employed in occupations similar to those pursued in Sheffield. Besides the district church, called Christ church, erected in 1822 at a cost of about 14,000*l.*, there are places of worship for Wesleyan Methodists and Independents; a Town school, National schools, some almshouses, and a few minor charities.

SHEFFORD, Bedfordshire, a decayed market-town in the parish of Campton, is situated on the right bank of the river Ivel, in 52° 2' N. lat., 0° 20' W. long., distant 10 miles S.E. from Bedford, and 41 miles N.N.W. from London. The population of the township of Shefford in 1851 was 1052. The living is a perpetual curacy in the archdeaconry of Bedford and diocese of Ely. Shefford had formerly a weekly market on Friday, but it has long been discontinued. Four fairs are held annually, of which two, on January 23rd and Easter Monday, are considerable marts for sheep and cows. There are here the parochial chapel, a Roman Catholic chapel, a Free school, and an Infant school. At Shefford the Ivel has been converted into a navigable canal.

SHEKI. [GEORGIA, ASIATIC.]

SHELBURNE. [NOVA SCOTIA.]

SHELBYSVILLE. [INDIANA.]

SHELFORD, GREAT. [CAMBRIDGESHIRE.]

SHELLIFF, RIVER. [ALGERIE.]

SHELTON. [STAFFORDSHIRE.]

SHENDY. [NUBIA.]

SHEPPEY, ISLE OF, a liberty in the county of Kent, which gives name to a Poor-Law Union. Sheppey Poor-Law Union contains seven

parishes, with an area of 31,083 acres, and a population in 1851 of 13,385. The Isle of Sheppey is described under *KENT*.

SHEPTON MALLET, Somersetshire, a market-town, and the seat of a Poor-Law Union, in the parish of Shepton Mallet, is situated in a valley watered by a small feeder of the river Brue, in 51° 11' N. lat., 2° 32' W. long., distant 18 miles S.W. by S. from Bath, and 116 miles W.S.W. from London. The population of the town of Shepton Mallet in 1851 was 3885. The living is a rectory in the archdeaconry of Wells and diocese of Bath and Wells. Shepton Mallet Poor-Law Union contains 24 parishes and townships, with an area of 49,657 acres, and a population in 1851 of 16,957.

Shepton Mallet is a place of some antiquity; it is called *Septon* in Domesday Book; but, becoming afterwards part of the territory of the Mallet family, took the additional designation of Mallet. The principal street is broad and well built, lighted with gas, and paved. The church, a large and handsome cruciform structure, is on the east side of the market-place. It has a tower at the west end surmounted with a spire. The Wesleyan Methodists, Independents, Roman Catholics, and Unitarians have places of worship. The Free Grammar school, founded in 1627, which is free to 15 boys, has an income from endowment of 75*l.* a year, with a free house for the master. It had 50 scholars in 1854. There is also a National school. The county bridewell is at Shepton Mallet. The principal manufactures are those of woollen-cloth, serge, sail-cloth, silks, crapes, and velvet. The market on Friday is a considerable corn-market; there are fairs for cattle on June 18th and August 8th.

SHERBORNE. [HAMPSHIRE.]

SHERBOURNE, Dorsetshire, a market-town, and the seat of a Poor-Law Union, in the parish of Sherbourne, is situated on rising ground on the right bank of the river Yeo, in 50° 58' N. lat., 2° 30' W. long., distant 18 miles S. by E. from Dorchester, and 117 miles S.W. by W. from London. The population of the town of Sherbourne in 1851 was 3878. The living is a vicarage in the archdeaconry of Dorset and diocese of Salisbury. Sherbourne Poor-Law Union contains 30 parishes and townships, with an area of 39,478 acres, and a population in 1851 of 13,073.

Sherbourne was of considerable importance in the time of the Saxons, who called it 'Sciraburn,' or 'Scireburn.' Ina, king of the West Saxons, on the division of the diocese of Winchester, then the sole bishopric of the West Saxons, made Sherbourne the seat of an episcopal see in 705. The seat of the bishopric was removed, about 1075 or 1076, to Old Sarum. A monastery for secular canons was established here after the conversion of the West Saxons. The rule of St. Benedict was afterwards introduced, in 998, and it became an abbey, which continued till the dissolution of monasteries. A castle was built at Sherbourne by Roger, bishop of Sarum, in the reign of Henry I.; it changed hands once or twice in the civil war of Stephen and the Empress Maud. It was stormed in 1645 by Cromwell and Fairfax, after which it was demolished. In the reign of Edward III. the town sent representatives to parliament, and at a later period the assizes were often held here. In the time of Leland and Camden it was the seat of a considerable woollen manufacture. The clothing-trade declined, was replaced by the manufacture of buttons, bone-lace, and haberdashery, which was succeeded, towards the middle of the last century, by the silk manufacture.

The town is pleasantly situated, partly on the slope of a hill, partly in the pleasant vale of Blackmore. The streets are partially paved, lighted with gas, and supplied with water. The church is a large cruciform structure, of different dates, mostly perpendicular. The tower is 150 feet high. The church anciently belonged to the abbey. Attached to the church are four ancient chapels. This church has recently been restored at an expense of about 15,000*l.*, of which about one-half has been contributed by the Earl of Digby. The Wesleyan Methodists, Quakers, and Independents have places of worship in the town. The King's school, founded by Edward IV. in 1550, has an income from endowment of more than 1000*l.* a year, and has several exhibitions of 40*l.* a year, tenable for four years, either at Oxford or Cambridge. It is under a head-master and five other teachers, and had 109 scholars in 1854. The school is free to residents in the town or immediate neighbourhood, on payment of 6*l.* a year. The Earl of Digby presented to the school the remains of the abbey, which have been restored, providing a chapel, a dining-hall, a larger school-room, studies, &c. A school for girls is supported by the Earl of Digby. There are also a National school for boys, an Infant school, and a savings bank. There are several ancient houses in the town. The town-hall and market-house are near the church. There are several silk-throwing mills, and some of the inhabitants are employed in sewing gloves for manufacturers in Yeovil. Markets are held on Thursday and Saturday, of which the Saturday market is the most important; there are three yearly fairs.

The remains of the castle, which occupied an area of four acres, are on a rocky eminence at the east end of the town. In the fine pleasure-grounds which surround the ruins of the castle is Sherbourne Lodge, frequently called Sherbourne Castle, the residence of the Earl of Digby; it was built by Sir Walter Raleigh, and contains some interesting portraits.

SHERBOURNE. [GLOUCESTERSHIRE.]

SHERBROOKE. [CANADA.]

SHERBURN. [YORKSHIRE.]
 SHERRINGHAM. [NORFOLK.]
 SHERSTON. [WILTSHIRE.]
 SHERWOOD FOREST. [NOTTINGHAMSHIRE.]

SHETLAND ISLANDS, Scotland, form the most remote group of islands incorporated with Great Britain. They are about 150 miles W. from Buchanness in Aberdeenshire, and are separated from the Orkneys, from which they lie N.W., by a channel about 50 miles broad. Excluding the two more detached islands, called Foula and Fair-Isle, the Shetlands lie between 59° 52' and 60° 5' N. lat., 0° 15' E. long., and 1° 50' W. long. Foula is about 20 miles W. from the Mainland of Shetland, and Fair-Isle about 25 miles S. from the nearest headland of the Mainland. The population of the islands in 1851 was 31,078. Shetland unites with the Orkneys in the return of one member to the Imperial Parliament.

Surface, Coast-Line, &c.—The Shetland group consists of more than 100 islands, islets, holms, and skerries, 32 of which are inhabited; the others are either small isles, on which cattle are pastured, or sterile masses of rock. The largest of the Shetland Isles, called the Mainland, is about 60 miles long, from its northern extremity, Feideland, to its southern termination, Sumburgh Head. Its breadth varies from 8 miles to 10 miles: at one part, from Sandness to Nestingbay, the breadth is 24 miles; but the coasts are singularly irregular, and indented with innumerable deep bays, distinguished by the provincial term 'Voes,' which so penetrate the interior, that no part of the island is more than three miles from the sea. The next largest island is Yell, 20 miles long and 6 miles broad. Unst, the third largest island, is about 11 miles long and 6 miles broad. The other islands are comparatively small: the largest are Fetlar, Whalsey, Bressay, Papa-Stour, Meikle-Roe, Burra, Foula, and Fair-Isle.

The general appearance of the Shetland Isles, as seen from the sea, is an unvarying line of abrupt coast. The elevation of the highest parts is not remarkable: Roeness Hill, in the Mainland, with an altitude of 1500 feet, is the highest hill in Shetland. Foula is distinguished from the other islands by a cluster of five lofty hills, terminating in pointed cones, the highest having an altitude of 1400 feet. The surface of the islands is rugged and wild, often desolate and sterile. The few tracts of cultivated and fertile land are generally near the coast. The towering headlands that frown over the dark and stormy seas and 'rousts' (as the turbulent surges raised by the conflicting currents and torrents that sweep round the headlands are called); the singular pyramids of rock that rise to a great elevation along several parts of the coast; and the openings of numerous lofty and dark caverns in the precipices of the coast—some of great beauty and others of gloomy grandeur—are highly picturesque features. The tides are remarkable for their unequal flow at different parts of the islands, and in opposite directions at the same time. The tide flows an hour earlier along the western than on the eastern sides of the islands, and does not recede below high-water mark more than two-third parts of the depth of the ebb tide at the Orkney Islands.

Geology and Mineralogy.—The southern part of the Mainland is composed of a ridge of clay-slate, lying parallel to secondary sandstone and conglomerate on the one side, and small islands of gneiss and sienite on the other. The centre of the Mainland is a solid mass of gneiss, having bluish gray quartz on the west side, and districts of sienitic greenstone and granite to the north. The island of Yell is formed of gneiss. Unst is chiefly formed of serpentine and diallage rock, bordering on a district of gneiss and another of micaceous slate. Fetlar is similar to Unst; and the more remote island of Foula is formed of high hills of sandstone, with clay- and mica-slate, gneiss and granite on its north-eastern shores. Fair-Isle also chiefly consists of sandstone. There are copper-veins at Sandlodge and in Fair-Isle; iron-mica at Titfield-Head, and iron pyrites at Garthness.

Climate, Agriculture, &c.—The Shetlands are subject to severe and long continued storms. Winter commences in October. The return of spring is imperceptible till the end of April. The climate is variable and humid, but to the natives it is decidedly healthy, and instances of great longevity are not uncommon.

In the high latitude of Shetland, the light of day at midsummer never totally disappears, and the smallest print can be read at midnight. During the winter the nights are proportionally long and dreary; and in the month of December the sun is not above the horizon more than five hours and a half.

Agriculture is conducted in a primitive manner; the inhabitants directing their attention chiefly to the fisheries. The small tenants have a small proportion of arable land, enough to raise a scanty supply of food for themselves and their families, and to allow them to devote the best part of their time to fishing. The lands are also frequently let under condition that the landlord is to receive all the fish at a fixed price, which enables him to derive a profit from the re-sale; while on the other hand the landlord is the purveyor of the fishing materials, and often of a great proportion of the tenants' food, upon which a profit also arises. The climate is so ill adapted to the raising of corn, that, although the soil is in several places good, only the most common descriptions of barley and oats are cultivated. The race of cattle peculiar to these islands is of diminutive size. The cow has long pointed horns, and is generally of more than one colour, dingy white and brown predominating. Three hundred-weight is above the

average weight of a cow, and three English quarts per day is the utmost quantity of milk yielded. The Shetland pony, or Sheltie, is annually exported in great numbers. These diminutive horses are extremely hardy and vigorous, and undergo much fatigue in proportion to their size. They provide their food from the hill pastures, and are never placed under shelter. The native sheep are remarkably small, and have a degree of nimbleness and vigilance which would be considered foreign to the nature of the animal by persons only acquainted with the flocks of other countries. The carcass of one weighs about 30 lbs. The colour of their wool, from which stockings and gloves are knit by the natives, is various, being white, dun black, and brown, and all these colours are often blended together in one animal.

The fisheries are the most important branch of industry. 'Sillocks,' the young of the coal-fish, literally swarm from May until September, close to the shores, affording abundance of a favourite food, and considerable quantities of oil. The ling and tusk fishery, in the open sea, is the most valuable and most hazardous, and, together with the cod fishery, contributes more to the prosperity of Shetland than any other. The herring fishery is also followed. The capture of whole herds of whales, known as 'bottle noses,' which approach the coast in pursuit of the herrings, supplies the natives occasionally with supplies of oil of very fine quality. The slaughter of seals in the deep caverns of the coast is engaged in to an extent sufficient to class it among the fisheries.

Divisions, Towns, &c.—The islands form 14 parishes, under the ecclesiastical jurisdiction of the Synod of Shetland. The Free Church has seven chapels, the Independents have six, and the United Presbyterians have two chapels. There are also some chapels for Wesleyan Methodists. The only town is Lerwick, which is situated on Bressay Sound, on the east side of the Mainland of Shetland. The population of the town in 1851 was 2904. The houses are built close to the water's edge; and the country being destitute of roads and wheeled vehicles, Lerwick presents a singularly confused appearance, with no other thoroughfare than a tortuous ill-paved path between the houses. It possesses many excellent shops, and has a harbour which is about a mile wide at the south entrance, expands opposite to the town, and again contracts; being fully protected by the shores of Bressay island on the one side, and by those of the Mainland on the other. The number of vessels registered at the port on December 31st, 1853, was 62, of 1986 tons burden. During 1853 there entered the port 111 sailing-vessels of 8121 tons, and 28 steam-vessels of 8960 tons; and during the same period there cleared from the port 105 sailing-vessels of 8116 tons, and 28 steam-vessels of 8960 tons. Besides the parish church there are in the town a Free Church and chapels for United Presbyterians and Independents. The only villages which require notice are Scalloway and Hillswick, both on the west side of the Mainland. Hillswick, population about 200, is 36 miles N.N.W. from Lerwick, and has a finely-sheltered harbour. The inhabitants are chiefly engaged in the ling and the herring fisheries. Many of the lochs in the parish abound with salmon-trout. Besides the parish church, there are chapels for Wesleyan Methodists and Independents. Scalloway, population about 400, about six miles W. by N. from Lerwick, was formerly the capital of Shetland. The Independents have a place of worship here. Scalloway has a good harbour, and near it along the coast are several commodious voes or bays, which afford convenient shelter to vessels. A short distance east from the village are remains of the castle of Scalloway, built about the year 1600 by Earl Patrick Stewart.

History, Antiquities, &c.—Antiquaries have long disputed whether the ancient Romans saw the Shetland Isles when they circumnavigated Britain, and much learning has been advanced to connect the *Thule* of Tacitus with Shetland. The country was peopled by Northmen, and was long subject to Norway. About 1380 the line of Norwegian earls ceased to retain their authority, and a Scottish nobleman, Henry Sinclair, obtained the earldom of Orkney, which included Shetland, from the King of Denmark and Norway. It continued in his family for about a century. In 1469 James III. of Scotland married Margaret, the daughter of the King of Denmark, and with her, obtained the Shetlands in security of her dowry, which never having been paid, the islands have since formed part of Scotland. The Norwegian laws and usages continued in force in Shetland until a very recent period, and thus the old laws and observances of Shetland essentially differ from those of Scotland. The free possession of lands is known by the term 'udal,' the proprietors being termed 'udallars,' and this property descends in the udaller's family without the evidence of any written instrument. The islands now form part of the united sheriffdom of Orkney and Shetland. [ORKNEY.]

There are several interesting remains of antiquity in Shetland,—such as Lawtings, or open courts of justice under the Norwegian laws; round towers, particularly that of Mousa, which is nearly entire; and, of more recent erection, the ruins of the large castle of Scalloway.

For several years a steam-vessel has plied regularly every week, from March till November, between Edinburgh and Lerwick in Shetland, calling on its way at Aberdeen and Wick.

SHIELDS, NORTH, Northumberland, a market-town, sea-port, and conjointly with the village of Tynemouth a parliamentary borough, in the parish of Tynemouth, is situated on the left bank and near the mouth of the river Tyne, in 55° 1' N. lat., 1° 26' W. long.

distant 7 miles E. by N. from Newcastle, 279 miles N.N.W. from London by road, and 301 miles by the North-Western, and York Newcastle and Berwick railways. The population of the township of North Shields in 1851 was 8882. The living of North Shields is a curacy, annexed to the vicarage of Tynemouth, in the archdeaconry of Northumberland and diocese of Durham.

North Shields first rose about the time of Edward I., under the protection of the Prior of Tynemouth, but its growth at that time was checked by the burgesses of Newcastle, who obtained a decree which compelled the prior to destroy the buildings which he had erected. The place continued in obscurity until Cromwell, in the time of the Commonwealth, caused an act to be passed for forming quays and establishing a market. The restrictions on the trade of the place were subsequently removed, and the town rose in importance. It now extends about a mile along the Tyne, opposite South Shields. The town is lighted with gas. The parish church of Tynemouth is at the eastern end of North Shields. There is a chapel of ease. A new church was completed in 1836. The Wesleyan, Primitive, and New Connexion Methodists, English Presbyterians, United Presbyterians, Independents, Baptists, Quakers, and Roman Catholics have places of worship. There are in the town National, British, and Infant schools; a school of industry for girls, partly endowed; a Presbyterian school; a Roman Catholic school; a savings bank; a handsome building for the subscription library; a mechanics institute; a theatre; assembly rooms; and commodious baths.

North Shields is a place of great trade. Numerous collieries are in the neighbourhood; ships of 300 tons can load at the quays. There is a great export of coals, chiefly to London and the eastern coasts of England and Scotland. Several vessels are engaged in the Greenland and Davis's Straits whale fishery. The number and tonnage of vessels registered as belonging to the port of Shields on December 31st, 1853, were, under 50 tons, 17 sailing-vessels of 545 tons, and 82 steam-vessels of 1646 tons; above 50 tons, 763 sailing-vessels of 201,104 tons. During 1853 there entered the port, in the coasting trade, 666 sailing-vessels of 66,468 tons, and 29 steam-vessels of 492 tons; and cleared, 1413 sailing-vessels of 151,897 tons, and 23 steam-vessels of 451 tons. In the colonial trade there entered 31 sailing-vessels of 9538 tons, and cleared 45 sailing-vessels of 17,538 tons. In the foreign trade there entered 541 British vessels of 109,665 tons, and 422 foreign vessels of 41,451 tons; and there cleared 483 British vessels of 92,932 tons, and 634 foreign vessels of 74,256 tons. A steam ferry affords communication with South Shields; there are steamers to Newcastle, and a railway gives communication with Tynemouth and with Newcastle. Ship-building, and the manufacture of sailcloth, cordage, chain-cables, and anchors, are actively carried on. Salt-pans, breweries, a pottery, and brick- and tile-works employ many hands. A county court is held. Saturday is the market-day; fairs are held on the last Friday in April and the first Friday in November.

SHIELDS, SOUTH, Durham, a market-town, seaport, municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parish of Jarrow, is situated on the right bank and at the mouth of the river Tyne, in 55° N. lat., 1° 26' W. long., distant 20 miles N.N.E. from Durham, 276 miles N.N.W. from London by road, and 290 miles by the Great Northern, and York Newcastle and Berwick railways. The population of the borough of South Shields, which includes the townships of Westoe and South Shields, was 23,974 in 1851. The borough is governed by a mayor, aldermen, and councillors; and returns one member to the Imperial Parliament. The living is a perpetual curacy in the archdeaconry and diocese of Durham. South Shields Poor-Law Union contains six townships, with an area of 15,477 acres, and a population in 1851 of 35,577.

Of Jarrow and its ancient Benedictine monastery some particulars will be found in our notice of the county of DURHAM. South Shields (anciently written Le Sheeles) has risen into importance with the extension of the coal-trade in modern times. One inscription which has been dug up indicates that the Romans had a station here. The present town originated with the fishermen of the Tyne, who built here along the shore sheds, locally termed 'sheels' or 'shields,' to defend themselves from the weather.

The town of South Shields extends into the township of Westoe; the modern parts contain many good houses. The town is lighted with gas, and has a good supply of water. In a large square near the centre of the town is the town-hall, used also as an exchange and news-room, and having a market-house beneath. The parochial chapel has been so much altered that little of the ancient part can be traced, with the exception of the old tower. A chapel of ease is of modern erection, and there are two chapels for United Presbyterians, and one each for Wesleyan and Primitive Methodists, English Presbyterians, Independents, and Baptists. There are National and Charity schools, a school supported by Presbyterians, and a savings bank. There is a set of 22 comfortable small houses for master mariners above 60 years of age. A great quantity of coal is brought down the river in keels, and shipped here: some coal-pits are in the immediate vicinity. The shipping returns for 1853 are included in those of NORTH SHIELDS. Ship-building is carried on with great activity. There are spacious docks for building and repairing ships; also extensive glass-works, a pottery, manufactories of soda and alum, breweries, and rope-walks. A numerous body of pilots are employed

for navigating vessels into the Tyne. At the mouth of the Tyne is a pilot tower. There is weekly communication by steam-vessel with Hull and with Berwick-on-Tweed. A county court is held. The market is on Saturday; two fairs are held, but they are indifferently attended. The town possesses a subscription library; a literary, scientific, and mechanics institute; an exchange news-room; public baths; and a theatre.

SHIFFNALL, Shropshire, a market-town, and the seat of a Poor-Law Union, in the parish of Shiffnall, is situated near the Staffordshire border, in 52° 39' N. lat., 2° 19' W. long., distant 13 miles E.S.E. from Shrewsbury, 135 miles N.W. by W. from London by road, and 139 miles by the North-Western and Birmingham and Shrewsbury railways. The population of the township of Shiffnall in 1851 was 1958. The living is a vicarage in the archdeaconry of Salop and diocese of Lichfield. Shiffnall Poor-Law Union contains 15 parishes and townships, with an area of 45,453 acres, and a population in 1851 of 11,463. Shiffnall parish church is a handsome and spacious cruciform edifice. The Baptists have two chapels; and there are National schools, partly endowed, and a Blue-Coat school. Mines and coal-pits in the vicinity afford considerable employment. Tuesday is the market-day. Fairs are held in April, August, and November.

SHIKARPOOR. [HINDUSTAN.]

SHILDON. [DURHAM.]

SHILLELAGH, County Wicklow, Ireland, a village and the seat of a Poor-Law Union, is situated on a feeder of the Derry River, 31 miles S.W. from Wicklow, and 59 miles S.W. from Dublin by road. The population in 1851 was about 150. Shillelagh Poor-Law Union comprises 23 electoral divisions, with an area of 110,122 acres, and a population in 1841 of 34,435, in 1851 of 24,172. The village contains a chapel of ease, a school-house, dispensary, and Union workhouse. Fairs are held six times a year. In Coolattin Park, belonging to Earl Fitzwilliam, are some old oaks, which are all that remain of the oak forests for which the Shillelagh district was formerly noted.

SHINFIELD. [BERKSHIRE.]

SHINRONE. [KING'S COUNTY.]

SHIPSTON-ON-STOUR, Worcestershire, a market-town, and the seat of a Poor-Law Union, in the parish of Shipston-on-Stour, is situated on the left bank of the river Stour, in 52° 4' N. lat., 1° 38' W. long., distant 30 miles E.S.E. from Worcester, 83 miles W.N.W. from London. The population of the parish in 1851 was 1835. The living is a rectory in the archdeaconry and diocese of Worcester. Shipston-on-Stour Poor-Law Union contains 37 parishes and townships, with an area of 78,889 acres, and a population in 1851 of 20,651. Shipston is pleasantly situated in a hilly district. The town is lighted with gas. Besides the parish church there are chapels for Wesleyan Methodists and Baptists, National schools partly endowed, and a savings bank. The market-day is Saturday; fairs are held once a month. A county court is held in the town.

SHIRAZ. [PERSIA.]

SHIRVAN. [GEORGIA, ASIATIC.]

SHOA. [ABYSSINIA.]

SHOBDON. [HEREFORDSHIRE.]

SHOOSHEE. [GEORGIA, ASIATIC.]

SHOREHAM, NEW, Sussex, a market-town, sea-port, and parliamentary borough, in the parish of New Shoreham, is situated on the left bank and near the mouth of the river Adur, in 50° 50' N. lat., 0° 17' W. long., distant 24 miles E. by S. from Chichester, 56 miles S. by W. from London by road and by the London and South-Coast railway. The population of the parish of New Shoreham in 1851 was 2590; that of the parliamentary borough, which includes nearly all the rape of Bramber, was 30,553. The borough returns two members to the Imperial Parliament. The living of New Shoreham is a vicarage in the archdeaconry of Lewes and diocese of Chichester.

The borough of New Shoreham, so called to distinguish it from Old Shoreham, now a small village about a mile inland, was part of the possessions conferred by the Conqueror upon William de Braose, lord of the rape of Bramber. King John landed here from Normandy with a large army in 1199, and he made it a free port in 1210. In the time of Edward III. (1346) it contributed 26 ships towards the two fleets which were fitted out by the king, being one ship more than was furnished by London; Fowey, Yarmouth, and Dartmouth alone furnished a larger number. In 1758 an act was obtained for the improvement of the haven, but the growth of a sand-bank at the mouth of the Adur caused the embouchure to shift towards the east, and to advance a mile and a half in the course of half a century, so as to render the haven of little use. In 1816 an artificial channel was cut through the shingle embankment, and substantial piers were erected. The harbour mouth is still subject to a bar, which rises occasionally above the low-water level, and shifts its position from 60 to 160 feet from the pier-heads. The lift of the spring-tides is about 15 feet, and neaps about 9 feet. The depth of the water over the bar at high-water is from 14 to 17 feet, according to the tides and the state of the bar. The Adur was formerly crossed by a ford, once belonging to the priory of Hardham. In the year 1833 a handsome suspension-bridge was erected near the mouth of the river and close to Shoreham.

The number and tonnage of vessels registered as belonging to the port of Shoreham on December 31st 1853 were:—Under 50 tons 54 vessels, tonnage 1027; above 50 tons 62 vessels, tonnage 11,277.

During 1853 there entered at the port 909 vessels of 91,535 tons, and there cleared 366 vessels of 20,577 tons aggregate burden.

During the last few years much improvement has taken place in the town. It is lighted with gas and paved. The church, dedicated to St. Nicholas, is a large and elaborately-finished edifice of the 12th century. In the town are a Protestant Free Church and a chapel for Wesleyan Methodists. The college of St. Nicholas, at Shoreham, is a Grammar school for the education of youths of the middle classes. It had 60 scholars in 1854. Besides this school the college has St. John's Middle Grammar school, Hurstpierpoint, Sussex, which had 147 scholars in 1854, and St. George's Military, Naval, and Engineering school, Leyton, with 18 pupils in 1854. At Shoreham are National and Infant schools, a museum and conservatory, and a theatre.

The chief trade of Shoreham consists in the export of timber, and the import of coals, corn, timber, and Irish provisions; and it is a warehousing port for all descriptions of timber, and for colonial and foreign produce. There is a custom-house. The oyster-fishery is prosecuted with considerable success. Ship-building is carried on. Several of the Shoreham boatmen act as pilots. A corn-market is held every alternate Monday, and a fair on July 25th.

SHOTLEY-BRIDGE. [DURHAM.]

SHREVEPORT. [LOUISIANA.]

SHREWSBURY, the county town of Shropshire, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, is situated on the Severn, in 52° 43' N. lat., 2° 45' W. long., distant 153 miles N.W. by W. from London by road, and 161 miles by the North-Western and Shrewsbury and Birmingham railways, via Trent Valley. The borough is governed by 10 aldermen and 30 councillors, one of whom is mayor; and returns two members to the Imperial Parliament. The population of the borough in 1851 was 19,681. The livings are in the archdeaconry of Salop and diocese of Lichfield. Shrewsbury Poor-Law Union comprises six parishes, with an area of 18,032 acres, and a population in 1851 of 23,104.

It is supposed that a stronghold was established by the Britons at this place, when they found Wroxeter (the Uriconium of the Romans) no longer tenable against the Angles. The Welsh name was Pengwern. On the conquest of the town by the Anglo-Saxons, it received the name of Scrobbes-Byrig, and of this name the modern Shrewsbury is a corruption. Ethelfleda, 'the lady of the Mercians,' daughter of Alfred the Great, founded the collegiate church of St. Alkmund; Athelstane established a mint here, and it soon became the chief town of the shire.

The town was included in the earldom of Shrewsbury, granted by William the Conqueror to his kinsman Roger de Montgomery, who erected a castle at the entrance of the peninsula on which the town stands. The castle and town were surrendered to Henry I. by Robert de Belesme, the third earl, who had risen in arms in favour of Robert, Henry's brother. After being held for several years by the crown, the earldom was granted by Henry, in 1126, to his second wife. The town received a charter from Henry II., but the earliest charter extant is of Richard I. In 1215 the town was taken by the Welsh under Llewellyn the Great, prince of North Wales, who had joined the insurgent barons against John, but was not held long by him. In the war of Henry III. with his barons, Shrewsbury was taken, in 1264, by Simon de Montfort, the leader of the insurgent barons, and Llewellyn, grandson of Llewellyn the Great, prince of Wales; but the battle of Evesham, in 1265, restored it to the crown. In 1283 a parliament was assembled at Shrewsbury for the trial of David, the last prince of Wales, who was executed as a traitor. In the reign of Richard II. a parliament was held here, in 1397-98, at which the Earl of Hereford (afterwards Henry IV.) brought a charge of treason against the Duke of Norfolk. In the early part of the reign of Henry IV., in 1402, the king assembled an army here to march against Owen Glyndwr, and the year after he fought the famous battle of Shrewsbury against the insurgent Percies and their allies, when the insurgents were defeated with great slaughter. In the war of the Roses, Shrewsbury supported the Yorkists, and Edward IV. showed much favour to the townsmen. His second son Richard, the younger of the two princes murdered in the Tower, was born here.

In the civil war of Charles I. the king came to Shrewsbury, where he received liberal contributions of money and plate from the neighbouring gentry, and largely recruited his forces. The Earl of Denbigh and Colonel Mytton, the parliamentary commanders, having approached Shrewsbury (July, 1643), were repulsed by Sir Fulke Hunkes, an officer of the royalist garrison, of which Sir Francis Otley was governor. The town was however surprised and taken by the Parliamentarians in February, 1644. Shrewsbury is a borough by prescription, and has sent two members to Parliament since the 23rd Edward I.

The town stands chiefly on a peninsula formed by the Severn. It has gradually extended beyond the Severn on the east and west sides, forming the suburbs of Abbey-Foregate and Coleham on the east, and of Frankwell on the west; and on the north extending beyond the isthmus or neck occupied by the castle, forming the suburb of the Castle-Foregate. The town contains an usually large number of picturesque old half-timber houses, several of which are of a superior character. The streets are lighted with gas and paved; and the town is supplied with water from the river, and from a spring two miles distant. There are two bridges over the Severn: the English

bridge (built in 1774), a handsome freestone structure of seven semi-circular arches, connects the Abbey-Foregate with the town; and the Welsh bridge, a neat plain structure of five arches, connects it with Frankwell. There are some remains of the castle and of the ancient walls. There are also remains of monasteries of the Augustinian and Franciscan friars, and of the Benedictine abbey founded by Roger de Montgomery, in 1088. The Abbey church, a cruciform structure, was in great part demolished at the dissolution; the nave, western tower, and north porch now constitute the church of Holy Cross parish. St. Alkmund's church has been rebuilt in modern times, with the exception of the tower and spire (184 feet high), which belonged to the more ancient structure. St. Chad's has also been rebuilt; it is a Grecian structure, of circular form, with a tower 150 feet high. A small part of the old church of St. Chad now remains, and is used as a school. St. Julian's was rebuilt about the middle of the last century; but the tower, which is of Norman architecture, belonged to the old church. St. Mary's is an ancient large and fine cruciform church, with a tower and spire 220 feet high. The church has been in part restored, the rich antique stained windows have been repaired, and new ones inserted. The Independents have two chapels; the Wesleyan, Primitive, and New Connexion Methodists, the Baptists, Unitarians, Roman Catholics, Quakers, Welsh Independents, and Calvinistic Methodists, have each a place of worship. The Royal Free school of Edward VI. has an income of 3100*l.* a year, and numerous exhibitions to both universities; the number of scholars in 1850 was 105. There are also a British school, a Diocesan school, the Blue Coat or Bowdler's Charity school, and several National and Charity schools. There are a mechanics institute, the Shropshire Agricultural society, and the Shropshire and North Wales Natural History and Antiquarian society, with a museum and library. The hospitals and charitable institutions are numerous. Among them are the sick man's charity; the house of industry; the lying-in hospital, and the Salop infirmary, a plain Grecian structure with a Doric portico, rebuilt in 1830 at a cost of nearly 19,000*l.*

Among other buildings may be mentioned the town- and shire-hall, a spacious and handsome stone building; the Public Rooms, a fine Grecian structure, including the post-office, music-hall, and subscription news-room, erected in 1849; the ancient market-house of the age of Elizabeth; a spacious butter-market, built by the corporation in 1844; the town and county jail and house of correction; the military depot, a handsome brick building near the Abbey-Foregate; the lunatic asylum; the public baths; the circus; the column in honour of Lord Hill, at the entrance of the town from London; the public subscription library; the theatre; and the assembly-rooms. Of the ancient edifices of the town, the white-hall, and the council-house, with its richly-ornamented wooden gateway, are worthy of notice. On the south-west side of the town is 'the Quarry,' believed to be the site of a Roman theatre, which has been formed into a handsome public walk planted with lime-trees; it comprises about 20 acres, extending along the bank of the Severn.

The trade of the town is considerable, especially in Welsh cloths and flannel; thread, linen-yarn, and canvas are manufactured, and there are iron-works at Coleham. The town has long been famous for brawn and 'Shrewsbury cakes.' There is an excellent salmon fishery in the Severn. The river is navigable for boats of 30 or 40 tons, and there is a canal to near Wellington, which opens a communication with the Staffordshire collieries. On the banks of the river are extensive quays and warehouses. The town is connected by railway with Chester, Birmingham, and Hereford. Markets are held on Wednesday and Saturday, the latter for grain. Cattle markets are held monthly. Races are held in the second week of May. The county assizes, sessions for the county and town, and a county court, are held in Shrewsbury.

SHREWSBURY. [NEW JERSEY.]

SHRIVENHAM. [BERKSHIRE.]

SHROPSHIRE, or SALOP, a county in the west of England, is bounded N. by Cheshire, E. by Staffordshire, S. by the counties of Worcester and Hereford, and W. by the Welsh counties of Radnor, Montgomery, and Denbigh. It lies between 52° 18' and 53° 0' N. lat., 2° 14' and 3° 12' W. long. Its greatest length from north to south is 48 miles; from east to west, 40 miles. The area of the county is 1291 square miles, or 826,055 statute acres. The population in 1851 was 229,341.

Surface, Hydrography, and Communications.—Shropshire contains every variety of surface, from the rugged mountain to the fertile and cultivated valley. The river Severn separates the county into two nearly equal divisions, and forms a boundary between the more elevated districts of the west and south, and an extensive level on the north and north-east, which extends into Cheshire and Staffordshire. On the west various chains of Welsh mountains extend into Shropshire. The Berwyn range, which traverses Montgomeryshire, terminates within the north-western boundary of Shropshire, in Selattyn Hill, which is 1300 feet above the level of the sea. The Breiddin Hills, remarkable for their picturesque forms, are situated on the right bank of the Severn, near where that river enters Shropshire. The greater portion and highest parts of these hills lie in Montgomeryshire, but their north-eastern extremities extend four miles into this county. A long range of elevations, commencing in Radnorshire, extends into

the south-west of Shropshire, and forms the district of mountainous land called Clun Forest, portions of which attain an elevation of 1200 feet and upwards. Connected with this range by intermediate hills is an elevated tract situated north of Bishop's Castle, the central ridge of which runs nearly from south to north, and attains its highest point in Corudon Mountain, 1700 feet. On the east, this tract is flanked by a very singular mass of rocks called the Stiperstones. Proceeding to the south-east, another range of hills is approached, the most considerable portion of which, called the Longmynd, attaining the height of 1674 feet above the sea-level, is connected on the south with a mountainous district lying east of Clun Forest, and forms with it the watershed between the Clun and Onny rivers. On the eastern side of the Longmynd lies the valley of Church Stretton, which is bounded on the eastern side by the Caradoc Hills, reaching the height of from 900 to 1200 feet. This range, like those just described, runs from south-west to north-east. It extends across the Severn in tracts of inferior elevation, and terminates, near Wellington, in the remarkable and well-known hill called the Wrekin. This hill rises 1320 feet above the sea, and, being nearly detached from neighbouring hills forms a conspicuous object. The long narrow valley of Ape-Dale lies between the Caradoc Hills and an elevated ridge, called Wenlock-Edge, which extends from the valley of the Onny to the Severn at Coalbrookdale, a distance of about 20 miles. It rises gradually on the eastern side to a considerable height, but the western slope is very rapid. Wenlock-Edge is flanked on the east by a number of detached rounded hills, all of which, as well as the greater portion of Wenlock-Edge, are under cultivation or planted to their summits. Between the hills last described and the town of Ludlow lies a rich tract of low land, called Corve-Dale. This valley extends north to within a short distance of Wenlock, and on the south opens to the valley of the Teme. It is shut in on the east by a range of hills extending from Ludlow northward. Connected with this range, a little to the eastward, are the Clee Hills, a long ridge running due north and south, and rising here and there into lofty summits, two of which—Brown Clee Hill (1805 feet) and Titterstone Clee Hill (1750 feet)—are the highest points in the county.

The chief part of the northern division of Shropshire may be described as a plain rising gradually from the left bank of the Severn to the northern border of the county, just within which the northern edge of the basin of the Severn is no more than 300 feet above the sea. A small portion in the extreme north-west of the county belongs to the basin of the Dee, which river, and its feeder the Ceiriog, form part of the boundary. Another small district in the north-east of the county is drained by the Weaver (a feeder of the Mersey) and its tributaries.

There are extensive tracts of waste lands in Shropshire. Clun Forest is not, as its name would imply, a wooded tract; it consists of smooth rounded hills, which were formerly used as sheep-walks; the greater portion of it is now inclosed. The cultivation of mountain land is on the increase. There are numerous wastes between Shrewsbury and Drayton, and the county also contains several extensive mosses or bogs, such as Bagley Moors, between Shrewsbury and Ellesmere. The forest of Wyre lies on the right bank of the Severn, between the towns of Bewdley and Cleobury Mortimer. It is a large tract, covered principally with underwood, which is cut for the purpose of burning into charcoal to supply the iron-works in the vicinity. Shropshire contains a greater quantity of oak-timber than almost any other county in England.

The *Severn*, the chief and only navigable river in Shropshire, enters the county from Montgomeryshire, a short distance below its junction with the Yrwy. Its course is by Shrewsbury and Bridgenorth. Its entire course through the county is nearly 70 miles, for the whole of which distance it is navigable. [SEVERN.]

The *Teme* rises in Radnorshire, and enters Shropshire from Herefordshire a short distance above the town of Ludlow, whence it flows south to the border of the county, which it separates from Herefordshire and Worcestershire, entering the latter county below Tenbury, and falling into the Severn near Worcester. Throughout its whole course it flows through rich and picturesque scenery. The Clun and the Onny are feeders of the Teme. The *Tera* rises in a small pool on the borders of Staffordshire, in the north-eastern district of Shropshire, and flows south-west past Market-Drayton. It then takes a more southerly course, and is joined on the left bank by the river Mee, which runs near Newport. It runs again westward, and receives the Roden on the right, reaching the Severn between Atcham and Wroxeter. Its whole course is about 30 miles. The Perry, the Meole, the Cound, and the Warf are tributaries of the Severn. There are two or three streams in the county bearing the name of *Rea*, but the principal of them takes its rise in the parish of Ditton Priors, in the northern projection of the Clee Hills, and, running south past Cleobury Mortimer, unites with the Teme at Newnam, below Tenbury in Worcestershire. The *Corve* takes its rise on the western slope of the same ridge, and flows south-west through Corve-Dale into the Teme at Ludlow.

The fish that frequent that part of the Severn which is in Shropshire are salmon, trout, grayling, pike, perch, shad, chub, gudgeon, roach, dace, carp, flounders, eels, and a few lampreys. The fish of the other rivers and streams are principally trout and grayling.

The lakes, or natural pools of water, are not numerous or extensive. The largest is Ellesmere, near the town of that name. It covers about 116 acres. The smaller are Whitmere, Colemere, Avesmere, and Mereton pools.

The first canal formed in this county appears to have been a short line commencing at Donnington Wood, in the parish of Lilleshall, and terminating at Pave Lane near Newport, a distance of about seven miles, with a short branch to the lime-works at Lilleshall. This was continued by the Shropshire Canal, completed in 1792, to the Severn, at Coalport, below Coalbrookdale. The Shropshire Canal is $7\frac{1}{4}$ miles in length; it has a rise of 120 feet and a fall of 333 feet. It is of the greatest importance in conveying the produce of the coal, iron, and other works to the Severn. The Shrewsbury Canal starts from the Severn at Shrewsbury, and, after running on the left bank of that river for some distance, turns north-east and joins the Donnington and Shropshire canals a short distance E. by N. from Wellington. The Shrewsbury Canal is 17 miles long; it has a rise of 154 feet and a fall of 22 feet. Inclined planes are used in these canals instead of locks for the ascent and descent of boats. The Birmingham and Liverpool Junction Canal passes through the north-eastern part of the county, and there is communication between this and the Shrewsbury Canal. The Chester and Ellesmere Canal traverses the north of the county. A branch of it, known as the Montgomeryshire Canal, passes through the north-west of the county. It was intended to form another line from Hordley, on the Montgomeryshire Canal, to Shrewsbury, but it has not been carried farther than Weston Wharf. The southern part of Shropshire is devoid of water communication.

The principal coach-road in the county is the London and Holyhead road, which enters Shropshire between Wolverhampton and Shiffnall, passes through Shrewsbury, and enters Denbighshire near Chirk. It is 30 feet wide, exclusive of the footpaths. This road was the chief line of communication between London and Dublin before the introduction of railways. The Bristol, Shrewsbury, and Chester road enters Shropshire at Ludlow, passes through Church Stretton to Shrewsbury, and thence northward. There is a branch from this road leading from Ludlow to Bishop's Castle and Montgomery. There are coach roads from Bridgenorth to Shrewsbury, Ludlow to Birmingham over the Clee Hills, Ludlow to Wenlock and Coalbrookdale, and from Ludlow to Bridgenorth. There are also various roads communicating with Coalbrookdale, Wellington, Drayton, Newport, Ellesmere, Whitchurch, &c.

The Birmingham, Shrewsbury, and Chester railway enters the county on the east at Albrighton, and runs through Shiffnall and Wellington to Shrewsbury, whence it runs north-west through Baschurch, Whittington, Gobowen, and Chirk, where it crosses the Ceiriog into Denbighshire. From the Gobowen station a branch line of two miles in length runs to Oswestry. The Shrewsbury and Hereford railway runs south from Shrewsbury through Condover, Church Stretton, and down the vale of the Onny to Ludlow. The Shrewsbury and Stafford railway leaves the Birmingham, Shrewsbury, and Chester line at the Wellington station, and runs north-east past Newport. Besides these great lines there are many short rail and tram roads, connecting the various mines with the furnaces, the Severn, and the canals in the Coalbrookdale district.

Geology and Mineralogy.—The Severn nearly forms the division between the new red-sandstone system on the north, and the older formations on the south. An outlier of lias, situated between Whitchurch and Market-Drayton, lies in an elliptical basin, the new red-sandstone rising from beneath, and forming around the lias on the south the hills of Hawkstone, and appearing on the east and south-east at Belton and Market-Drayton, on the north-east in the rising ground extending towards Nantwich, and to the north-west in the undulating country near Whitchurch. The greater part of this basin consists of lower lias shale, finely laminated; but the overlying subdivision of the marlstone is also apparent at Preea. The strata contain the characteristic fossils of the lias. This outlier is distant 60 miles from the nearest point of the great lias formation in Worcestershire and Warwickshire.

The new red-sandstone system, which rises from beneath and surrounds the bed of lias, occupies the whole northern portion of the county, extending north and east into Cheshire and Staffordshire, and on the west passing into the coal formation of Chirk and Oswestry. On the south-west it warps round the edges of the Silurian rocks of Montgomeryshire, and extends for some miles south of the Severn to the coal formations about Westbury and Pontesbury, where the southern edge of the new red-sandstone overlies that coal-field which extends north-east to near Shrewsbury; but the sandstone again penetrates south to a narrow point near the Caradoc Hills, and is succeeded on the west by the coal-field of Le Botwood. The edges of the rocks of the Silurian system extending north across the Severn, as well as the trap rocks of the Wrekin, again deflect the sandstone, the boundary line of which is extended still farther to the north-east from Wellington to near Newport, by the coal formation of Coalbrookdale, on the western edge of which field the sandstone again appears, and occupies the remainder of the county east of the Severn. The new red-sandstone system in this part of England consists of saliferous marls and calcareous flags, red-sandstone and quartzose conglomerate, calcareous conglomerate, and lower red-sandstone. As the new red-

sandstone system in Shropshire occurs in the form of a basin, the lower members will appear towards the edges of that system; and accordingly the lower red-sandstone is met with all along the line that forms the boundary of the system.

The coal-field of Coalbrookdale, the most extensive and productive in the county, extends from near Wenlock, on the right bank of the Severn, across that river to Wallington and Lilleshall, while a thin tortuous zone extends south to Tasley, within a short distance of Bridgenorth. On the north-west and east, this coal-field is bounded and overlaid by the lower new red-sandstone. On the west it is flanked by a thin zone of the lower Silurian rocks, and by the trap rocks of the Wrekin and Ercall Hills, and on the south by the old red-sandstone and upper Silurian rocks. In the upper measures of this field there is a remarkable band of fresh-water limestone, the geological position of which is immediately under the youngest members of the carboniferous series. The coal and iron measures below it are generally more abundant in the northern than in the southern part of the field. The coal-measures on the east side of the field are not less than 1000 feet thick. The ironstone of this field is both concretionary and flat-bedded. The ores of iron are peroxides in sandstone, argillaceous carbonates in shale, and sulphurets in the coal. Petroleum occurs in great abundance in both the upper and lower measures, and some of the beds of shale of the latter afford excellent fire-clay, which is used in the manufacture of pipes and pottery. The Shrewsbury coal-field extends from the Severn at the Breiddin Hills on the west, to Shrewsbury on the east, and occupies a semicircular bay, of which Pontesbury is the southern point. The seams are separated from each other by red, green, and black shale, and clod.

The coal-field of Oswestry is situated on the western verge of the county, and is quite distinct from those already noticed. The productive portion of it is very limited, occupying a small area between Oswestry and the hills of Llanvorda, Trefonen, Treflach, and Sweeney. The carboniferous limestone is better developed here than in any other part of the county. It separates the millstone-grit from the older Silurian rocks, and has a maximum thickness of 500 feet.

The coal-fields of Shropshire remaining to be noticed are situated on the south side of the county. The Titterstone Cleve Hill coal-field lies between the towns of Ludlow and Cleobury Mortimer. At Cornbrook and Knowlbury in this field there are four principal beds of coal, which vary in thickness in different parts; and beneath the uppermost bed the shale contains concretions of ironstone of excellent quality, which also occur beneath the next seam. The millstone-grit rises at many points from beneath the productive coal-field, and is separated from the old red-sandstone by the carboniferous limestone at Oreton; but in other parts it rests immediately upon the sandstone. At Knowlbury the iron-ore is profitably worked. The coal-field of the Brown Cleve Hills lies a few miles north of the formation just described, and, like that, is surrounded on all sides by the old red-sandstone, which here separates the coal-measures into two distinct elevations, known as the Cleve Barf and the Abdon Barf. These two are the loftiest carboniferous tracts in Great Britain. The pits on the Abdon Barf are shallow. Those of the Cleve Barf vary from 14 to 80 yards. Nearly all the best coal has been extracted. In this coal-field, as well as in that of the Titterstone Cleve Hill, there is abundant evidence of the tract having been heaved up into its present position by powerful forces acting from beneath, which have thrown the carbonaceous masses into separate troughs or basins.

The coal-field of Wyre, or Bewdley Forest, lies east of those just described, occupies the south-eastern corner of the county, and extends into Worcestershire, the greater part of it lying within that county. It has a length from north to south of about 20 miles, and a breadth in the Forest of Wyre of 5 or 6 miles. That portion of it lying in Shropshire and extending southward in a narrow zone from near Bridgenorth, is bounded on the west by the old red-sandstone of Chelmarsh.

The old red-sandstone system occupies a considerable part of the southern division of the county. It terminates on the north in the coal-field of Coalbrookdale, and on the east in that of the Forest of Wyre. On the west it is bounded in Corve-dale by the upper Ludlow rock of the Silurian system. At Hayton's Bent, north of Ludlow, veins of copper-ore occur, which were formerly worked, but have been abandoned for upwards of a century. A large outlier of old red-sandstone, the principal part of which forms Clun Forest, occurs on the south-west of the county, and is separated from the great mass by wide intervening tracts of Silurian rocks. This outlier is nearly 100 square miles in superficial extent. Its western extremity reaches into Radnorshire.

The Silurian and Cambrian systems of rocks occupy all the southern division of the county lying west of a line drawn from Ludlow to the Severn at Coalbrookdale, with the exception of Clun Forest. The Ludlow rocks rise from the old red-sandstone of Corve-dale into eminences of 1000 or 1100 feet above the sea, exhibiting the subdivisions of the formation, namely, the upper Ludlow rock, Aymestry limestones, and lower Ludlow rock. West of these, and separated by Hope-dale, is an escarpment extending from the valley of the Onny to Coalbrookdale, called Wenlock-Edge, and composed of Wenlock limestone. This is succeeded by Wenlock shale, composing the valley of the Caradoc, or Church Stretton Hills, which consist chiefly

of different varieties of unbedded or amorphous trap, flanked on the east and west sides by Caradoc sandstone. On the north-eastern extremities of these Silurian rocks is an elevated and extensive tract of rocks of the Cambrian system, composing the Longmynd and other mountains, with outbreaks of trap, and these are again succeeded by Caradoc sandstone, the altered and irregular ridge of the Stiperstone, and the trap-rocks of Shelve and Corndon. A vast expanse of Ludlow rocks then succeeds, and extends into Montgomeryshire. Among the trap and sandstones of Shelve and Corndon occur several metalliferous veins containing ores of lead, &c., of considerable value.

The trap-rocks of the Wrekin, &c., as in the other volcanic districts, have disturbed and altered the adjacent strata, and from observing these phenomena and the dislocations of Coalbrookdale and the Cleve Hills, "it may," says Sir R. L. Murchison, "be affirmed that this district in Shropshire furnishes proofs of the alternate play and repose of volcanic action during very long periods." In the northern division of Shropshire granitic boulders occur both isolated and in groups: they occur in groups on the northern face of Haughmond Hill and the north-western slopes of the Wrekin, and isolated in the district lying a few miles south of Shrewsbury. There are numerous saline springs issuing from the new red-sandstone of North Shropshire. A saline spring, called Saltmoor, occurs also at Ashford, on the banks of the Teme below Ludlow, from which, at the period of the Norman conquest, it appears salt was manufactured. On Prolley Moor, on the western side of the Longmynd, there is a spring containing chloride of lime. Chalybeate springs occur near Sherlot Common, in the neighbourhood of Wenlock, at Moreton Say, and other places.

Soil and Agriculture.—The soil of the county along the right bank of the Severn is chiefly a red-clay and gravel, derived from and overlying the new red-sandstone formation; it is favourable for many kinds of agricultural produce. The south-west portion of the county is the least productive. The ground is too steep and elevated, and the soil too light to admit of general cultivation. The valleys consist of loam resting on gravel, and forming good meadow and pasture land. The farms are for the most part arable, but some are for grazing, for hay, for the dairy, and for rearing and feeding. The crops in general cultivation are wheat, barley, oats, peas, vetches, turnips, potatoes, and beans. Some hemp and flax are grown, and some hops on the southern edge of the county adjoining Herefordshire. Irrigation of the grass-land is extensively practised, and with the greatest advantage. The meadows adjoining the Severn and other rivers and streams are often overflowed; and the water lies on them, especially near the Severn, for a considerable time. The fertilising effect of these floods is very great; they generally occur before the grass is in a forward state, or after it has been mown and removed.

Shropshire is not remarkable for its dairy produce. The cattle are reared from the improved breeds of Lancashire, Cheshire, Leicestershire, and Staffordshire. In the neighbourhood of Bishop's Castle there is a good breed of cattle, of a dark-red colour; in the south the Herefordshire breed is more common. Most of the farmers rear a few calves every year. There are some horses bred in Shropshire, as well for the road as the plough. The waggon horses are generally of a strong black sort. Breeding mares constitute a portion of almost every team. On Clun Forest and the Longmynd a small hardy race is reared, approaching to the character of the Welsh pony. The old Shropshire sheep are horned, with black or mottled faces and legs. Their size is nearly that of the South-Down, but the neck is longer and the carcass not so compact. They abound on the Longmynd. The small Welsh breed of sheep exists here, as well as the large Leicestershire sheep. Upon the hills towards Wales the sheep are without horns, with white faces and with shorter legs, and heavier but coarser fleeces than the Shropshire sort. The sheep are not generally folded. Pigs are fattened to a great extent. Some cider and perry are made in the south of the county. The farms generally vary from 100 to 1000 acres; but on the borders of Wales there are many farms not exceeding 20 acres.

Mining, Industry, and Manufactures.—The mineral wealth of Shropshire has been indicated above. Several thousand persons are engaged in raising coal, ironstone, and lime, and in the manufacture of iron. Coal is raised in various parts of the county. In 1740 there were six furnaces in Shropshire, producing 2000 tons of iron annually. The trade was then languishing in consequence of the scarcity of wood charcoal for smelting. But about this period the iron-masters of Coalbrookdale adopted Edward Lord Dudley's invention of smelting iron with pit-coal, and with such success as to give a great and decided impulse to the trade, not only in Shropshire, but throughout England. It is in this county and Staffordshire that the manufacture of iron is seen in its greatest perfection. The beauty and finish of their rolling-machinery, which is run at an immense speed, enables them to secure almost the whole of the very small and extra sizes of iron, which they throw off at little more cost than the Welsh manufacturers do their common bars. A considerable quantity of lead is procured from the Snail-beach Hope, and other mines in the district of Shelve and Corndon.

Among the industrial products of the county are—iron-castings for mill-work and steam-machinery, nails, &c.; china, earthenware, tiles, &c., at Coalport, below Ironbridge on the Severn, and in the neighbourhood of Broseley; glass at Wrackwardine near Wallington;

flannel at Shrewsbury, Oswestry, Church Stretton, and Worthen; coarse linens and linen thread; carpets at Bridgenorth; gloves at Ludlow, &c. There are also numerous paper-mills and mills for dyeing woollen-cloth.

Divisions, Towns, &c.—Shropshire is divided into 12 hundreds, a liberty, and a franchise:—North Bradford in the north-east of the county; South Bradford, central and east; Brimstrey, east; Chirbury, west; Condover, central; Ford, west; Munslow, south; Oswestry, north-west; Overs, south; Pimhill, north; Purslow, south-west; Stottesden, south-east; Shrewsbury liberty, central; Wenlock franchise, central and east.

It contains the parliamentary boroughs and market-towns of BRIDGENORTH, LUDLOW, SHREWSBURY, and WENLOCK; and the market-towns of BISHOP'S CASTLE, BROSELEY, CLEOBURY MORTIMER, CLUN, DRAYTON-IN-HALES, or MARKET-DRAYTON, ELLESMERE, HALES-OWEN, NEWPORT, OSWESTRY, SHIFFNALL, CHURCH STRETTON, WELLINGTON, WEM, and WHITCHURCH. Each of these towns will be found described under its title.

The more important villages we notice here; the populations are those of 1851:—

Bromfield, population of the township 541, is situated on the left bank of the Teme, near the point where it receives the Onny, 3 miles N.W. from Ludlow. A short distance south from the village are the fine mansion and the grounds of Oakley Park. There are some remains of Bromfield priory, an establishment for monks of the Benedictine order. *Dawley*, population of the parish 9201, about 14 miles E. by S. from Shrewsbury, possesses a small market held on Saturday, and an annual fair. There are extensive coal, iron, and lime-works in the neighbourhood; the chain manufacture is carried on; bricks and tiles are made, and numerous tram-roads afford means for transmitting the produce from the respective works. Besides the parish church there are a chapel of ease; chapels for Wesleyan, Primitive, and New Connexion Methodists; National and British schools; and a parochial library. The streets are lighted with gas. *Hodnet*, population 2057, about 13 miles N.N.E. from Shrewsbury, has an ancient parish church, a Free school, and a National school. Malt- ing is carried on, and there are flour-mills. Three annual fairs are held. *Lilleshall*, population of the parish 3987, about 4 miles S.S.W. from Newport, is chiefly remarkable for its ancient Augustinian abbey. There are some beautiful remains of the Abbey church; the west and south doorways are of rich Norman character. The remains are in the occupation of a farmer. There are schools supported by the Duke of Sutherland and by the Lilleshall Mining Company; there is also a savings bank. *Pontesbury*, population of the parish 3363, about 7 miles S.S.W. from Shrewsbury, has some lead-mines, which employ a considerable number of persons. The parish church, which was formerly collegiate, was rebuilt some years ago. There are chapels for Baptists and Independents; also National schools. *Pree*, population of the parish 3196, about 6 miles N.N.E. from Wem, had formerly a market, which has been long discontinued. Two annual fairs are held. The parish church is an ancient cruciform edifice. The Independents have a chapel, and there are Free and Infant schools. Malt- ing is carried on. Tesselated pavements and other antiquities have been found here. *Tilstock*, population of the ecclesiastical district 593, about 3 miles S. from Whitchurch, has a neat chapel of ease, erected in 1834, a chapel for Wesleyan Methodists, and National schools. *Whittington*, population of the parish 1927, about 2½ miles N.E. from Oswestry, has a parish church, a chapel for Independents, and a Free school. Malt- ing is carried on. The ancient castle is noticed elsewhere. *Wombridge*, population of the parish 2166, is about 3 miles E. from Wellington, in an extensive mining district. The Shrewsbury Canal and the Shropshire Canal form a junction near Wombridge. Oakenates station of the Shrewsbury and Birmingham railway is close to the village. Coal and iron are extensively worked. Besides the parish church there are well-attended National schools. *Wrockwardine*, population of the parish 3107, is near the left bank of the river Teme, about 2 miles W. by N. from Wellington. The parish church is a venerable structure, strongly built. At Wrockwardine Wood is a chapel of ease, in connection with which, as well as with the parish church, are National schools. The Shrewsbury Canal, and the Shrewsbury and Birmingham railway, pass near the village. Coal and iron are extensively wrought.

Shropshire is partly in the diocese of Hereford, partly in that of Chester. The whole of the county is in the province of Canterbury. The county is included in the Oxford circuit. The assizes and quarter sessions are held at Shrewsbury, where is the county jail. County courts are held in Bishop's Castle, Bridgenorth, Cleobury Mortimer, Market-Drayton, Ludlow, Madeley, Newport, Shrewsbury, Wellington, Wem, and Whitchurch. Shropshire returns 12 members to parliament, of whom four are for the county, namely, two for the northern division and two for the southern; and two each for the boroughs of Shrewsbury, Bridgenorth, Ludlow, and Wenlock. By the Poor-Law Commissioners the county is divided into 16 unions, namely—Aitcham, Bridgenorth, Church Stretton, Cleobury Mortimer, Clun, Ellesmere, Ludlow, Madeley, Market-Drayton, Newport, Oswestry, Shiffnall, Shrewsbury, Wellington, Wem, and Whitchurch. These unions comprise 295 parishes and townships, with an area of 927,880 acres, and a population in 1851 of 249,716.

History, Antiquities, &c.—Previous to the Roman invasion, the district of which this county is now a part was inhabited by the Cornavii and the Ordovices, their territory being divided by the Severn. It is probable that part of the south of Shropshire was possessed by the Silures. After the subjugation of Britain this county formed part of the Roman province of Flavia Caesariensis. The western side of the county bears numerous traces of this remote period. There are remains of various British camps. The Gaer ditches near Clun, which bear traces of an ancient fortification, have been assigned by Camden and others as the spot where Caractacus encountered Ostorius Scapula and was vanquished. On a hill called Tongley, near Walcot, the seat of the Earl of Powis, are vestiges of a British encampment called Bury Ditch. Other British remains may be traced at Brocard's Castle, near Church Stretton; at Old Port (a corruption of Old Fort), near Oswestry; and on the Wrekin and Cleo Hills. Of Roman stations, one of the principal was Uriconium, or Viriconium, now Wroxeter, a village on the Severn, about 6 miles S.E. from Shrewsbury. A rampart and ditch, with remains of walls, 3 miles in circumference, mark the ancient boundaries of the city. Another Roman station was Mediolanum, supposed by some to have been near Market-Drayton, by others near Meivod; and a third was Rutunium, at Rowton. There were also Bravinium at Rushbury, Sariconium at Bury Hill, and Uricona at Sheriff-Hales. Near the village of Chesterton, in the neighbourhood of Bridgenorth, are the remains of a Roman camp called the Walls: the form is nearly square, and comprises upwards of 20 acres. The Roman road known as Watling-street traversed this county from east to south-west, as far as Church Stretton, whence it took a more southerly course, crossed the Onny at Little Stretton, and entered Herefordshire at the village of Leintwardine.

In the contests between the British and Roman inhabitants and the new invaders, the Saxons, the latter destroyed the Roman towns, Uriconium among the rest; they soon however built another city, to which they gave the name of Scrobbes-burg, the 'town of shrubs' (from the wooded appearance of the neighbourhood), now softened to Shrewsbury. These contests lasted for nearly a century and a half, when the Saxons ultimately succeeded in subduing the inland Britons. The district thus occupied by the Saxon chiefs extended as far as the base of the Welsh mountains, and became one extensive Saxon state, known by the name of Myrcnaland, or Myrcna-ric, 'the land or kingdom of the borderers,' Latinised into Mercia, and subsequently corrupted into the Marches of Wales, which were united to the kingdom of Mercia by Penda in 626. In consequence of attacks upon this portion of his territory by the Welsh princes, Offa, king of Mercia, formed the dyke or rampart which still bears his name, extending from Flintshire on the north to the Bristol Channel on the south, and which seems to have been intended as a defence as well as a boundary between the Saxons and the Britons. It crosses several portions of the western part of this county, and may be traced on the high ground where cultivation and the ploughshare have not levelled it. In 849 the Danes penetrated as far as the Severn, and in the following year reached Wales. In 896 they established themselves at Cwattbridge (Quatford) on the Severn, south of Bridgenorth, where they built a fortress, and passed the winter. At Cleobury Mortimer are the remains of what is supposed to have been a Danish camp. When Alfred succeeded in subduing the Danes, and uniting the seven Saxon kingdoms into one, Scrobbesburg was one of his principal cities, and he gave the same name to the shire of which it is the capital: from this name, Scrobbesburg-scire, has come the present designation, Shropshire.

William the Conqueror granted to his relative Roger de Montgomery nearly the whole of the county, and to many of his followers all the lands they might conquer from the Welsh; the consequence was, that a bitter warfare was carried on against the ancient possessors of the soil for upwards of three centuries. These Lords Marchers in course of time established a court of their own to settle disputes among themselves. They built towns and erected castles, and to them may be attributed the greater portion of the numerous castles in this county.

In consequence of repeated incursions of the Welsh, Edward I., in order to be near the seat of war, removed the courts of King's Bench and Exchequer to Shrewsbury, where they were held for some time. In 1397 Richard II. adjourned his parliament from Westminster to Shrewsbury, where it was held with great splendour. In the revolt of Owen Glyndwr, in the reign of Henry IV., this county was the theatre of several contests. The memorable conflict between Henry IV. and the Percies, known as the Battle of Shrewsbury, took place on the 21st of July, 1403, at Berwick, within three miles of Shrewsbury, and terminated in the defeat and death of Hotspur.

In the contests between the houses of York and Lancaster, Shrewsbury, Ludlow, and the border country in general, espoused the cause of the former; and it was perhaps in gratitude for these services that Edward IV. re-established the court of the resident and council of the marches of North Wales, which was held at Ludlow till its abolition by act of Parliament in the reign of William III. The Duke of Richmond, afterwards Henry VII., having assembled his army on the Long Mountain on the borders of this county, marched to Shrewsbury, where, after some hesitation on the part of the bailiff, he was enthu-

siastically received by the inhabitants, and joined by the tenants of the Earl of Shrewsbury, who accompanied him to Bosworth Field.

The most important of the old castles of Shropshire are mentioned in the notices of the towns referred to in a previous part of this article. It remains to notice briefly a few others of which remains still exist.

Acton Burnell Castle, 7 miles S. by E. from Shrewsbury, was founded or restored by Robert Burnell, bishop of Bath and Wells, treasurer and afterwards chancellor of England. It is remarkable as being the place where a parliament was held in 1284, in the reign of Edward I. The Act entitled Statutum de Mercatoribus was passed here. The remains of the castle consist of a square building, with a tower at each corner. Cause Castle, near Westbury, is a mere confused heap of ruins, a great portion of the stone having been removed. The site of the castle is one of the most lofty and commanding in the western border of this county. Hopton Castle, situated a little south of Clunbury, was held for the Parliament in the reign of Charles I., and was besieged for upwards of a fortnight. It is now in complete ruin. Whittington Castle, near Oswestry, was formerly a place of considerable importance; the ruins are extremely picturesque, and include eight massive towers. The east wall is washed by a lake.

The remains of some of the abbeys in Shropshire are very beautiful. Buildas Abbey, situated at the village of Buildas, on the right bank of the Severn, about 11 miles below Shrewsbury, was founded in the year 1135. The walls are nearly entire. The building is cruciform, with a massive tower rising from the intersection. The lower story of the tower remains, resting on four arches springing from brackets in the walls. Of Haughmond, or Hsghmond Abbey, situated on a rising ground 4 miles east of Shrewsbury, and founded in 1100, the chapter-house is entire. It is oblong, the upper end forming two sides of a hexagon. Lilleshall, or Lilleshull Abbey, near the village of Lilleshall, 3 miles S. from Newport, is an extremely beautiful ruin. It was founded in the reign of Stephen. The church, which was cruciform, was 228 feet in length. The south door communicating with the cloister is one of the richest early Norman arches in the kingdom. The abbeys of Shrewsbury and Wenlock are noticed elsewhere. There are also remains of an abbey near Alderbury, called New or White Abbey, founded by Fulke Fitz-Warine, in the early part of the 13th century. At Chirbury, on the borders of Montgomeryshire, are traces of an Augustinian priory, founded in the reign of John; its nave forms the present parish church. White Ladies' Priory, near Tong, on the borders of Staffordshire, is a picturesque ruin, situated in a sequestered spot. It was inhabited by White, or Cistercian, nuns as early as the reign of Richard I. or John. White Ladies' and Boscobel House, near it, afforded concealment for a short time to Charles II. after his defeat at Worcester.

Statistics: Religious Worship and Education.—According to the Returns of the Census in 1851, it appears that there were then in the County 679 places of worship, of which 291 belonged to the Church of England, 273 to eight sections of Methodists, 59 to Independents, 81 to Baptists, 11 to Roman Catholics, 3 to Quakers, 3 to Plymouth Brethren, 2 to Irvingites, 2 to Mormons, and 1 to Unitarians. The total number of sittings provided was 145,186. There were 559 day schools in the county, of which 247 were public schools, and 312 were private schools, with an aggregate of 25,254 scholars. Of Sunday schools there were 298, with 22,705 scholars. Of evening schools for adults there were 14, with 175 scholars. There were 8 literary and scientific institutions, with 802 members, and about 2500 volumes in the libraries belonging to them.

Savings Banks.—In 1853 the county possessed 11 savings banks at Bridgenorth, Ellesmere, Lilleshall, Market Drayton, Newport, Oswestry, Shiffnall, Shrewsbury, Wellington, Wenlock, and Whitchurch. The total amount owing to depositors on November 20th 1853 was 635,911*l.* 10*s.* 6*d.*

SHUMLA, or SHUMNA, a fortified town in European Turkey, is situated on the northern slope of an offset of the Balkan Mountains, which forms the watershed between the Paravati and the Akeli Kamchik rivers, near the point indicated by 43° 18' N. lat., 27° 2' E. long.; 225 miles N.N.W. from Constantinople, 65 miles S.E. from Rustschuk, 48 miles nearly due W. from Varna, and 60 miles S. by W. from Silistria, with all which towns it is connected by track-roads. Roads, or tracks, from the principal fortresses of the lower Danube and the Dobruscha on the north, and from the several passes of the Eastern Balkan on the south, converge upon Shumla; these advantages and its strong position make it the 'Key of the Balkan.' And yet it is not the town that is so strong, though it is defended by a wall and a citadel; but on the heights that command it on the south and west the Turks have formed entrenched camps, so as to prevent any enemy from reaching the passes of the Balkan by this route, and are enabled to detach forces for the defence of any point in the range that is threatened. The place itself has little resemblance to a town or a fortress; it is more like a vast Bulgarian village, each house standing within its own yard and gate, which inclose also the stables and cowhouses. The streets, so called, are dirty and unpaved. In 1847, when visited by General Jochmus, there were about 5000 Turkish and 1000 Christian families in Shumla, which would give a population of 30,000; 30 mosques and baths, one Greek and one Armenian church, and three Christian schools (in which the Bulgarian language, a Slavonic

dialect, is taught), cavalry and infant barracks, and a new hospital. Three new forts had been built in the plain, and one on the heights, and the garrison was only about 1000 infantry and 800 cavalry; but after the outbreak of the war with Russia the fortifications were greatly extended and completed by Omer Pasha, who made Shumla his headquarters for a considerable part of 1854.

Shumla is usually a place of some commerce; English and other foreign manufactures are exposed for sale in the bazaar. It had formerly, perhaps still has, considerable cotton, silk, and woollen manufactures, which supplied a great part of Bulgaria and Wallachia, but the Austrian trade since the establishment of steam navigation on the Danube, has injured these branches of commerce. There is also a good trade in copper and tin wares. The mausoleum of Djezair Hassan Pasha is named as one of the most attractive objects in Shumla. There are some Roman remains in the shape of decaying fountains and arches, and in the plain that skirts the town to the north and east there are many of the t^{ép}s, or mounds, which abound in Bulgaria. The Paravati River, which runs east of Shumla generally in a narrow valley to the sea at Varna, is the ancient *Lyginos*. The Kamchik, which drains the northern and southern slopes of the Little Balkan and enters the sea 14 miles south of Varna is the ancient *Pamysus*.

Shumla first came into the hands of the Turks by capitulation in 1387. The Russian armies in their attacks upon Turkey have been thrice repulsed from Shumla: in 1774 under Rumjanzow, in 1810 under Kaminskoi, and in 1828 under Wittgenstein. Soon after however Marshal Diebitsch, after fighting a battle at Kulefcha, a little to the east of Shumla, marched eastward by Pravati, and, forcing the passes of the Eastern Balkan, made himself master of Adrianople.

(General Jochmus, in *London Geographical Journal*, vol. xxiv.)

SHUSTER. [PERSIA.]

SIACK. [SUMATRA.]

SIAM, in Asia, including the countries tributary to or dependent on it, extends from 4° to 22° N. lat., 98° to 105° 20' E. long. It comprehends a vast extent of country in the peninsula beyond the Ganges, and the larger part of the Malay peninsula. It is bounded E. by the kingdom of Cochinchina, or Annam; N. by the province of Yun-nan, China, and that part of Laos which is subject to the Birman; W. by the Birman empire, from which it is separated by the river Saluen, the British province of Tenasserim, and the Gulf of Bengal; and S. by the independent states of the Malay peninsula, Perak, and Pahang. The area is very variously estimated, but is probably not less than 250,000 square miles. The population was estimated by Crawford at 2,790,000, but more recent travellers estimate it at from 5,000,000 to 6,000,000, which is probably much more nearly correct.

Surface, &c.—Siam possesses a great extent of coast. That portion of the Indian Ocean which is called the Gulf of Siam, and extends from south-east to north-west above 500 miles, with an average width of about 250 miles, is almost entirely surrounded by the countries subject to Siam. The Gulf of Bengal forms a coast-line of 529 miles; and the Indian Ocean, with the Gulf of Siam, one of 1467 miles.

A considerable portion of Siam is covered with mountains and hills. The mountainous and hilly part appears to be connected with two chains of mountains, running south and north, and terminating at their northern extremity in the snow-covered mountain ranges which surround the elevated table-land that forms the centre of the Chinese province of Yun-nan. Between these two ranges lies the wide valley of the river Menam.

The western of the two great chains, called by geographers the Mountains of Siam, separates the basins of the rivers Saluen and Menam, and occupies also the northern portion of the Malay peninsula, as far south as 11° N. lat. Towards its southern extremity (between 15° and 12° N. lat.), it is probably not more than 70 miles across, but is divided into two ridges, which inclose the narrow valley in which the Tenasserim River runs southward. The whole of this range appears to be covered with jungle or high trees. Some of the summits rise, according to a vague estimate, to between 5000 and 8000 feet. The ridge which extends along the eastern banks of the Tenasserim River is called by the Siamese Sam-ra-yot, or the 'Three Hundred Peaks.' It consists of lofty mountains, extremely rugged on their flanks as well as summits, and rising in innumerable bold conical peaks. This ridge, which lowers considerably as it approaches Kwi Point (12° N. lat.), does not come near the Gulf of Siam, but leaves between it and the shores a level country, apparently alluvial, on which rise some insulated peaks. The mountains of Siam terminate near 11° N. lat., on the isthmus of Kra. Three passes are known to lead over these mountains between Tenasserim and Siam, but only one of them seems adapted to facilitate the intercourse between the two countries. It leads from Molmein, near the confluence of the river Ataran with the Saluen, along the banks of the Ataran to its source, where the range is passed at a place called Prasong-tahu, or the 'Three Pagodas.' Thence it passes into Siam, and traverses the rich and fertile valley of the river Mekhlong nearly to its mouth, at the town of the same name.

The high ground which traverses the isthmus of Kra from north to south, extending from 12° to 9° N. lat., can hardly be called hilly. It is separated from both the mountains of Siam and those of the Malay peninsula, which lie north and south of it, by deep and

wide depressions. The northern of these depressions occurs near 11° N. lat., where the ground that separates the Pakchan River, which falls into the Gulf of Bengal, and the Choomphon River, which enters the Gulf of Siam, is so low, that, according to the statement of the natives, the two rivers often unite their waters during the spring-tides. Both rivers are navigable for boats, and they could be readily so connected as to constitute a short and direct water-communication across the isthmus between the Bay of Bengal and the Gulf of Siam. The southern depression occurs at the southern extremity of the isthmus of Kra, and crosses the peninsula obliquely from the Bay of Bengal, east of Phunga, or Ponga (8° 15' N. lat.), running north-east to the town of Pennom, east of which it expands to a great width, comprehending the low country on both sides of the river Thakham, between the towns of Phoon-phin and Chai-ya.

The mountains of the MALAY PENINSULA have been noticed under that head. The undulating country which separates the Malay mountains and the mountains of Siam from the Bay of Bengal, and extends a few miles inland, terminates on the shores with a coast of moderate elevation. It appears to be of slight fertility, and is thinly inhabited. At a distance of from 10 to 20 miles this coast is lined with a series of islands. The long channel between them and the mainland has depth enough for the largest vessels; near the continent there is indeed seldom above 4 or 5 fathoms, but near the islands there are generally from 20 to 30 fathoms. Many vessels sail through it during the south-western monsoon, as the heavy sea is greatly broken by the islands. The islands themselves are rocky, and most of them high: some rise to more than 3000 feet. The channels between them are very deep, and usually free from danger. Most of these islands are only from 2 to 6 miles long. The largest, from north to south, are the following:—*St. Matthew's Island* (10° N. lat.), also called *Elephant Island*, is about 12 miles long and 6 miles wide, and has at the north part an excellent harbour, 4 miles long and 3 miles wide, called *Elephant's Harbour*. The highest part, situated in the middle of the island, is nearly 3000 feet above the sea-level. *Salanga*, or *Junk Seylon* (8° N. lat.), is about 16 miles long and 6 miles wide. It is separated from the continent by the Strait of Papua, in which there are only from 2 to 3½ fathoms of water. On the east side of Salanga are some tolerably good harbours. Provisions are abundant, and tin was formerly exported. Towards its southern extremity is a high mountain. Farther south, between 6° 49' and 6° 8' N. lat., is the group of the *Lancava Islands*, which, in addition to several smaller ones, contains the islands of Trotto, Lancawi, and the two Laddas. They are also very elevated, and have some good though little frequented harbours.

The eastern coast of that portion of the Malay peninsula which belongs to Siam is much lower and wider, the mountains being frequently 15 and 20 miles distant. In fertility it is also superior to the western coast: several extensive tracts yield rich crops of rice; and others, though uncultivated and covered with jungle, exhibit a vigorous vegetation. The islands along this coast are not numerous, nor elevated, except Tantaem, the largest, which however is not very high.

To the east of the mountains of Siam is the large valley of the river Menam. According to Crawford, it extends from the most northern recess of the Gulf of Siam to Pech-ai (between 19° and 20° N. lat.) 360 miles; and its breadth at its southern extremity does not exceed 60 miles. But this alluvial tract towards its southern extremity, at least on the west, is inclosed by a more elevated country of equal width and of considerable fertility. In this valley, as far as it is known to Europeans, the fertility of the soil is not inferior to that of most countries between the tropics which are subject to the inundations of a large river. The banks of the river, being more elevated than the country at a distance, are studded with villages and towns, and the lower grounds are covered with extensive rice-fields.

The mountain range which divides the valley of the Menam from that of the river Maekhaun, or Camboja, is little known. Between 19° and 20° N. lat. a great interruption in the mountain chain occurs; and it is said that in these parts an arm of the river Maekhaun branches off and runs to the Menam, so as to constitute, at least during some part of the year, a natural water communication. This mountain range, which is called the mountains of Camboja, in consequence of its dividing the last-mentioned country from Siam, where it approaches the Gulf of Siam between the river Bang-pa-kung (14° 40' N. lat.) and Chan-ti-bon (12° 20' N. lat.), and again between Tung-yai (12° N. lat.) and Kong (11° N. lat.), is of moderate elevation, and covered to its summits with high trees and vegetation.

Between the towns of Chan-ti-bon and Tung-yai lies a plain, which extends from the shores of the Gulf of Siam far inland, the mountains in these parts receding so far from the shores as not to be visible from the sea. This tract, which constitutes the province of Chan-ti-bon, is one of the most fertile and populous districts in the Siamese empire. It is in general well cultivated, and from 300 to 400 vessels are employed in taking the produce to Bang-kok, near the mouth of the Menam, whence a great portion of it goes to China.

That portion of the Siamese empire which lies east of the Mountains of Camboja belongs to the basin of the river Maekhaun, or river of Camboja. It is almost entirely unknown, but seems to extend in wide plains, which terminate south of 15° N. lat. on the

river Maekhaun, which here divides Siam from Cochin-China, but north of 15° the plains reach so far east as to come up to the mountain range of Cochin-China, whose western declivity is in these parts included within the territories of Siam. This extensive country, though fertile, is but thinly peopled.

Rivers and Lakes.—The river Saluen, which forms the boundary between Siam and the Birman empire for 150 miles, is noticed under BRMA. The Maekhaun is noticed under COCHIN-CHINA. Several of the small rivers which drain the eastern side of the Malay peninsula are navigable for a few miles, as the Thawang, which passes near Ligor (between 8° and 9° N. lat.). But the most important of the rivers of Siam is the *Menam*, a name which signifies, in the Siamese language, 'mother of waters.' This river rises in the south-western districts of the Chinese province of Yunnan, with two branches. The western and longer one, called Nanting-ho, has its origin near 24° N. lat., and has a general southward course until it joins (south of 22° N. lat.) the other branch, called Maepraen, which the Siamese regard as the principal branch. The united river preserves the name of Maepraen, and traverses Lower Laos, or Yun-shan, where it becomes navigable for boats at the town of Chang-mai, or Zamaś, the capital of that country. Farther down the navigation is much impeded by rapids and cataracts, so that in several places, according to Kämpfer, goods must be taken out of the boats and transported to some distance by land. From the place where an arm of the Maekhaun is said to join the Menam, the river is called Menam, or Meinam, and, so far as we know, no impediments to navigation occur farther down. Above Ayuthia, the ancient capital, the river divides several times, and contains some very large and several smaller islands. On one of the latter Ayuthia is built. The last division of the waters occurs below Bang-kok, the present capital. When Kämpfer wrote, 1690, the middle embouchure called Tachin was the deepest, and by it large vessels entered the river, but at present both this and the western branch have only from 8 to 12 feet of water on the bar. The eastern arm, which at present is the only one navigable for large vessels, varies below Bang-kok from three-quarters of a mile to a mile and a half in width, and the depth, even close to the low banks, is from 6 to 10 fathoms, whilst its rapidity during the low tide is about 3 miles an hour; the navigation is however impeded by an extensive mud-bank which lies opposite its mouth, and extends about 10 miles into the sea. The highest water on this bar from February to September is about 13½ feet, and in the remaining four months, in which the country is inundated, somewhat more than 14 feet. The Menam, like all large rivers which have their source or course between the tropics, inundates the flat country contiguous to its banks. In the lower part of the river the water begins to overflow in the month of September, and continues to rise to the beginning or middle of November, when it decreases; and at the end of December the waters re-enter the bed. But farther to the north the increase takes place sooner. The inundations contribute greatly to the fertility of the alluvial tract by the mud which they deposit. The whole course of the Menam does not exceed 800 miles, and this river is therefore greatly inferior to the Irawaddi and the Maekhaun.

It is not known whether any of the upper tributaries of the Menam are navigable; but the two rivers which fall into it from the west near its mouth are both navigable. The most western, the *Mekhlong*, which has also given its name to the western embouchure of the Menam, runs through a country in which hills and plains of some extent alternate, and is navigable by boats up to the fortress of Luntshang, a place of some commerce 200 miles from the mouth of the river. The eastern river which reaches the sea by the central embouchure of the Menam, to which it gives its name, Tachin, is also navigable for a considerable distance. The plains along its banks are inhabited by many Chinese, who cultivate the sugar-cane.

About 30 miles east from the eastern mouth of the Menam is that of the river *Bang-pa-kung*, which originates in the mountains of Camboja, between 15° and 16° N. lat. It runs west-south-west; is said to be not much inferior in size to the Menam itself; and has an equal depth of water on its bar. It drains a country highly productive in rice and not inferior in fertility to the alluvial tract that surrounds Bang-kok and Ayuthia.

A large lake called the Lachado is said to exist in the parallel of, but a considerable distance west from, Ayuthia; a river called Talan carries off its waters to the Menam.

Climate.—At Bang-kok, the only place of which we have any detailed information, the year is divided between the dry and the wet seasons, as in other tropical countries. The dry season lasts from October to April, and during this time the weather is temperate, but in April and the beginning of May, before the rains set in, the thermometer is daily from 95° to 96° in the shade. The periodical rains commence early in May, and go on increasing, so that in June and July they are extremely heavy. In August the rains are usually light, and they cease in September. The river has then risen so as to inundate the country, and it continues to rise to the end of November. The greatest rise of the river at Bang-kok is 18 feet. During the rains hard gales from the south and south-west are frequent, and with the rain they moderate the heat. The prevailing winds are connected with the monsoons; and during the year blow regularly from all points of the compass.

Productions.—Siam is rich in natural productions. Rice is most extensively cultivated and largely exported, chiefly to China. On the alluvial soil of the Menam it generally yields forty-fold; and when only thirty-fold, it is considered an indifferent crop. With the exception of Bengal, Siam unquestionably exports more rice than any country in Asia. Maize is also extensively cultivated, particularly in the mountain districts, but it is not much exported. Wheat and other cereals are little if at all grown. Of leguminous plants, the *Phaseolus radiatus*, the *Phaseolus maximus*, and the *Arachis hypogaea* are most commonly cultivated, and the first is exported to China and the Malay Islands. The roots cultivated in other tropical countries are common, especially the sweet potato. The cocoa and areca palms are cultivated extensively in the lower tracts, and the oil obtained from the first is an important article of export. Siam is noted for a great variety and abundance of fruit-trees, and their produce surpasses that of all other parts of India in flavour. The neighbourhood of Bangkok is one forest of fruit-trees. The most exquisite fruits are the mango, the mangustan, the orange, the durian, the lichi, and the pineapple, with many others of inferior value.

Several other plants are cultivated as articles of foreign trade. The most important is the sugar-cane, which is extensively exported to China, the western parts of Hindustan, Persia, Arabia, and Europe. The cultivators of the cane are always Siamese, but the manufacturers of sugar are invariably Chinese. Black pepper of a superior quality is cultivated to an enormous extent in the country east of the Gulf of Siam; nearly the whole of it is exported to China. Tobacco, which formerly was imported, is now grown so generally, that considerable quantities are exported to Cochin-China and to several of the Malay countries; the best is grown in the countries east of the Gulf of Siam. Cotton does not succeed in the low countries, but a cotton of good quality is grown in the more elevated tracts on the Malay peninsula, and in those which divide the alluvial region of the Menam from the mountains of Siam.

The forests, which cover nearly all the mountain ranges of Siam, yield several articles of trade. Cardamums are collected in the forests on the mountains of Cambodia, and go to China, where they fetch a very high price. In the mountainous and woody districts of Laos a gum is collected which nearly resembles benzoin, with which it was long confounded. Gamboge is collected in the mountains of Cambodia, whence its name. Aquila-wood is procured in the countries east of the Gulf of Siam, as far north as 13° 30' N. lat., and considerable quantities of it go to China, where it is used as a perfume in the temples. Sapan-wood is got from the forests, with which the mountains of Siam are clothed, between 10° and 15° N. lat. In point of quantity, if not of value, it is the most considerable of all the exports of Siam. It is principally sent to China, but a very considerable quantity is also exported to Bengal and Europe.

The forests of Siam contain many valuable timber-trees; one which yields a considerable article of export, is called by the Siamese Waideng, or red-wood, and by the Portuguese Pao Rossa, or rose-wood, but it does not resemble the rose-wood used in Europe, though it is used in China, whither large quantities are exported for cabinet-work. The teak-forests are very extensive, but all of them are in Laos, or north of 16° N. lat.; great numbers of teak-trees are floated down the Menam, when the river is swollen, to Bangkok.

In Siam the elephant exists in the greatest perfection. The finest are found in the forest of Suphan, between 14° and 15° N. lat., west of Bangkok, but they inhabit every part of the kingdom. In Bangkok their use is prohibited, except to a few persons of very high rank. In all other parts of the country they are freely employed, both for riding and as beasts of burden, especially in Southern Laos, whose capital, Lanjang, takes its name from this circumstance, signifying 'the place of ten millions of elephants.' The number of wild elephants is very great, and they are regularly hunted on account of the government. White elephants are found occasionally; they are regarded with great veneration, and two or more are kept in a royal watt, or temple, and attended by a large band of priests. The person who succeeds in trapping a white elephant receives a considerable reward; if the animal be a very fine one the reward is a handsome pension, which is continued to his descendants. The double-horned rhinoceros is more frequently met with in Siam than in any other country: like the elephant it is hunted for its hide and horn, both of which are exported to China. The tiger is extremely common, though not equal in size to that of Bengal: his bones and skin constitute a considerable article of commerce with China; the bones are used by the Chinese as a medicine. The black tiger is by no means rare. The skins of leopards, which are also very common, go to China. The true civet (*Viverra civetta*) is reared by the Siamese for its musk. The scaly skin of the pangolin (*Manis pentadactyla*) is sent to China, where it also appears to be used for its supposed medicinal virtues. There is also the orang-utan. There are seven different kinds of deer, among which the common stag (*Cervus Elephas*), the muntjac, and the chevrotin (*Moschus pygmaeus* and *Javanicus*) are most common. The buffalo is numerous in the alluvial tracts, where it is preferred to the ox for agricultural labour. Black cattle are more numerous in the more elevated districts, and are only kept for agricultural purposes, their milk being too trifling in quantity to be useful, and the slaughter of them is forbidden even to strangers.

But the numerous wild cattle which are found in many parts of the country are shot by professed hunters, for their hides, horns, bones, and flesh; the flesh, after being converted into jerked beef, forms an article of trade with China. The horses of Siam are of a small kind, resembling our ponies. A small kind of goat is kept about the temples. Hogs are very numerous, both in a domestic and in a wild state. The lard, prepared with great care, is exported to the European settlements in the neighbouring countries. Fowls in their wild state exist in the forests of Siam, and the common fowl is reared in the lower countries. Common ducks are reared in great numbers by the Chinese, but geese are almost unknown. The peacock is common in the forests, and the feathers are exported to China. There are several species of pheasants and pigeons, and also of wading birds. The feathers of the kingfisher, the blue jay, the pelican, and several birds of the crane and stork families, are sent to China. There are tortoises and crocodiles in the Menam, but they are not so common as in the Ganges. The green turtle (*Testudo Midas*) abounds on the islands along the eastern shores of the Gulf of Siam, and the eggs are sent to Bangkok, where they are used for food. Lizards and serpents are numerous.

Fish are abundant, but generally of inferior quality; several kinds however are dried and exported. Shrimps and prawns dried and prepared are an article of export under the name of balachang. The *Coccus lacca* produces the dye or gum called lac in commerce. The lac of Siam is of very superior quality, containing a larger portion of colouring-matter than that of Bengal and of the Birman empire. It is exported to China and the European settlements.

Several kinds of animals in Siam contain individuals of a white colour, which is rarely the case in other countries. Besides white elephants, Finlayson found white monkeys, white buffaloes, and white deer, and he thinks that this anomaly in the colour of the animals is connected with the peculiarities of the climate.

Gold is obtained in small quantities in the mountains of the Malay peninsula, and at the southern extremity of those of Siam. Tin exists in many places in the southern mountains, in those of the Malay peninsula, and also on the island of Salanga. It constitutes a considerable article of export. Iron is very abundant in both ranges which form the boundary of the valley of the Menam, and is worked on a very extensive scale. Copper and lead are found in some places, and worked to some extent. Zinc is said to abound, but is not worked. Antimony is worked on a small scale. The sapphire, the Oriental ruby, and the Oriental topaz are obtained by digging the alluvial soil at the bottom of the hills that surround the plain of Chan-ti-bon. Salt is made in the low wooded and uninhabited country which extends along the sea between the mouths of the Menam.

Inhabitants.—The population of Siam is composed of different nations, part of whom are aborigines, and part emigrants from other countries. The first class of inhabitants consists of Siamese, Laos, Cambodjans, and Malays, who have attained a certain, though different degree of civilisation, and of Kariang, Lawa, Kha, Chong, and Samang, who occupy some mountain regions, and seem to be backward in civilisation. The immigrant nations are Chinese, Mohammedans, Hindoos, Peguans, and Portuguese.

The Siamese, Laos, Cambodjans, and Malays, who constitute about three-fourths of the entire population, seem to belong to the same race with the Birman and inhabitants of Cochin-China: they are all members of the great Mongol family. Their average height is five feet three inches. The skin is of a lighter colour than that of the Asiatics to the west of the Ganges, a colour which, in the high ranks, where a yellow cosmetic is generally used, approaches that of gold. Its texture is remarkably smooth, soft, and shining. They have a strong tendency to obesity. The cheek bones are large and prominent, and give to the whole face the form of a lozenge. The forehead, though less prominent towards the side, is broad, and covered with the hairy scalp in greater proportion than in any other people. In some it descends to within an inch, or even less, of the eyebrows, covers the whole of the temples, and stretches forward to within nearly the same distance of the outer angle of the eye. The diameter of the head from the front backwards is very short, and hence the general form is somewhat cylindrical; and, in a great number of instances, from the crown to the nape of the neck is nearly a straight line. The top of the head is often unusually flat. The hair is black, thick, coarse, and long. The features are never bold, prominent, or well defined. The nose is small, round at the point, but not flattened as in the negro; and the nostrils, instead of being parallel, diverge greatly. The mouth is wide, but not projecting; the lips are rather thick. The eyes are small, and the outer angles are more turned up than in the western races, though not so much as in the Chinese. The eyebrows are neither prominent nor well marked. The beard consists only of a few straggling hairs.

The Siamese call themselves Thay, but are called by the Malays, and some other neighbouring nations, Zëam, or Zam, from which word the term Siam is derived. They speak a peculiar language, of which however that which is spoken in Laos is only a dialect. It consists of monosyllabic words; but these are mixed with a considerable number of words taken from the Pali language, and others from the Chinese. The alphabet is mixed up with characters taken from the

Pali and Devanagari. It is used in common life, and some poetry and novels, as well as historical compositions, are written in it. But the sacred literature is only written in the Pali language, which, together with the worship of Buddha, was introduced into Siam and the adjacent countries in the 4th century of our era.

Divisions and Towns.—The government of Siam is an absolute despotism, not limited even by ancient customs, by the established tenets of religion, or by the authority of hereditary chiefs. Siam is composed of countries which constitute the kingdom of Siam, and are immediately subject to the sovereign; and also of tributary countries, governed by their own princes, who are dependent on the king of Siam. The former consist of the kingdom of Siam, called by the natives Iudara Thay-nu, and of a portion of the kingdom of Cambodia, called by the Siamese Iudara Shan. The tributary princes inhabit the countries north and south of the kingdom. On the north are the countries of the princes of Laos; and on the south the princes who govern a portion of the eastern coast of the Malay peninsula.

Iudara Thay-nu, or Siam Proper, comprehends the countries along the eastern coast of the Gulf of Siam, as far inland as the mountains of Cambodia, and those in the basin of the river Menam as far north as 19° N. lat., together with the isthmus of Kra, the Malay Peninsula, and as far south as the British colony of Province Wellesley, 5° N. lat. The small Malay kingdom of Keddah, or Queda, has been incorporated into Siam proper, and now constitutes a part of the province of Ligor. Siam proper is divided into eighteen provinces.

BANG-KOK, the new capital, and Ayuthia, the ancient capital, are on the banks of the Menam River. *Ayuthia, or Yuthia,* stands on an island formed by two arms of the river Menam, and is also called Duarawadi, and sometimes Iudara, or by the Europeans Siam. It was taken in 1767 by the Birmans, and from that time ceased to be the capital. It is now a mere ruin, with scarcely any inhabitants. The country which extends from this town southward to Bang-kok and the mouth of the river is well cultivated and has numerous villages, except near the sea, where the low shores, inundated by the high tides at full and change, are covered with trees, and only inhabited by persons who make salt.

Bang-pa-sie is near the mouth of the river Bang-pa-kung, which has a mud-bar with only 12 feet of water on it, but within the river deepens to from 2½ fathoms to 3 fathoms. The town is a considerable place, and carries on an active commerce with Bang-kok. Around it is a large tract of low alluvial ground of great fertility and very productive in rice and sugar-cane. Farther up on the banks of the same river is the town of Patriyu, which contains a considerable population, and is fortified.

Chan-ti-bün, the capital of a province of the same name, stands near the coast, 180 miles S.E. from Bang-pa-Sie; it is a small but rather populous and busy place, exporting the produce of the province, consisting of rice, pepper, gamboge, cardamums, and aquila-wood. The river on which it is built forms at its mouth a harbour that affords anchorage in 5 or 6 fathoms water, but the river is only navigated up to the town by small boats which carry goods from this place to Bang-kok. South of Chan-ti-bün is the small town of *Tung-hay,* near the mouth of a little river which falls into a broad arm of the sea. It exports pepper and aquila-wood.

Pi-sa-luk is a considerable town on the Menam, near 18° 30' N. lat. In the valley of the Mekhlong River, west of Bang-kok, there are also some commercial towns. At the mouth of the river is the town of *Mekhlong,* with 13,000 inhabitants, which has a harbour for small vessels, and carries on a considerable trade. Higher up, *Rat-phri,* has 10,000 inhabitants, *Pak-prck,* 8,000 inhabitants, and *Bant-chiom,* 5,000 inhabitants, and these places have a considerable trade with the adjacent countries. Much sapan-wood is cut in the forests on the neighbouring mountains. At *Lamtechang,* which is a small place, but has some commerce, the river becomes navigable. South of Mekhlong, near the shores of the Gulf of Siam, is the town *Pri-pri,* which has a considerable population, and exports rice and palm-sugar. The harbour is only accessible to vessels of small burden.

On the isthmus of Kra, along the coast of the Gulf of Siam, are the towns of Choomphon, Chai-ya, Bandon, Phumphin, and Phosuga, but none of them are of much consequence.

In the part of Siam proper which lies south of the isthmus of Kra, on the Malay peninsula, are several towns. *Ligor* has about 5,000 inhabitants, and some trade with China, to which country cotton, black pepper, tin, and rattans are exported. *Talung* lies farther to the south, on a river which falls into the channel between the mainland and the island of Tantailem. From this place a road crosses the peninsula, which leads to *Trang,* a small harbour and town on the Gulf of Bengal: it is not much used. Still farther south, and near the boundary of the Malay kingdom of Patani, is the town of *Sungora,* or *Sungkla,* which is built partly on the continent and partly on the southern extremity of the island of Tantailem.

Samui, a small island in the Gulf of Siam, near 10° N. lat., and several miles from the eastern coast of the isthmus of Kra, is very fertile, and a place of trade, being visited annually by some Chinese junks, which export cotton and edible birds'-nests. The group of the *Sichang Islands* lies within the more narrow portion of the Gulf of Siam, not far from the eastern coast. They are eight in number, and the largest, properly called *Sichang,* is five miles long and about a mile

and a quarter wide in its broadest part. Between this island and Kohkam, the next in magnitude, is an excellent harbour.

That portion of the kingdom of Siam which formerly belonged to the kingdom of Cambodia lies on the west of the river Maekhaun, and is called Bangtang. It consists for the most part of extensive level flats, which stretch from the river many miles westward to the mountains of Cambodia, but the population is said to be small.

The tributary states of Laos, and those on the Malay peninsula, are noticed under LAOS and MALAY PENINSULA.

Manufactures.—The Siamese do not distinguish themselves in any of the useful arts, and are much behind the Hindoos and Chinese. Even their vessels and trinkets of gold and silver are imported from China; but certain gold and silver vases of handsome form and neat workmanship are fabricated in the palace of the king, and presented to the chiefs as insignia of title and office. The manufacture of silk and cotton stuffs is wholly in the hands of women; the fabrics are of a very coarse and homely texture, and greatly inferior to those made in Java and Celebes. A common description of coarse pottery is made in the country, but all the ordinary and better descriptions are imported from China, and in large quantities. The Chinese, who settled in Siam during the last century, have introduced some branches of industry. Besides the fabrication of sugar, which they have greatly extended, and the working of the neglected mines of iron, they carry on the trades of blacksmith, tinsmith, and currier on a large scale. Considerable quantities of wrought-iron are produced by them, and at Bang-kok there are several extensive manufactures of cast-iron wholly conducted by Chinese. The manufacture of tin vessels is very considerable. The preparation of leather is carried on to a great extent, not for the purpose of making shoes, which are scarcely used, but for covering mattresses and pillows, and for exportation to China. Tigers' and leopards' skins, &c., are preserved with the fur on, and exported to China.

Commerce.—Siam, in a commercial point of view, is considered the most important of the three empires which divide among them the countries between the Gulf of Bengal and China. As all the provinces of the empire produce some articles which are in demand in foreign countries, and nearly all the foreign commerce is at present concentrated in the town of Bang-kok, the inland and coasting trade is very considerable. The most important branch of inland commerce is that with the northern provinces of Siam Proper and with Laos, and a vast number of boats come down the Menam laden with grain, cotton, sapan-wood, oil, timber, stick-lac, benzoin, some raw silk, ivory, bees'-wax, horns, and hides. The goods carried back are salt, salt fish, and Chinese, Indian, and European manufactures, and also those of Bang-kok. The produce of the province of Bang-tang, and also of Lan-jang, or Southern Laos, reaches Bang-kok by the river Bang-pa-kung. By this route are brought down gamboge, cardamums, stick-lac, varnish, raw hides, horns, and ivory. From the countries west of Bang-kok, especially those on the banks of the rivers Mekhlong and Tachin, great quantities of sugar, cotton, and sapan-wood are brought to Bang-kok. From the other ports goods are in general exported directly to China.

The most important branch of the foreign trade of Siam is that with China. It is partly carried on by Chinese vessels, but mostly in vessels built in Siam and navigated by Chinese. The principal commodities imported from China are coarse earthenware and porcelain, spelter, quicksilver, tea, vermicelli, dried fruits, raw silk, crapes, satins and other silk fabrics, nankeens, shoes, fans, umbrellas, writing paper, sacrificial paper, incense rods and many minor articles. A considerable number of passengers come annually to settle in Siam. The commodities exported to China have been already noticed. Besides the trade with China, which is carried on by sea, there is an overland trade between Laos and the province of Yun-nan; but as the roads traverse high mountain ranges the commerce is not very active. The imports consist of coarse Chinese woollens, some English broadcloths, pins, needles, and other descriptions of hardware, with some gold, copper, and lead. The returns are principally ivory, stick-lac, rhinoceros horns, and some minor articles. The commerce with Cochin-China is also considerable; but there appears to be scarcely any commercial intercourse existing between Siam and the Birman empire. Some trade is carried on between Molmein, in Tenasserim, and the northern districts of Siam. The British colony is supplied with live stock, and the trade seems gradually extending to many other articles. But the most important trade, next to that with China, is with the European establishments on the Malay Peninsula and the Sunda Islands, especially with the British colonies of Singapore, Malacca, and Pulo Penang, and with the Dutch establishments of Batavia, Cheribon, and Samarang in Java, Pontianac in Borneo, and Rhio in Bing-tang. The staple exports of Siam to these colonies are sugar, salt, oil, and rice, to which may be added the minor articles of stick-lac, iron-pans, coarse earthenware, and hog's lard. The returns are British and Indian piece-goods, some British woollens, opium, and glass, with the products of the adjacent countries which are suited for the Chinese market, such as pepper, tin, dragon's blood, rattans, tripang, edible birds'-nests, and camphor. The crews of the Siamese junks engaged in this trade are almost exclusively Chinese, but the vessels are built at Bang-kok.

Formerly the commodities of Hindustan and Europe reached the

capital of Siam by being transported across the isthmus of Kra and the Malay peninsula, by the roads which connect Poonga with Chai-ya, Phun-phin, and Bandon, Trang with Ligor, and Queda with Sungora. The goods were carried overland by elephants, the only animal of burden used in these parts, and the journey took from five to seven days. The goods were shipped on the shores of the Gulf of Siam for the capital. By these roads the tin, ivory, and edible birds'-nests of Salang are still brought to Siam; but not the manufactures of Europe and Hindustan, as Singapore is a better emporium for procuring the goods, and the conveyance by this route is less expensive.

In the present year, 1855, Sir J. Bowring succeeded in negotiating a treaty with the king of Siam, which is to come into operation in April, 1856, by which the restrictions which impede European trade with Siam are to be removed, and a new and moderate import tariff is to be substituted. British subjects are to be allowed the right to rent or purchase houses and lands within a certain distance of Bang-kok.

History.—The early history of Siam is entirely unknown. In 1511 the Portuguese, after the conquest of Malacca by Albuquerque, established an intercourse with Siam. In the 16th century Siam was for many years subject to the Birmans, but recovered its independence towards the close of that century. In 1612 the first English vessel went to Ayuthia. Towards the end of the 17th century, a European adventurer, a native of the island of Cephalonia, called Phaulkon, who previously to his arrival in Siam had served as a sailor, mostly in English vessels, by his talents gained the esteem of the king, and was by degrees promoted to one of the most important offices of government. He persuaded the king to encourage the civilisation of his subjects by inviting European settlers, and for that purpose to send an embassy to Louis XIV. of France. This embassy appeared in Europe in 1684, and the king of France sent two embassies to Siam in 1685 and 1687, and also a corps of 500 French soldiers. Phaulkon put the French in possession of the fortress of Bang-kok, but in 1690 a revolution took place, through which the reigning family lost the throne, the minister Phaulkon his life, and the French were expelled from the country. About 1760 the Birmans laid waste the country and took the capital, Ayuthia. The king of Siam had been killed in the assault, and his family was carried away to Ava as prisoners. Soon afterwards the Birman army left the country, and a chief named Phiat-tak, of Chinese descent, seized upon the throne and proclaimed himself king; but in 1782 he was deprived of his throne and life by an insurrection which placed the reigning family on the throne. Some further attempts of the Birmans to conquer at least a part of Siam entirely failed, and a truce was at last concluded between both parties in 1793. Since that time no remarkable event has taken place in the history of Siam.

SIASSI. [SOOLOO ARCHIPELAGO.]

SIÁWSK. [OREL.]

SIBERIA is the name of that part of the Russian empire which is in Asia, and extends from the Ural Mountains, which divide Europe from Asia, eastward to the seas of Okhotsk and Kamtchatka, both of which are parts of the Pacific Ocean. It lies between 45° 30' and 77° 40' N. lat., 60° and 190° E. long. The most eastern point is East Cape, or Vostochinii Noss, which is only about 48 miles from Cape Prince of Wales in America, from which it is separated by the narrowest part of Behring's Strait. The greatest length from east to west exceeds 3600 miles, and the greatest width from north to south is hardly less than 1950 miles. It is bounded E. by the Pacific Ocean, N. by the Polar Sea, W. by the Ural Mountains, and S. by the Chinese empire and the steppes of the Khirghis Cossaks. The basin of the Amur has recently been added to the Russian territories on the south. [AMUR; RUSSIA.]

Surface.—This immense country, which perhaps exceeds Europe in extent by upwards of a million square miles, presents little variety of surface. The western half, or that which lies west of the meridian of the North-East Cape (105° E. long.), may be described as nearly an uninterrupted plain. The eastern half, or that which lies east of 105° E. long., contains numerous mountain ranges and hills, which occupy a great extent of country, between which some plains are inclosed. The mountains in some places rise above the snow-line. The plains are at different elevations above the sea; the southern being perhaps 2000 feet above the sea-level, whilst the most northern are so low that a part of them is inundated during hard gales. We may describe the country in three portions, namely—Western, Central, and Eastern Siberia.

Western Siberia lies between the Ural Mountains (60° E. long.) and 85° E. long., and the surface consists of one extensive plain. According to its productive powers it may be divided into five regions, the steppe, the agricultural district, the mining district, the wooded region, and the northern plain, or tundra. The *Steppe* comprehends the southern part of the plain as far north as 55° N. lat., and extends from the base of the Ural Mountains to the banks of the river Irtish. It is called the *Steppe* of Ishim. Along its south-eastern border lies a wide hilly tract, about 300 miles in width, of which only the northern portion belongs to Russia. The valleys which divide the more elevated portions of the steppe generally consist of bare rocks without vegetation, and are partly covered with salt incrustations. The rivers have water in the cold season; in the hot season it is only found in a few places. The numerous small lakes have always a bitter or brackish water, and cannot be drunk. The vegetation consists only of artemisia, salsola,

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and salicornia. The more elevated tracts are covered with grass during the greater part of the year. But farther south, towards the higher ridge of the Ooltau, the country improves. Wells are more frequent at the foot of the hills, and though the grass grows only in tufts surrounded by a bare red-clay, it is tolerably abundant, and affords good pasture for the herds of the Khirghis Cossaks. There are a few tracts fit for agriculture. This hilly tract is separated from the Ural Mountains by a very level plain, which in these parts is only 300 miles wide, but farther north increases to double that width between 52° and 55°, where it occupies the whole country between the Ural Mountains and the Irtish River. This plain contains an immense number of small lakes, the water of which is brackish. The tracts which divide these lakes from one another, and rise a few feet above their level, have a soil consisting of sand or of yellow-clay, or of both together, and they support only a scanty vegetation. Many parts are covered with a salt efflorescence as white as snow, and produce several kinds of salicornia. The river Ishim runs slowly through a bottom never exceeding a mile in width: and on this narrow tract there are bushes and good pasture. The most fertile tracts lie round the lakes. In this steppe the summer is very hot, and the winter exceedingly cold; the quantity of rain is small, and usually falls at the approach of winter. The *Agricultural District* extends north of the steppe, between the Ishim line of fortifications on the south and 60° N. lat. Between the rivers Irtish and Oby it advances as far south as 61° N. lat. This region presents a great diversity of soil and productions. In that part which is contiguous to the Ural Mountains, called the *Steppe of Isset*, the declivities of the mountains are overgrown with forests, and numerous rivers descend from their summits. As these rivers are abundantly supplied with water in spring, they have excavated wide bottoms, which are covered with alluvial soil, and are comparatively fertile. Accordingly agriculture and the rearing of cattle are carried on to some extent. On the lower declivities of the Ural Mountains are numerous mines of iron and copper, in connection with which the extensive forests which cover the surface of the adjacent districts are exceedingly valuable. Of the country between the Tobol and the Irtish the cultivable tracts are those which immediately adjoin the lakes. Farther north the surface is hilly, especially between the Tobol and Ishim; and the soil is not inferior to that on the west of the Tobol. Between the Ishim and Irtish the country is nearly a flat, but somewhat elevated above the watercourses. Its productive power is small. Between the Irtish and the Oby occurs the *Steppe of Barabinsa*, which is only well known where it is traversed by the road that leads from Tobolsk to Tomak, and to the mining district. The soil is partly covered with swamps and lakes, several of which are of great extent, as those of Oobinskoi, Chany, and Chebakly: the more elevated tracts are traversed by many small rivers, which contain water all the year round. In most parts the surface is a dead level, and without vegetation; but in isolated spots it is covered with grass, and contains poplar and birch. The more elevated spots are frequently covered with a salt efflorescence, and the water of some of the lakes is brackish, especially those south of 54° N. lat. This tract is not much inhabited. The northern district of the *Steppe of Barabinsa* is covered with nearly continuous forests of firs and birch, on a very swampy soil. No agriculture is carried on, but wild animals are numerous, among which the beaver is considered the most valuable by the nomadic tribes that inhabit these forests and live chiefly on the produce of the chase. The south-eastern angle of the *Steppe of Barabinsa* contains a very remarkable depression, which begins about 20 miles due north of the town of Semipalatinsk, on the Irtish (50° 25' N. lat.), and extends in a north-north-east direction to the town of Bernal, on the Oby (53° 20' N. lat.), a distance of more than 200 miles. The width varies between 20 and 30 miles. The whole tract is covered with fine fir-trees, which are very valuable for the mining operations carried on at Bernal and in the Altai Mountains. The winters of the agricultural district are much colder than in Russia west of the Ural. At Tobolsk the thermometer every winter sinks to -25°, and sometimes to -30°, and it generally does not rise above -20° for four or six weeks together. The summer heat is very great. In July and August the thermometer usually rises to 85°, and even 90° after mid-day; but the nights are rather cold in comparison with other countries in which the daily temperature is as high. The *Mining District* extends over the south-eastern part of Western Siberia, and comprehends the most western portion of the ALTAI MOUNTAINS. The *Wooded Region* lies north of 60°, but, properly speaking, the northern portion of the *Steppe of Barabinsa*, as far south as 57°, ought to be included in it, as the general features are similar. The whole region is covered with a variety of species of pine and fir, and the birch is also common. No part of it is adapted to agriculture. A little rye and barley are cultivated, and some vegetables are grown. Fur-bearing animals abound in the district, and fish are obtained in considerable quantities in the river Oby. The climate in winter is severe, but the heat in summer is very considerable. The most northern part of Western Siberia is a low plain, called the *Tundra*. The surface is nearly a dead level, and quite destitute of trees. Only a few shrubs occur, whose roots do not penetrate the ground, and even these are of stunted growth. Even in summer ice is found only a few inches under the surface. The

soil is covered with moss, except in a few places where it is without vegetation. There are many small lakes, generally well stocked with fish. But the wandering tribes which inhabit this country derive their subsistence partly from their large herds of tame and of wild reindeer, and from the sea animals with which the sea abounds along their coasts, especially the morse and the seal.

Central Siberia lies between 85° and 105° E. long., and comprehends the greater part of the ALTAI MOUNTAINS, the hilly country east of the Oby River, as far north as its affluent the Ket, the vale of the Upper Yenesei, the plain of the Lower Angara River, the wooded plain, and the Tundra; in all six regions. The *Hilly Country* which lies west of the Altai Mountains, and extends to the eastern banks of the river Oby, by which it is separated from the Steppe of Barabinsa, is studded with hills near the Altai Mountains, but towards the north it extends in a plain, which is slightly undulating between the Oby and its affluent the Tom. It is almost entirely covered with coniferous trees, among which the *Pinus cembra* is numerous: the cones are collected, and constitute an article of commerce with the countries farther west. Cultivation is however limited, the soil of this tract being sandy and of inferior quality. East of the river Tom the country is a table-land, furrowed by numerous rivers, along the course of which there are many wide bottoms considerably depressed below the surface of the plain. These bottoms have a fertile soil; cultivation is carried on in them to a considerable extent, and there are numerous villages. The river Ket, which divides this region from the forest region, must be considered as the limit of cultivation in this part of Siberia. The *Vale of the Yenesei* is considered the warmest part of Siberia. It is perhaps also the most fertile. It is inclosed by mountain ridges, which sometimes rise above the snow-line. On the west of the vale, between 88° and 89° E. long., are the Teletskoi Mountains, so called from the lake of that name, which lies to the west of the range. On the south of the vale are the Mountains of Sayansk, which unite the Altai Mountains to the range called Erghik Targak Taiga, and separate Siberia from the Chinese empire. This range reaches northward to the vicinity of the town of Sayansk, and the river Yenesei makes its way through it by a long and narrow gorge. The vale extends about 350 miles from south to north, and nearly 200 miles from east to west, but perhaps not less than one-half of it is occupied by high mountains. The Yenesei flows through a wide bottom covered with alluvium from 2 to 3 feet thick, and of great fertility. Wheat, rye, and oats yield from 10 to 12 times their seed. The higher ground is abundantly watered, and the water-courses are fringed with trees, while the remainder is covered with a rich turf of grass all the year round. Some of the bottoms of these rivers are used as pasture-ground, and herds of cattle are sent from this country to other parts of Siberia. The rearing of cattle is favoured by the mild winters. The cattle remain the whole year round on the pastures, the cold not being intense, and frequently not occurring before Christmas, with the exception of night-frosts. On these plains many useful plants grow in a wild state, as the wild hemp, the wild flax, wild Siberian buckwheat, which is collected and used by the inhabitants in making a kind of porridge, and several sorts of *vaccinium* and *ribes*. The most eastern part of the southern portion of Central Siberia is the *Plain of the Lower Angara*. It is an inclined plane, which sinks towards the north, and in that direction is traversed by several rivers which run to the Lower Angara and Upper Toonguska. The surface is generally hilly, but in the direction from south to north it is traversed by some extensive valleys which are nearly level. The greater part of the elevated region is still covered with forests of larch, fir, and birch, and at intervals there are fields which produce moderate crops. Rye, oats, buckwheat, hemp, and tobacco are cultivated with success. In a few places agriculture extends to the narrow valleys which lie between the offsets of the mountain ranges, but these parts of the region are still inhabited by some small wandering tribes, who keep no domestic animals except camels, and this seems to be the most northern point of Siberia in which these animals are found. Some of them however have a few horses, cattle, or sheep. They hunt the elk, a large deer called marali, the musmon, a kind of mountain-goat, lynxes, and especially sables and squirrels. This region is characterised by the dryness of the atmosphere, owing to which only a small quantity of snow falls on this region. The winters however are extremely severe, and the mean annual temperature is only 31.5°, or a little below the freezing point. North of the courses of the rivers Upper Toonguska and Ket, of which the latter is a confluent of the Oby, lies the *Wooded Region* of Central Siberia, and along the Polar Sea extends the *Tundra*. They appear to be similar in character and products to those districts of Western Siberia which bear the same names. Agriculture is only carried on in the valley of the Yenesei River. At Yeneseisk several kinds of grain and vegetables are grown.

Eastern Siberia, or that part of it which lies east of 105° E. long., comprehends about one-half of the whole surface of the country. It contains a much smaller portion of land fit for agricultural purposes than the other divisions, which is partly owing to the severity of the climate, and partly to the greater elevation of its surface in those parts which are south of 60° N. lat. Along the shores of the Sea of Okhotak, between the Chinese frontier and the town of Okhotak, the coast is rocky and very high. The country rises with a steep ascent, and at a

short distance from the sea the general level is from 2500 to 3000 feet above it. This may also be considered as the general level of the immense tract which extends westward from the sea south of 60° N. lat. to the meridian of the town of Yakutsk, and then west-south-west to the northern and eastern shores of the Lake of Baikal, having in this part the vale of the river Lena for its northern boundary. It appears that the surface is a succession of plains, separated from one another by depressions, or by ridges of hills. The whole region is unfit for cultivation, and it does not appear that any considerable portion of it is adapted for pasture, as none of the numerous tribes of the Yakutes, who live chiefly on the produce of their herds, have settled on it, but the whole has been abandoned to the Toonguses, who get their subsistence by the chase. The surface is generally covered with trees, consisting chiefly of pines, firs, larch, and *Pinus cembra* intermixed with birches. The number of lakes is said to be very great, and many of them are surrounded by high hills: these lakes are usually covered with ice nearly the whole year round. Among the wild animals found in this region are numerous reindeer, and the argali or wild sheep. The climate of this part of Siberia is distinguished by the severity and the length of the winter. At the south-western extremity of this region lies the Lake of Baikal. [BAIKAL.] The mountain range which constitutes the southern edge of the table-land separates the streams which run northward to the river Lena from those which flow southward to the river Amur, and constituted till lately the boundary line between Siberia and the Chinese empire as far west as 119° E. long. The southern portion of Eastern Siberia is divided by a mountain range into two parts,—the basin of the Selenga, which falls into the Lake of Baikal, and that of the Shilka, one of the principal branches of the river Amur. The basin of the river Selenga is divided into two portions by the course of the river, which here runs in a general direction from south to north. The larger portion lies east of the river Selenga, and consists of three valleys, which extend from the summit of the Yablouoi Khrebet westward, and open into the valley of the Selenga. The upper portion of the valleys is too cold for cultivation; but in the lower part, which is generally from three to four miles wide, agriculture has been attempted with success, and in modern times it has been considerably improved by Polish emigrants, who have been sent into this region since 1772. They cultivate wheat, rye, buckwheat, flax, hemp, peas, and water-melons. The wider valley of the river Selenga itself appears in many parts to have an arid dry soil; but it contains good pasture, and in some places the soil is of considerable fertility, and cultivated by Russian families which have been settled there for upwards of 150 years. About twelve miles from its mouth, the Selenga enters a level plain of considerable extent, which may be considered as the delta of the river, as it is traversed by four arms into which the river divides on entering the plain. This plain extends for 22 miles on the shores of the Lake of Baikal, above which it is very slightly elevated. The western portion of the basin of the Selenga comprises a wide plain, which serves as a pasture-ground for the numerous herds of horses, cattle, and camels of the Buriates, who are in exclusive possession of that tract. The wooded mountains on the east of the Selenga are haunted by wild beasts, such as bears, gluttons, elks, deer, musk animals, wild hogs, ounces, lynxes, wolves, foxes, hares, sables, squirrels, martens, marmots, and wild goats. Many sheep and goats are kept, and their skins, especially those of the lambs, constitute an important article of export to China. That portion of Siberia which lies east of the basin of the Selenga, and is drained by the river Shilka and its two principal branches the Ingoda and Onon, is called Da-uria, which is said to signify 'boundary-country,' or 'border.' The whole, with the exception of a comparatively small tract along the south-eastern border, is a mountain region, traversed by several ridges running south-west and north-east, but nowhere rising to a great elevation. The mountains and hills supply good pasture for the greater part of the year. The valleys are flat and open, but most of them are fit for cultivation. North of 51° 30' N. lat. most of the cereals of Europe are grown. The most southern portion of this region, or that which lies south of 51° 30' N. lat., between the rivers Onon and Argun, is part of the Gobi, or rather, of that portion of it which is called the Steppe of the Kerlon, from the name of the upper course of the river Argun. [AMUR.] The surface is level, and is covered with numerous small stones, among which are jasper, agates, beryls, and topazes. No part of this level country is cultivable. The mountains of this region, especially those which lie between the Onon and Argun, are rich in silver, lead, tin, and zinc, all of which are worked. The Upper Vale of the river Lena is among the agricultural districts of Siberia, corn being grown as far north as the town of Yakutsk. Though the cultivation of corn and several vegetables generally succeeds in this vale, the greater part of it is covered with fir and pine trees; whilst the numerous islands and the low banks of the river are overgrown with birch, poplar, and willow. The wooded country is used as pasture by the Yakutes. The country round the town of Yakutsk may be considered as the richest pastoral tract in Eastern Siberia, though the ground is always frozen for a depth of 400 feet below the surface, and only a small layer of two or three feet is free from ice in summer. Its wealth is chiefly derived from the almost innumerable herds of cattle which pasture on the low country which extends from the river eastward to the river Aldan. A still

more extensive tract of rich pasture-land lies to the east of the Lena River, on both sides of the river Vilui. Many rich families of the Yakutes, who inhabit this tract, possess several hundred head of cattle. The whole country east of the middle course of the river Aldan, between 59° and 60° N. lat., is a mountain tract, extending more than 200 miles east and west to the vicinity of the Pacific. The most elevated part of it, which lies nearly in the middle, and is almost 100 miles wide, is more than 2400 feet above the sea-level. The Toongusses, a wandering tribe of hunters, inhabit this country. At the northern extremity of the Aldan Mountains (62° N. lat., and 141° E. long.) is a mountain knot from which two chains branch off. One of them runs from this point first due east, and then north-east, parallel to the shores of the sea of Okhotsk and the bay of Penginak. It is called by the Russians Stanavoi Khrebet, and covers two degrees of latitude in width; but some of its branches reach as far north as 67° N. lat. At the source of the river Anadir (near 164° E. long.) it divides into two branches. One of them runs first south-east, and then turns south, traversing the peninsula of Kamtschatka [KAMTCHATKA]; the other extends first towards the north, and then turns eastward, in which direction it terminates at Behring's Strait in the capes Vostochinii Noss, or East Cape, and Tshookotskoi Noss. The other chain which branches off from the mountain knot of the Aldan range at first runs north-north-west, but turns west near 64° N. lat., and continues in that direction, parallel to the lower course of the river Aldan, until it approaches the banks of the Lena, where it turns due north, and terminates near 67° N. lat. Between the Lena and the Kolyma the country improves considerably. It is traversed from south to north by several chains of hills, generally of small elevation, but in many places of considerable width. These hills are overgrown with birch and larch, but the trees do not attain their full growth. The greater part of this region is a level plain, without trees, but interspersed with numerous lakes, which contain plenty of fish, and have good pastures on their banks where the settlements of the Yakutes are. The 'albuty,' or dry lakes, which constitute a peculiar feature of Northern Siberia, are still more fertile. They are wide and flat valleys, very little depressed below the general surface of the plain. In spring, when the rivers inundate the adjacent country, they are filled with water, which remains there during the summer; but during the winter the ground bursts, and many narrow clefts are formed, by which the water runs off, and in the following summer the whole ground is covered with the finest turf. There are also good pastures near the declivities of the hills, but the remainder of the plain is chiefly covered with moss and is swampy. Between the river Indighirka on the west and the Alasei on the east are several extensive plains covered with moss, on which only a few larches creep along the ground. There are other wastes of considerable extent. Along the Polar Sea, and some distance from it, the country is a tundra, or low plain covered with moss, of the same description as that which occurs in Western Siberia. Between the Indighirka and Kolyma the surface is traversed by numerous low swells, which generally run south and north, and, terminating on the sea in bluffs, render the coast alternately high and low. The scanty population of this tract subsist almost entirely on the produce of their fisheries in the numerous lakes with which this country is interspersed. The country east of the Kolyma River is of a different description. The offsets of the Stanovoi Mountains come close up to the river, forming on its banks steep bluffs several hundred feet high, and the whole region is covered with ranges of mountains, frequently rising to 2000 or 3000 feet above the sea. In many places they reach the sea, forming on the shores several elevated capes, as Cape Baranov, Cape Shelagakoi, and North Cape. On the sea-shore however there are many tracts of level ground covered with moss. In the interior the valleys are rather wide, and generally swampy, but also often covered with good pastures. The forests of this region are abundantly stocked with animals, among which are countless herds of rein-deer, elks, black bears, foxes, sables, and gray squirrels. Multitudes of ducks, geese, and swans are taken in the Kolyma. The chief supply of food is from the fisheries in the rivers, which are extremely productive. The most common fish is the herring; but there is also salmon of several kinds. The country of the Tshooktshes, or the most north-eastern portion of the Asiatic continent, presents a succession of sterile valleys and bare rocks, whose vegetation is limited to that kind of moss which is the food of the reindeer. In a few sheltered valleys there are some willows which attain the size of shrubs. The climate is extremely severe. The valleys are generally swampy and full of small lakes. There are a few berry-bearing shrubs. A few families of the Tshooktshes subsist by fishing and killing sea animals along the coast; but the greater number live on the produce of their herds of tame reindeer, and by hunting those which are in a wild state. South of the country of the Tshooktshes is the peninsula of Kamtschatka.

We shall conclude this survey of Siberia with a few observations on the Polar Sea, which constitutes its northern boundary. Nearly opposite the middle of the coast-line of Siberia, or more precisely, opposite the country between the mouths of the rivers Yana and Indighirka, is a group of islands, which are called, from their discoverer, the Liakhehoff Islands. They consist of four larger and some smaller islands. The larger islands are named Kotelnoi, Fadeyefskoi, New Siberia, and Liakhehoff, and vary in size from 100 miles long by

60 miles broad, to 40 miles long by 20 miles broad. Even the summers on these islands are so cold that the snow does not entirely melt, and not a blade of grass grows. They consist of layers of ice, alternating with layers of sand, in which an incredible number of elephants' and other fossil bones are imbedded. The sea between these islands and the continent does not completely freeze before the last days of October, but along the coast of Siberia the ice is formed much earlier in the year, and soon acquires a degree of firmness. On the contrary, in spring, the ice melts much sooner along the coast, which is quite free from it in the month of June, whilst in the open sea it constitutes one unbroken sheet of ice up to the month of July, and the quantity is hardly perceptibly diminished even towards the end of the summer. It floats about in the sea in large masses, which, being impelled by currents and winds, are driven against one another with incredible force. These floating masses render the navigation of the Polar Sea extremely dangerous, and have frustrated attempts made to survey the entire coast; the tract still unsurveyed incloses the most northern cape of Siberia, called the North-East Cape, or Severo Vostochinii Noss. In endeavouring to reach the American continent by Behring's Strait, some explorers have made use of nartes, or sledges drawn by dogs. They generally set out in the latter part of the winter, from March to the end of May, when the cold is much less severe than in the earlier part of the winter. It has thus been ascertained that in winter the large body of the sea is open and free from masses of ice, but this open water occurs in different parts at different distances from the shore. In expeditions of this kind numerous ice-hills have been met with, which sometimes constitute single masses with steep declivities; at other times they form regular groups; and frequently they form long ridges. They consist of masses of ice irregularly united, but as the hollow places are filled up with snow, they appear to have a regular form. They vary in height from 10 to 70 feet, and are certainly of a different origin from the icebergs of the Greenland Sea. Salt is found on the ice wherever it is not covered with a thick layer of snow. It is in the form of small shot, and it has a somewhat bitter taste, but may be used. The persons who annually visit the Liakhehoff Islands, use it without the least inconvenience. This sea-salt, called *rasaól*, very much retards the progress of the nartes on the ice.

Climate.—Siberia is the coldest country in the northern hemisphere, if we except Greenland and the Arctic Archipelago of North America. It is much colder than any part of Europe situated in the same latitude. North Cape, in Europe, is near 71° 10' N. lat.; and Ustyansk, at the mouth of the river Yana, in 70° 55' N. lat. The latter place however is nearly 28 degrees colder, as the following table shows:—

	Mean annual temperature.	Mean tem. of Winter.	Mean tem. of Spring.	Mean tem. of Summer.	Mean tem. of Autumn.
North Cape . . .	+ 32°	+ 24°	+ 30°	+ 42°	+ 32°
Ustyansk . . .	+ 4 39°	- 24 9°	+ 27 01°	+ 40 15°	- 24 70°

Irkutak is only about 45' nearer the pole than London, and yet the mean annual temperature is lower than that of North Cape, being 31°; while the mean annual temperature of London exceeds 50°. But Irkutak is 1240 feet above the sea-level. This elevation however would lower its temperature only three or four degrees. The climate increases in severity as we proceed from west to east. The severity of the winter in Eastern Siberia is shown by the circumstance that quicksilver freezes every winter in the country near Irkutak, and in Yakutak it remains in a frozen state for two months together even in mild winters, and in severe seasons for three months. In a large part of Siberia the ground is frozen to a considerable depth even at the end of the summer. In Western Siberia the winter, although very cold, is much less so than in the eastern districts. The summers in Western Siberia are warm and sultry, chiefly in consequence of its proximity to the Great Caspian Desert, which is subject in summer to excessive heat. We may here give the temperature of two places at a considerable distance apart, namely, Bernal and Nishnei-Kolymak, of which the former may be considered one of the warmest and the latter one of the coldest places in Siberia. Bernal is in 53° 20' N. lat., 84° 10' E. long.; and Nishnei-Kolymak in 63° 31' N. lat., 160° 56' E. long. Bernal is 390 feet above the sea; Nishnei-Kolymak is almost on a level with the sea:—

	Mean annual temperature.	Mean tem. of Winter.	Mean tem. of Spring.	Mean tem. of Summer.	Mean tem. of Autumn.
Bernal . . .	+ 35 13°	+ 6 61°	+ 42 92°	+ 61 32°	+ 29 18°
Nishnei-Kolymak	+ 12 05°	- 19 03°	+ 36 15°	+ 44 41°	- 13 33°

Wrangel, who passed three years at Nishnei-Kolymak, gives a description of the climate of that place. The year is divided into two seasons, the winter and the summer. The river is covered with ice in the beginning of September, and is not free from it before the beginning of June. In October the cold is diminished by thick fogs and the vapours which rise from the sea, which then begins to freeze. The frost attains its greatest degree of severity in January, when the thermometer sinks to -60°. Respiration then becomes difficult, and the wild reindeer, the true inhabitant of the polar regions, hides itself in the thickest parts of the forests, and stands motionless. In February the cold does not decrease much; in March it begins to decrease more; but the cold which in these months is felt at sunrise

is unusually severe to the feelings. The wind which is called the hot wind blows from east-south-east, and raises the temperature suddenly from between -45° and -50° to $+29^{\circ}$ and upwards, but it generally does not last more than 24 hours. A sudden rise of the thermometer takes place during the month of June. It sometimes attains $+72^{\circ}50'$ at noon. In July the heat is greatest, and the weather more constant, but there are innumerable swarms of gnats, which torment men and animals. These gnats compel the numerous herds of reindeer to leave the forests, and to retire to the treeless country on the shores of the sea, when vast numbers of these animals are killed by the natives. In August the heat decreases rapidly, and night-frosts are frequent towards the end of that month.

Rivers.—Siberia has a great number of rivers, and as the whole course of most of them, and the greatest part of the course of the remainder, lies through a level and hilly country, nearly all of them are navigable for a great distance. The principal rivers run from south to north, from the agricultural districts to those where vegetation does not supply food to the inhabitants, and hence their great importance for internal intercourse. The tributaries, at least the greater number and the largest of them, run chiefly east and west, and form a water-communication between the agricultural districts themselves, and render it practicable for goods bought from the Chinese at Maimatahin to be transported to European Russia at nearly the same expense as those which are obtained at Canton are carried to Great Britain. Though all these rivers are frozen for more than six months of the year, the advantages arising from them are not thereby materially diminished, as the ice facilitates communication almost as much as the open water. Of the rivers of Siberia the most important are the Oby, the Yenesei, and the Lena.

The *Oby*, *Obi*, or *Ob*, the most western of the larger rivers of Siberia, is the largest river of the Old Continent. Its basin is said to comprehend more than 1,370,000 square miles, and is only inferior to that of the Amazonas and Plata in South America. This basin extends from 47° to 74° N. lat., 1890 miles in length, and in the widest part, near 55° N. lat., it is nearly 1200 miles across. The principal branch of the Obi is properly the Irtish, or the western of the two great branches which unite near $60^{\circ} 30'$ N. lat., but the eastern branch has the name of Obi before their union, and is therefore considered the principal river, though it is inferior to the Irtish in length of course. The *Irtish* rises in the Chinese empire, in the government of Gobdo, or the country of the Western Khalkas Mongols, probably between 46° and 47° N. lat., and 87° and 88° E. long. It runs nearly due west, and after about 70 miles falls into the lake of Zaizang. The *Irtish* issues from the north side of the lake, several miles from its western extremity. The lake, according to Humboldt, is about 1720 feet above the sea-level. The course of the river is nearly due north, and in a flat country, until it approaches the boundary-line of Siberia, where the mountains come close up to the river on both sides. It then turns to the west-north-west, and in that direction it runs in a narrow valley between rocky hills until it reaches Ust Kamenogorsk. The current in this part is rapid, and the river is navigated, though not without difficulty. It receives on the right the Buchtarma and other considerable tributaries. From Ust Kamenogorsk to Semiyarsk the river runs nearly due west, and below Semiyarsk it turns north-west, in which direction it continues to run to some miles below the town of Omsk, north of 55° N. lat. Below Omsk the *Irtish* turns first to the north-east, then to the north, and afterwards it runs again nearly due west to its confluence with the Tobol at Tobolsk. Before this union, the *Irtish* is joined from the south by the river *Ishim*, which runs more than 700 miles, but, draining a sterile and sandy country, contains very little water in proportion to its length, and is only navigated in the lower part of its course. The *Tobol*, which is nearly equal in length to the *Ishim*, is much more important. It rises near 52° N. lat., 60° E. long., on a flat swell of the Caucasian Desert, and runs for a short distance to the east, but the remainder of its course is to the east of north, through a level country, though in some places low offsets of the Ural Mountains approach the western banks. The *Tobol* receives several considerable affluents from the left, among which the *Ooi*, the *Iset*, the *Toora*, and *Towda* are the largest. At the confluence of the *Tobol* the *Irtish* changes its direction to the north-north-east, but turns to the north-north-west before it meets the *Obi*. The *Obi* rises in the Altai Mountains with two large branches, the *Katunga* and the *Biya*. The most remote branch of the *Katunga*, the *Chooya*, and that of the *Biya*, the *Choolyshman*, originate near 49° N. lat., within the Chinese government of Gobdo. Nearly all the waters collected within the Altai Mountains north of 49° N. lat. and between $84^{\circ} 30'$ and 90° E. long., run either east or west, and uniting between 50° and 51° N. lat., near the meridian of 87° E. long., form a large river, the *Katunga*. After the union of these rivers, the *Katunga* runs nearly due north with an extremely rapid course through the northern ridges of the Altai Mountains, until it reaches $52^{\circ} 30'$ N. lat., when it turns west, and entering a hilly region meets the other great branch of the *Obi*, the *Biya*. The *Katunga* is too rapid to be navigable. The place where the *Biya*, or *Choolyshman*, as it is called in the upper part of its course, originates, is not known, and we are very imperfectly acquainted with the course of this river above the Lake of Teletskoi. The *Choolyshman* falls into the Lake of Teletskoi near $51^{\circ} 40'$ N. lat.,

with several arms. This lake, called also Altyn-kul, or Altai Noor, is a true alpine lake, resembling in grandeur and beauty the Lake of Luzern. It is surrounded by wooded mountains, rising in the vicinity of the lake to the height of 4000 or 5000 feet, and Mount Toulak at its southern extremity attains an elevation exceeding 6000 feet. The lake is more than 40 miles from south-south-east to north-north-west, but at its northern extremity an arm runs westward for 20 miles more. At the southern extremity it is about 5 miles wide, but grows gradually narrower as it advances towards the north. The western arm is hardly a mile wide on an average. The lake is about 1900 feet above the sea-level. The river issuing from the western arm of the lake, under the name of *Biya*, in a western direction, soon turns to the north, but by degrees it resumes its western course, running between mountains and high hills, until it joins the *Katunga* below *Biak*, at *Katunak*. After this union the river is called *Obi*, or *Ob*. The *Obi* flows in a western direction until it is met from the south by the river *Charysh*, when it turns to the north, in which direction it continues with many windings to its confluence with the *Tom*, when it begins to run north-west until it reaches 75° E. long., from which place it flows west to its junction with the *Irtish*. Below the mouth of the *Charysh* the *Obi* is joined from the east by three rivers, which are navigable and important for the industry of Siberia even in its present state, namely, the *Tom*, the *Choolyn*, and the *Ket*. The current of the *Obi* below *Katunak* is very gentle, and does not offer the least obstruction to an easy navigation, but in approaching the *Irtish* it spreads its waters over a low country, and divides into many arms, which inclose large islands, and in this part shoals are numerous. The *Obi*, after its confluence with the *Irtish*, turns northward and flows in that direction to the vicinity of the polar circle, when, increasing to a great width, it turns east at *Obdursk*, and falls into the Gulf of *Obi* by three arms, of which the eastern is the largest and deepest. Where the *Obi* joins the *Irtish* it divides into two arms, of which the western is called *Beresowakye Protok*, or *Birch River*. The two arms unite more than 70 miles farther north, and inclose an island of that length and of a width varying in general from 5 to 6 miles. Farther north the river frequently divides again, as the alluvial and low plain which lies to the west of the river is from 40 to 50 miles wide, and the greater part of it is inundated in spring time. The gulf into which the *Obi* falls is between 70 and 80 miles wide and more than 400 miles long. Except several low islands which occur near the mouths of the river, only a few rocky islets appear, not far from the eastern shores of the gulf, but the gulf itself is so full of shoals, that large vessels find the navigation very difficult. At *Tobolsk* the *Obi* generally freezes about the 2nd of November, and at *Obdursk* in the middle of October. The ice generally breaks up at *Tobolsk* at the end of April, and at *Obdursk* about the middle of May. The gulf is frozen till the beginning of June. Large quantities of fish are taken in the *Obi* and in the Upper *Irtish*.

The *Yenesei* is the second river of Siberia in magnitude. Its basin covers an area of 1,020,000 square miles. The two remotest branches of the *Yenesei*, the *Ta-kem* and *Selenga*, originate in the Chinese empire. The *Ta-kem* rises where the two vast mountain chains of the *Erghek Targak Taiga* and the *Tangnu Oöla Mountains* [ALTAI MOUNTAINS, vol. i, col. 260] meet one another; and the *Selenga* rises south of the most remote branches of the *Yenesei*, on the eastern declivities of the *Tangnu Oöla*. [ALTAI MOUNTAINS, vol. i, col. 261.] The *Selenga* runs more than 450 miles in an eastern direction within the Chinese empire, where it is joined by two considerable tributaries, the *Ekhe*, which rises in the Lake of *Kossogol*, on the southern declivity of the *Erghek Targak Taiga Mountains*, and runs nearly parallel to the *Selenga*; and the *Orghon*, which originates in the *Khangai Mountains of the Gobi*, and runs from south to north. At the confluence of the last-mentioned tributary, the *Selenga* turns to the north, and soon enters Siberia, where it is joined from the east by the rivers *Chikoï*, *Khilok*, and *Uda*; it falls into the Lake of *Baikal* after a course of about 700 miles. [BAIKAL.] The only outlet of Lake *Baikal* is the *Lower Angara*, which on receiving the river *Oka* is called the *Upper Toonguska*, and flows into the *Yenesei*. This river then runs north-west until it has crossed 60° N. lat. A little below the town of *Yeneseisk* it receives from the left the *Kem*, a small river, which however is important as a link of the extensive line of water communication which extends from the boundary of the Chinese empire, south of the Lake of *Baikal*, to the base of the *Ural Mountains*. Before reaching 70° N. lat., the *Yenesei* enlarges into a wide estuary full of low islands and shoals, which is called the *Gulf of Yenesei*, and is on an average 20 miles wide, and more than 200 miles long. In its lower course the river is joined by several large rivers. The *Yenesei* freezes towards its mouth about the 10th of October, and the ice does not thaw before the beginning of June. The entire course of this river is about 2500 miles.

The *Lena* rises in the *Baikal Mountains* [ALTAI MOUNTAINS], hardly more than 20 miles from the banks of Lake *Baikal*, and about 50 miles N.E. from *Irkutsk*. Its basin is estimated to contain nearly 800,000 square miles, and its course is about 2000 miles long. It becomes navigable 50 miles from its source, at *Kotshuga*, a large village, which from this circumstance has become the depot of goods destined for the north-eastern part of Siberia and for the Russian

settlements in North America. The river runs generally in a north-east direction, passing Olekminak and Yakutsk. The remainder of its course is nearly due north. North of 70° N. lat. it enlarges to three or four miles in width, and at its mouth forms a delta, which projects into the sea, like that of the river Maekhaun, in the peninsula beyond the Ganges. This delta is traversed by several arms of the river, three of which form navigable channels: the western is called Krestovakoi, the central one Toomatskoi, and the eastern Bukooskoi. These channels are wide, but full of shoals. The Lena freezes over in the beginning of September, and is hardly free from ice before midsummer. Among the tributaries of the Lena are some very large rivers—the Vitima, the Olekma, the Aldan, and the Vilui.

Besides these large rivers there are others of less magnitude, but still so large that they would be considered important in any other country. The Anakara, 500 miles long, and the Olenek, more than 700 miles long, fall into the Polar Sea between the mouth of the Yenesei and the Lena. East of the Lena are the embouchures of the rivers Yana, Indighirka, and Kolyma. All these rivers are navigable, and of importance for the country, as the two greatest necessities of life, corn and salt, are brought by them from the southern districts of Siberia to the most northern parts. The Anadyr, or Anadir, and the Amur are separately noticed. [ANADYR; AMUR.] The small river Ud falls into the Sea of Okhotak near 55° N. lat. [ОКХОТСК.]

Productions.—The domestic animals vary greatly in size and form in different districts. This is especially the case with horses and sheep. Among the latter, the sheep kept by the Khirghis Cossaks, in the Steppe of Ishim, are distinguished by their thick tails and fine wool. All attempts to transport this species to other parts of Siberia have failed. In 1830 some landed proprietors in the neighbourhood of Irkutak introduced Spanish sheep, for the purpose of improving the wool of the native sheep.

Siberia is very rich in metals. There are three extensive mining districts. The most western comprehends the mines of the Ural Mountains. On the eastern declivity of that range the mines occur between 56° and 60° N. lat., where they occupy a tract of land about 40 miles in width. These mines yield great quantities of gold, silver, and copper; there is also some iron and platinum. The second mining district is that of Bernal. The mines yield much silver and copper, but less gold and lead. The mines from which these metals are obtained lie mostly in the Altai Mountains, and in those valleys which open to the Irtysh River. The third mining district is that of Nertshinak, which is situated on the east of the Yablonof Khrebet, in the basin of the river Amur. The mines contain gold, silver, iron, lead, zinc, antimony, and arsenic. [ALTAI MOUNTAINS, vol. i., col. 262; RUSSIA, vol. iv., col. 373.]

The western parts of Siberia get the salt which is required for their consumption from the salt-lakes in the steppes of Ishim and Barabinsk, in some of which the salt crystallises spontaneously. Two lakes of this kind occur also in the vale of the Yenesei, on the western declivity of the Teletskoi Mountains; one of them gives an annual produce of 180,000 poods. The countries bordering on the river Lena obtain salt partly from some salt-springs which occur in the vicinity of the town of Ust Kutak, and partly from the river Vilui, where, according to Erman, there are some lakes in which the salt crystallises, and he adds that from the same country rock-salt is brought to Yakutsk. Da-uria obtains its salt from one of the lakes of the Gobi, called Dabassunef Lake, not far from that of Khara. Several kinds of precious stones occur in Siberia, and diamonds have been found along the eastern declivity of the Uralian range. The amethysts, topazes, emeralds, and red turmalines are of great beauty; zircons of extraordinary size have been found near Miasak, south of Ekatarinburg. Several precious stones are brought from the Altai Mountains, the most valuable of which are jasper and porphyry of great beauty. The mountains of Da-uria contain beryls, topazes, emeralds, and some other stones of less value. In the Baikal Mountains, especially towards the western extremity of the lake, lapis-lazuli of a very fine quality is found. The most important mineral for domestic economy is a kind of mica, which divides into flat pieces like glass, and is extensively used all over Siberia, and even in European Russia, for windows.

The tusks of the fossil elephant constitute an article of commerce, and many persons make the discovery of them the business of their life. They are deposited in immense masses, which occur more frequently and are of larger extent as we proceed from south to north. The greatest number of these bones are brought from the Laikhoian Islands, but they are also numerous in the north-eastern part of Siberia, east of the river Lena. They are generally found at a certain depth, mostly in hills of clay, rarely in mould, and never in sand. The harder and more consistent the clay is, the better the bones are preserved.

Inhabitants.—When the Russians first entered Siberia, they found the country in possession of numerous tribes more or less addicted to a nomadic life; none of them cultivated the ground, and they had no permanent places of abode, with the exception of some Tartars in the vicinity of Tobolsk. Some of these tribes belonged to widely-spread nations, but others, often consisting of a small number of families, constituted separate nations. The small number of individuals in the several tribes rendered them unable to make effectual resistance to the Russians, who gradually subjugated this immense

country. In this struggle some of the smaller tribes seem to have entirely disappeared, or perhaps a remnant of them united itself to some neighbouring tribe, and was gradually incorporated. Though it is certain that several tribes or nations have disappeared, there are still about forty tribes, differing more or less in physical character and in language. Some of them belong to the Caucasian race, and others are akin to the Mongols. In noticing these tribes we begin from the Ural Mountains and proceed eastward.

The most north-western part of Siberia is occupied by the Samoyedes. South of the Samoyedes are the Ostiaks, who occupy both banks of the river Obi from Obdursk upwards to the confluence of that river with the Irtysh, and even south of this place there are some families. They also occupy the northern districts of the steppe of Barabinka, as far south as 60° N. lat. Eastward they are spread over the whole of the wooded region to the banks of the Yenesei. The Vogules live to the west of the Ostiaks, occupying the woods, and the mountains, valleys, and plains included within the Ural range and its declivities; they are even in possession of a narrow level tract along their base. In the plain they are found as far southward as the Toora. In the agricultural district which extends south of the country occupied by the Vogules and Ostiaks, the population consists of Russians and Tartars, and in most parts the latter are more numerous. The Tartars who live east of the river Tobol as far as the banks of the Irtysh, are known by the name of Tartars of Tobolsk. They are distinguished from their western neighbours by having adhered to the Islam, and by their fondness for travelling: hardly a caravan goes to Bokhara of which they are not the leaders. The Barabinkes, another tribe of Tartars, inhabit the steppe which bears their name. The most eastern of their tribes inhabit the mountains of Kooznesk, and are called Kooznesi, that is, smiths, on account of their occupation. They unite agriculture with mining, and produce annually a large quantity of iron, though in a very clumsy way. A considerable number of Bokharians have settled among the Russians and Tartars. The Bashkirs are noticed under RUSSIA (vol. iv., col. 375). We shall here only observe that this tribe is not found north of Ekatarinburg, but that between this place and Slatoust they constitute the bulk of the population. The Khirghis Cossaks, commonly called Kirghises, are one of the widest-spread nations in Asia, nearly the whole of the Caspian Desert being in their possession. Though a considerable portion of this nation is in some degree dependent on Russia, and another portion on China, their dependence is rather nominal than real, and their country is considered a part of TURKISTAN. The interior of the Altai Mountains is inhabited by a tribe of Calmucks, who are called the Calmuck mountaineers. Those who inhabit the eastern districts, namely, the valleys of the Chooya, Bashkaus, and Choolyshman, pay tribute both to the emperor of China and of Russia. Between the lakes of Teletskoi and the neighbourhood of Irkutak there is a number of small tribes. On the eastern declivities of the mountains of Teletskoi there are four nations of Turkish origin—the Biryusses, the Beltires, the Sagai, and the Katakinees. These tribes are in possession of the mountains and adjacent country as far east as the banks of the river Abakan, an affluent of the Yenesei. Between the rivers Abakan and the Yenesei are the Koibales, and many families belonging to this tribe are found east of the last-mentioned river, under the name of Motores and Kandym. In the mountains which divide the valley of the Yenesei from the plain of the Lower Angara there are several tribes allied to the Koibales in origin and language. The most northern, on the banks of the river Kam, are called Kamashes, and south-east of them, on the Uda, are the Karakas and Kangut. In the undulating country which lies between the lower course of the river Choona, an affluent of the Upper Toonguska, and the Yenesei, are the Yarinzes. Nearly contiguous to this country, but on the western side of the river Yenesei, and north of the town of Yeniseisk, are the Kasuimskie Ostiaks, also called the Ostiaks of the Yenesei.

The most populous of all the nations that inhabit Siberia, next to the Russians, are the Buriates, who occupy the country on both sides of the Lake of Baikal, and extend towards the east as far as the western banks of the river Onon. Their priests have a very rich literature, mostly on the subjects of Buddhism, which a great part of the Buriates have embraced, but the classical sacred books are written in Sanscrit. South of the Buriates, along the very boundary-line of the Chinese empire, between the rivers Selenga and Onon, a small number of Khalkas Mongols are settled. The most widely dispersed of the native nations of Siberia are the Toonguses. They occur even in Da-uria, particularly between the Onon and the Argun, and the northern districts of Mandshooria are also peopled with them. In these parts they unite agriculture with the keeping of animals, especially the reindeer. Farther north they are in possession of the country that incloses the Lake of Baikal on the north, and hence they extend to the Polar Sea. They are also found along the banks of the river Yenesei. The Toonguses are considered as the best formed of the native tribes of Siberia. They are generally of middling size, of a fine shape, and slender. Their face is less flat than that of the Mongols, their eyes small and lively, and their nose well formed, though rather small. Many of them have no beard, and the rest have very little. Their hair is black and lank, and rarely grows gray in old age. They are most accomplished horsemen. Though widely

speak over an immense country, the language of the most distant tribes of the Toongues is said to agree very nearly with that of the Mandshoo. The Yakutes, the most populous of the nations of Eastern Siberia, except the Buriates, are a Turkish tribe, who are almost entirely occupied with the care of their herds of cattle and horses and the dairy. They appear also to have attained a considerable degree of skill in tanning, and in working iron, which they get from the mines on the upper course of the river Vilui. The Yookahires are only found north of the Polar Circle, and mostly in parts where the wooded regions border on the tundras. They only live east of the Lena, and as far as the vicinity of Choun Bay. The Tahooktahes occupy the most north-eastern peninsula of Asia. To the west this tribe is met with as far as Choun Bay, and southward they are in possession of the whole basin of the Anadyr River. The Russians do not consider them as subjects of their emperor, and the Tahooktahes are very jealous of their independence. On this account they do not easily permit Europeans to enter their country. The Koriakes inhabit the northern part of the peninsula of Kamtchatka and the country about the gulfs of Penahinsk and Ishiginak, as well as the mountains of Stammovoi Khrebet. The peninsula of Kamtchatka is inhabited by Kamtchatdales. [КАМТОЧАТКА.]

Population.—The population of Siberia is now estimated at more than three millions and a half, exclusive of the Middle Horde, or Orda, of the Khirghis Cossaks, which is computed at more than a million of individuals. [RUSSIA, vol. iv. col. 378.] But this population is very unequally distributed over the surface of the country. Even the most populous districts, namely, the agricultural region in Western Siberia, the vale of the river Yenesei in Central Siberia, and the plain of the Lower Angara, would be considered very thinly peopled in any part of Europe, but they are thickly inhabited when compared with other parts of Siberia, where several tracts occur extending over a surface of from 20,000 to 30,000 square miles, which are entirely uninhabited, as for instance the country south and north of the Verkhnai Yanak Mountains. In other places a few families live at the distance of one or two days' journey from one another. The majority of the present inhabitants are Russians; all the other tribes do not much exceed one million.

Political Divisions and Towns.—The administration of Siberia is divided into two general governments, those of Western and Eastern Siberia. Western Siberia consists of the governments of Tobolsk and Tomsk and the province of Omsk; and Eastern Siberia of the governments of Yenesei and Irkutsk, and the provinces of Yakutsk, Okhotak, and Kamtchatka, to which are added the Russian settlements on the western coast of North America as far as 56° N. lat., and 141° W. long. All these divisions are governed by separate officers, who receive their orders from the governor-general, and can only apply to the court of St. Petersburg through him. A small but very important portion of Siberia is not subject to the authority of the general governor, but is united to the European governments of Perm and Orenburg.

That part of the government of Perm which is on the east of the Ural Mountains extends along their base from 55° 30' to 61° N. lat., and is the most populous, best cultivated, and most industrious portion of Siberia. Nearly all the numerous mines of the mining district of the Ural are included in this division. Besides Ekatarinburg, which is the seat of administration for the mines, it contains several remarkable places, as Berezov, with 2000 inhabitants; Newanok, with 10,000 inhabitants; Alpayewsk, with 2000 inhabitants; Nishnei Taghilak, with more than 20,000 inhabitants, in a district noted for its rich iron- and copper-mines and its washings of gold and platinum. In this place there are also extensive manufactures of lacquered-ware. Kushwinak, farther north, with about 6000 inhabitants, is built in the centre of a district rich in iron-mines; in its vicinity is the iron-mountain called Bladogat, which rises to 1370 feet above the sea-level. Verkhoturye has 3000 inhabitants, and is considered the most northern point where the alluvial beds that contain gold particles occur. They have been traced southward to the source of the Ural River, a distance exceeding 600 miles.

Only a small portion of the government of Orenburg lies east of the Ural Mountains. It is partly inhabited by Russians and Choowashes, and partly by Bashkirs. Its wealth consists chiefly in cattle. The largest town is Chelyabinsk, on the small river Mias, not far from the base of the Ural Mountains, with 5000 inhabitants. North-east of Chelyabinsk is Miask, the most southern place where gold is obtained by washing. Troitzk, on the river Oöi, with 3000 inhabitants, is a place of some trade, but its commerce is now limited to trade with the Khirghis Cossaks who inhabit the country south of the Oöi.

The government of Tobolsk comprehends the whole of Western Siberia north of 60° N. lat. and the western half of it south of that parallel, exclusive of the country of the Khirghis Cossaks. In this government no metals are found except some bog-iron; but salt is got from several lakes. The wealth of the southern districts consists in the produce of agriculture and the herds of cattle; that of the northern consists of the produce of the fisheries in the river Obi, and the numerous wild animals that inhabit the forests. In the southern districts wood is scarce, except along the base of the Ural Mountains.

The capital is Tobolsk, where the governor-general of Western Siberia resides. [ТОБОЛСК.] In the comparatively populous district

which extends south-west to the boundary of Perm are *Toorinsk*, on the river Toora, with 7000 inhabitants, mostly Tooralinzes, who carry on a considerable trade in furs, and have many tanning-pits; and *Tioomen*, with 10,000 inhabitants. Tioomen is the oldest city in Siberia, having been founded by Tartars in the time of Genghis Khan. On the banks of the river Tobol are the towns of *Yalootorovsk*, with 2000 inhabitants; and *Koorgan*, with about 1000 inhabitants. In the vicinity of the last-mentioned place there are numerous ancient tombs in the form of small hills; they are called 'koorgani.' One of them, called by Pallas a royal mausoleum, is nearly 500 feet in circumference. East of Tobolsk is *Tara*, built on the west bank of the Irtysh, with 3600 inhabitants. Vessels of 300 tons burden go from here to Tobolsk. *Surgut*, north-east of Tobolsk, on the river Obi, is a small place with 1500 inhabitants. *Berezov*, on the west bank of the Obi (63° 56' N. lat.), has 8000 inhabitants, and a considerable traffic in furs and fish. It is the most northern place in which rye and barley succeed.

The province of Omsk consists properly of two lines of fortifications and of the country of the Khirghis Cossaks. The capital, *Omsk*, is built on the east bank of the Irtysh, at the point where the two lines of fortifications meet. It is a well-fortified place, with 7500 inhabitants, and contains a military school for the Cossaks and a college for those who wish to learn the languages of Western Asia. From this place, as well as from two of the fortresses, *Petropawlawsk* on the Ishim, and *Semipalatinsk* on the Irtysh, caravans depart for Tashkend in Kokan, and for Bokhara, traversing the steppes of the Khirghis Cossaks. *Ust Kamenogorsk*, on the Irtysh, has about 2000 inhabitants. The new agricultural colony of *Kar-Karaly*, with the steppe of the Khirghis Cossaks, belongs to this province.

The government of Tomsk is rich in metals (silver, copper, lead, iron), and in grass in the mountainous part; the steppe abounds in wild animals, and the eastern districts in agricultural products, but cultivation does not extend much beyond the bottoms of the rivers. The capital is *Tomsk*, a town containing from 8000 to 9000 inhabitants, on the banks of the river Tom, and on the great road leading from Western to Eastern Siberia. It is rather a well-built town. *Koonesk*, on the river Tom, with 3500 inhabitants, lies in a district which abounds in iron- and copper-mines, the produce of which is brought to this place. *Bernaul*, on the west and elevated banks of the river Obi, is the centre of the mining industry in the Altai Mountains, as the ore of most of the mines is brought to Bernaul to be smelted, owing to the want of fuel in their neighbourhood. It contains between 8000 and 9000 inhabitants, extensive furnaces, and a school of mineralogy. Many Germans are employed in the town and vicinity, and a German church and school have been erected: there is also a public library. At *Kolywan*, which stands in a valley of the Altai Mountains on the small river Loktefka, there is a manufactory in which many objects are made of porphyry. *Biysk*, a fortress on the river Biya, not far from its confluence with the Katunga, has 2000 inhabitants.

The government of Yenesei is 1800 miles in length. Agriculture does not extend north of the town of Yenesei (58° N. lat.); but it is in a prosperous condition in the vale of the Yenesei, south of *Krasnoyark*, though even there cattle constitute the principal wealth of the inhabitants. Iron-ore abounds in the mountains that inclose the vale, and it is worked in a few places. North of the town of Yenesei the inhabitants live chiefly by fishing. The capital of this government is *Krasnoyark*, on the Yenesei, with 3300 inhabitants. This town carries on a considerable commerce. *Yenesei*, farther north, was formerly the capital, and is still the most populous place, having between 4000 and 5000 inhabitants, and possessing an active and extensive commerce. The fair in the month of August is much frequented. *Atahinsk*, west of *Krasnoyark* and the *Kachoga* mountains, contains between 1500 and 2000 inhabitants. The river *Choolym* is here navigable for large river barges. *Toorookhanak* (near 66° N. lat.), on the Yenesei, is small; but at certain seasons of the year it is visited by the neighbouring nomadic tribes, who exchange their furs for tobacco, flour, and other necessaries.

The government of Irkutsk is chiefly agricultural. Cattle, horses, camels, and sheep constitute the principal sources of wealth. The capital is *Irkutsk*, the residence of the governor-general of Eastern Siberia. This town is built on the east bank of the Lower Angara, opposite the mouth of the river Irkut, from which its name is derived, and contains about 20,000 inhabitants. The streets are straight and wide, but are not paved; most of the houses are built of timber. The palace of the governor-general, the medical institution, the grammar school, and the hall of the American Company, are good buildings. There are also a public library, a museum of natural history, a military school, and a school for navigation. Irkutsk is the centre of the commerce of Eastern Siberia. The town is 1240 feet above the sea-level, and the climate is very cold; but it is healthy and pleasant, owing to the dryness of the atmosphere. At *Telma*, north-west of Irkutsk, is a considerable manufacture of cloth, a smaller one of linen, and some glass-houses. *Kotahuga*, on the river Lena, is 1503 feet above the sea-level. In the country south of Lake Baikal is *Verchnei Udinsk*, on the river Uda, not far from its confluence with the Selenga; it has about 4000 inhabitants, who are engaged in commerce with Kiashta and Nertshinsk. At *Selenginsk*, a small place,

there is an English missionary establishment. West of it, in a steppe, is the seat of the Khamba Lama, the chief of the Buddhist religion among the Buriates: like the Dalai Lama in Tibet, the soul of the Lama is supposed to pass into his successor. Close to the boundary of the Chinese empire is the commercial town of Kiachta with Troizko Sawak. [KIACHTA.] In Da-uria is the town of *Nertshinsk*, a miserable place with 1000 inhabitants. Not far from the banks of the river Argun is *Nertshinskoi Sawod*, with 4000 inhabitants, the seat of administration for all the mines of this district.

The province of Yakutsk extends over all the north-eastern part of Siberia. Grain is only cultivated in the Vale of the Lena as far as Yakutsk; but the crops are uncertain, owing to the shortness of the warm season. In the basin of the Vilui there are mines of excellent iron. The most numerous and most wealthy tribe are the Yakutes, who are breeders of cattle, horses, and sheep. The capital is *Yakutsk*, on the river Lena, with more than 4000 inhabitants. Yakutsk is one of the best markets in Siberia for furs, especially sable, as this animal is very abundant in the wilderness south of the road leading to Okhotak, and the fur is of the best quality. In the northern districts are some places, as *Ust-Yansk* and *Nischnei-Kolymak*, to which the native tribes resort to exchange their furs for flour, tobacco, and other articles.

The province of Okhotak extends along the sea of that name, from the innermost corner of the Bay of *Penshinsk* to 58° N. lat., comprehending the lower coast and the mountains at the back of it. There is no cultivation here. The capital is *Okhotak*. [OKHOTSK.] At the most northern recess of the Bay of *Ishiginak*, one of the great inlets of the Sea of Okhotak, is the small town of *Ishiginak*, with 500 inhabitants, who live chiefly on the produce of their fishery, but have also some commerce.

The province of KAMTCHATKA is separately noticed.

Manufactures.—Siberia does not possess many manufacturing establishments. It has some tanneries, iron-foundries, glass-works, and manufactures of coarse woollen-stuffs and linen. An article of export is made at *Ekaterinburg* by the jewellers and cutters of precious stones. During nine months in the year the dress of the poor, as well as of the rich, consists of furs or sheep-skins, or the hides of the reindeer prepared in a peculiar way; and in the manufacture of these objects the nomadic nations, especially the *Samoyedes* and *Ostiaks*, excel.

Though the ocean washes the northern and eastern sides of Siberia, this country has no maritime commerce. The ice of the Polar Sea and the Sea of Okhotak prevents the free navigation of these waters, and the mountainous country which lines the shores of the Sea of Okhotak, affords nothing that could be brought into commerce except the furs of some wild animals. But Siberia carries on an extensive commerce with Russia, Bokhara, Tashkend, and China. The most important is the trade with Russia. The transport of the goods is effected by a road which leads from Perm in Russia to *Ekaterinburg* and *Tobolsk*. West of *Ekaterinburg* it crosses the Ural Mountains by a mountain pass, the highest part of which, near *Blimbayewak*, is 1698 feet above the sea. By this road the produce of the rich mines of Siberia is brought to Europe, as well as a great quantity of furs, and some leather and skins, which are chiefly collected among the nomadic tribes of the northern districts. The commerce which is carried on at *Kiachta* with the Chinese has been noticed under *KIACHTA*. The goods from *Irkutsk* to *Kiachta*, and from *Kiachta* to *Irkutsk*, are conveyed, from May to November, by large vessels which navigate the Lake of *Baikal* and the river *Selenga*, and in November and December by carts on a road which passes over the high mountain ranges that inclose the western portion of the lake called the *Kultuk*, and in winter by sledges on the ice of the lake itself. The greater part of the Chinese goods is afterwards sent to Western Siberia and to Europe at a comparatively small expense, nearly the whole transit being by water. The inhabitants of Siberia have also some commerce with *Kuldaha*, the capital of the Chinese government of *Ili*, or of *Songaria*, through the agency of the *Khirghis Cossaks*, who inhabit the country contiguous to the Chinese boundary. A regular commercial intercourse has been established between Siberia and the khanat of *Khokan*, by means of caravans passing through the steppes of the *Khirghis Cossaks*. These caravans are not composed of Siberians, but of *Bokharians*, *Armenians*, and *Siberian Tartars*. These Tartars can proceed with their goods to the town of *Kashgar* in Chinese *Turkistan*, from which place the Russians are excluded by the Chinese government, but the *Siberian Tartars* are admitted. The principal articles brought to Siberia are derived from the *Khirghis Cossaks*, and consist of cattle and horses, of which latter the consumption in the mining district is very great, and of felts made of the hair of camels and cattle, and of coarse carpets made of wool. The articles exported from Siberia by this way are chiefly corn for the consumption of the *Khirghis Cossaks*, and for the commerce with *Khokan*, Russian leather, otter-skins and seal-skins, woollen-cloth, looking-glasses, razors and some cutlery, combs of European manufacture, and particularly large quantities of iron and copper from the Ural mines. The commerce which is carried on between the town of *Troizk*, on the river *Ool*, in the department of *Orenburg*, and the town of *Bokhara*, is of a similar description. The caravans, which are composed of *Bokharians* and

Armenians settled at *Bokhara*, traverse the steppe of the Little Orda of the *Khirghis Cossaks*. Besides the articles brought from *Khokan*, the *Bokharians* import large quantities of raw cotton, and a few shawls of great value.

There is a considerable commerce carried on between the southern agricultural districts and the northern, which are inhabited by nomadic nations. A great number of Russian merchants at certain periods, especially in February, visit certain places to which the nomadic nations resort, to buy from the latter their furs and other objects. The Russian merchants give in return flour or bread, and a few manufactured articles. These places of commerce are very small, but are full of people at the time of the fairs. Among these places are *Obdurak* on the *Obi*, *Toorookhanak* on the *Yenesel*, *Ust-Yansk* on the *Yana*, and *Ostronoye* on the *Aniuy*, one of the confluents of the *Kolyma*. The most frequented are the first and the last. The fair of *Obdurak* is attended by all the nomadic nations that live between the town of *Archangel* on the *White Sea*, and the river *Yenesel*, by *Samoyedes*, *Syrianes*, *Ostiaks*, and *Vogules*. The fair at *Ostronoye* is attended by the tribes that inhabit the north-eastern peninsula of Asia, the *Yookahires*, *Lamutes*, *Toonguses*, *Choowanzes*, *Koriakes*, and particularly the *Tshooktahes*. The *Tshooktahes*, most of whom have frequent dealings with the native tribes of the north-west districts of America, are in general sufficiently skilful in trading with the Russians; but they are easily cheated out of their goods when spirits are offered to them, which however are only smuggled into the country in very small quantities, as the Russian government has prohibited the importation of this article. In the commercial intercourse of the *Tshooktahes* with the native tribes of Russian America, the island of *Imaklitt*, one of the group of the *Diomedes* or *Gwosdef Islands*, is generally the place where the exchange of goods takes place. The most active merchants are the American inhabitants of the two small islands called *King's Islet* or *Ookivok*, and *Asiak* or *Ajak*, especially those of the last-mentioned island, who dispose of the Russian goods which are obtained from the *Tshooktahes* along the coast of America, as far south as the peninsula of *Alaska*, and would probably carry them still farther to the east, if the settlements of the American Company did not provide the tribes in those parts with such articles. The *Tshooktahes*, as well as the Americans, visit the island of *Imaklitt* in summer in their boats called 'baidares,' which are made of whale-bone, and in winter in sledges which are drawn by dogs. The *Tshooktahes* bring tobacco, some iron utensils and ornaments obtained from the Russians, with a considerable number of reindeer dresses, as this animal does not appear to be common in any part of North America. The *Asiak-mutes*, or inhabitants of the island of *Asiak*, bring various descriptions of furs, and a great number of morse-tusks.

History.—Europeans had not the least knowledge of the existence of Siberia up to 1580. It is however certain that a part of it was conquered by *Gengis Khan* and his successors; for it appears that the *Buriates* were subjected to the *Kalkas Mongols* by that conqueror; and when the *Cossaks* had passed the Ural Mountains, they found that the country on both sides of the river *Irtish* was subject to *Kutshum Khan* and his *Tartars* or *Turks*. A *Cossak* chief called *Yermak Timofeyew*, passed the Ural Mountains with his small army in 1580, and made several important acquisitions of territory till 1584, when he was drowned in the *Irtish*. After his death his conquests were lost to Russia, but the power of *Kutshum Khan* (the *Tartar* chief of this district) had been broken, and he was unable to resume his former position. The Russians continued gradually to gain on him, until his empire was entirely destroyed, and all the country west of the river *Obi* was subjected to the sway of the *Czar*. In 1604 the town of *Tomsk* was built, which constituted a fresh point from which the bold spirits of the age might proceed farther east. In 1614 the different *Turkish* tribes that inhabited those parts, joined by the *Khirghis*, rose against the inhabitants of *Tomsk*, laid waste the whole country to the very gates of the town, and besieged the city itself. No succour could be sent from Europe, as Russia was then in great internal disorder, owing to the unsettled state of the country after the death of *Boris Godoonoff*, and the wars which preceded the accession of the family of *Romanoff* to the throne of Russia. But the inhabitants of *Tomak* maintained their footing, though their progress for some time was retarded; and several years afterwards, when the *Eastern Khirghis*, in despair of resisting the *Cossaks*, left the country and emigrated to the west, the progress of the Russians was very rapid. Small parties of adventurers, issuing from *Tomak*, advanced to the banks of the Lake *Baikal*, entered the basin of the river *Lena*, where they subjected, though not without considerable difficulty, the powerful nation of the *Yakutes*, and after passing the *Aldan Mountains*, reached the Sea of *Okhotak* in 1639. The populous nation of the *Buriates* had been attacked and partly conquered in 1620, but they frequently rebelled, and their complete submission was not effected before 1658. Soon afterwards the town of *Irkutsk* was built by *Iwan Pochaboff* (1661). Thus the whole of Siberia, with the exception of *Da-uria*, was subjected to Russia in about eighty years, without the government having been at the least expensive; for all these wars had been undertaken and brought to successful issue by private adventurers, mostly *Cossaks*, who were induced to such undertakings by the desire of plunder and by their roving habits. The

conquest of Da-uria was completed in the same way. Khabarow, a Pole by birth, had escaped from Yeneseisk with a few exiles, and after wandering about for some time in the woods which surround Lake Baikal, he and his followers settled, beyond the present boundary of Siberia, on the Amur, in 52° 9' N. lat., where they built a small fortress, called Alban. As they had offended their neighbours, some tribes of Toonguses, they feared they might be overpowered by numbers, and offered their conquest to the emperor of Russia, soliciting at the same time his forgiveness for their offences. Meanwhile the Toonguses had applied to the Chinese for assistance, and disputes subsequently arose between the courts of Peking and St. Petersburg; but by the intervention of the Jesuits who resided at Peking, a treaty was concluded in 1689, by which the boundary between Siberia and the Chinese empire was established. This treaty was confirmed by the treaty of 1727, in which Kiachta and Maimatshin were appointed as the only places where a commercial intercourse between the two countries should take place. At the same time Russia obtained permission to send every ten years a spiritual embassy to Peking, in order that the prisoners taken by the Chinese at the last conquest of Alban, and their offspring, might receive instruction in their religion.

(Pallas; Georgi; Fischer; Sauer; Humboldt; Sarytcheff, *Account of a Voyage of Discovery to the North-East of Siberia*; Klaproth, *Magazin Asiatique*; Cook, *Third Voyage to the Pacific Ocean*; Cochrane, *Narrative of a Pedestrian Journey through Russia and Siberian Tartary*; Erdman; Kotzebue, *Voyage of Discovery into the South Sea, &c.*; Beechey, *Voyage to the Pacific*; Rose, *Reise nach dem Ural, dem Altai, und dem Caspischen Meere*; Wrangel, *Reise längs der Nordküste von Siberien und auf dem Eismere, and Statistische und Ethnogr.; Nachrichten über die Russischen Besitzungen in Nord America*; *London Geographical Journal*, vol. viii.)

SIBOURNE. [PYRÉNÉES, BASSES.]

SICILIES, KINGDOM OF THE TWO, is the title of an Italian monarchy, which comprises the southern part of the peninsula, being nearly one-third of continental Italy, and also the island of Sicily. It is the largest and most populous of the Italian States. The area and population are as follows:—

	Area in square miles.	Population in 1851.
Continental Territory	32,475	6,612,892
Island of Sicily	10,536	2,091,580
Total	43,011	8,704,472

In administrative language the continental territories are styled 'Dominj di quà del Faro' ('Dominions on this side the Strait of Messina'), while Sicily is designated 'Dominj di là del Faro' ('Dominions beyond the Strait of Messina'). Writers also use the denomination of Sicilia Citeriore and Sicilia Ulteriore, the designation having reference to Naples, the capital. A geographical and statistical account of each of these two great divisions is given under NAPLES, Kingdom of, and SICILY; and a sketch of the history is given under NAPLES, City, and at the end of SICILY.

SICILY, a large island in the Mediterranean Sea, which is separated by the narrow Strait of Messina, from the coast of Calabria. It is of triangular form, and obtained its ancient name *Zynacria* from its three principal promontories:—Lilybæum, now Capo Bofo, the most western point, which is about 90 miles distant from Cape Bon on the coast of Tunis; Pelorus, now Capo di Faro, the north-eastern angle, which faces the rock of Scylla, 3 miles distant on the Calabrian coast; and Pachynus, now Cape Passaro, the south-east point, which is 60 miles from the island of Malta. The length of the northern and southern sides of the island, not including the windings of the coast, is about 175 miles each; and that of the eastern side is about 115 miles. The area is 10,536 square miles according to the latest official returns, and the population at the census of 1851 amounted to 2,091,580. In the article SARDEGNA, it is stated that the island of Sardinia is, according to some, greater, according to others, less than Sicily; the true area of Sardinia is very nearly 9300 square miles, so that the island of Sicily exceeds it in area by about 1200 square miles.

A number of mountain-groups extend across the island from east to west, bearing various names; the Mounts Pelorias, or Dinamari, between Melazzo and Taormina, which seem to be a continuation of the Apennines of Calabria; the Herai Montes, farther west; the Nebrodes, now Monti Madonia, south of Cefalù and Termini, the highest summit of which, near the town of Polizzi, is said to be 6000 feet high; the Cratae, the ramifications of which extend to Palermo, and one of the highest summits of which is that of Calata-mauro, near Corleone; and, lastly, Mount San Giuliano, the ancient Eryx. These mountains are much nearer to the northern than to the southern coast, and the longest water-courses are consequently on the south side of them. Toward the centre of the island are the limestone mountains of Enna, now Castrogiovanni, about 3000 feet high, and Mount Artisino, which is still higher; both of these are offsets of the Nebrodes ridges: and farther south the lower groups of the mountains of Noto, formed of tertiary rocks, extending to Cape

Passaro; and the hills of Modica, the Hybla Minor of the ancients. Few summits in Sicily, with the exception of Ætna, exceed 4000 feet in height. Towards the eastern coast rises the detached group of Ætna, which occupies an area nearly 90 miles in circumference: the highest summit of Ætna is 10,617 feet above the sea. [ÆTNA.] At the southern base of Ætna lies the plain of Catania, the largest in the island. There are smaller plains along the southern coast, near Alicata, Terranova, Marsala, and at Melazzo on the northern coast; but the larger part of the surface of the island consists of mountains and valleys. The northern coast is generally high, the mountains in many places coming close to the sea. Few of the rivers are perennial. Of these few the principal are, the Giaretta, or Simæthus, which flows eastward through the plain of Catania; the Fiume Salso, the ancient Himera, which flows southward, and enters the sea near Alicata; and the Belice, or Hypsa, which flows into the sea near Selinunte, the site of the ruins of Selinus. Most of the rest are torrents, dry or nearly so in summer, but swelling into formidable floods in the rainy season.

Most of the mountains have been in the course of ages stripped of their ancient forests, and they now present a naked and barren appearance. The sides of Ætna however are still covered with fine forests of oaks, beech, maple, birch, fir, and magnificent chestnut-trees. A few other forests are scattered over the surface of the island, the principal being that of Caronia, near the northern coast; that of Capellaro, south of Palermo; the woods near Castelvetrano, on the southern coast; and the forest of Giummia, west of Calatagirona. The mineral productions of Sicily consist of copper and silver, which were once worked, but are now abandoned; ciannabar, sulphur, which is found in great abundance, especially near San Cataldo, Galati, Butera, Bifara, Tavara, and Montegrande, and forms a considerable article of export from Alicata, Girgenti, and Palma.

Sicily seems to contain no iron. Marble, alabaster, and other kinds of fine stones are found in abundance. Amber is found near Catania. There is rock salt near Castrogiovanni, but the greater part of the salt consumed or exported is sea-salt, which is made in extensive salterns along the coast, especially near Trapani, Marsala, and Agosta. The exported salt is mostly put on board Baltic or Norway traders.

Sicily has few lakes. The Lake of Lentini, so called from the town which occupies the site of the ancient Greek city of Leontini, which stood on the south-east shore of the lake, lies near the east coast between Catania and Syracuse. It is of considerable extent, about 12 miles in circumference, but stagnant, shallow, and insalubrious. It abounds with fish. The plain northward from Lentini, now called the Plain of Catania, is the ancient Leontinus Campus, celebrated for its luxuriant fertility. An ancient tradition fixes the abode of the Læstrygones in this plain. The Lake of Pergusa, near Castrogiovanni, in the centre of the island, is about 4 miles round. It is supposed to be the Lake Pergus mentioned in ancient tradition of the abduction of Proserpine by Pluto. There is a small lake near Randazzo at the northern foot of Ætna; and another called Cantarro near the coast of the western part of the island, a few miles from Castel-Vetrano.

The sea around the coast of Sicily abounds with fish of various sorts, but the most productive fisheries are those of the migrating fish, the sardine, and tunny. Most of the fish are consumed in Sicily and Naples and other parts of Italy.

The cultivation of corn is said to occupy about one-half of the tilled land. The best wheat is that of Termini. Corn was formerly dear in the sea-port towns, owing to the want of roads in the interior. The lower classes, especially in the interior, eat barley bread. Indian-corn and beans are cultivated to a small extent. Wine is made in abundance, especially in the southern part of the island. The white wines of Marsala, Castel-Vetrano, Catania, and Bronte are exported in considerable quantities. The amarena of Agosta and the muscat of Syracuse are fine dessert wines. The red wine of Faro is a good common wine. Sicilian wine is exported to England, Germany, Spanish America, and Brazil. The distillery of brandy has been greatly improved of late years, and a considerable quantity is exported to South America, as well as tartar, both white and red. Dried raisins, called zibib, are exported from Messina and other ports. Messina is the depôt for the currants of the Lipari Islands, of which about 12,000 barrels are yearly exported.

Olive-oil of an inferior quality is produced chiefly along the northern coast. The oil of Tusa and Cefalù is considered the best. Olive-plantations might easily be spread all over Sicily. Linseed-oil is made at Catania, and along the southern coast. Lemons and oranges are plentiful and fine, and are exported in considerable quantities; but much of the fruit is left to rot on the ground. The manufacture of citric acid, and essences of lemon, citron, orange, anise-seed, lavender, rosemary, and bergamot, constitutes another branch of industry. Silk, a staple article of Sicilian produce, is sold to French and Swiss manufacturers. The silk of Foria is the best; and next to it is the silk of Piana, Rametta, and San Martino. Messina is the great mart for silk.

Liquorice-juice is made chiefly at Catania, Patti, and Palermo, and exported to England and the north of Europe, where it is employed in brewing. The pods of the carob-tree, which grows wild in the southern part of the island, are exported to Trieste, Naples, Leghorn, and Genoa:

they are chiefly used as forage for horses. Manna, which is an exudation of the sweet sap of the ornus (a species of ash which grows in the mountains of Sicily) is procured by making vertical incisions in the bark of the tree. Almonds and pistachio-nuts also are largely exported to Germany and the north of Europe. Sumach is exported chiefly to England. The best sumach is that of Alcamo and Trapani. Kid-skins and lamb-skins, both dressed and undressed, are shipped from Messina to Germany and England. The other articles of Sicilian produce are—rice, nuts, walnuts, dried-figs, cantharides, honey, wax, gum, soda, and cotton, which is cultivated to a considerable extent. The sugar-cane (cannamele), which was once extensively cultivated in Sicily, is now entirely abandoned. The above list of products shows the great natural capabilities of the island.

Cattle are few in number, and mostly poor, owing to the want of the artificial grasses, and to their being neglected and left in the fields without stabling. Sheep are numerous, but little attention has been paid to improving the breed, and the wool is bad. Cheese is made from ewes' milk. Goats are in many places preferred to sheep. The government has established a stud of foreign stallions to improve the breed of horses. Wolves are common in the mountains and forests, and snakes in the low plains.

The population is distributed very unequally over the surface of the island. The coasts, especially the northern and eastern, are thickly studded with towns, whilst the central part of the island is comparatively uninhabited. The tract between Messina and Catania is the most populous part of the island, whilst in the west the tract between Alcamo and Trapani is almost a desert. The mountains are generally uninhabited. The want of roads, and the greater resources for industry afforded by the proximity of the sea, serve to explain this inequality.

Sicily was formerly divided into three great divisions, called Valli. 1. *Val di Mazzara*, which comprised the western part of the island; its eastern boundary very nearly coinciding with the northern and southern *Himera*, which both rise in the Madonia Mountains, and flow—the former northward, under the name of *Fiume Grande*, into the sea between Cefalù and Termini, the latter southward, under the name of *Fiume Salso*—into the sea at Alicata. The Fiume Salso has brackish waters after its junction with a small stream that flows from the salt-mines of Caltanissetta, and has obtained its name from this circumstance. 2. *Val di Demone*, which comprises the north and north-east of the island, as far south as the Simethus, or Giaretta, including the region of *Ætna*. 3. *Val di Noto*, which comprised all the rest of the island between the Salso and one of the head streams of the Giaretta, which passes San Filippo d'Argyro.

The island is now divided into seven provinces, the area, subdivisions, and population of which are as follows:—

Provinces.	Area in Sq. Miles.	Districts.	Communes.	Population in 1851.
Palermo	1984	4	72	514,717
Messina	1386	4	116	349,484
Catania	1761	2	81	378,991
Girgenti	1375	3	45	245,974
Noto	1482	3	41	237,814
Trapani	1358	3	21	182,809
Caltanissetta . .	1190	3	31	180,791
Total	10,536	22	407	2,091,580

The government of the island is placed in the hands of a general-governor, who is also commander-in-chief of the forces. Each province has its own Intendente, or civil governor; each district its Sottintendente, or subprefect; and each commune its Sindaco, or mayor, as in the continental dominions. [NAPLES, vol. iii. col. 907.] For judicial purposes the provinces are divided into judicatures, each having a judge of first instance for criminal and police matters. In the head town of each province is a collegiate court for civil suits. There is a 'Gran Corte Civile,' or High Court of Appeal, in each of the three principal cities, Palermo, Messina, and Catania, and a supreme court of justice at Palermo. For scientific instruction there are three universities, Palermo, Messina, and Catania; and 21 colleges in the various provincial towns. There is an institute for female education at Palermo; naval schools at Palermo, Termini, Cefalù, and Messina; a veterinary school at Palermo, and an academy of the fine arts in the same city.

Elementary instruction is much neglected; some elementary schools exist in the towns, but few in the rural communes. The great majority of the people is illiterate.

The religion of the inhabitants is the Roman Catholic. The ecclesiastical establishment consists of three archbishops—Palermo, Monreale, and Messina; 11 bishops—Syracusa, Mazzara, Cefalù, Patti, Nicosia, Piazza, Gerace, Girgenti, Caltagirone, Catania, and Lipari; 13 abbacies, and about 30,000 secular priests. The regular clergy consists of 7591 individuals, including lay brothers, distributed among 658 convents, of which 409 are possessed of property, and 249 are of the mendicant orders. Sicily having remained undisturbed by revolution or French invasion, the property of the convents has

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remained untouched. There are colonies of Greek or Epirote origin, which have retained the Eastern ritual, but acknowledge the Pope as their spiritual head, being of what is called United Greeks, who are Catholics in faith, but use the Greek ritual. The head of the Greek clergy resides in Messina, and is subject to the jurisdiction of the archbishop of Messina.

The governor-general represents the king's person, and is often a member of the royal family. He has under him a secretary of state; but all important matters are referred to a section of the council of state sitting at Naples, which section is specially concerned with the affairs of Sicily.

Sicily is not burthened with the conscription. Recruits for the army are obtained by voluntary enlistment. The permanent force kept in the island consists in ordinary times of 6000 men. The principal garrisons are those of Palermo, Messina, Syracuse, Trapani, Agosta, and Melazzo. There was formerly a rural police, called 'armigeri,' charged with the care of keeping the roads clear from outlaws; but it has been superseded by gendarmes. The present king, Ferdinand II., opened several carriage-roads throughout the island. During a visit to the island previous to 1840, he abolished every remnant of feudality, setting the example himself by renouncing several feudal duties and fees. He also ordered the demesne lands to be distributed among the poor rural population.

The manufactories of Sicily are unimportant. Cotton-cloth is manufactured at Messina, Catania, Palermo, and Caltagirone; silks at Palermo, Catania, and Nicolosi; leather at Messina; gloves, soap, artificial flowers, and paper, at Palermo; coral from the coast of Africa is wrought at Trapani. Sicilian vessels, mostly coasters, amount to about 1400, besides fishing-boats. The foreign trade of Sicily is carried on chiefly in Genoese, Austrian, French, and Spanish ships.

The principal towns of Sicily are:—PALERMO, MESSINA, CATANIA, SYRACUSE, AGOSTA, TRAPANI, and GIRGENTI. Among the inferior towns, the following deserve notice:—Melazzo, Patti, Taormina, Castro Reale, and Randazzo, noticed under MESSINA; Termini, Cefalù, Corleone, Monreale, and Carini, noticed under PALERMO; Caltagirone, Nicosia, Acì Reale, Paternò, Aderno, and San Filippo d'Argyro, noticed under CATANIA; Sciacca, Castronovo, Bivona, and Aragona, noticed under GIRGENTI; and MARSALA, ALCAMO, and ALICATA, noticed under their respective heads.

The other towns which deserve notice are:—*Castelvetrano*, near the site of the ancient Entella, in the west part of the island, with about 12,000 inhabitants, in a romantic situation on a hill in the province of Trapani; the ruins of the ancient Selinus are a few miles south of Castelvetrano, near the sea-coast. *Mazzara*, capital formerly of the Val di Mazzara, is situated in 37° 40' N. lat., 12° 34' 53" E. long., on the coast at the mouth of the Salemi, about 10 miles S.E. from Marsala, and the same distance west of Castelvetrano, and has 10,000 inhabitants. *Caltanissetta*, a town with above 20,000 inhabitants, a cathedral, and numerous churches and convents, is situated in the interior of the island, a few miles west of the Salso. *Caltabellotta*, on a hill north of Sciacca, near the south-west coast, has about 7000 inhabitants. *Castrogiovanni*, a town of 12,000 inhabitants, near the site of the ancient Enna, stands on a lofty hill of very difficult access, near the centre of the island, 36 miles W. from Catania and N.E. from Girgento. *Terranova*, on the site of the ancient Gela, on the south coast of the island, on the river Terranova, has about 9000 inhabitants, who carry on a considerable trade by sea. *Modica*, in the south of the island, 28 miles S.W. from Syracuse, is situated in one of the finest and most fertile districts in all Sicily; it has numerous churches and convents, and about 24,000 inhabitants. The finest cattle in Sicily, the finest wool, and the best cheese and butter, are produced on the territory of the city of Modica. East of Modica, on a hill near the coast, is *Noto*, the capital of the province of Noto, with a college, a rich collection of Greek, Roman, and Moorish coins, a museum of antiquities, an hospital, and about 18,000 inhabitants, who trade in corn, wine, and oil. *Piazza*, an episcopal town in the interior, 18 miles N. from Terranova, with 18,000 inhabitants, is situated on a hill halfway between Castrogiovanni and Caltagirone. *Castellammare*, on the gulf of that name on the north-western coast, between Palermo and Trapani, has a strong castle and large granaries: it is noticed under CASTELLAMMARE. *Salemi*, a fortified town, situated on a hill in the west part of the island, 16 miles S. from Castellammare, is built on the site of the ancient *Halicyæ*, and has about 12,000 inhabitants. Both names of this town are derived from the salt springs near it. *Leontini*, the ancient Leontini, has 6000 inhabitants and some good buildings; but the air is considered unhealthy in summer. *Carlentini*, a little south of the preceding, has 4000 inhabitants. *Geraci*, in the mountains, north-west of Nicosia, has 4000 inhabitants. Besides these, there are many other towns of less note. Sicily has many towns containing above three thousand inhabitants, as the population live chiefly in towns, and not in cottages dispersed about the country.

The small islands belonging to Sicily are—I. The group of the LIPARI ISLANDS.

II. The group of the Trapani Islands, anciently called *Ægates*, and lying opposite the promontories of Drepanum (Trapani) and Lilybæum. *Favignana*, the ancient *Ægusa*, about 16 miles from the mainland of Sicily, is 18 miles in circumference: it has good anchorage

ground for large vessels, and a strong castle. Favignana has good pastures and copious springs. A number of sheep are reared on this island, which is the largest of the group, and the surrounding sea abounds with fish. The woods contain hares and deer. *Martimo*, originally called Hiera, and afterwards Maritima from its standing farthest out at sea, is 11 miles in circuit, and 25 miles from the coast; it is rocky and naked, and the coast is bold and steep: wild thyme grows in abundance, and supplies nourishment for swarms of bees. It has a strong castle, which is used as a prison for state prisoners. *Levanzo*, the ancient Bucinna, north of Favignana, and about 10 miles distant from the point of Trapani, is 8 miles in circuit, and has some good pastures. The group comprises some smaller rocky islands, dangerous to navigators, among which are the two *Formiche*, and *Scoglio di Mezzo*, between *Levanzo*, Favignana, and the mainland. The *Ægates* are celebrated in history for the great naval victory gained by the Romans (B.C. 241) over the Carthaginian fleet towards the end of the first Punic war. There is a group of small islands south-east of Favignana and near Cape Lilybæum, one of which, *San Pantaleo*, is the ancient *Motya*, once a settlement of the Phœnicians, and afterwards a stronghold of the Carthaginians, which was destroyed by Dionysius the elder. There are some fragments of the walls and gateways of the ancient city. The island is only a mile and a half round; it is barren and inhabited only by a few fishermen. Outside San Pantaleo lies a group of low rocky islets called *Stagnone*. *Motya* was in ancient times connected with Sicily by a causeway.

III. The island of *Ustica*, 40 miles N. by W. from Palermo, is about 11 miles in circumference; the surface is hilly; it contains many olive and other trees, and large cisterns cut in the rock, as well as sepulchres and other traces of ancient colonisation. *Ustica* was for centuries deserted, owing to the island being exposed to the depredations of the Barbary pirates, until the year 1759, when a fresh colony was sent to it, with a garrison, and several small forts were built: the population is now in a thriving condition. [PALERMO.]

IV. The island of *Pantellaria*, the ancient *Cosyra*, is situated between the south-west coast of Sicily and the coast of Tunis, east of Cape Bon, from which it is about 44 miles distant. It is 60 miles from the nearest point of Sicily south of Mazzara. *Pantellaria* is about 36 miles in circumference; it is of volcanic formation, and produces the vine and the olive, cotton, pulse, fruits, and pasture, but little corn. The inhabitants, who number about 5000, are remarkably industrious. The island has several creeks with good anchorage-ground. An herb called *orsaglia*, which grows on the island, is used for dyeing. There is a warm soapy spring, which is used for bleaching and scouring linen, and other mineral springs. A copious spring in the middle of the island furnishes the inhabitants with drinkable water. There is a town, with several churches, and a castle with a garrison sent from Sicily.

V. South of *Pantellaria*, towards the coast of Tripoli, are the two uninhabited islands of *Linoso* and *Lampedosa*. *Linoso*, which is the smaller, is destitute of water, but *Lampedosa* has a good spring and good anchorage-ground, and a soil capable of cultivation; it was once inhabited. *Lampedosa* gives the title of prince to a Sicilian family. The crown of Sicily used to receive feudal homage from the grand-master of the order of Malta, that island, as well as *Gozo*, having formerly been subject to the kings of Sicily.

The best harbours on the coast of Sicily are those of Messina and Syracuse, which are perfectly safe. The ports of Palermo, Agosta, and Trapani are next in importance. But the southern coast is destitute of harbours; that of *Girgenti* is only fit for small craft, and therefore this coast is dreaded by Mediterranean sailors.

The ancient Sicilian population was formed out of a mixture of various nations, Sicani, Siculi, and Greek colonists. There was also an admixture of Punic blood, and afterwards of Roman and Campanian. After the fall of the Western Empire, the Byzantine Greeks remained masters of the island, till the Saracens came, and the Arab and Moorish race remained in Sicily for more than two centuries. Then came the Normans, and after them the Aragonese or Spaniards, who gained a lasting footing in the country. From all these races the actual Sicilians are derived, but it may be presumed that the indigenous Sicilian and the Greek and Punic blood are the three preponderating elements. Accordingly there is considerable difference of complexion and appearance among the inhabitants. The Sicilians are generally dark, and yet we sometimes see complexions as fair as in the north of Italy. Unless bent down by poverty or disease, the Sicilian exhibits a spare but muscular and erect form, lively dark eyes, great elasticity of limb, and quickness of motion. He is shrewd, quick-sighted, and very imitative. Although the climate and the state of society incline him to indolence, he is more easily roused into activity than the Neapolitan, and is more capable of perseverance. The Sicilian women are handsome, and amorous; and their countenances often exhibit a strong admixture of Greek features. The Sicilian oral language is a dialect of the Italian, and as such is noticed under the head ITALY. The modern Sicilian dialect can boast of *Meli*, a lyric poet equal if not superior to his countryman Theocritus.

History.—The legends of the Greeks speak of the giants, Cyclops, and Laestrygonians, who inhabited Sicily previous to the epoch of the Trojan war. The Sicani are next mentioned, who are said by some to have been Iberians. (Thucyd., vi. 2.) Other writers consider the

Sicani to be aborigines of Sicily. (Diodorus, v. 2.) The island is sometimes called *Sicania*, from them. The Siculi next came from Italy, and occupied the eastern part of Sicily about 300 years before the Greeks made any settlement in the island. The Siculi drove the Sicani to the southern and western parts of the island, to which they gave the name *Sicilia*. (Thucyd., vi. 2.) They built *Zancle*, *Agyra*, *Enna*, *Erbessus*, and *Hybla*. The Phœnicians are said to have colonised *Panormus*, *Soksis*, and *Motya*. Then came the *Elymsæ*, who are said to have built *Elyma*, *Entella*, and *Egesta*. In the year B.C. 750 a colony of Chalcidians from *Eubœa*, and *Megarians*, led by the Athenian *Thucles*, landed on the eastern coast, and built the town of *Naxos*. In the following year a party of Corinthians and other Dorians laid the foundation of *Syracuse*. About B.C. 712 a party of Rhodians and Cretans built *Gela* on the southern coast. In course of time a colony from *Gela* built *Agrigentum*, and the *Syracusans* colonised *Camarina*. A colony of *Megarians* settled at *Hybla*, and afterwards built *Selinus*, B.C. 651. Colonies from *Zancle* founded *Mylæ* and *Himera*. The interior of the country remained in possession of the Siculi, under their respective princes. *Hippocrates*, tyrant of *Gela*, about B.C. 495 defeated the Siculi, took *Naxos* and *Leontini*, and obliged the *Syracusans* to give up *Camarina*. Having joined *Anaxilas*, tyrant of *Rhegium*, they surprised *Zancle*, and shared the plunder between them. *Anaxilas* then invited a party of *Messenians* to colonise *Zancle*. The tyrant *Phalaris*, B.C. 565-550, extended and consolidated the power of *Agrigentum*. About 60 years later *Theron* was tyrant of *Agrigentum*. He raised most of the splendid buildings of *Agrigentum*, and he conquered *Himera*, thus extending the dominion of *Agrigentum* to the northern coast of the island. *Theron* and his son-in-law, *Gelon*, tyrant of *Syracuse*, together defeated the first invasion of the Carthaginians, B.C. 480.

Between B.C. 452 and 440, Sicily was distracted by an internal war between the Siculi, led by their king or chief *Deucetius*, and the states of *Agrigentum* and *Syracuse*. It terminated with the destruction of *Trinacria*, a stronghold of the Siculi, which is supposed to have been near *Palica*, east of *Caltagirone*, and on the western border of the great plain of *Catania*. The *Syracusans* next attacked *Leontini*. This was a war of races: the Doric cities taking part with *Syracuse*, and the Chalcidic cities with the *Leontini*. The latter, being the weakest, applied to the Athenians for assistance. The first Athenian expedition to Sicily took place B.C. 427, but it led to no decisive result. A new quarrel between *Egesta* and *Selinus* led to the second Athenian expedition to Sicily, B.C. 415, which terminated fatally for the Athenians. [SYRACUSE.] The *Egestans*, being left at the mercy of their enemies of *Selinus*, applied to *Carthage*, and this led to the second invasion of Sicily by the Carthaginians (B.C. 409), who, under the command of *Hannibal*, son of *Hasdrubal*, took and plundered *Selinus*, which never afterwards recovered. The Siculi of the interior having joined the Carthaginians, their united forces took and destroyed *Himera* 240 years after its foundation. The Carthaginians next attacked the powerful city of *Agrigentum*, and after a long siege took and destroyed it in B.C. 406. [AGRIGENTUM.]

The Carthaginians now settled in Sicily, where they remained for about a century and a half, till the first Punic war. *Syracuse* was the only city that effectually opposed *Carthage* and prevented its dominion extending over the whole island. After a succession of wars between *Carthage* and *Syracuse*, a treaty was concluded about B.C. 340, by which the Carthaginians retained possession of the western part of the island, the river *Halycus* (now the *Platani*), which enters the sea on the western side of *Cape Bianco*, 18 miles W. from *Girgenti*, forming the boundary of their dominions on that side, but they retained the city of *Heraclea Minoa*, on the left of the river at its mouth. *Lilybæum* in the south, *Eryx* in the west (on *Mount Eryx*, 6 miles from *Drepanum*), and *Panormus* in the north, were the principal settlements of the Carthaginians, and they flourished by commerce. The other towns formed a league, of which *Syracuse* was the head. *Timoleon* invited fresh Greek colonies to repopulate *Agrigentum*, *Agyra*, *Gela*, and other places which had been devastated during the war.

The Carthaginians availed themselves of the dissensions between *Syracuse* and *Agrigentum* to interfere as mediators, when, in reward for their mediation, they secured an extension of territory to the river *Himera*. A war broke out between *Syracuse* and *Carthage* about B.C. 310, the particulars of which are related under *CARTHAGE*, vol. ii., col. 363. *Pyrrhus*, son-in-law of *Agathocles*, came and drove the Carthaginians out of the island, with the exception of *Lilybæum*, which he could not take, and he suddenly abandoned Sicily to its own dissensions and the mercy of the Carthaginians.

Syracuse, in this emergency, elected *Hiero* for its commander, who began by attacking the *Mamertines* in *Messana*. The *Mamertines* called in the aid of the Carthaginians, who took possession of the citadel. The *Mamertines* however revolted against their new allies, and called in the Romans to assist them against both *Hiero* and the Carthaginians. This circumstance led to the first Punic war, at the end of which the Romans succeeded the Carthaginians in the possession of the west of Sicily—*Hiero* II., king of *Syracuse*, retaining possession of the eastern part as ally of Rome. During the second Punic war the Romans took *Syracuse*, and became masters of the whole island which they administered as a province under a prætor.

The oppression of one of its prætors Verres reduced the island almost to a barren waste, and his robberies stripped the towns of all their wealth and works of art.

During the wars of the Triumvirate, Sicily was for a time in possession of Sextus Pompeius, who was at last defeated and driven away by Octavian. After his assumption of supreme power, Augustus restored many towns of Sicily which had been devastated during the late wars; he sent colonies to Tauromenium, Catania, Thermæ Himerenses, Centuripi, Panormus, Thermæ Selinuntie, Heraclea, and Syracuse. Finding the extent of this last city too large to be filled again, he contented himself with colonising the island Ortygia, which has constituted ever since the modern town of Syracuse.

Christianity spread early into the island, and a persecution of the Christians took place under Nero. In the 3rd century of our era we find registered the names of bishops of Panormus.

About A.D. 440 the Vandals, under Genseric, landed from Africa on the western coast of Sicily and took Lilybæum. Theodoris, the Gothic king of Italy, added Sicily to his continental dominion. In the year 584 Belisarius reconquered Sicily for the emperor Justinian; and the island continued to be a dependence of the Eastern empire, and was administered by a governor styled 'Patrician,' who was sent from Constantinople.

About the year A.D. 826, one Euphemius, a Byzantine officer who commanded the imperial troops in Sicily, fell in love with a Sicilian maiden of noble birth, who was a nun, and took her by force from her convent. Complaints having been laid before the emperor, Euphemius was outlawed. He then revolted, and defeated the patrician Photinus, but not being strong enough to withstand the imperial forces, he sailed over to Africa and invited the emir of Kairwan to effect the conquest of the island. In June 827 the first Saracen expedition landed in Sicily, took Agrigentum and Minoa, Messina in 831, and Panormus in 835. It was not till 878 that the Saracens took Syracuse by storm. Soon after the Saracens of Sicily threw off their dependence on the emirs of Kairwan; but it became subject to the fatimide kalif El Mehad in 910. In 945 the fatimide kalif Al Mansur appointed an emir as permanent and hereditary governor of Sicily, who fixed his residence at Panormus. Under the rule of the emirs Sicily enjoyed a more orderly government and comparative tranquillity. Tauromenium, the last hold of the Byzantines, was taken by the Saracens in 962. In 964 Nicephorus Phocas sent a strong armament to recover Sicily. A battle took place near Rometta, in which the Saracens totally defeated the Byzantine army, with the loss of 10,000 men. After this Sicily was governed by a succession of emirs, nominally dependent on the fatimide kalifs. In 1036 a revolt broke out among the Sicilian Saracens against the emir El Achal, who was killed, and his brother El Hassan was driven away. In every town the leading Saracens assumed the local power, and thus Sicily became a prey to anarchy, which favoured the invasion by the Normans.

The Saracens never formed the bulk, nor more than about one-sixth, of the population. The Christians enjoyed the free exercise of their religion, paying a tribute, like other conquered subjects in Mohammedan states; but they had no political rights, and were subjects of the conquering race.

Of the numerous remains of antiquity existing in Sicily the most important are noticed under SYRACUSE and AGRIGENTUM. Taormina has an ancient theatre in tolerable preservation. Other remains of antiquity are seen at Catania, Lentini, Alicata, Messina, Modica, Paterno, and Segeste, or Egesta, near Trapani. The antiquities of Sicily have been described by Swinburne.

The Normans first entered Sicily as auxiliaries of Maniaces, Katapan of Apulia, whom they aided in recovering the island for the eastern emperors from the Saracens in 1037. But the weakness and mismanagement of the Byzantine rulers threw the island once more into the hands of the Saracens. About 1060 Pope Nicholas II. granted the investiture of Sicily to Robert Guiscard, duke of Apulia and Calabria, who commenced the conquest of the island in the following year by taking Messina. In 1070, aided by his brother Roger, he took Palermo, which he made his capital. At his death Robert left Sicily, with the exception of Palermo, to his brother Count Roger, who drove the last Saracen garrison in Sicily out of Noto, and assumed the title of Great Count of Sicily. Roger introduced the feudal system in the towns and districts which he had taken by force from the Saracens; the rest of the country was considered crown domains, the proprietors of which remained undisturbed under the name of 'alodialists,' or 'burgensetici.' He instituted the Sicilian parliament, or assembly of the great feudatories, both ecclesiastical and lay, who met when convoked by the prince. In 1091 he sailed to Malta, and obliged the Galt, or Saracen governor, to pay tribute to the count of Sicily.

Count Roger of Sicily died in 1101, and was succeeded by his son Roger, who, in reward for aiding his cousin Duke William of Apulia against his refractory vassals, obtained the city of Palermo, and thus became monarch of all Sicily. On the death of Duke William in 1127 without issue, Count Roger of Sicily succeeded after much opposition in establishing his authority over all Apulia, Calabria, and Salerno.

In the year 1130 Count Roger assembled a parliament at Salerno,

which decided that he should assume the title of King of Sicily. This resolution was unanimously confirmed by the Sicilian parliament which he soon after convoked at Palermo; and on Christmas-Day of that year Roger was solemnly crowned in the cathedral of Palermo by the four archbishops of Palermo, Salerno, Capua, and Benevento. He assumed the title of 'Rex Siciliae, Ducatus Apulie, Principatus Capue.' Pope Innocent II., who refused to acknowledge Roger's new dignity, marched with troops into Campania, but was surprised and taken prisoner in 1139 by Roger, who treated him with great respect, and on the 25th of July a treaty was concluded between them, by which the Pope granted to Roger the investiture of the kingdom of Sicily, the king swearing allegiance to the see of Rome, and promising the payment of an annual tribute. About the same time, on the death of the duke Sergius, the Neapolitans chose Roger's eldest son for their duke, retaining their municipal laws and liberties. In 1140 King Roger seized that part of Abruzzo which lies between the Pescara and the Tronto, and thus the Sicilian kingdom attained its compact form and the boundaries which it has retained to this day. In this reign the silver coin called a ducat was first coined, and the manufacture of silk was introduced into Sicily.

Roger died in 1154, at the age of 59. He was the third great man of his family. Robert Guiscard and Count Roger laid the foundations of the monarchy by their conquests, and King Roger consolidated the whole into a regular form, made a body of laws, and established an orderly system of administration.

The Norman dynasty ruled over Sicily till 1194, when it came with the rest of the kingdom under the Suabian dynasty, in the person of Frederick II., son of the emperor Henry VI. and Constance the posthumous daughter of King Roger. Frederick was the founder of the third estate, or Commons, in the island of Sicily, having called to sit in the Sicilian parliament two prud'hommes, or wise men, for every damease town. He also established a municipal body in every commune, and introduced many other wise reforms into his states. Frederick II. died in 1250. Conrad succeeded him, but died in 1254, leaving his only son Conradin two years of age. Manfred a natural son of Frederick, assumed the regency of the kingdom of Sicily. Manfred was crowned king at Palermo in 1258, with the assent of the Parliament on the rumour of the death of Conradin. At the battle of Benevento, fought in 1266, Manfred was defeated and killed by Charles of Anjou, who was acknowledged king of Sicily, Apulia, Calabria, &c. The young Conradin led an expedition in 1267 to recover his paternal kingdom; but he was defeated by Charles of Anjou at Tagliacozzo, and publicly beheaded at Naples in 1269.

The terrible massacre of the French in Sicily, known in history as the Sicilian vespera, put an end to the French or Angevine rule in Sicily in 1282. The Sicilians called to the throne Pedro, king of Aragon, who had married Constance, daughter of Manfred. Charles of Anjou retained the continental territories, and fixed his residence at Naples. Both styled themselves King of Sicily, and the usage began gradually to prevail at Naples of calling the island 'Sicily ultra pharum,' and the continental territories 'Sicily citra pharum.'

The island had a succession of Aragonese kings from this time till 1416, when Alfonso, son of Ferdinand (of Aragon), having succeeded his father as king of Aragon and Sicily, appointed a viceroy to govern Sicily. This was the beginning of the Spanish viceregal government in Sicily, which lasted, with a few short intervals, for above three centuries (till 1734), to the great disappointment and disadvantage of the Sicilians.

By the peace of Utrecht, Charles V. resigned his claims to Spain, but retained Naples, Sardinia, and Milan, and by the express intervention of England, Sicily was given to Victor Amadeus of Savoy, with the title of king. Victor Amadeus made his ingress into Palermo in 1714, and assembled the Sicilian parliament. The census of the island of Sicily, taken at this time, gave a return of 1,153,000 inhabitants, of which Palermo reckoned 120,000. An expedition sent by Cardinal Alberoni in 1718 took Sicily from Victor Amadeus, but England and Austria obliged the Spaniards to evacuate the island, and by a new arrangement Sardinia was given to Victor Amadeus and Sicily to the emperor Charles. Thus Sicily and Naples were again united under a foreign crown.

In 1734 a new war having broken out in Europe on the occasion of the disputed succession of Poland, Spain undertook to reconquer both Naples and Sicily. The Infante Don Carlos (Carlo Borbone), son of Philip V., marched with a well-appointed army and took Naples from the Austrians. He then proceeded to Sicily, which he also conquered after some resistance. At the same time Philip V. made a solemn renunciation of Naples and Sicily in favour of his son Don Carlos (who assumed the title of King of the Two Sicilies) and his heirs.

Carlo Borbons, under whom the country enjoyed peace, and a degree of prosperity to which it had been a stranger for centuries, having by the death of his brother Ferdinand VI. of Spain succeeded to the crown of that monarchy, resigned his kingdom of the Two Sicilies to his son Ferdinand, then eight years old, appointing a council of regency during his minority. The first part of the reign of Ferdinand, till the epoch of the French revolution, was spent in forwarding the system begun by his father. He married in 1768 Maria Carolina of Austria, daughter of Maria Theresa and sister of Marie Antionetta.

A French army having invaded the kingdom of Naples in 1799, Ferdinand and his court escaped to Sicily. In the following June the troops of Ferdinand, joined to a large Calabrian militia, led by cardinal Ruffo, retook the capital and the whole kingdom, and Ferdinand returned to Naples. In 1805 he entered secretly into a coalition against Napoleon, who after the victory of Austerlitz sent Marshal Massena against Naples, and for the second time Ferdinand took refuge in Sicily, where he remained with his court till 1815.

In 1812, a new representative constitution upon a liberal scale was proclaimed in Sicily. The parliament of 1814 was opened by the king in person, but after its dissolution he never called another. In the following year, after the defeat of Murat by the Austrians, king Ferdinand was restored to the throne of Naples. He assumed the title of Ferdinand I., King of the United Kingdom of the Two Sicilies, and the legislation and administration of both divisions of the kingdom were reduced to a uniform system. Thus the Sicilian constitution was virtually abolished.

In 1818, a new concordat for the Two Sicilies was agreed upon by the Pope. But a revolt broke out in 1820, in consequence of which the Spanish constitution of 1812 was proclaimed, and a united parliament convoked for Naples and Sicily. Sicily however, ever jealous of its nationality, demanded a separate parliament, and a repeal of the union effected by the king. The Parliament at Naples refused to listen to this demand, and an insurrection broke out at Palermo, which was put down with much bloodshed. In 1821 an Austrian army marched upon Naples, the constitution was abolished, and the king restored to absolute power. Ferdinand died in 1825, and was succeeded by his son Francis, who died in 1830. The present king, Ferdinand II., ascended the throne on the death of his father. He commenced his reign well, introducing many reforms in the finances, the tariff, and the personnel of the administration. An attempt, made by the Sicilians in 1831-2 to break off the union with Naples, was quickly suppressed. In January 1837, the cholera broke out with great violence; a fancy seized the people that the poor were poisoned by the physicians at the command of the government; the wealthy took to flight, and a panic seized the population including even the military. In six weeks there were not less than 26,000 deaths in the city of Palermo alone. Pernicious regulations made for the isolation of infected districts, led to a dearth of provisions and many tumults. At last the Palermitans, roused by political malcontents, disarmed the garrison, deposed the viceroy from his government, and broke off all connection with Naples; the palaces were plundered, and many physicians, their wives, and children thrown into the sea. Similar scenes took place in Catania (where there were 10,000 deaths), in Syracuse, and other places. To put an end to this state of anarchy, 3000 Swiss troops, under the command of General Sonnenberg and Del Carretto, chief of police, landed in the island and were received without opposition into the disaffected towns, where, while the pestilence was mowing down the people, the ringleaders of the insurrection were executed under sentence of courts martial. By a decree dated October 31, 1837, the separate administration of the island was abolished, the ministerial council for Sicilian affairs in Naples was suppressed, the island declared a Neapolitan province, and public offices in both parts of the kingdom ordered to be filled up without regard to the nationality of the candidates. In March 1838, the king visited the island, dissolved the courts martial, and granted an amnesty which excepted only the ringleaders in the late commotions.

The arbitrary interference of the king in his endeavour to check the sulphur trade of Sicily, led to new complications and humiliations. England and France were the principal customers for the sulphur of the island; but in 1838 a French company obtained a monopoly of the trade, on condition that the yearly consumption should be reduced from 900,000 to 600,000 cantars (150 lbs. or 160 lbs. each). The English government protested against this contract, as opposed to the interest of British subjects, and as the protest was disregarded an English fleet blockaded the coast and seized many Neapolitan vessels. In consequence of these vigorous measures the sulphur contract was cancelled, and the trade resumed its usual course.

Few events of importance occurred in Sicily for several years after this. There was but little symptom of discontent notwithstanding the loss of all its privileges. But the inspiring reforms that followed the election of Pius IX. in Central Italy, seemed to rouse the spirit of liberty in the hearts of the Sicilians, and in January 1848 the island broke out into a blaze of insurrection. Messina led the way (Jan. 6), Palermo raised the insurrectionary standard on the 12th, and on the 15th had established a native provisional government, with Ruggero Settimo as one of its chiefs. A royal fleet, under the Count of Aquila, the king's brother, bombarded the town, which was prepared for defence. The bombardment and several attempts at negotiation having failed, the king granted a constitution with two chambers and the usual guarantees on the 10th of February. A parliament met in Palermo in April, which decreed (April 15) the deposition of the king and the Bourbon dynasty. The king occupied with revolutionary troubles at home could do nothing but protest, and the Sicilians continued to frame their constitution, which, monarchical in form, was adopted by the parliament on the 10th of the following July, and on the next day, the Duke of Genoa, second son of Carlo Alberto, was

invited to occupy the throne. Still the king's necessities in his continental dominions allowed him merely to protest.

At last, General Filangieri (Prince de Satriano) was dispatched to Sicily, and commenced the reconquest of the island by the capture of Messina (September 7, 1848) after an obstinate resistance of two days. The zealous but somewhat indiscreet interference of the British and French representatives at the court of Naples, and the approach of a British and a French fleet, checked the progress of the king's arms, and raised high the hopes of the islanders, who had time to put all their towns into a state of defence. After long negotiations the king granted an ultimatum, offering every guarantee for constitutional liberty that any sensible people could desire. This decree, dated Feb. 28th, 1849, granted to Sicily, among other privileges, a general amnesty; a resident viceroy, failing the residence of the king; a separate Sicilian ministry; the responsibility of ministers, who must be native Sicilians; a separate budget; a parliament consisting of two chambers—peers and deputies; and a resident minister for Sicily at the court of Naples. On the 9th of March following the Sicilian parliament having considered this ultimatum, refused to accept it, ordered a levée-en-masse, and were left to fight out their battle single-handed. The struggle did not last long. The Prince of Satriano took the lines of Taormina (April 2), Catania (April 6); Agoato and Noto were soon mastered; and Palermo sent a deputation to announce a surrender at discretion on the 23rd of April. Some attempts were made however to continue the contest in the capital, but the prince at the head of his troops took possession of it on the 15th of May. And thus in Sicily, as elsewhere at this period, a paroxysmal effort to obtain constitutional liberty, ended in abortion.

SICYON and SICYONIA, the territory of Sicyon. Sicyonia was situated on the south coast of the Corinthian Gulf, and near the eastern extremity of the gulf. In the time of Strabo (p. 382, Casaub.) the river Nemea was the boundary on the east between Corinthia and Sicyonia. On the west it was bounded by the territory of Pellene (Herod., i. 145), and on the south by the territory of Phlius. Sicyonia consisted of a plain country along the coast and a higher tract extending a few miles inland. The area cannot be ascertained; it perhaps fell short of 100 square miles. The Asopus, a small stream, gave its name to a district called Asopia. In proceeding along the coast from the harbour of Sicyon westward, the small streams Helisson and Sythas were crossed. The Sythas was the boundary between Sicyonia and Pellene. In going from Corinthia to Sicyonia the Nemea was first crossed and then the Asopus. The old name of Sicyon was *Ægiale*, or *Ægiali*, which was afterwards changed into *Mecone*.

Sicyon, the chief town, was, according to some accounts, 20 stadia, and, according to others, 12 stadia from the sea. The old town was on the coast, and it became the port when the new town was built. Demetrius the son of Antigonus pulled down the city in the plain and built the new city close to the ancient Acropolis. In the time of Pausanias many of the public buildings were in a ruinous state; but it still contained works of some of the great sculptors of Greece. Between Sicyon and Phlius, 60 stadia from the former and 40 from the latter, was Titane, situated in a mountainous country. A road led direct from Sicyon through Titane to Phlius.

Ægialeus, according to tradition, was the founder of Sicyon. The Sicyonians sent 3000 hoplites to the battle of Platea; and they had 15 ships at the battle of Salamis. In the Peloponnesian war the Sicyonians joined the Spartan confederation.

As a school of art Sicyon holds a distinguished rank. This school was founded by Eupompus, and it produced Pamphilus and Apellea. Sicyon was also one of the most ancient seats of the plastic art. Canachus and Lysippus were natives of Sicyon.

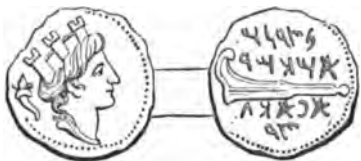
SIDMOUTH, Devonshire, a market-town in the parish of Sidmouth, is situated at the mouth of the little river Sid, in 50° 41' N. lat., 3° 15' W. long., distant 14 miles E.S.E. from Exeter, and 156 miles S.W. by W. from London. The population of the town in 1851 was 2516. The living is a vicarage in the archdeaconry and diocese of Exeter.

Sidmouth was a borough and market-town, governed by a portreeve, as early as the 13th century. It was anciently one of the principal fishing-towns of Devonshire, but the fishery has declined. The town has recently risen into some importance as a watering-place. The hills on each side of the valley of the Sid rise to a considerable elevation, and form, towards the sea, bold and lofty cliffs. The narrowness of the valley does not admit of the town displaying a considerable front to the sea; but the villas and detached houses extend for some distance inland on both sides of the stream. A sea-wall, extending upwards of 1700 feet in length, forms an excellent promenade. The baths, public rooms, and libraries face the sea. The town is lighted with gas and paved. Markets are held on Tuesday and Saturday; fairs are held on Easter-Monday and the third Monday in September. The parish church, dedicated to St. Nicholas, was erected in the 15th century; it was enlarged a few years back. There are a chapel of ease, chapels for Wesleyan Methodists, Baptists, and Independents; and National and Infant schools.

SIDON, or ZIDON, the most ancient, and for a long time the chief city of Phœnicia, and probably the mother city of Tyre, which is called in the Bible "the daughter of Sidon." It stood on the coast of the Mediterranean, in a plain about a mile broad, about 30 miles

N. by E. from Tyre, 20 miles S. from Berytus (Beirut), and 66 miles W. from Damascus. It possessed a good harbour, and at a very early period became a great maritime and commercial city. As early as the time of Joshua (B.C. 1444) it is called 'Great Zidon.' The Sidonians are thought to have been the first manufacturers of glass (Plin., v. 17), and their skill in arts and manufactures is frequently referred to by Homer, as well as by later writers. They are often mentioned in the Bible as skilful builders. They were worshippers of the goddess Ashtoreth, whose head is commonly found upon their coins.

At the division of Canaan among the Israelites, Sidon, with the adjacent country, fell to the tribe of Asher, who were never able to conquer it. The importance of Sidon was gradually eclipsed by that of Tyre, which then became the chief city of Phœnicia. When Shalmanezar invaded Syria, Sidon separated itself from Tyre, and surrendered to him. The Sidonians furnished the best ships in the fleet which Xerxes collected for the invasion of Greece. (Herod., vii. 96; viii. 67.) Under Artaxerxes Ochus the Sidonians revolted, together with the other Phœnicians and the Cyprians. After a short siege Sidon was betrayed to Ochus by its king, Tennes, upon which the Sidonians burnt themselves with their city and treasures. (Diod. Sic., xvi. 41-45.) The city was rebuilt. It submitted to Alexander the Great without resistance. After his death it was subject alternately to the kings of Egypt and Syria, till it fell under the power of the Romans. *Saida*, or *Seyde*, still a place of some commerce, with about 6000 inhabitants, retains the name, and occupies part of the site of the ancient city, of which some traces are said to exist two miles inland. In a hill near the town are innumerable sepulchral cells, the walls of which in many instances are covered with Phœnician inscriptions. In the mountains, 8 miles east of Saida, is *Djoun*, long the residence of Lady Hester Stanhope, who died here June 1839. Sidon suffered a bombardment by the allied fleets of England, Austria, and Turkey in 1840.



Phœnician coin of Sidon.

SIDOUT. [CUDPARAH.]
SIEDLEC. [POLAND.]

SIENA, a province (compartimento) of Tuscany, which formerly comprehended the whole southern part of the grand-duchy, corresponding to the territory of the former republic of Siena, is bounded N. by Florence, W. by the Mediterranean, E. by Arezzo, and S. by the Papal States, from which it is partly divided by the river Fiora. The territory of the republic is now divided into two provinces, Siena and Grosseto. The province of Siena comprehends the highlands, or northern and eastern parts of the country; that of Grosseto comprehends the western and southern lowlands, or the extensive maremma known geographically by the name of Maremma Sinese, to distinguish it from the Pisan Maremma. The area and population of the two provinces are as follows:—

Provinces.	Area in Sq. Miles.	Communes	Population in 1852.
Siena . . .	1450	38	186,263
Grosseto . . .	1714	20	77,891
Total . . .	3173	58	264,154

The province of Siena lies in the upper basin of the Ombrone, and its affluents the Arbia, the Mersa, and the Orcia. The *Ombrone*, called *Umbro Major* by the Romans, to distinguish it from the *Umbro Minor* of Pistoia, is the largest river of Tuscany next to the Arno: it rises from a copious source near Ceta Mura, or Civita Mura, in the Monti di Chianti, a subapennine ridge which divides the valley of the Ombrone from that of the Upper Arno, and flows southward by Berardenga and Asciano, skirting the western base of Monte San Savino, which divides it from the valley of the Chiana; it then passes by the town of Buonconvento, below which it receives the *Arbia* from the north, which passes near the city of Siena. The Ombrone then inclines to the south-west, flowing along the western base of the hills of Montalcino, and receives the *Mersa* from the north-west, a tortuous stream which has a course of above fifty miles. It then flows directly south, through a narrow and deep defile between the hills of Montalcino on the east, and a hilly tract on the west that divides the waters of the Ombrone from those of the Bruna, which flows into the Lake of Castiglione. Issuing from the narrow gorge beyond Monte Antico, the Ombrone receives from the eastward the *Orcia*, a mountain torrent which drains the northern side of the volcanic group of Radicofani and Montamiata, and also the hilly region of Montepulciano. The Orcia has a course of about thirty miles. Passing by Paganico, the Ombrone forms a bend to the south-east, and passing through a low ridge it enters the wide plain of the Maremma, through which it

flows in a south-west direction, passing near Grosseto and the Lake of Castiglione, into which part of its water is conducted by a canal, in order to fill up by its alluvium that pestilential swamp; the main body of the river enters the sea at Torre della Trappola, after a course of about eighty miles.

The province of Siena consists of highlands and valleys, being crossed by various ranges of hills, composed mostly of marls covered by yellow-sand, and abounding with organic remains. [APENNINES.] Few summits exceed 1000 feet, except the Montagna di Cetona, or Monte Pisi, on the borders of the Val di Chiana, which is above 2500 feet high; the volcanic cone of Radicofani, which is above 3000 feet; and the partly volcanic group of Montamiata, or Monte Santa Fiora, which rises to about 5000 feet above the sea. The chief products are corn, wine, silk, fruit, and oil. Excellent marble is quarried near Siena. The province is crossed by the railway that unites Siena with the Florence, Pisa, and Leghorn line at Empoli.

The following are the principal towns:—*Siena*, which is noticed in a separate article. *Montalcino*, a walled town and bishop's see, situated on a lofty hill 20 miles south-east of Siena: it has a cathedral, a clerical seminary, several other churches and convents; manufactures of coarse linen, hats, pottery, and leather; and about 3800 inhabitants. *Colle*, on the slope of a hill near the sources of the river Elsa, an affluent of the Arno, 12 miles north-west of Siena, is a bishop's see; it has a fine cathedral, several other churches, a large hospital, a clerical seminary, a conservatory for the education of young girls, paper-mills, manufactories of woollens and hats, of glass, pottery, and leather, and about 2500 inhabitants.

The province of *Grosseto* consists chiefly of a vast tract of maremma along the coast of the Mediterranean from the valley of the Cornia on the borders of the province of Pisa, to the Lake of Burano and the river Fiora, being a length of about 70 miles, whilst its breadth from the sea-coast inland is from 15 to 20 miles. Besides the Ombrone, several rivers flow from the hills, which form a belt along the inland side of the Maremma, and crossing the plain run into the sea after a short course. These streams are, the *Cornia*, which after a course of 24 miles enters the shore-lake of Piombino; the *Pecora*, a small river near Massa, which enters the shore-lake of Scarlino; the *Bruna*, which enters the Lake of Castiglione; the *Albegna*, which, rising in the Monte Labro (a summit about 3600 feet high, forming part of the group of Montamiata) flows rapidly southward, past the ruins of the Etruscan city of Saturnia, and crossing the Maremma enters the sea north of Monte Argentaro.

The Maremma is not a uniform level, for at several points the hills approach near to the sea, dividing the plain into several basins, distinguished by the names of Maremma of Massa, Maremma of Grosseto, &c. Active measures were commenced for the drainage of a portion of the marshes of Grosseto, by the grand-ducal government in 1852. There is a succession of shore-lakes along the sea-coast, which by their mephitic exhalations in summer occasion malaria. The largest are the lagoon of Castiglione, and the Lake of Orbetello, which is salt, and occupies an area of about ten square miles. Between the Lake of Orbetello and the sea rises the rocky and lofty promontory of *Monte Argentaro*, a conspicuous object from the sea, which appears to have been once an island. Monte Argentaro is of calcareous formation; it occupies an area about 22 miles in circumference, and the summit is about 1700 feet high. It is joined to the mainland by two very narrow and low isthmuses which run between the Lake of Orbetello and the sea-coast, the northernmost of which is intersected by a narrow canal, uniting the lake and the sea. The sea at the base of Monte Argentaro is very deep, and forms two good harbours, *Santo Stefano* on the north and *Port Ercole* on the east. Port Ercole has a strong fort, and several towers defend the coast on the foot of the mount. The mountain is covered with forests which abound in game: it has copious springs and excellent pastures, and the air is perfectly healthy. Near Port Ercole are the ruins of the ancient Etrurian and Roman town of *Cosa*. The ruins are called *Ansedonia*, for what reason is unknown. The walls constructed with nicely-fitted polygonal blocks of hard limestone still remain in tolerable preservation, with a chain of towers, of which 14 still remain. The walls of Cosa inclose a quadrangle about a mile in circuit, forming the level summit of a hill about 600 feet above the sea. At the foot of the hill was a station *Subcosa*, or *Succosa*, on the Aurelian way. Port Ercole, which still retains its ancient name (*Portus Hercules*), was the port of Cosa. It is situated opposite Cosa, under the shoulder of Monte Argentaro.

The air of the Maremma is very unwholesome, and the towns situated in it, with the exception of Orbetello, are thinly inhabited, and subject to the malaria fever. The principal branch of industry is the rearing of cattle, which feed in the wide solitary plains, and the cutting of timber in the extensive forests. Corn is sown, but not to a great extent. The wine made in the Maremma is not in much esteem. Great hydraulic works undertaken since the accession of the present Grand Duke, have already produced a considerable improvement in the atmosphere of a portion of the Maremma. Several of the lagoons have been entirely drained, and become cultivable land; the rivers have been embanked; a fine road has been opened along the length of the province, parallel to the line of the ancient *V. Aurelia*; handsome bridges have been thrown across the rivers

Artesian wells have been made to provide the inhabitants of Grosseto and other places with wholesome water: and the consequence is that the population is increasing as the malaria decreases, fresh ground is broken up, and cultivation and life spread along the once desolate wastes. The chief products of the province are corn, wine, timber, silk, potash, and oil.

Grosseto, the head town, built in the middle ages from the ruins of the Etruscan town of *Rusellæ*, which was a few miles distant, lies in the midst of a wide plain between the Ombrone, the lagoon of Castiglione, and the sea-coast, from which it is distant 6 miles, and about 45 miles S. from Siena. It is surrounded by walls and bastions, and contains about 2500 inhabitants. It has a bishop's see, and has a clerical seminary, and a civil and criminal tribunal for the province. *Massa Maritima*, a bishop's see and a town with some fine buildings, is situated on a hill a few miles from the sea-coast, north-east of Piombino: population, about 3000. At *Follonica*, on the sea-coast, 10 miles S. from Massa, are extensive furnaces and iron-works, in which the iron from the mines of Elba is smelted. *Piombino* is a small fortified seaport-town, facing the island of Elba, from which it is divided by a channel about five miles wide. The principality of Piombino, which formerly included the island of Elba, belonged to Prince Bacciochi, brother-in-law of Napoleon I., from 1805 till 1815. Piombino is about 40 miles S. from Leghorn, and has about 1500 inhabitants. Near it are some traces of the ancient *Populonia*. The neighbouring lagoon is in progress of being drained. *Campiglia*, a thriving town in the valley of the Cornia, 10 miles N. from Piombino, stands on a hill, and has a handsome church built in the 12th century, an hospital, and a population of 2200. *Orbetello* is a considerable town, built on a promontory which projects into the salt lake of Orbetello. The walls of Orbetello are formed of large stones without cement, and the town is strongly fortified on the side of the isthmus which unites it with the mainland. The territory, which extended from the village of Talamone to the States of the Church and included also a portion of the island of Elba, belonged for centuries to Spain, and was ceded in the last century to the king of the Two Sicilies; but by the treaty of Vienna it was annexed to Tuscany, of which it naturally forms a part. The town of Orbetello has about 3000 inhabitants, and enjoys a healthy climate, though the surrounding country is affected by malaria. The lake abounds with fish. *Pitigliano*, an inland town in a fine situation in the valley of the Fiora at the foot of the lofty group of Montamiata, has about 2000 inhabitants. The *Fiora*, which has its source in the mountain of the same name, runs southward, and after a course of about 30 miles in the Tuscan territory enters the States of the Church, and passes near Montalto, after which it enters the sea.

The island of *Giglio*, the ancient *Igilium*, which belongs to the province of Grosseto, is 11 miles W. by S. from Monte Argentario: it has a harbour on its eastern coast, and a castle with a village on the hill above it. The surface is 6 miles long by 3 miles broad, and hilly; the rocks are of granitic formation, except in the western part, where they are calcareous. The inhabitants are very industrious, and cultivate corn and the vine. They export annually 12,000 barrels of wine to the continent. A number of them are fishermen and sailors. Almost all the families are possessed of some landed property. A considerable part of the island is covered with timber trees. When Rome was taken by Alaric a number of the citizens took refuge in this island.

The neighbouring island of *Giannutri* is about 5 miles in circuit: it is destitute of springs, and uninhabited. Some Roman remains have been found upon it, which show that the island was once inhabited. It is the ancient *Dianium*, which Pliny says the Greeks called *Artemisia*.

SIENA, a city in Tuscany, is situated on a hill surrounded by other hills, 24 miles S. from Florence, and 45 miles E.S.E. from Leghorn, on the high road from Florence to Rome, and has about 20,000 inhabitants. It is 24 miles by railway distant to the south-east from the Empoli junction on the Florence-Pisa railroad. Siena is an archbishop's see; it has a university, a town library of 50,000 volumes and several ancient and mediæval manuscripts, a gymnasium, a clerical seminary, several elementary schools, an academy of the fine arts, a deaf and dumb institution, a large hospital, an orphan asylum, a workhouse for the destitute, a savings bank, and an asylum for poor children. The principal manufactures consist of silks and woollens.

Siena abounds with fine churches. The cathedral, one of the oldest in Italy, is rich in marbles, sculptures, and paintings. The exterior is cased with marble, black and white. The pavement is of white marble, on which numerous figures have been engraved or cut in, representing biblical subjects. In the annexed hall, called the *Bibliotheca*, are 10 frescoes by Pinturicchio, representing the principal events of the life of Pope Pius II. (*Aeneas Sylvius Piccolomini* of Siena). The splendid chapel of the Chigi family, constructed by Pope Alexander VII., is rich in lapis-lazuli and green marble, bronzes, and statues. The baptistery, which is a separate church detached from the cathedral, as at Pisa and Florence, is an octagon, and entirely cased with marble inside and out, and adorned with sculptures by the earliest Tuscan artists. In the church of San Domenico is a good painting on wood of the Virgin and Child by Guido di Ghazzo of Siena, of the date 1221, long before the birth of Cimabue,

who has been generally considered as the restorer of Italian painting. In the academy of the fine arts of Siena there is a painting of St. Peter and St. John by Pierrolino of Siena, who flourished about A.D. 1100. Siena abounds with productions of the earlier artists, both of its own school and of the Florentine school. Among the numerous churches, those of San Martino, San Agostino, San Spirito, La Concezione, and others are rich in paintings by good masters, in the street Dell' Oca is the house, now converted into an oratory, in which Saint Catherine of Siena was born in 1347.

The Piazza del Campo is concave, in the form of a shell, and surrounded by arcades, and adorned with a fountain: it was once the forum of the republic of Siena. Eleven streets branch out of it. This piazza is immortalised by Dante in the 11th canto of his *Purgatorio*. The streets of Siena are generally narrow, crooked, and uneven. The general appearance is that of an old decayed city. In the 14th century, before the great plague of 1348, the population of Siena and its suburbs amounted to 180,000. The people of Siena are noted for the purity and melody of their speech.

Among the palaces the most remarkable is the Palazzo del Publico, or town-house, a massive structure of the middle ages, which is adorned with frescoes of the 13th and 14th centuries, commemorating events of the national history. The palaces Petrucci, Piccolomini, Saracini, Bandinelli, and Buonsignori contain some good paintings. The town-gate, called Porta Camollia, is remarkable for its architecture. Siena is well supplied with good water by aqueducts from the neighbouring hills, and is adorned with several handsome fountains.

Siena is mentioned among the Roman colonies by the name of *Sena Julia* or *Seva*. (Plin., iii. 5.) It is mentioned as a bishop's see in the 6th century. A council was held at Siena in 1058, wherein Pope Nicholas II. was elected. In the struggle between Gregory VII. and Henry IV., Siena generally espoused the cause of the emperor, Florence that of the Pope; and the two republics were therefore frequently at war. In 1258 Farinata degli Uberti, being exiled from Florence with other Ghibelines by the Guelph party, retired to Siena, where being joined by reinforcements from Sicily and Pisa, he marched with the militia of Siena to meet the Guelphs at Monte Aperto near the Arbia, and defeated them completely with the loss of 10,000 killed, and as many prisoners. The carroccio of Florence was dragged in triumph to Siena. After the establishment of Charles of Anjou at Naples, the Guelphs obtained for a time the preponderance at Siena, and the Ghibelines were banished. In the meantime Siena extended its dominion over the lowlands of the Maremma as far as the sea, but it never became a naval power like Pisa. For the last half of the 14th century the republic of Siena was torn by dissensions between the nobles, and a party led by the Salimbeni (themselves nobles), who wished to remodel the government. In 1384 the reformers were driven away to the number of 4000; the whole of the nobles who had been previously exiled returned into the town.

In 1432 the emperor Sigismund came to Siena, where he was received with great honour. In 1460 Pope Pius II. visited Siena, his native town, and strove, but with little success, to put an end to the civil discord which ever lurked in the bosom of that republic. In 1482 a new tumult broke out; many persons were arrested, some thrown out of the windows of the town-house, others beheaded in various prisons, and the rest banished, fined, and excluded for ever from civil offices. The old party of the reformers was then recalled, and the government became more democratic, but not more orderly; for factions continued to rage among the people. In 1487 the exiles entered the city by stratagem, and took possession of the state. A council of 720 citizens was then appointed from among various parties, which appointed an executive council of 24 individuals for five years, on the condition that the public offices should be no longer given by favour, but drawn for by lot. Pandolfo Petrucci, a citizen of an old family of Siena, an able unscrupulous man, rose to influential eminence by his activity in conducting the business of the council. He made himself still more powerful in the subsequent general disturbances of Italy, and became in reality the dictator of Siena. Petrucci died in 1512. His sons, not having the capacity of their father, did not long retain power, and were obliged to emigrate.

After the fall of Florence in 1530, Siena retained for many years its republican government, under the protection of Charles V.; but civil dissensions continuing, the emperor sent a Spanish garrison to enforce order, in 1547, and began building a castle to overawe the town. In 1552 the citizens, weary of Spanish interference, rose in arms and drove the Spaniards away, and applied for assistance to Henry II. of France, who sent them a small garrison. They also made common cause with the Florentine exiles led by Pietro Strozzi, which gave to Duke Cosmo of Florence an opportunity of interfering in the affairs of Siena. His troops, united to those of the emperor, destroyed the towns and villages which remained faithful to Siena. It was then that the Maremma was reduced to a wilderness. At last, in April, 1555, Siena capitulated through famine. In 1557 it was given up by Spain to Duke Cosmo, who reunited it with the rest of Tuscany, of which it has ever since formed a part.

SIERADZ. [POLAND.]

SIERCK. [MOSELLER.]

SIERRA LEONE is the name of a cape on the west coast of Africa, in 8° 30' N. lat., of a river or estuary which enters the ocean on the north side of the cape, and of a British colony established on a peninsula of which the cape forms the north-western extremity. The name has been extended to a large district, called the coast of Sierra Leone. This region comprehends those parts of Western Africa which are watered by the rivers that fall into the Atlantic between Cape Verga, in 10° 12' N. lat., and Sherboro Island, in 7° 30' N. lat. It is bounded N. by the part of Senegambia subject to the king of Fouta Jallon; E. by Sangara, a part of Súdán; S. by the Grain Coast; and W. by the Atlantic. Its area is estimated at 25,000 square miles.

Coast-line.—From Cape Verga the coast runs south-east to Alligator Point, and is low and flat, and covered with mangroves. It is divided into numerous islands by the several arms of the river Pongas and by the Dembia River, which reaches the sea a few miles N. from Alligator Point. That headland is the termination of the Soomba range, which rises in the interior to an elevation of 1705 feet. Beyond Alligator Point the Sangara River, of which the Dembia is a branch, opens into a deep bay, lined with a succession of shoals and reefs. The south shore of the bay terminates in Tumbo Point, a long rocky flat. Here the land rises gradually into a mountainous tract, of which the highest peak yet measured is Mount Kakullmah, 2910 feet above the sea-level. Within 6 miles from the shore at Tumbo Point, and 75 miles from Cape Verga, lie the Isles de Loos, or Ihas dos Idolos, a group of low islands and reefs inclosing a safe and convenient anchorage. These islands have a considerable native population. They possess a valuable fishery, and abound with the silk-cotton tree, and still more with the palm-tree, from which a large quantity of oil and wine is produced. The three principal islands are Crawford Island, which contains a British settlement, Factory Island, and Tamara, or Footabar.

From Tumbo Point the coast continues low and flat, and extends about 70 miles nearly due south to the peninsula of Sierra Leone. It is broken by the arms of several rivers into many clusters of islands, and the banks of the streams are clothed with mangroves. About midway the wooded island of Matacong lies near a headland, on the south side of which the river Fouricaria forms an estuary two miles wide, with a sand-bank across the channel. The estuary of the Sierra Leone River, from the Isle of Leopards on the north to Cape Sierra Leone on the south, has a width of 10 miles. The northern or Bullom shore is much depressed and marshy, and runs in a straight line to Tagrim Point, opposite Freetown. The southern shore is rocky, and between Freetown and the Cape is indented by several small bays, of which the most important is the Bay of Francia or St. George, where a number of streams from the adjacent heights combine to form the finest watering-place for ships on the coast. From Cape Sierra Leone, where a lighthouse has been lately erected, southward by False Cape to Cape Shilling, the west coast of the peninsula is rocky. The beach is beaten by a heavy surf, which can only be passed by canoes, and sometimes not even by them. Two islands, the Great and Little Bananas, lie near Cape Shilling, and resemble the adjoining coast in elevation and structure. They are almost continuous, and extend six miles in length and about a mile in breadth. The Great Banana contains many wild cattle. On these islands there are two villages, called Dublin and Ricketta.

Surface, Soil, and Produce.—From Cape Verga inland a tract of high land, much broken by ravines and narrow valleys, and nowhere more than 1000 feet above the sea-level, extends north by east, and then east, to the table-land of Fouta Jallon, near 11° W. long. Immediately within this northern boundary the country is still very little known. In general it is mountainous. From 9° W. long. a gently undulating tract spreads westward for 80 or 90 miles, with a general elevation of 800 feet above the sea. Extensive vales and fertile meadows, belted with strips of wood, and decorated with clumps of trees of the densest foliage, are occasionally diversified by hills, or broken by deep ravines, and furrowed by numerous rivulets, sunk far below the surface. The soil of the valleys is a rich vegetable mould mixed with iron-clay and sand, requiring little labour, and very productive. Some of the lower depressions become swamps during the rainy season. Rice and ground-nuts are the principal crops; maize, yams, and mandioc are extensively grown. Cattle and sheep are numerous. Horses are imported from Sangara, which lies farther east. This level country is bounded on the west by a mountain range running 60 miles from north to south between 11° and 12° W. long. The range is broken in several places by rivers flowing westward through spacious valleys. Sa Wollé, near 11° W. long., 9° N. lat., is 1900 feet high, and Semba town stands on a mountain 1900 feet above the sea. The hills, in a few places bare from their steepness, are generally belted round the base with camwood-trees, and on the higher parts dotted to the summits with palm-trees and clothed with grass, which continues green throughout the year. Between the fields are frequent clusters of palm-trees. The pine-apple is the prevailing fruit. Cattle and goats and other domestic animals are numerous. Between this hilly country and the sea lies the main part of the coast of Sierra Leone, forming a plain of about 100 miles in breadth, varied in some places by rocky tracts traversed by deep ravines, and in others

by depressions, which are converted by the rains into extensive swamps, and in the dry season are covered with grass nine or ten feet high. The country is fertile, but only partially cultivated. White or Carolina rice grows in great perfection; red rice, which keeps longer, is raised more extensively by the natives for their own consumption. Goats are common, but cattle and sheep are rare, and horses are not reared. Over all the interior, as well as in the colony, poultry is abundant, but of a diminutive kind. Guinea-fowls are plentiful, and much larger than those in England. Wild bees are very numerous. Fish abound on the coast and in all the rivers. The wild animals are the elephant, buffalo, various species of antelopes, monkeys, of which the chimpanzee is the most remarkable, leopards, and wolves.

The peninsula of Sierra Leone, which chiefly constitutes the territory of the colony, is 25 miles long from north to south by 12 miles broad. It is bounded N. by the Sierra Leone River; E. by the Bunce River and the Calmont Creek; S. by the Calmont Creek and Yawrey Bay; and W. by the Atlantic. Its area is 220 square miles. The interior of the peninsula is an elevated region of uneven surface, which rises from 400 to 1000 feet above the sea, and is overtopped by conical peaks, among which Sugar-Loaf and Leicester Mountains attain an elevation of between 2000 and 3000 feet. The whole region is covered with a good soil, which, on the arrival of the British colony, was entirely, and is still in part, clothed with large forest-trees, among which is the silk-cotton-tree, the trunks of which are made into canoes often large enough to contain 100 men. The indigenous esculents are yams, plantains, Indian corn, sweet potatoes, okro, pumpkins, and spinach. The fruits of the soil are the cocconut, the baobab, or monkey-bread, banana, orange, pine-apple, guava, pomegranate, lime, papaw, and African plum. Coffee, sugar, indigo, and cotton have been introduced by the British, and grow well. Some European fruits are cultivated on the higher parts, and the vine flourishes in the gardens of Freetown. Yams, mandioc, pumpkins, plantains, and Indian corn constitute the principal food of the inhabitants.

Rivers.—Of the rivers of Sierra Leone the most northern is the Pongas, which reaches the sea, on both sides of 10° N. lat., by four arms. Several rivers fall into the sea between Cape Tumbo and the estuary called the River of Sierra Leone. Some of these rivers, particularly the Mellikuri and Scarcies, are visited by vessels for camwood, teak-timber, and ground nuts. Of the great and little Scarcies, the former, called also Kaba and Mungo, runs more than 300 miles. The most important river is the Rokelle, which is navigable at certain seasons for a great part of its course. It rises in the mountains which separate Sierra Leone from Súdán, at an elevation of 1417 feet above the sea-level, and runs first south, and afterwards either west or south-west, until it approaches within 30 miles of the sea, when it spreads out in a wide estuary, called the River of Sierra Leone, which is 7 miles wide opposite Freetown, and constitutes the harbour of the colony. At the close of the dry season the Rokelle is navigable for boats only to Rokon, a distance of 50 miles from its estuary; but in all other seasons, to a much greater distance. The course of the Karamanka River, which falls into Yawrey Bay, is generally parallel to that of the Rokelle, and sometimes only 10 miles from it.

Geology.—The geology of this region is little known. The Sierra Leone Mountains, the Banana Islands, and the Isles de Loos are supposed to be of volcanic origin. The main section of the interior is a vast alluvial plain, through which basaltic rocks in many places protrude. Iron is worked in the most hilly parts of the interior. The natives have much gold, but it is brought from the countries on the upper part of the Joliba. Salt is made along the low shores.

Climate.—There are two seasons, the wet and the dry. The former lasts from May to November, and is always ushered in and terminated by tornadoes. Nothing can exceed the gloominess of the weather during this period. The hills are wrapped in impenetrable fogs, and the rain falls in such torrents as to prevent any one from leaving his house. At this period the diseases which prove so fatal to the coast have generally made their appearance, though they can scarcely be said to belong peculiarly to any season. The average quantity of rain which falls appears to be about 160 inches, of which one-half falls in July and August. The air is then loaded with vapours, the destructive effects of which are observed in many objects. The putrefaction of animal substances and the fermentation of vegetables take place with a rapidity that can hardly be conceived. The rains are often interrupted by several fine days in succession.

Being at no great distance from the equator, a high degree of heat is experienced all the year round. It is even probable that the mean heat of this country exceeds that of the equator, being 81° and 82°. The greatest heat is experienced in the months preceding the rainy season, in which the mean temperature may be about 83°. Sierra Leone does not enjoy the advantages arising from the trade-winds, which in the West Indies operate so powerfully in reducing the temperature and rendering the climate more tolerable to Europeans. There is however a pretty regular succession of sea and land breezes. The sea-breeze usually sets in at ten o'clock, but sometimes two or three hours later, and blows from the west-north-west. It is always cool and pleasant, but varies greatly in strength. The land-breezes set in about nine o'clock in the evening, and are in general heated, and loaded with humid exhalations from the low and swampy grounds

over which they pass. Sierra Leone is noted for the unhealthiness of its climate, but there is great variation in this point in different years. In the interior the rains are much less abundant, and the heat is four or five degrees less.

Inhabitants.—Five different tribes inhabit the coast of Sierra Leone, all of whom belong to the negro race, but they have attained different degrees of civilisation. The country north of the river Kaba is occupied by the Mandingoes, whose chief town is Fouricaria. Between this river and the Rokelle are the Timannees, near the sea, and the Limba farther inland. South of the Rokelle are the Kooranko, and the most eastern portion is occupied by the Soolima. It is probable that there are other tribes in those parts of the country which have not yet been visited by Europeans. The Mandingoes, who are Mohammedans, have made some progress in civilisation; they are distinguished by their activity and restlessness, and are penetrating farther south, some of them having settled in the vicinity of the American colony of Liberia. The Timannees occupy a country extending 90 miles from east to west, and 55 miles from north to south. Their country is divided into four nominal districts, governed by headmen, who always assume the title of king. They cultivate the ground, though with less skill and industry than their neighbours. The Timannees are very docile; they soon accommodate themselves to European habits, and are in general much attached to their employers. They have their fetishes and greegrees, and none of them have embraced Christianity or Mohammedanism. Their towns are Kambia, Porto Logo, Macabele, and Ma Yosso. The country of the Limba is still little known. The Kooranko occupy a country extending east to the banks of the Joliba. In language and costume they closely resemble the Mandingoes, but they are by no means so handsome or so intelligent. The language, except a few words which have suffered a little from corruption, is the same as that spoken by the Mandingoes, but their manners bear a stronger affinity to those of the Timannees. They dress however like the Mandingoes, with great decency, and the manufacture of cotton-cloth is general among them. The Kooranko country contains the towns of Seemeva, Kolakouka, and Kamato. The Soolima, who occupy the country between the Kooranko on the south and Foots Jallon on the north, are described as muscular and short in stature, averaging in height from 5 feet 6 inches to 5 feet 8 inches. The capital of the Soolima is Falaba, which consists of about 4000 huts, and contains about 10,000 inhabitants. Other towns in the interior are Sangoora, Semba, Mousaiah, and Konkodoogore, which have altogether about 15,000 inhabitants.

The population of the colony in 1851 was 44,501. It included individuals from as many as 100 African tribes. The number of Europeans was little more than 100. Of 5223 slaves brought to the colony in 1849 and 1850, as many as 3852 emigrated. The colony is divided into 16 parishes, which are under the superintendence of the Bishop of Sierra Leone, 13 European and three native clergymen. There are good stone churches in almost every important village in the colony. The Wesleyan Methodists have four ministers and several native lay preachers. They have seven chapels in Freetown, and eight in the villages. There are about 30 chapels belonging to other sects; the ministers are generally persons of colour. Extensive provision has been made for education in the colony. The Church Missionary Society and the Wesleyans have schools in the villages and many parts of the rural districts. In Freetown the Church Missionary Society has a Grammar school and a female institution, and near the town, the Fourah Bay Institution for general education and the training of teachers and ministers. The Wesleyan Methodists have also a training school at King Tom's Point in Freetown, in which the pupils are clothed and fed at the expense of the society.

The affairs of the colony are administered by a governor and a council of seven or more members, appointed by the crown at the recommendation of the governor; the chief justice, queen's advocate, and colonial secretary being members ex officio. The law courts are the Assize, Royal Commission and Chancery courts, the Court of the Ordinary, of the Recorder of Freetown, of Vice-Admiralty for adjudicating on captured slave ships, and the Police and Small Debt courts. The revenue is derived from customs duties, of which the most important is an ad-valorem duty of four per cent. on all British and foreign goods imported, and from a few local taxes, the most productive being the spirit licence. A house and land tax first levied in 1852 produced in that year 3075*l.* African produce pays no duty. The revenue for 1852 was 19,886*l.* 11*s.* 2*d.*, the expenditure was 19,708*l.* 14*s.* 2*d.* The principal articles exported from the colony are teak timber, camwood, ginger, pepper, palm-oil, nuts, gum-copal, colanuts, and ivory. The chief imports are India goods, cotton manufactures, arms, ammunition, hardware, beads, spirits, ale, and wine from Great Britain; and tobacco, lumber, and cotton goods from the United States. The fisheries of the Banana Islands and the Isles de Loss employ from 150 to 200 boats and canoes, and from 1000 to 1500 men.

Freetown, the capital, stands on the north side of the peninsula, and on the left bank of the Sierra Leone River, about 5 miles from the sea, in 8° 29' N. lat., 13° 9' W. long., on an inclined plane at the foot of some hills, on which are the governor's residence or Fort Thornton, the barracks, and some other public buildings. It is 50 feet above the sea-level at high-water mark, and is regularly laid out in

fine wide streets, thickly interspersed with orange, lime, banana, and cocoa-nut trees. Many of the houses are commodious and substantial stone buildings. The population of Freetown is about 16,000. The town contains St. George's church, a good stone building; several chapels and school-houses; the Church Missionary and Wesleyan Missionary institutions; a Grammar school; a market-house, fish-market, custom-house, and jail, including the lunatic asylum. The navigable entrance of the river is narrow, there being an extensive shoal with steep sides in the middle of the river, called the Bullom shoals. The river can only be entered with a sea breeze, which, though tolerably regular, is not always certain either in strength or duration. *Kissy*, a small village 2 miles E. from the town, has a church and parsonage, and a hospital, to which is appended the Bullom hospital, a building between the village and the sea. *Regent's-Town*, at the basin of Sugar-Loaf Hill, 6 miles S. from Freetown, consists of a number of streets regularly laid out, and contains a good stone church, a parsonage, several school-houses, including a missionary training institution, a government house, and several warehouses. Many houses of the natives are built of stone. *Gloucester*, between Freetown and Regent's-Town, has a neat stone church and missionary residence, with a government establishment for African children under a native schoolmaster. There are many other villages in the colony, with populations varying from 100 to nearly 2000. In the eastern districts are Wellington, Newlands, Allen's-Town, Hastings, Stanley, Victoria, Rokelle, Waterloo, Calmont-Town, Campbell-Town, and Macdonald. In the western district are Kent, Russell, York, and Sussex. In the mountainous district are Bathurst, Charlotte, Leicester, Gloucester, Wilberforce, Congo-Town, Murray-Town, Aberdeen, Lumley, Goderich, and Adonkia.

The British Colony of Sierra Leone was established in 1787 by some philanthropists, who intended to show that colonial productions could be obtained without the labour of slaves. In that year 470 negroes, then living in a state of destitution in London, were removed to it; and in 1790 their number was increased by 1196 individuals of the same race, who had been settled in Nova Scotia, but could not bear the severity of that climate. Ten years later, 550 Maroons were transported from Jamaica to Sierra Leone; and in 1819, when a black regiment in the West Indies was disbanded, 1222 black soldiers and their families were settled there. Since the abolition of the slave-trade in 1807, the slaves captured by the British cruisers have been settled in the colony, and the population has been thus so much increased, that in 1820 it amounted to 12,000, and in 1846 to about 45,000; since then it has been kept nearly stationary by emigration. In 1818 the Isles de Loss, and more recently the Banana Islands, were added to the colony by purchase.

SIERRA MADRE. [MEXICO.]
SIERRA MORENA. [ANDALUCIA.]
SIERRA NEVADA. [ANDALUCIA; CALIFORNIA.]
SIGEAN. [AUDE.]
SIGMARINGEN. [HOHENZOLLERN.]
SIGNAKH. [GEORGIA, ASIATIC.]
SIGOOAM. [ALEUTIAN ISLANDS.]
SIGUENZA. [CASTILLA LA NUEVA.]
SIHUN, RIVER. [ANATOLIA.]
SILCHESTER. [HAMPSHIRE.]
SILEBY. [LEICESTERSHIRE.]

SILESIA (Schlesien), a province of Prussia, is situated between 49° 40' and 52° 8' N. lat., 14° 25' and 19° 15' E. long. It is bounded N.W. by Brandenburg; N.E. by Posen; E. by Poland; S.E. by Austrian Galicia; S. by Austrian Silesia; and S.W. by Bohemia. The province is 210 miles in length from north-east to south-west, and from 70 to 80 miles in breadth from east to west. The area of the province is 15,695 square miles. The population in 1852 amounted to 3,173,171, of whom 31,373 were Jews, and the remainder Protestants and Catholics in nearly equal numbers. The river Oder, which becomes navigable soon after entering the Prussian boundary, divides the province in its whole length into two nearly equal parts, which are very different from each other. That on the left bank, which is called the German side, is hilly, but has a very fertile soil, which amply rewards the labour of the husbandman. That on the right bank, called the Polish side, consists chiefly of a sandy and not very fruitful soil. There are however some sandy tracts on the German side, and some rich and productive spots on the Polish side. The country is highest on the south-eastern frontier, and declines more towards the north-western frontier, where it is the lowest.

Where the frontiers of Silesia and Bohemia meet, a mountain chain rises, which extends southward to the sources of the Breswa and the Ostrawitz, where it joins the Carpathians, divides the basin of the Oder on the one side from those of the Elbe and Danube on the other, and forms the natural boundary between Silesia and Bohemia and Moravia. This chain, called by the general name of the Sudetic chain, is divided into different parts, bearing different names, as the Isergebirge, the Riesengebirge, the loftiest and wildest part of the whole chain, the Schneekoppe, which is 4950 feet above the level of the sea, the Glatz Mountains, &c. In the interior there are some ranges unconnected with the great chain—the principal of which is the Zobtengebirge, 2318 feet above the level of the sea. On the right side of the Oder, from the part where its course is to the northward, the high

land disappears, and those immense plains begin which characterise this part of Europe. The Oder, locally called the Ader, comes from Moravia, and receives the Elsa, the Klodnitz, the Slober, and the Bartach, on the right side; the Oppa, the Neisse, the Ohlau, and the Katsbach, on the left. The *Bober*, a considerable stream, which carries down the drainage of the northern slope of the Riesengebirge, traverses the north-eastern part of Silesia, passing Bunzlau and Sagan, below which town it forms for a short distance the boundary of Silesia and Prussian Saxony, and then entering Brandenburg, joins the Oder below Crossen. A small portion of the province west from Görlitz belongs to the basin of the Spree. There are few lakes, and those which are so called are rather large ponds. The largest are the Koschnitz, Moswitz, and Schlauer lakes. The last is however four miles in length, but nowhere above a mile in breadth. The air is tolerably mild, except in the mountainous tracts; but in the southern districts the temperature for obvious reasons is lower, and the winter longer and more severe.

Among the useful animals of the province are—horses, horned cattle, sheep, goats, swine, game, fish, bees, and domestic poultry. Wolves are found on the Zobtengebirge, otters in the Bober, and sometimes beavers in the Oder. The vegetable products are—corn, pulse, potatoes, garden vegetables, fruit, flax, tobacco, hops, madder, wood, teazle, and timber. The minerals are copper, lead, cobalt, arsenic, iron, and zinc. This last metal is found in Silesia and in the adjoining territory of Craoow in far greater quantities than in any other country in Europe. Other mineral products are sulphur, marble, alum, lime, and, above all, coal, of which about two millions and a half tons are annually obtained. Though Silesia is on the whole one of the most fertile and best cultivated provinces of Prussia, yet it does not produce sufficient corn for the consumption of its dense population. The province is traversed by the Vienna-Berlin railway, which passes through Oppeln, Brieg, Breslau, and Liegnitz, and from which a branch runs from Brieg to Neisse; another from Breslau to Schweidnitz, Frieberg, and Woldenburg; and a third from the Handorf station in the north of the province, and eastward to Glogau. At the Kohlfurt station, 82 miles W.N.W. from Breslau, the Saxo-Silesian railway from Dresden joins the Vienna-Berlin line, having passed in a portion of the north-west of the province the town of Görlitz.

The manufactures of Silesia are of the greatest importance, and that of linen has existed from a very remote time. It is carried on with little aid from machinery, and chiefly by the country people. The cotton manufacture has extended considerably since 1840. Woollen cloths are manufactured in some towns. There are sugar refineries in several places; tanneries at Breslau and Schweidnitz, and breweries and brandy-distilleries in most of the towns. Machinery has been introduced into some larger manufactories for textile products. The province is divided into three governments, which, with their respective areas and population in 1847, are as follows:—

Governments.	Area in Square Miles.	Population in 1847.
Breslau	5251	1,165,994
Oppeln	5148	987,818
Liegnitz	5301	913,497
Total	15,699	3,065,509

Austrian Silesia is that part of Silesia which was retained by Austria in the treaty of Hubertsburg in 1763. It is united with Moravia, with which it forms one province. [MORAVIA.]

Towns.—Breslau, the capital of Silesia, forms the subject of a separate article. [BRESLAU.] The other towns of the government of Breslau, which comprises the central part of Silesia, are as follows:—*Brieg*, a large manufacturing town of 12,000 inhabitants, is situated 28 miles by railway S.E. from Breslau, on the left bank of the Oder. It was formerly fortified, and still has a castle and an arsenal. The church of St. Nicolai, famous for its fine organ, the gymnasium, and the lunatic asylum are the most remarkable objects in the town. The industrial products include woollen-cloths, linen, tobacco, beer, &c. A railroad joins Brieg to Neisse, which stands 31 miles to the southward. *Frankenstein*, 36 miles S. from Breslau, stands on a high hill near the left bank of the Pause, and has a population of 6000, who manufacture broadcloth, linen, aqua-fortis, straw-plat, saltpetre, &c., and trade in corn. Seven miles S.W. from this town is the strong fortress of *Silberberg*, erected under Frederick the Great to defend one of the mountain passes into Bohemia. *Glatz*, 16 miles S.S.W. from Frankenstein, is a strongly-fortified town situated in a narrow valley on the left bank of the Neisse, and has 10,000 inhabitants, including the garrison. It is surrounded by walls, and defended by an old castle built on a high hill, and by a regular modern fortress erected on a hill on the opposite side of the town. Linen, leather, damask, broadcloth, and hosiery are manufactured. The town has a gymnasium and a Catholic college. *Oels*, 16 miles N.E. from Breslau, stands on the Oelse, and has 6000 inhabitants, who manufacture broadcloth and linen. The castle, the former residence of the princes of Brunswick-Oels, contains a valuable library and collections of natural history. The town has a gymnasium and a theatre. *Reichenbach*, a town of

5500 inhabitants, surrounded by walls and ditches, 31 miles S.S.W. from Breslau, has cotton factories, a synagogue, two private observatories, and several benevolent institutions. *Schweidnitz*, a fortified town on the Weistritz, is 35 miles by railway S.W. from Breslau. It has a gymnasium and 13,000 inhabitants, who manufacture gloves, leather, broadcloth, beer, tobacco, &c., and trade in wool. The Roman Catholic church of Schweidnitz is adorned with paintings, and has one of the loftiest towers in Silesia. The neighbourhood of Schweidnitz is a very beautiful country.

The towns in the other two governments are noticed under *LIGNITZ* and *OPPELN*.

SILHET, or *SYLHET*, Hindustan, a district in the presidency of Bengal, situated chiefly between 24° and 25° N. lat., 91° and 98° E. long., is bounded N. by the Cossyah Hills, E. by Muneepore, S. and W. by Tiperah and Mymensing. The area is computed at 3532 square miles. The population of the district is estimated at upwards of a million, supposed to be in the proportion of two Mohammedans to three Hindoos. The southern and central portion of the territory is a continuation of the flat surface of the lower districts of Bengal, and is subject to deep inundation during the rainy season. Towards the north-east the surface is broken irregularly into a number of detached hills, clothed to their summits with trees and verdure, and terminating in the steep and lofty ridges that rise to a height of 6000 feet along the boundary of the district. The western border is varied by a succession of fine vales and conical hills, which bound the valley of the Brahmaputra. The principal rivers are the Soormah and the Menga. The climate is healthy and the soil fertile. Besides chunam, or lime, which is found in inexhaustible quantities, and exported to all parts of Bengal, coal of a good quality is found in the district. Elephants, buffaloes, tigers, and deer are numerous. The rivers and streams swarm with fish. Oranges and limes grow in extensive plantations, and are largely exported. The other products are rice, sugar, cotton, cinnamon, cocoa-nuts, and other fruits. Wax, stick-lac, and aloe-wood are abundant. Baskets, strong cotton cloths, and a wild silk called muggadooties, are manufactured. The district is noted for boat-building; and Silhet shields are in much repute among the natives of Hindustan. The district is interspersed with numberless villages, and contains the towns of Aymerigunge, Chirra, and Silhet. *Silhet*, the chief town and the residence of the principal authorities of the district, is situated on the river Soormah, in 24° 55' N. lat., 91° 55' E. long., distant 120 miles N.E. from Dacca, and 325 miles N.E. from Calcutta by road.

SILISTRIA, or *Drystra*, the ancient name of which is Durosterum, in 44° 7' N. lat., 27° 12' E. long., 155 miles N.N.E. from Constantinople, is a fortified town in Bulgaria in European Turkey. It is the capital of a pashalic, and stands on the right bank of the Danube, which is here 1200 feet wide, and is studded with a series of islands between the town and the Wallachian shore. The town is large, defended by a citadel, and surrounded by double walls and ditches. The city itself is surrounded by ditches from 12 to 15 feet deep, and defended by strong palisades. The water-front of the town is protected by a fosse and wall. In the rear of the town are several tabias, or forts, the fire of some of which commands the islands opposite the town. On the land side the town is commanded by ranges of low hills. Silistria is ill-built; the streets are narrow and crooked, and the houses low; even the mosques and public baths partake of the general ugliness. There is however at the eastern extremity of the town a custom-house in a better style of architecture. The large magazines which surround it contain chiefly corn and flour. As it is a fortress built on the northern frontier, in the neighbourhood of the Danube, and is principally of a military character, the commerce has never been flourishing. The population amounts to 20,000.

Silistria has frequently been the theatre of sharp actions between the Russians and the Turks. It was unsuccessfully besieged by the Russians in 1778, and was again attacked by them in 1779, on which latter occasion they suffered a considerable loss. In 1828 General Rosh was obliged to retreat after besieging the town for some months; but it fell into the hands of the Russians in 1829, when Generals Diebitch and Krassowski took it by assault on the 30th of June. It was again attacked with a large force in May and June 1854 by the Russians, who, after enormous losses, retreated from the place, which was heroically defended by the Turks. The Russians were commanded first by Prince Gortschakoff, and lastly by Prince Paskiewitch; the Turks by Musa Kussul Pasha, aided by Captains Butler and Nasmyth, British officers, who happened to be in the place when the siege commenced. The Pasha was killed by the bursting of a shell; and Captain Butler died of fatigue and wounds received in defending the Arab Tabia earthwork. During this memorable siege the town and its defences were battered almost to ruins.

SILIVRI, a sea-port town of European Turkey, is situated 47 miles W. from Constantinople, and has about 5000 inhabitants. It is built in the form of an amphitheatre, on the declivity of a small hill facing the Sea of Marmara. It forms a beautiful object when seen from the sea. The top of the hill is crowned by the ruins of a fort, which was built under the Greek empire. The part of the town below the fort is solely occupied by Turks. The Turks have several mosques, and a market-place, which is much admired. The harbour admits only small vessels, and is generally filled with fishing-boats. Silivri

occupies the site of the ancient *Siletie*, which was a colony of Megaris.

SILSOE. [BEDFORDSHIRE.]
SILVERTON. [DEVONSHIRE.]
SILVES. [ALGARVE.]

SIMBIRSK, a government of Asiatic Russia, is situated between 52° and 57° N. lat., 42° 30' and 50° 5' E. long. It is bounded N. by Kasan, E. by the river Volga, which separates it from the new government of Samara, S. by Saratov and Pensa, and W. by Nijni-Novgorod. The area is 17,732 square miles, and the population 927,311. The surface is in general an undulating plain, but along the bank of the Volga there is a range of hills composed of clay, marl, limestone, and freestone, rising in some places to the height of 400 feet. The principal river of this government is the Volga, which enters it from Kasan, about the middle of the northern frontier, and runs in a direction nearly south to Stavropol, where it turns to the east; and there, after being joined by the Sok, coming from Orenburg, it makes a semicircular bend, and at Samara turns due west, in which direction it proceeds as far as the town of Sysran, when it again turns to the south. Among the minor rivers which belong to the basin of the Volga are the Ousa, and the Systan. The lakes and rivers are upwards of 500 in number, but they are all small. The climate is generally healthy; but the cold in winter and the heat in summer are extreme. The Volga is usually frozen during five months in the year.

The soil is generally fertile, and is carefully cultivated; producing rye, wheat, spelt, oats, barley, millet, and buckwheat. The inhabitants cultivate also the poppy, peas, lentils, flax, much hemp, tobacco, and some potatoes. Horticulture is in a backward state. In the northern parts of the government there are extensive forests. The breeding of cattle is attended to among the Kalmuck Tartars. The Tartars apply to agriculture with great success. Game is abundant, but the fur-bearing animals are scarce. The fisheries of various kinds in the Volga are productive. The minerals are alabaster, sulphur, and limestone.

The manufactures carried on are those of woollen cloths, blankets, carpets, sail-cloth, leather, silk, and nankeen. Glass-ware, soap, and candles are manufactured; and there are many spirit distilleries. The exports consist of horses, oxen, hemp, apples, water-melons, corn, fish, tallow, leather, raw hides, and millstones.

Simbirsk, the capital of the government, is situated on the right bank of the river Volga, and near the right bank of the Sviaga, which runs northward, while the Volga flows to the south. The town stands on an eminence which commands a fine view of the Volga and over an immense extent of country uninterrupted by forests. The town is not regularly built, but there are some broad and straight streets. Almost all the houses are of wood, but neat and convenient within. The churches, 16 in number, are all of stone, except one, which is of wood. There are two monasteries, a gymnasium, and manufactories of candles and soap, and some tanneries. The town is in a very fertile plain, and on one side there are gardens and orchards. The population amounts to 18,000. Of the other towns the most considerable is Sysran, on the river of the same name, near its conflux with the Volga. It has 8000 inhabitants, numerous churches, four public schools, and factories of various descriptions.

The government of Samara was constituted by a ukase issued in December 1850. It comprises three districts taken from the government of Orenburg, two districts of the government of Saratov, and one district, with two parts of districts of the government of Simbirsk. The area and population of each of the governments affected by this new arrangement, now stand as follows:—

Governments.	Area in Square Miles.	Population in 1846.
Simbirsk	17,732	927,311
Orenburg	96,701	1,192,823
Saratov	44,965	1,357,658

The government of Samara is composed of the following districts:—

Districts.	Governments from which the Districts were taken.	Area in Sq. Miles.	Population in 1846.
Samara	Simbirsk	5755	135,615
Stavropol	"	4358	188,508
Bugulminski	Orenburg	4782	110,286
Bagurianski	"	7237	191,168
Busulukski	"	9374	212,560
Nikolaewski	Saratov	9522	211,548
Novosenski	"	10,580	116,283
Total		51,588	1,115,963

Samara, the capital of the government, is situated on the left bank of the Volga and the right bank of the Samara River. It contains about 11,000 inhabitants, who carry on a considerable trade in cattle, sheep, salt-fish, caviar, skins, leather, and tallow.

The town was built in 1591 as a defence against the Kalmucks. *Stavropol*, population 8400, the chief town of the Kalmucks, is situated on the left bank of the Volga, about 20 miles N.W. from Samara. This town was built for the Kalmucks on their conversion to Christianity, about the year 1737. In the centre is a kind of fort, surrounded with palisades, which is the residence of the chief of the Kalmucks. The Russian or Cossak garrison is in the upper town. The merchants reside together in a slobos, and the citizens occupy the lower town. *Bugulma*, about 140 miles N.E. from Samara, contains a population of about 2000, and carries on a considerable trade in cotton and woollen cloth. Two large fairs are held here annually. *Bugurustan*, on the river Kivel, which joins the Samara, is about 100 miles E.N.E. from Samara. *Busuluk*, is situated near the junction of the river Busuluk with the Samara, about 90 miles E.S.E. from Samara town. It possesses tanneries, and some trade. A large annual fair is held at Busuluk.

SIMCOE, LAKE. [CANADA.]
SIMFEROPOL, or SIMPHEROPOL. [CRIMEA.]
SIMMENTHAL. [BERN.]
SIMOIS, RIVER. [TROY.]
SIMONOSEKI. [JAPAN.]
SIMON'S TOWN. [CAPE OF GOOD HOPE.]
SIMPANG, RIVER. [BORNEO.]
SIMPLON. [SWITZERLAND.]
SINAI, MOUNT. [ARABIA.]
SINDE. [HINDUSTAN.]
SI-NGAN-FOO. [CHINA.]

SINGAPORE is a British settlement in the East Indies, situated on the southern extremity of the Malay peninsula. It consists of the island of Singapore, and about 50 islets dispersed south and east from it in the Straits of Singapore. The territories of this settlement embrace a circumference of about 100 miles, including the seas and straits within 10 miles of the coast of the island of Singapore, and they lie between 1° 8' and 1° 32' N. lat., 103° 30' and 104° 10' E. long.

The island of Singapore has an elliptical form, and is about 25 miles in its greatest length from east to west, and 15 miles in its greatest width. The area is estimated at about 275 square miles. The island is divided from the continent of Asia by a long and narrow strait called Salat Tabrao, or the Old Strait of Singapore. This strait is nearly 40 miles long, and varies in width between 2 miles and a quarter of a mile. This strait was formerly navigated by vessels bound for the China seas; but the Strait of Singapore is now preferred. The Strait of Singapore is the high road between the eastern and western portions of maritime Asia.

The surface of the island is gently undulating, here and there rising into low rounded hills of inconsiderable elevation. The higher ground rises in general not more than 100 feet above the sea; the highest hill, called Bukit Timah, which is north-west of the town, does not attain 200 feet. The shores of the island are mostly low, and surrounded by mangrove-trees. In several places the coast is indented by salt-creeks, which sometimes penetrate into the land from three to six miles. When the island was first occupied by the British it was entirely—and is still for the greater part—covered with a forest composed of different kinds of trees, five or six of which are well adapted for every purpose in house-building. The water of the rivulets is almost always of a black colour, disagreeable taste, and peculiar odour, properties which it appears to derive from the peculiar nature of the superficial soil over which the streams flow. The water drawn from wells which are sunk lower than the sandy base is less sensibly marked by these disagreeable qualities. The southern and western division of the island consists of laterite resting on sandstone. Granite appears in the north and east. Iron-ore is abundant; but tin, so plentiful on the neighbouring continent, has not been found in the island.

The climate of Singapore is hot, but equable, the seasons varying very little. The atmosphere throughout the year is serene. The tempests of the China Sea sometimes occasion a considerable swell in the sea, and a similar but less remarkable effect is produced by a tempest in the Bay of Bengal. The effects of these remote tempests are particularly remarkable in the irregularity of the tides, which at times run in one direction for several days successively, and with great rapidity. The regular and periodical influence of the monsoons is slightly felt, the winds partaking more of the nature of land and sea breezes. To these circumstances must be attributed the great uniformity of the temperature, the frequent fall-of showers, and the absence of a periodical rainy season. The greatest quantity of rain falls in December and January, and the smallest in April and May. These frequent rains keep the island in a state of perpetual verdure. The thermometer ranges during the year between 72° and 88°. The mean annual temperature is 80.7° Fahr. The daily range of the thermometer never exceeds 10 degrees. The climate of Singapore is remarkably healthy, owing to the free ventilation that prevails, and to the almost entire absence of chilling land-winds.

Singapore is not rich in agricultural productions. Considerable tracts near the town have been cleared by the Chinese, who have succeeded in cultivating different kinds of fruits and vegetables, rice, coffee, sugar, cotton, and especially pepper and the betelvine (*Piper*

striboa). Only the summits of the higher grounds are barren, but on their slopes and in the depressions between them the soil frequently has a considerable degree of fertility. Tropical fruits succeed very well, such as the mangusteen, pine-apple, cocoa-nut, orange, and mango. The tropical vegetables, as the egg-plant, different kinds of pulse, the yam, the batata, different varieties of cucumber, and some others, grow very well, but the climate is too hot for most European vegetables. Large quantities of rice are imported from Sumatra and Java, and fruits from Malacca.

The animals of Europe have been introduced, but most of them are few in number, as pasture-grounds are scarce. The Chinese however keep a great number of hogs. Of the large quadrupeds of the continent tigers only are met with on the island. The loss of human life caused by the attacks of tigers is considerable. There are several kinds of monkeys, bats, and squirrels; also the icotides, the porcupine, the sloth, the pangolin, the wild hog, and two species of deer—the *Moschus pygmaeus*, which is smaller than an English hare, and the Indian roe (*Cervus Munjac*). Birds are numerous, especially different kinds of passerers, climbers, and waders. Tortoises are common. The coral-reefs and shoals in the vicinity of Singapore furnish that delicate fern-like sea-weed called 'aggar-aggar' (*Pucus saccharinus*) in abundance, and it forms an article of considerable export to China, where it is used in making thin glues and varnishes. It is made into a very fine jelly by Europeans and the native Portuguese.

In 1819, when the British took possession of the islands, the population amounted to about 150 individuals, mostly fishermen and pirates, who lived in a few miserable huts: about 80 of these were Chinese, the remainder Malays. In 1824, when the first census was taken, the population was 10,683; in 1852 it was estimated at 59,043, including Europeans, Indo-Britons, Native Portuguese, Christians, Armenians, Arabs, Chulians, and Klings from the coast of Coromandel; natives of Hindustan, Bugie, and Balinese; Malays, Chinese, Javanese, Kaffirs, Siamese, Jews, Parsees, and Bayanese. The Europeans are few. The Chinese are more than 30,000 in number, and the Malays about 12,000. The military force, which consists of a detachment of the Madras native regiment, with a small company of artillery, numbers about 500. The Europeans and Chinese constitute the wealthier classes. The Europeans are for the most part merchants, shopkeepers, and agents for mercantile houses in Europe. Most of the artisans, labourers, agriculturists, and shopkeepers are Chinese. The Malays are chiefly occupied in fishing, collecting sea-weed, and cutting timber, and many of them are employed as boatmen and sailors. The Bugis are almost invariably engaged in commerce, and the natives of India as petty shopkeepers, boatmen, and servants. The Chulians and Klings are daily labourers, artisans, and petty traders. The Kaffirs are the descendants of slaves, who have been brought by the Arabs from the Arabian and Abyssinian coasts. The most useful are the Chinese settlers.

The town of *Singapore* stands on the southern shores of the island, in 1° 17' 22" N. lat., 103° 51' 45" E. long., on a level and low plain of inconsiderable width, fronting the harbour. It extends about two miles along the shore, but only 1000 yards inland, where it is inclosed by hills from 100 to 150 feet high. The commercial portion of the town occupies the western extremity, and is separated from the other parts by a salt-creek, called the Singapore River, which is navigable for small craft. A good wooden bridge connects it with the eastern part, which contains the dwellings of the Europeans, the public offices, and the military cantonments. Contiguous to this portion of the town is the government-house, which is built on a hill. The most eastern part is occupied by the sultan of Johore, the Malays, and Bugis. The whole of the warehouses, and all the dwelling-houses in the principal streets in their vicinity, are built of brick and lime, and roofed with red tiles. The more distant dwelling-houses are built of wood, but roofed with tiles. The town contains a Missionary and an Armenian church, a court-house, jail, custom-house, baths, concert-rooms, several native schools, and the Singapore Institution founded by Sir Stamford Raffles, for the cultivation of the languages of China, Siam, and the Malay Archipelago. The institution comprises English, Malay, and Tamil schools, with upwards of 70 pupils. Ships lie in the roads of Singapore at the distance of from one to two miles from the town, according to their draught. With the assistance of lighters, cargoes are discharged and taken in with scarcely any interruption throughout the year. The lighters convey the goods to the river of Singapore, where they discharge them at a convenient quay, and at the door of the principal warehouses.

If the commerce of Singapore were limited to the produce of the place, it would give employment to very few vessels. Catechu or gambier, pepper, coffee, nutmegs, and a few of the finer fruits, are its principal products; and these, together with the pearl sago and iron implements, birds'-nests, trepang, tortoise-shell, and a large quantity of aggar-aggar, form the only native exports. But Singapore has risen into great importance as the emporium of Southern Asia and the Indian Archipelago. All the nations that inhabit the countries bordering on the Indian Ocean resort to it with the produce of their agriculture and manufacturing industry, and take in exchange such goods as are not grown or produced in their own countries. All of them find there a ready market. There is usually also an abundant supply of European goods. This has partly arisen from the harbour

of Singapore having been declared a free port, in which no export or import duties, nor any anchorage, harbour, or lighthouse fees are levied.

The commerce of Singapore may be divided into the Eastern trade, that of the Straits, and the Western trade. The Eastern trade, or that which is carried on with the countries east and south-east of Singapore, comprehends the commerce with China, the Spanish settlement of Manila, the independent tribes of the Indian Archipelago, the Dutch settlements on the island of Java and at Rhio, and the countries of the peninsula beyond the Ganges which lie east of the Malay Peninsula. The most important branches of this commerce are those with China, Java, and Siam.

The commerce with China is entirely carried on in Chinese vessels. They leave their respective ports during the north-east monsoon about January, and return with the south-west monsoon, which blows from April to October. From Canton the voyage is performed in from ten to twenty days, and from Fokien in twelve or fifteen days. The junks bring annually from 2000 to 2500 emigrants to Singapore. The principal articles of import are—camphor, crockery, raw silk, tea, joss-sticks, alum, hardware, and tobacco. The exports to China consist chiefly of guns, betel-nut, birds'-nests, béche-de-mer, cotton-twist, British cottons, iron, tin, opium, rice, black pepper, woollens, garro and lakka wood, and sapan wood.

The commerce between Singapore and Manila is carried on partly by Spanish and partly by American and English vessels. The imports from Manila into Singapore comprise hemp and rope, cigars, sugar, tea, sapan-wood, and a number of minor articles. The exports consist chiefly of opium, iron, and British cotton goods.

The trade with Celebes is almost exclusively in the hands of the Bugis of Waju, a country on the western side of that island, the inhabitants of which have colonised many islands of the Indian Archipelago, and carry on what may be called the foreign trade of the countries in which they have settled. They disperse the goods obtained at Singapore over most of the islands east of Celebes as far as the coast of New Guinea, and also over that chain of islands called the Lesser Sunda Islands. Their country vessels, called 'prahus,' arrive at Singapore during the prevalence of the eastern monsoon.

The commerce between Singapore and Borneo is almost exclusively carried on by native vessels, many of which are of great size; some of them are managed by Bugis. This trade is protected from pirates by the establishment of a British station at the port of Labuan.

An active commerce is carried on between Singapore and the rival settlement of the Dutch at Rhio, about sixty miles east-south-east. The direct commerce between Singapore and Java is limited to the three ports of Batavia, Samarang, and Surabaya; but European and India goods may be shipped from these places to any other Dutch settlement on the island of Java, or on the other islands of the archipelago, the Moluccas excepted. The commerce between Singapore and Siam is mostly carried on by the Chinese who are settled in that country, and in junks built at Bang-kok and other places. The commerce with Cochin China is carried on by the Chinese settled at Kangtso and Saigun in Camboja, and at Quinhon, Faifo, and Hué in Cochin China.

The commerce of the Straits is carried on with the Malay peninsula, the island of Sumatra, and other neighbouring islands. The harbours on the eastern side of the peninsula which trade with Singapore are Pahang, Tringanu, and Calantan, and this trade is rather active. On the western side the principal trade is with Penang, or Prince of Wales Island, and Malacca. The commerce between Singapore and the island of Sumatra is almost entirely limited to the ports along the eastern coast of the island; there is hardly any commercial intercourse with the Dutch settlements of Bencoolen, Padang, and Trapanuli, which are on the western coast. The commerce of the eastern coast is divided between Singapore and Penang. The harbours which have intercourse with Singapore are—Campar, Siack, Indragiri, Iambie, Assahan, and Batu Bara.

The western trade of Singapore comprehends that with Calcutta, Madras, Bombay, the island of Ceylon, and Arabia; with the Cape of Good Hope, Mauritius, and Australia; and with Europe and America. The commerce carried on with Calcutta is the most valuable. The commerce with Madras has been on the decline for several years, British manufactures having superseded the Madras piece-goods which formed the principal article of trade with that place. The commerce with Bombay is more important. The trade with Arabia is carried on by vessels which sail annually with Mohammedan pilgrims, who assemble at Singapore from Java and the neighbouring Malayan states. The trade with the United States is inconsiderable. The trade with Continental Europe is principally carried on by vessels under the French, Belgian, Hamburg, Bremen, and Danish flags.

The commerce of Singapore with Great Britain is of considerable amount. In 1853 the declared value of the goods exported from Great Britain to Singapore was 595,566*l*. The principal articles imported into Great Britain from Singapore are—caoutchouc, gum, gutta-percha, hides, mace, nutmegs, pepper, mother-of-pearl, oils, raw silk, sago, tin, and tortoise-shell.

The affairs of the settlement are administered by a governor, assisted by a council of several salaried members. A Recorder's Court has been established in Singapore. The revenue is raised from government

rents, dues, and fines, and from an excise on pork, opium, and home-made spirits. The total income for the year ending 30th April, 1852, was about 40,000*l.* The expenditure was 21,110*l.*, exclusive of the expenses for the military and convicts.

History.—On the site of the present British settlement formerly stood the capital of a Malay kingdom, the city of Singhapura (the 'Lion's Town'); and Sir Stamford Raffles was able in 1819 to trace the outer lines of the old city. It was next the capital of the kingdom of Malacca. This town was taken in 1252 by a king of Java, and the residence of the king was transferred to the town of Malacca, which was then founded. After that event the town seems gradually to have decayed, and the country to have been abandoned. It was then a part of the kingdom of Jahore, which had been so reduced by internal discord that some of the superior officers had become independent. One of them, the Tumungong, or chief justice, had got possession of the island of Singapore and the adjacent country, and from him the British obtained in 1819 permission to build a factory on the south shore of the island. Soon afterwards a person who had some claim to the throne of Jahore came to the British settlement, and received a small pension. From this person, who was afterwards king of Jahore, and the Tumungong, the British obtained in 1824 the sovereignty and fee-simple of the island, as well as of all the seas, straits, and islands, for the sum of 60,000 Spanish dollars, and an annuity of 24,000 Spanish dollars for their natural lives. In 1826 Singapore was placed under the provincial government of the Straits Settlement, which was fixed on Penang, or Prince of Wales Island. In 1851, by an order of the directors of the East India Company, Singapore, Malacca, and Prince of Wales Island, were detached from the presidency of Bengal, and constituted a separate government.

SINIGAGLIA. [PESARO-URBINO.]

SINOPE. [PAPLAGONIA.]

SIPHNO, called also *Siphanto* and *Sifanno*, an island in the Archipelago, forming one of the group called the Cyclades, is situated between 36° 50' and 37° 10' N. lat., 25° 10' E. long.; it lies opposite Antiparo, S.E. from Serpho, N.E. from Milo, and S.W. from Paro. It is oblong in form, and about 30 miles in circumference. [ARCHEPHELAGO, *Grecian.*] It was colonised by Ionians from Athens. (Herodotus, viii. 48.) In the reign of Polycrates, the tyrant of Samos, about B.C. 520, the inhabitants were very flourishing in consequence of their gold and silver mines, and, according to Herodotus (iii. 57), they were the most wealthy of the islanders. Their mines were afterwards less valuable. Siphnus is very little noticed by ancient authors. From Stephanus Byzantinus, Hesychius, and Suidas we learn that the natives were of dissolute manners, inasmuch that to do like a Siphnian was a term of reproach.

Fiedler mentions only two towns: *Kastron*, on a rocky hill overlooking the sea, which is the residence of the governor; and *Stawri*, called Stavril by Tournefort, in the centre of the island. Siphno is in the patriarchal of Nakscha. The bishop is also bishop of Milo. The population in the time of Tournefort was about 5000; they were taxed in the year 1700 at 4000 crowns of French money. The lands are chiefly laid out in vineyards. The chief trade is in silk, figs, honey, wax, sesame, and cotton stuffs, which are celebrated for their quality: the inhabitants import the raw material. There are very few sheep, horses, or horned cattle. The climate is good, and the inhabitants long-lived.

The antiquities of the island are few. On the south side, at Porto Plati Gallo, are the remains of an old Greek town. Tournefort speaks of a temple sacred to Pan near the castle, which is also noticed by Carpacchi, and of several marble sarcophagi with good sculpture. The Greek coins of Siphnus are very numerous: they are of gold, silver, and copper. *Kastron* is a castle built apparently when the Venetians first occupied the island. Various buildings bear the arms of the Gozzadini family, three of whom were still living there in the time of Tournefort.

SIRANG, or CERAM. [JAVA.]

SIRH'IND, Hindustan, a district in the protected Sikh territory, at the north-western extremity of the province of Delhi, is situated between 30° and 31° N. lat., 75° and 77° E. long., having the river Sutlej on the north, and on the east the head branches of the Jumna. It consists of extensive plains, which, lying at the head of India, as its name imports, divide the great desert from the lofty Himalayas, and form an open communication between the Punjab and the rest of Hindustan. The sacred river Sereswatee flows through the centre of the district. The country is well peopled and generally cultivated, but the periodical rains are not always sufficient to insure a crop. After a rainy season, during which the banks of the streams are flooded, the plains are clothed with good pasture, and the climate, cooled by the rains, is temperate and healthy. In the hottest season, however, the inhabitants are at times driven for shelter to subterranean dwellings. The principal towns are, *Patalah*, which is the largest and most flourishing; *Tahnesir*, an object of religious veneration to the Hindoos; and *Somanaa*. *Sirhind*, the ancient capital, now a heap of ruins, stands on the road to Belaspoor, in 30° 40' N. lat., 75° 55' W. long., distant 27 miles N.W. from Umballah, and 155 miles N.N.W. from the city of Delhi. It was founded or rebuilt in the 14th century, by Feroze III., who erected a fort in the town, and opened canals from the Sutlej and the Jumna for the irrigation of the

neighbouring district. Lying in the route of the Persian and Tartar invaders of Hindustan, the town was exposed to the ravages of war, and in 1707 was pillaged by the Sikhs, a disaster from which it has never recovered.

SIRINAGUR. [CASHMERE.]

SIROD. [JURA, Department of.]

SISSONNE. [AISENE.]

SISTERON. [ALPES, BASSES.]

SISTOVA, a town in Bulgaria, is situated on a height above the right bank of the Danube, 37 miles above Rustschuk, and 25 miles below Nikopoli, and has about 21,000 inhabitants. The town is defended by a citadel, and inclosed by a dry ditch and palisade. The houses are low and ill-built. The mosques, of which there are eight, are the only buildings worth notice. Sistova is a place of considerable commerce, and is looked upon by the Bulgarians as their proper capital. In ordinary times it has a good trade in corn, hides, leather, foreign manufactures, and colonial produce. The Turks and Austrians concluded a peace at Sistova in 1791.

SITKHA, the most important of the Russian settlements on the west coast of North America. Its proper name is New Arkhanghelak. This place lies in 57° 2' 50' N. lat., 135° 18' W. long., and is built on one of the group of islands which received from Vancouver the name of King George III's Archipelago. The population is about 1200, of whom 500 are employed by the Russian American company. The harbour, which Vancouver named Norfolk Sound, but which is now better known as the Bay of Sitkha, is spacious and safe, and offers excellent anchorage opposite the settlement. The place itself is surrounded by a wooden wall, and inclosed by mountains of considerable elevation, which are almost covered with forests, in which excellent timber is found. With the exception of the governor's house the dwellings are described as being little better than wooden hovels, huddled together without order or design. Ship-building constitutes the most important of the branches of industry, and the vessels of the Russian American Company are built here. New Arkhanghelak is the centre of the administration of the Russian territories in America, over which the American Company exercises sovereign powers, nearly in the same way as the Hudson's Bay Company over a much more extensive portion of North America. The collecting of furs is the exclusive object of both companies, and New Arkhanghelak may be compared with Fort York, which lies nearly under the same latitude on the eastern coast of America. The climate is milder here than on the east coast of America in the same latitude. A considerable amount of rain falls at Sitkha.

SITKHA, EAST and WEST. [ALEUTIAN ISLANDS.]

SITKOKF. [JAPAN.]

SITTINGBOURNE. [KENT.]

SIVAS, or SIWAS, a town in Asia Minor, on the north bank of the river Kizil-Irmak, in 39° 25' N. lat., 36° 55' E. long.; 100 miles S.W. by W. from Trebizond, and 100 miles N.E. from Kaisariyeh. It is the capital of a pashalic which comprehends the whole eastern part of Asia Minor, and which still bears the name of Rûm. The valley of the Kizil-Irmak, the ancient Halys, here spreads out into a broad and fertile plain. The situation, being level, with the exception of only one small circular elevation in the south-west, the whole city is seen to much advantage when approached from the north. It is interspersed with trees, without being buried in them, like most of the towns in these parts. The great number of chimneys seen above the house-tops indicate that the winter is severe; and the inhabitants affirm that it is as cold as at Erzurûm. The houses are well-built, partly tiled, partly flat-roofed, and intermingled with gardens. These, with the numerous minarets, give a cheerful aspect to the place. The bazaars are extensive and well stocked with goods, including many of British manufacture. The consumption of Sivas itself, and the circumstance of its furnishing supplies to many places, causes its transit-trade to be extensive. Sivas is inhabited by about 6000 families, of whom 1000 or 1100 are Armenians, and the rest Moslems. An Armenian historian states that the town contained 120,000 inhabitants in the time of Tamerlane; and that it capitulated to him on condition that their lives should be spared, which condition he most barbarously violated.

SIWAH is the modern name of the oasis in the Sahara, which was called by the Greeks and Romans Ammonium, Ammonia, or Ammoniac, from the celebrated oracle and temple of Jupiter Ammon, with whose worship the Greeks became acquainted through the Cyrenseans. The town of Siwah is in 29° 12' N. lat., 26° 17' E. long., and is about 160 English miles from the sea-coast. The whole oasis is about 15 geographical miles long and 12 miles broad, but Diodorus (xvii. 50) says that the length and breadth are about 50 stadia, which would only make a little more than 5 geographical miles. The surface is undulating, and in the north it is surrounded by high limestone hills; it is watered by many springs of fresh as well as of salt-water, the latter of which probably arise from the masses of salt mentioned by Herodotus. The ancients speak of three things as remarkable in this oasis: first, a well, called the Well of the Sun, of which the water was warm in the morning and evening, and cold at mid-day (Herod., iv. 181; Diodor., xvii. 50; Lucr., vi. 849, &c.; Pomp. Mel., l. 8); secondly, a large palace of the ancient kings of the Ammonians, which was surrounded by a triple wall, and situated in the centre of

the oasis (Diodor., xvii. 50); and thirdly, the temple of Jupiter Ammon, which was surrounded by a shady grove. Cambyses made an unsuccessful attempt to take the Ammonium (Herod., iii. 25); and it was visited by Alexander the Great. In the reign of the Ptolemies and under the Romans the oasis belonged to that nomos or province which was called Libya (Ptolem., iv. 5). In the time of Strabo (xvii., p. 813) the oracle was almost entirely neglected. In the middle ages the Arabs called this oasis Santariah.

The Ammonium, during its most flourishing state in ancient times, seems to have been well peopled; and the inhabitants, who lived in villages, are said to have consisted of three distinct tribes. The southern and western parts were inhabited by Æthiopians, the middle part by the Nasamones, and the north by a nomadic tribe of Libyans. The description which Diodorus gives of the beautiful climate of the oasis, and of its fertility, especially in fruit, is still applicable to it; nearly the whole oasis forms an uninterrupted succession of meadows, fields, and palm-groves; and the gardens produce an abundance of the most delicious fruits. The water however is said to be injurious to camels.

The present inhabitants consist chiefly of Berbers mixed with negroes, and all are very zealous Mohammedans. The principal place in it bears the name of Siwah, and has about 8000 inhabitants. This town and several other smaller places in the oasis are built upon eminences, and surrounded by walls to protect them from hostile inroads. The houses are all wretched huts, and the streets are narrow and dark.

Ruins of the ancient temple of Ammon are still visible. The paintings, sculptures, and hieroglyphics which remain on the walls, are copied and described in the work of Minutoli. There are also ruins of other places, especially in the neighbourhood of the modern village of Shargiah, which probably mark the sites of the ancient villages. The Wall of the Sun is near Shargiah, and is still remarkable for its varying temperature. Catacombs cut in the rocks have been discovered in four different parts of the oasis.

SIX-MILE-BRIDGE. [CLARE.]

SKEEN-ELF. [CHRISTIANSAND; NORWAY.]

SKERRIES. [DUBLIN, County.]

SKIBBEREEN, County Cork, Ireland, a market-town and the seat of a Poor-Law Union, is situated on the river Ilan, in 51° 34' N. lat., 9° 18' W. long., distant by road 52 miles S.W. from Cork, and 210 miles S.W. from Dublin. The population in 1851 was 3856. Skibberreen Poor-Law Union comprises 23 electoral divisions, with an area of 115,024 acres, and a population in 1851 of 38,059. The town contains a parish church, chapels for Roman Catholics and Wesleyan Methodists, two National schools, a court-house, market-house, dispensary, bridewell, and Union workhouse. In the town are flour-mills and a brewery. Quarter and petty sessions are held. There are six yearly fairs, at which large quantities of yarns and coarse linens are sold.

SKIDDAW. [CUMBERLAND.]

SKIPTON, or SKIPTON-IN-CRAVEN, West-Riding of Yorkshire, a market-town and the seat of a Poor-Law Union, in the parish of Skipton, is situated on an affluent of the river Aire, in 53° 58' N. lat., 2° 2' W. long., distant 44 miles W. from York, 216 miles N.N.W. from London by road, and 231 miles by the Great Northern and the Leeds and Colne branch of the Midland railways. The population of the town of Skipton in 1851 was 4982. The living is a vicarage in the archdeaconry of Craven and diocese of Ripon. Skipton Poor-Law Union contains 47 townships, with an area of 147,597 acres, and a population in 1851 of 28,363.

Skipton is an ancient town, which appears to have risen with the castle. The houses are built of stone. The only public building belonging to the town is the town-hall. Skipton Castle, a little to the east of the church, was formerly a place of great strength. It was built originally by Robert de Romillé, about the end of the reign of William the Conqueror. It stood a siege of three years against the parliamentary army, but was compelled to surrender on Dec. 22nd, 1645. In 1649 it was dismantled by order of parliament; but it was afterwards rebuilt by the Countess of Pembroke as a residence. Some parts of the old castle are incorporated with the modern building. The parish church is a substantial and spacious structure, parts of which are of great antiquity. The district church of Christ church was built in 1838; that of St. Mary's Embeay is a new erection on the site of the first ecclesiastical foundation in Craven. The Primitive Methodists have two chapels, and the Wesleyan Methodists, Independents, Swedenborgians, and Roman Catholics have each one chapel. There is a Free Grammar school, founded in 1548 by William Ermysted, canon-residentary of St. Paul's, London. The number of scholars in 1854 was above 60. The income from endowment is about 600*l.* a year. There are National and British schools, a mechanics institute, and a savings bank. The market, which is on Saturday, is a very large market for corn, and there are fairs on alternate Mondays for cattle and sheep. A county court is held. The population is partly agricultural, the vicinity forming an excellent grazing district, but the cotton manufacture is the chief source of employment. The Leeds and Liverpool Canal passes the town.

SKIRLAUGH, East Riding of Yorkshire, a village and the seat of a Poor-Law Union, in the parish of Swine, is situated in 53° 50'

N. lat., 0° 15' W. long., distant 9 miles N.N.E. from Hull, and 183 miles N. by W. from London. The population of the township of North Skirlaugh in 1851 was 190, of whom 68 were in the Union workhouse. The living is a chapelry annexed to the vicarage of Swine, in the archdeaconry of the East Riding and diocese of York. Skirlaugh Poor-Law Union contains 42 townships, with an area of 67,028 acres, and a population in 1851 of 9279. In the village is an elegant chapel, erected early in the 15th century by Walter Skirlaugh, bishop of Durham.

SKULL, Cork County, Ireland, a village and the seat of a Poor-Law Union, is situated in the midst of wild romantic scenery, at the head of Skull Harbour, in Roaring Water Bay, in 51° 33' N. lat., 9° 30' W. long., distant by road 64 miles S.W. from Cork, and 222 miles S.W. from Dublin. The population in 1851 was 535, besides 1811 in the Union Workhouse. Skull Poor-Law Union comprises 11 electoral divisions, with an area of 57,169 acres, and a population in 1851 of 16,418. The village contains a number of well-built houses; a neat parish church, built in 1720; a Roman Catholic and a Wesleyan Methodist chapel; two National schools, and others partly endowed; a dispensary; and the Union workhouse. The harbour is a convenient and sheltered roadstead, with an anchorage of three or four fathoms, accessible at all times of the tide. A rock, midway in the entrance, is dry at two hours' ebb. Behind the village Mount Gabriel rises to the height of 1835 feet. Skull is said to have been anciently a seat of learning, and to have derived its present name from its earlier title, St. Mary of the Schools.

SKYE, Inverness-shire, Scotland, one of the Hebrides, lies between 57° 2' and 57° 41' N. lat., 6° 37' and 6° 40' W. long. It is separated from the mainland by a narrow strait, forming the entrance to Loch Alsh, in some parts not more than a mile wide. The extreme length of the island, from the point of Sleat to the point of Aird, is about 44 miles; its breadth, at the northern part of the island, slightly exceeds 20 miles. The population in 1851 was 21,521.

Portree, the only town in the island, has been already noticed. [INVERNESS-SHIRE.] The island throughout is extremely mountainous. The Cuchullins, a chain of hills stretching along the south-western coast, are remarkable for their craggy peaks and fantastic outlines. They are generally of granitic formation, but one group is composed principally of hypersthene rock. The highest peak of these mountains is about 3220 feet. The coast is indented with lochs, and there are several small inland lakes, the most remarkable of which is Loch Coruisk, celebrated in Sir Walter Scott's 'Lord of the Isles.' The margin of this loch is composed of rough and precipitous rocks, rising to a gigantic height. The cave of Strathaird, the most remarkable of the natural beauties of Skye, is a cavern, the roof, floor, and walls of which are entirely covered with stalactites, many of them assuming elegant and fanciful forms. The soil of Skye is unproductive. There is scarcely any wheat grown, potatoes being the principal produce. The herring fishery furnishes a subsistence to the poorer population for a few months in the year.

SKYRO (Scyros), an island in the Ægean Sea, belonging to Turkey, lies east of the island of Eubœa, in 39° 10' N. lat., 25° 12' E. long. The earliest inhabitants were Pelasgians and Carians, and Dolopes. Homer records the capture of it by Achilles ('Il., x. 664), who is said to have been discovered there disguised in female attire before the Trojan war. Theseus was sent into exile to this island, and was murdered by Lycomedes, its king, who became jealous of his popularity. (Pausan., iii. 6.) In B.C. 476 it was taken by Cimon, when the inhabitants were enslaved, and a colony was sent thither from Athens. (Thucyd., i. 98.) Six or seven years after this event the bones of Theseus were removed to Athens. The island afterwards passed out of the hands of the Athenians, but was restored to them by the peace of Antalcidas, B.C. 386. It was taken by Demetrius Poliorcetes, and again given to Athens B.C. 196, in the treaty between Rome and Philip of Macedon. (Livy, xxxiii. 30.)

The island is 60 miles round. On the west side is a large bay (Panormo) with several islets, the most western of which, *Skyro Poulò*, is 8 miles from the nearest part of the island. The harbour here is called Kalamitza by the Greeks, and by the Italians Gran Spiaggia. Opposite to this, on the other side of the island, is *Port Akhili*, named from the Homeric hero Achilles. The isthmus between these two points divides the island into two parts: the southern portion is uncultivated, full of high mountains, intersected by deep gullies, and rugged and bare, except at their summits, where they are covered with oak, fir, and beech. Mount Cocyla, on the east coast, a little to the south of Port Akhili, is 2588 feet high. At the southern extremity of the island is a port called *Trimpouchois*, or *Trébokhâ*, corruptions of *Tre Boche*, or the Three Mouths. It is surrounded by wooded hills, and has three entrances, the one on each side being about one-third of a mile in width, and the middle one rather narrower. They are all safe and deep. There is a depth of about 20 fathoms water in the centre of the harbour.

The northern division of the island is less mountainous. The town of *St. George* (*Hagios Giorgios*), on the east coast, covers the north and west sides of a high rocky hill. It contains nearly the whole population of the island, which is about 3000. It is the seat of a bishop. On the summit of this hill are the ruins of a castle built during the middle ages, and many houses, all abandoned, which are used by t'

inhabitants to keep stores in. The houses of Skyros are flat-roofed, of two stories, the lower of stone, the upper of wood, surmounted by terraces covered with earth. This hill was the site of the ancient Acropolis; the remains of Hellenic walls and towers still exist on the hill and its slope towards the town. The greater part of the ancient city lay to the east, near the sea. In this direction there is a large semicircular bastion almost entire. In the neighbourhood of St. George is a plain four square miles in extent, which bears corn, grapes, and figs. There is another at Kalamitza, which is also fertile. Other products of the island are excellent wheat, madder, wine, honey, wax, oranges, and lemons. There are a few oxen, and about 15,000 head of sheep and goats. Feluccas and other vessels are built of mountain pine. Oak-timber is used for fire-wood. The inhabitants of Skyros are good seamen.

SLANE. [MEATH.]

SLAVE RIVER AND LAKE. [HUDSON'S BAY TERRITORIES.]

SLAVONIA. [CROATIA.]

SLAWKOW. [POLAND.]

SLEAFORD, Lincolnshire, a market-town and the seat of a Poor-Law Union, in the parish of New Sleaford, is situated on the little river Slea or Sleaford, in 53° 0' N. lat., 0° 23' W. long., distant 18 miles S. by E. from Lincoln, and 115 miles N. by W. from London. The population of the town of Sleaford in 1851 was 3729. The living is a vicarage in the archdeaconry and diocese of Lincoln. Sleaford Poor-Law Union contains 56 parishes and townships, with an area of 127,867 acres, and a population in 1851 of 24,412.

The town has received the name of New Sleaford to distinguish it from the adjacent village of Old Sleaford. The bishops of Lincoln had once a castle here. The church is a spacious cruciform building, with a tower of early English style, surmounted with a spire of later date, 144 feet high. There are chapels for Independents and other Dissenters; a Grammar school founded in 1604, which had 26 scholars in 1854; National schools, partly endowed; and a savings bank. The town-hall is a modern building. Quarter sessions and a county court are held in the town. Monday is the market-day; fairs are held on Plough Monday, Easter Monday, Whit-Monday, August 11th, and October 20th.

SLESWICK. [SCHLESWIG.]

SLIGO, a maritime county in the province of Connaught, Ireland, is bounded N. by the Atlantic Ocean and Donegal Bay; E. by the counties of Leitrim and Roscommon; S. by Roscommon and Mayo; and W. by Mayo. It lies between 53° 53' and 54° 26' N. lat., 8° 3' and 9° 1' W. long. Its greatest length from east to west is 41 miles, and from north to south 38 miles. The area is 721 square miles, or 461,753 acres, of which 290,696 acres are arable, 151,723 acres uncultivated, 6134 acres in plantations, 460 acres in towns, and 12,740 acres under water. The population in 1851 was 128,510.

Coast-Line and Islands.—The coast has an irregular outline, forming several bays and natural harbours. Except in Sligo Bay and along the coast eastward from it the shore is rocky. Off that part of the coast which extends north-eastward from Sligo Bay, distant between three and four miles, is Innismurray, a small island, about a mile long from east to west, which rises precipitously on every side except just at the east point. It contains about 209 acres of cultivable land, chiefly pasturage, and is inhabited by about a score of families. Two or three miles farther out to sea are the Boabinsy rocks. Sligo Bay is nearly six miles across at the entrance, and about 10 miles deep to the town of Sligo. On the south-west side of the entrance is Aughris Head, and on the north-east side is Roskeeragh Point. The bay is divided by projecting headlands into three smaller bays. The middle bay is that which leads to the town of Sligo; it is in great part occupied by a large bank called Cummeen Strand, but has a channel navigable to the town for vessels drawing 13 feet of water. In this bay are Covey Island, which forms a natural breakwater, and Oyster Island, on which are two lighthouses. There are extensive sands or other strands in Killala and Sligo bays, and along the coast eastward of Sligo Bay.

Surface, Hydrography, and Communications.—From the western boundary an extensive plain stretches eastward, narrowing as it approaches Ballysadere Harbour. From the coast it rises gradually to the base of the Slieve Gamph and Ox Mountains, the two parallel divisions of a range 25 miles long by 5 or 6 miles broad which runs in a south-easterly direction from the head of Ballysadere Bay to Foxford in Mayo. The height of the range within the county varies from 600 to nearly 1800 feet. On the north-west side the hills rise into steep rocky peaks, with intervening ravines of no great depth. On the south-east side the ascent is more gradual and less rocky, and the streams are more abundant. Along this side of the range the surface between the Mayo and Leitrim boundaries exhibits a succession of valleys and hilly or undulating tracts, with occasional heights of from 300 to 700 feet. North from the Curlew Hills, which rise 863 feet on the Roscommon border, Carrowkeel Mountain has an elevation of 1062 feet; and Keshcorran, a little to the west of it, is 1183 feet high. The Braughlieve Mountains, which belong also to Roscommon and Leitrim, have an altitude in this county of 1183 feet. The town of Sligo stands in an extensive plain, which spreads eastward to the border of Leitrim, and northward to the shores of Donegal Bay. Slieve Dacane, 900 feet high, and Sliah Mountain, a height of 967 feet,

bound this plain on the south. About five miles north from Sligo the plain is broken by Truskmore, King's Mountain, and Benbulbin, three heights which form part of a range that comes in from Leitrim and Fermanagh. Benbulbin, with an elevation of 1722 feet, has a gradual ascent on the south side, but the north side is nearly perpendicular. Knocknarea, a hill of similar form, with its steep side to the west, rises on the north-east shore of Ballysadere Bay to the height of 1078 feet.

The lakes of the county are mostly small, and the greater number belong partly to Leitrim and Roscommon. Lough Gill, the largest and most beautiful, extends nearly six miles eastward from the neighbourhood of Sligo to a point just within the county of Leitrim. It has an extreme width of two miles, and is 20 feet above the level of the sea at low water. Lough Arrow and Lough Gara, the latter chiefly, and the former nearly all within the county, on the border of Roscommon, are nearly as large as Lough Gill; both are studded with islands, and remarkable for their picturesque scenery. Lough Easky and Lough Talt lie in the valley that separates the Slieve Gamph and the Ox Mountains.

The navigable waters of the county are the estuary of the Moy in Killala Bay, and the estuaries of the Owenmore and Garrogue in the Bay of Sligo. The Moy is navigable to Ballina, and forms the boundary of the county from a point three miles above Ballina. The Owen-garrogue, one of its two principal branches, has its sources within the county, in the Ox and Curlew Mountains, and flowing in a south-westerly direction, contributes its waters to the main stream at Foxford. The Easky drains Lough Easky, collects several mountain streams in its course, and runs northward through the town of Easky into the Atlantic, which also receives from this part of the coast the Finnid, the Ballybeg, and the Dunneil. The Arrow, or Uncion, has its source in Lough Arrow, and flows northward to the head of Ballysadere Bay, falling over shelving rocks, and forming an imposing cataract near the termination of its course. The Owenmore rises among the Curlew and Keshcorran Mountains, and pursues a winding course northwards, through Templehouse Lough, joining the Arrow about two miles from its embouchure. About three miles higher, the Owenmore is entered by the Owenbeg, which flows from the Ox Mountains, eastward through the town of Coolaney. Lough Gill, which is fed by the Bonnet River from Leitrim, is drained by the Garrogue, which has a course of about three miles through the town of Sligo into the head of the bay. The Drumcliffe and the Duff or Buuroes, with other small streams, drain the district north from Sligo, the Duff entering Donegal Bay at the Leitrim boundary.

The principal roads are the mail-road from Dublin to Sligo, with a branch mail-road to Ballina and Castlebar; and the mail-road from Sligo to Ballyshannon (county of Donegal), from which place it continues to Donegal and Londonderry, with a branch-road to Enniskillen. The Ox Mountains are traversed by several passes; that through which the Dublin and Sligo mail-road runs presents some very picturesque scenery. The inland traffic to and from Sligo is of very considerable amount. In the parts about Sligo Bay produce is carried to market by water.

Geology, Mineralogy, &c.—The Ox Mountains consist chiefly of mica-slate, with occasionally granite, hornblende-slate, gneiss, and quartz-rock; the strata dip rapidly towards the south. The mica-slate extends eastward across the Owenmore River, and along the south side of Lough Gill, by Slieve Dacane and Sliah Mountain, into the county of Leitrim, forming a range which may be regarded as a prolongation of the Ox Mountains. At the base of the Ox Mountains, on both sides, the old red-sandstone and conglomerate are observed skirting the primary rocks, and sinking below the carboniferous limestone, which occupies the lower lands extending on one side to the sea and on the other to the Curlew and other mountains on the border of Roscommon. The Braughlieve Mountains belong to the carboniferous group, and the Curlew Mountains to the old red-sandstone group. [ROSCOMMON, County of.] The old red-sandstone also constitutes the headland on the north-eastern side of the entrance of Sligo Bay. The rest of the county is occupied by the formations of the carboniferous limestone group. Yellow-sandstone, the lowest member of the group, forms a considerable area in the northern extremity of the county, and appears in the ridge of mountains on the west side of Lough Gara. The lower limestone, the member next above the yellow-sandstone, is found at the base of the Curlew Mountains, near Lough Arrow, and yields gray and dove-coloured marble. The mountains on the north-eastern border of the county are formed of the middle or calp-limestone, and of the upper limestone, which in Mount Benbulbin forms a bed 500 feet thick. This county and the adjacent one of Mayo are traversed by trap-dykes unexampled for length, directness, and parallelism. Their direction is nearly east and west. Trachyte, a formation not observed elsewhere in the British Isles, is found on the shore of Killala Bay.

Copper- and lead-mines were formerly wrought in the Ox Mountains, and iron-ore in the mountain of Kilmacley. Iron-ore appears along several streams. Garnets are found near Lough Easky, and asbestos to the eastward. Manganese has been met with in the mountains south-west from Lough Gill, and brick-clay, suitable for the manufacture of coarse pottery, near Lough Gill on the Sligo and Ballintogher road.

Climate, Soil, and Produce.—The climate is very variable, affected by frequent rains, and high winds from the Atlantic, but on the whole mild and healthy. Thin mossy and sandy soils, or both intermixed, varied with a light gravelly loam, prevail in the district north from Sligo. Improving as they approach the plain of Sligo, they there pass into a deep rich loam, forming the finest land in the county. South from Sligo, along the valleys of the Arrow and Owenmore, and as far as the Curlew Mountains, are extensive tracks of productive land and rich pasturage, interspersed with occasional patches of bog. On the shores of Lough Gara the soil is excellent both for tillage and grazing, but towards the Ox Mountains the land along the southern border is inferior. The district lying between the Ox Mountains and the sea consists, to a great extent, of moor and deep moss, with a broad belt of cultivated land along the shores of Killala Bay and the Atlantic. Oats, potatoes, and a considerable quantity of wheat are raised. The occupations are mainly agricultural, and tillage is chiefly practised. Of late the introduction of an improved system of culture has been attempted, by the amalgamation of farms, and the employment of skilled agriculturists from other parts of the kingdom. In 1853 the number of acres under crop was 96,723, of which 1404 acres grew wheat; 42,308 acres oats; 2747 acres barley, bere, rye, peas and beans; 26,563 acres potatoes; 5128 acres turnips; 1761 acres mangel-wurzel, carrots, vetches, and other green crops; 695 acres flax; and 16,117 acres were in meadow and clover. Of plantations there were 7360 acres in 1841, yielding oak, ash, elm, beech, fir, mixed timber, and fruit. In 1852, on 13,992 holdings, there were 7251 horses, 5731 mules and asses, 83,819 head of cattle, 36,009 sheep, 17,612 pigs, 2242 goats, and 182,467 head of poultry.

A considerable number of the population are employed in fishing. The Sligo fishery district comprises 103 miles of maritime boundary, extending from Ballina Bridge to Abbey Point. In 1853 it had 216 registered vessels, employing 1269 men and boys. Coarse linens and woollens are manufactured in the county.

Divisions and Towns.—The county is chiefly in the dioceses of Achonry and Elphin, with small portions in those of Killala and Ardagh. It is divided into six baronies, Carberry, Coolavin, Corran, Leyny, Tireragh, and Tireril; and contains 41 parishes. The principal towns are Sligo, Ardnaree, a suburb of Ballina in Mayo, and Tobercurry. SLIGO and TOBERCURRY are noticed under their respective titles, and Ardnaree under that of BALLINA. The following towns and villages may be noticed here; the populations are those of 1851:—

Ballymote, population 965, a market-town, is situated at the junction of several roads, 14 miles S. by W. from Sligo. The parish church of Emlyfadd is a good building in the early English style, with a handsome tower and spire. There are chapels for Roman Catholics and Wesleyan Methodists, a court-house, dispensary, constabulary barrack, and bridewell. The place has a small manufacture of linen. Five annual fairs are held. The town is the seat of quarter and petty sessions. Close by it are the remains of a Franciscan friary, in which was composed the 'Psalter of Ballymote'; also the ruins of a castle built in the year 1300 by Richard de Burgo. The ruins consist of walls 60 feet high, with parapet and towers.

Ballysadere, population 670, is a small town 5 miles S. by W. from Sligo, at the head of Ardnaglass Harbour, on both sides of the Owenmore River, which here forms a very fine cascade. Several large flour- and oatmeal-mills have been erected on the different levels of the cascade, and a considerable export of oatmeal and flour takes place by the river, which is ascended by craft of 100 tons burden, to a small harbour below the falls. A limestone-quarry and a bleach-green are near the town. There are seven yearly fairs.

Collooney, population 568, is a market-town, situated on the right bank of the Owenmore, 7 miles S. from Sligo. The church is a handsome gothic building containing some good monuments. There are a Roman Catholic chapel, two schools, police-barracks, market-house, a linen-hall, and a dispensary. Near the town are a large bleach-ground and an oatmeal-mill. The market is on Thursday, and there are six yearly fairs. Petty sessions are held monthly.

Dromore West, a small post-town and the seat of a Poor-Law Union, is situated on the river Easky, and on the Sligo and Ballina road, 21 miles W. by S. from Sligo. It is a poor ill-built place, with a small population, and containing a National school, a dispensary, and the Union workhouse. Petty sessions are held fortnightly; and fairs five times a year. Dromore West Poor-Law Union comprises 17 electoral divisions, with an area of 96,965 acres, and a population in 1851 of 19,563.

Easky, population 513, is a small market-town, situated on the old or coast-road to Ballina, on the left bank of the river Easky, 27 miles W. from Sligo. It contains a neat parish church, a Roman Catholic chapel, a Baptist meeting-house, and a court-house. The market is on Wednesday. Quarter sessions and petty sessions are held.

Achonry, a poor hamlet, about 15 miles S.S.W. from Sligo, near the road to Tobercurry, is only remarkable as the seat of an ancient diocese, and contains little besides the parish church, which was built in 1823. The diocese of Achonry existed in the 6th century. It was united in the time of Charles I. to the see of Killala, and by the late Church Temporalities Act both were added to the diocese of Tuum. The diocese of Achonry comprehends the greater part of Sligo county, and

a small section of Mayo. It comprises 10 benefices. The chapter consists of a dean, archdeacon, precentor, and three prebendaries. A manor court is held in the village. *Bellaghy*, population 316, situated on the southern border of the county, has a market, held weekly, on Wednesday. Fairs are held five times a year. *Coolaney*, population 326, a village in the barony of Leyny, is situated on the right bank of the Owenbeg River, 10 miles S.S.W. from Sligo. The river is crossed by a bridge near the north end of the town. Coolaney forms one street parallel to the stream, and contains a Baptist meeting-house, a court-house, dispensary, and constabulary barracks. There are five yearly fairs. *Riverstown*, population 330, a village situated 23½ miles S.S.W. from Sligo, contains the parish church of Kilmacallane, a Roman Catholic chapel, a Methodist meeting-house, a school-house, dispensary, constabulary-barracks, two corn-mills, and two kilns. Petty sessions are held here.

The county returns three members to the Imperial Parliament, two for the county and one for the borough of Sligo. The assizes are held at Sligo, where are the county jail, the county infirmary, and a fever hospital. Quarter sessions are held there, and at Easky and Ballymote. Petty sessions are held in 14 places. The lunatic asylum for Connaught, to which this county is entitled to send 46 patients, is at Ballinaaloe. In the county are 12 dispensaries. A savings bank is established in Sligo town. In September 1852 there were 93 National schools in the county, attended by 5428 male and 5783 female children.

History and Antiquities.—This part of Connaught was made the scene of warfare between the descendants and family of Roderic O'Connor, the last monarch of Ireland, in their struggle for the principality of Connaught. Hugh O'Neil, chieftain of Tyrone, was defeated near Ballysadere, in 1200, when attempting to reinstate Cathal of the Bloody Hand, dethroned by his kinsman Carrach, who was supported by the Anglo-Normans under De Burgo. Some of the Anglo-Norman settlers were engaged on the side of Cathal. In 1245 the castle of Sligo was built, and, having been destroyed by the natives, was restored about the beginning of the next century. In the general rebellion near the close of Elizabeth's reign, the royal forces under Sir Conyers Clifford, president of Connaught, were surprised in this county by the natives under O'Rourke, chieftain of Breffney or Leitrim, and suffered considerable loss. In the rebellion of 1641 the county was occupied by the insurgents, and held by them till nearly the close of the war. In the war of the Revolution the county was held by the Jacobites.

The relics of antiquity are numerous. There are many cromlechs and other primeval monuments, such as the Giant's Cairn near Sligo, which consists of part of a circle of great stones. Remarkable caverns, the origin and purpose of which are unknown, occur in various parts of the county. Rath, or hill forts, are numerous; and at Drumcliffe there is the stump of a round tower with two ancient crosses. In every district monastic and other ecclesiastical remains are met with, and in some places the ancient structures have been converted into parish churches. There are ruined castles at Lough Gara, Ballinafad, Ardnaglas, Castle Connor, and several other places. The island of Innismurray contains some striking remains of the ecclesiastical architecture of different ages.

SLIGO, Ireland, the chief town of the county of Sligo, a market and sea-port town, a parliamentary borough, and the seat of a Poor-Law Union, is situated near the mouth of the river Garvogue or Garrogue, in 54° 22' N. lat., 8° 22' W. long., distant 131 miles N.W. from Dublin by road. The borough is governed by 6 aldermen and 18 councillors, one of whom is mayor; and returns one member to the Imperial Parliament. The population in 1851 was 11,104, besides 2216 in the Union workhouse. Sligo Poor-Law Union comprises 29 electoral divisions, with an area of 143,523 acres, and a population in 1851 of 58,565.

Sligo appears to have owed its importance to a castle and a monastery for Dominican friars, built here in the 13th century, by Maurice Fitzgerald, earl of Kildare, and at that time lord justice of Ireland. The town suffered repeated injuries from fire, and from the hostilities between the English and the native Irish. In the reign of James I. it received a grant of a market and two fairs, and was incorporated and made a parliamentary borough. In the civil war of James II. the town was taken by the Enniskilleners, who, after repelling one attack, were driven out by the Jacobites under Sarsfield; it was again occupied by the Protestants under Lord Granard.

The river, in passing through the town, changes its course from west to north and north-west, and is crossed by two bridges, the old bridge below the bend, and the new bridge above it. The town is situated partly within the bend of the river, but chiefly along its left bank. The houses are well-built, and many are handsome. The parish church of St. John is an ancient cruciform structure, with a massive square tower at the west end. Calry parish church is a modern gothic building, with a well-proportioned spire. There are a Roman Catholic chapel; a small Dominican friary, with a neat chapel attached; an Ursuline convent, and a convent of the Sisters of Mercy; a Presbyterian, an Independent, and two Methodist meeting-houses; and several schools. The other public buildings are, the county court-house and jail, the custom-house, linen-hall, a large butter-market, the Union workhouse, a new constabulary barrack, and

a lunatic asylum; and in an inclosure near Calry church, the fever hospital, infirmary, and dispensary. There is a savings bank in the town. The manufacture of linen is carried on; and there are soap-and candle-works, rope-walks, flour-mills, breweries, and a distillery. The river has an important salmon fishery. The port of Sligo is under the control of town and harbour commissioners, elected for life, who have much improved the harbour. The exports are chiefly of corn, meal, flour, butter, provisions, and linen-yarn; and the imports are West India produce, tobacco, refined sugar, tea, British spirits, wine, flax-seed, tallow, glass and earthenware, coals, iron, timber, and salt. In 1853 there were registered as belonging to the port, 13 vessels under 50 tons, and 19 of 50 tons and upwards, with an aggregate tonnage of 4140 tons; also two steamers of 111 tons. During 1853 there entered the port 204 sailing-vessels of 20,077 tons, and 177 steam-vessels of 24,684 tons; and there cleared 158 sailing-vessels of 15,443 tons, and 78 steam-vessels of 24,419 tons. The assizes for the county, and quarter and petty sessions, are held in the town. Fairs are held March 27th, May 7th, July 4th, August 11th, and October 9th. Tuesday and Saturday are the market-days. Steamers ply regularly between Sligo and Glasgow. In a part of the town, belonging to Lord Palmerston, are some ruins of the ancient monastery.

SLIMBRIDGE. [GLOUCESTERSHIRE.]

SLOBODSK-UKRAINE. [CHARKOFF.]

SLOUGH. [BUCKINGHAMSHIRE.]

SLUYS. [ZEALAND.]

SMÅLAND. [SWEDEN.]

SMARDEN. [KENT.]

SMOLENSK, a government of European Russia, is situated between 53° 12' and 56° 30' N. lat., 30° 20' and 35° 20' E. long., and is bounded N. by the governments of Pakov and Twer; E. by those of Moscow, Kaluga, and Orel; S. by Czernigov; and W. by Mohilev and Witepak. The area is 21,572 square miles, and the population in 1846 amounted to 1,170,600.

The country is a high undulating plain, broken only by low hills. The soil is clay, mixed with sand and black mould. Some parts are very fertile, and all well repay the expense of cultivation. The principal rivers are—the DNEIPER, which rises in this government, but is not navigable in all this part of its course; the Obecha, the Mischa, the Kaspla, which run in a westerly direction to the Dina; the Ugra, which flows eastward to the Oka; the Gjat and the Wasuga, both of which run into the Volga. There are, it is said, 150 lakes, but none of considerable extent; and many morasses. As the country lies high, the climate is colder than that of other provinces in the same latitude. The frost in winter is very severe, and the ice does not break up till April; on the other hand, the heat of the summer months is very great, vegetation luxuriant, the weather not changeable, and the air salubrious.

The government produces vast quantities of rye and other grain, hemp, flax, tobacco and hops, culinary vegetables, and some fruit; but the wealth of the country consists chiefly in its immense forests, which supply timber for the use of the province itself, and also for the navy, particularly fine masts, which are sent to Riga. The forests abound in game of all kinds; elks, deer, wild boars, wolves, bears, and lynxes are found in them, and prodigious quantities of wild birds. Much attention is paid to the breed of horses, which are of a good Lithuanian stock. Oxen are used in agriculture as well as horses, and great numbers are fattened for exportation. Swine are very numerous, but sheep do not appear to thrive. The country people have great numbers of bees. The minerals are copper, salt, and bog-iron. The rural population manufacture linen and woollen cloths for domestic use. The Smolensk carpets are in great repute. There are numerous saw-mills, brandy-distilleries, tanneries, soap and candle manufactories, and some glass-works.

The exports are—agricultural produce of the different kinds above named; hemp-seed, linned, horse-hair, hides, hogs'-bristles, wool, honey, wax, masts to Riga, timber and firewood to the Dnieper, boats made for the navigation of the Oka, the Volga, and the Dina; horses, oxen, swine, salt-pork, tallow, and lard. Most of the articles are conveyed by land to Riga, Wilna, and Moscow; a great part of the cattle are driven to Poland, and thence to Germany; and the timber is floated down the rivers which fall into the Dina, the Oka, and the Volga. The imports are—colonial produce, wines, manufactured goods, and various other articles. The principal commercial towns are Wisama and Gahatak. Smolensk, situated on the main road to Moscow, likewise takes an active share in the foreign commerce, but is chiefly engaged with inland and retail trade.

The great majority of the inhabitants belong to the Greek Church, under the bishop of Smolensk, whose diocese is co-extensive with the government, and has 603 parishes. There are a few Poles, Jews, and Germans. Smolensk is within the limits of the university of Moscow. Elementary education is extending among the population, but is still in a backward state. The government is divided into 12 circles.

Smolensk, the chief town of the government, is in 54° 50' N. lat., 32° E. long., on the right bank of the Dnieper, which is here navigable, and crossed by a wooden bridge. It is surrounded with a wall 80 feet high and 15 feet thick, nearly two miles in circuit, but in many parts out of repair, and has a strong citadel. Smolensk is one of the

most ancient towns in Russia. Its name occurs in the Russian annals as far back as A.D. 879. The Lithuanians obtained possession of it in 1413. In the next two hundred and fifty years it was repeatedly taken and retaken by the Poles and Russians, till it was finally taken by the latter in 1654. In 1812 the first serious conflict between the French and the Russians took place (August 16 and 17) under the walls of Smolensk, when it was bombarded and set on fire. The French on their retreat in November following blew up part of the works. Though not a handsome city, Smolensk is now much superior to what it was before 1812, when it was almost entirely built of wood. The part rebuilt since that time is more regular; the houses are generally of stone, and many of them handsome. The public buildings are numerous: there are sixteen Greek churches, three convents, one Roman Catholic and one Lutheran chapel, numerous charitable institutions, a gymnasium, a seminary for priests, a military school, &c. In a military point of view Smolensk is considered a place of great importance, as it commands the road to Moscow, the heart of the Russian empire. The manufactures are linen, leather, silks, hats, and soap; there is also a brisk trade in the natural productions of the country. The population at the lowest estimate is 12,000; some late writers state it at 20,000.

Wisama, about 110 miles from Smolensk, on the road to Moscow, is a considerable town, with 12,000 inhabitants. It is situated on a river of the same name, and is built on a hill, and surrounded with a wall. There being large vacant spaces, it covers a great extent of ground, so that viewed at a distance it looks much more considerable than it really is, an illusion which is aided by the steeples and domes of nearly thirty churches.

Porostschje, on the Kaspla, which is here navigable, is a town with 6000 inhabitants, 50 miles N.N.W. from Smolensk. It has a considerable transit trade between Smolensk and Riga.

Among the other towns are—*Dorogobusch*, on the Dnieper, a pretty and well-built town, 50 miles E. by N. from Smolensk, with 4000 inhabitants, who have some manufactures and considerable trade; *Gahatak*, or *Gjat*, which is situated on the river Gjat, on the road to Moscow, in the east of the province, and has 3000 inhabitants, who have a considerable transit trade in corn, hemp, iron, and river-barges, for the construction of which the neighbouring forests afford excellent materials; and *Koslawt*, 70 miles S.S.E. from Smolensk, which has large corn-stores, several mills, and about 4000 inhabitants.

SMYRNA (*Jemir*), one of the most ancient Greek cities in Asia Minor. There was an Old Smyrna and New Smyrna. The old town lay on the north-east side of the Hermean Gulf or Gulf of Smyrna. According to some traditions it was originally an Æolian colony, and was afterwards taken possession of by some Ionian exiles of Colophon. (Herod., i. 16, 149.) It is said by Strabo to have been founded by an Ionian colony of Ephesus, where a part of the old town is said to have borne the name of Smyrna from an Amazon of the same name. Afterwards however the Ephesian colonists are said to have been expelled by the Æolians, and to have fled to Colophon, whence a short time after they returned, and recovered their original home. (Strabo, xiv.) Subsequently, about the year B.C. 700, Smyrna, which had hitherto belonged to Æolis, was admitted into the Ionian confederacy. This ancient town of Smyrna was by some supposed to have been the birthplace of Homer; and in its vicinity, on the banks of the little river Meles, there was a grotto in which Homer was said to have composed his poems. The Lydian king Sadyattes took and destroyed Smyrna, and distributed the inhabitants among a number of villages in the neighbourhood. (Strabo, xiv., p. 646; Herod., i. 16.) In this state they remained, according to Strabo, for 400 years; after which the town was rebuilt with great splendour by Antigonus and Lysimachus, or, according to Pausanias (vii. 5, § 1), and Pliny (v. 31), by Alexander the Great. This new town however was 20 stadia distant from the site of Old Smyrna, and 320 stadia from Ephesus, and was situated on the north bank of the river Meles, covering the plain as far as the sea, and occupying also a part of a hill which Pliny calls Mastusia. The city was or soon became the finest and largest in Asia Minor. (Strabo, xiv., p. 646.) When Asia Minor fell into the hands of the Romans, Smyrna became the seat of a conventus juridicus (Pliny, v. 31), and flourished as a commercial town. Trebonius, one of Cæsar's murderers, was besieged in Smyrna by Dolabella, who took the city, and destroyed a great part of it. (Strabo; Cic., 'Philip,' xi. 2.) But Smyrna soon recovered and flourished as before. Christianity was early established here, chiefly owing to the zeal of St. Polycarp, who was the first bishop of Smyrna, and suffered martyrdom there. (Iren., iii., 3, 4.) Smyrna appears in early times, as at present, to have been subject to frequent earthquakes. It was destroyed by an earthquake in A.D. 178, but it was restored by the emperor Marcus Aurelius. Before the introduction of Christianity the Smyrneans worshipped chiefly the heroine Nemesia, Homer, and the mother of the gods, whose temple stood near the sea-coast, and whose head is represented on the coin of which a representation is given in this article.

During the Eastern empire Smyrna again experienced several severe vicissitudes. Towards the close of the 11th century it fell into the hands of Tzachas, a Turkish pirate, and was nearly destroyed by a Greek fleet under John Duca. It was restored by the emperor Comnenus, but soon after fell into the hands of the Genoese, who

continued in possession of it until the year 1364. In 1402 it was taken by Tamerlane, and suffered very severely. The conqueror erected within its walls a tower constructed of stones and of the heads of his enemies. Soon after it came under the dominion of the Turks, under whom it has always been the most flourishing city of the Levant, notwithstanding that it has frequently been visited by earthquakes, fires, and the plague. One of the most destructive conflagrations that ever occurred in Smyrna took place on the night of July 28, 1841, whereby above 12,000 houses, many bazaars, mosques, and other public buildings, were destroyed.

Smyrna, the most important city of Asia Minor, and the centre of the Levant trade, rises in the form of an amphitheatre from the sea, and upon the hill above it (called Mount Pagus) there is an old castle which forms the citadel; over one of the gates there is a head which either represents Apollo or an Amazon, and over another a Roman eagle. It stands in 38° 25' N. lat., 27° 9' E. long., about 210 miles S.S.W. from Constantinople, at the bottom of a capacious bay, which has excellent anchorage, and is so deep that large ships come close to the wharfs. The bay extends into the city, and its margin is lined with quays, on which there are handsome stone houses, so that the city, with its domes and minarets, has a fine appearance on approaching it from the bay; but a great part of the interior, and especially that part which is built on the side of the hill, consists of low wooden houses, and the streets are ill-paved, narrow, crooked, and dirty. The inhabitants are probably about 180,000, of whom about 80,000 are Turks, 40,000 Greeks, 15,000 Jews, 10,000 Armenians, and about 5000 Franks. The Franks reside in Smyrna for purposes of commerce, and occupy, for the most part, the best quarter of the city near the bay. The Armenian quarter is on the lower slope of the hill, the upper part and western side are occupied by the Turkish part of the population. The Jews are confined to two small nooks between the Turks and Armenians. Except in the Frankish quarter the houses are chiefly built of wood, and only one story high. The town extends nearly two miles round the bay. The warehouses on the marina, or quays, are whitewashed. The port is frequented by ships from all nations, freighted with valuable cargoes both outward and inward. The chief imports are, coffee, sugar, indigo, tin, iron, lead, cotton-goods, and cotton-twist, rum and brandy, spices, cochineal, and a variety of other articles. The principal exports are, silk, opium, drugs and gums, galls, cotton-wool, valonia, fruit, figs and raisins. Besides these exports there are various kinds of skins, goats' wool, olive oil, wax, and a variety of other articles. The Turkish government has imposed hardly any restrictions on commerce; the duties are few and light. Most European states have consuls at Smyrna.



Coin of Smyrna. Actual size.

The city and its territory are governed by a pasha. There are large well aired barracks near the shore inclosed by an iron palisade. A British military hospital was established here in 1855. On the castle hill are some remains of ancient Smyrna, consisting of fragments of ancient columns which are used in the construction of graves in the large Turkish cemetery; portions of the old walls built into the walls of the castle, which stands on the site of the acropolis on the summit of Mount Pagus; some relics of a temple within the inclosure of the castle; the stadium, in which St. Polycarp suffered martyrdom, and which is formed in the side of the hill; and numerous columns, busts, cornices, and other architectural fragments, built into the walls of the Turkish town. Within the castle inclosure are the ruins of a mosque, which is said to have been the primitive church of Smyrna. At some distance to the south of the city runs the Meles, which is connected with the memory of Homer, and which is crossed by an aqueduct. The mosques of Smyrna are open to Christians; from the ceiling of the principal mosques are suspended by brass chains a vast number of lamps, ostrich eggs, and horsetails. The caravan bridge over the Meles, over which, especially in the fruit-season, strings of camels are constantly passing, is a point of great attraction with both Turks and Christians, and many coffee-houses are built along the banks of the immortal river. The neighbourhood of Smyrna is beautiful and fertile, owing to the prevalence of brigandage. Strollers are frequently carried off to the hills and detained till they are ransomed by their friends. About 5 miles east of the city, on the road to Sardis, at a place called Nimfi, is a gigantic human figure sculptured in relief, on a panel cut into the flat surface of the rock. This seems to be the memorial of Sesostris, described by Herodotus (ii. 106). A journal is published in Smyrna in the French language.

GEOG. DIV. VOL. IV.

Steamers and sailing-vessels ply to Constantinople, Marseille, Malta, and the chief ports of the Mediterranean.

SNAITH. [YORKSHIRE.]
SNAKE ISLAND. [ANGUILLA.]
SNEEK. [FRIESLAND.]
SNEINTON. [NOTTINGHAMSHIRE.]
SNETTISHAM. [NORFOLK.]
SNOWDON. [CAERNARVONSHIRE.]

SOCIETY ISLANDS, the name given by Captain Cook in honour of the Royal Society of London, to a cluster of islands in the South Pacific Ocean. They consist of two groups of islands, about 70 miles apart, of which the most easterly group, including Tahiti or Otahete, is called the Georgian Islands. The following are the names of the Society Islands. The names are given according to the orthography introduced by the first missionaries, and used by the press now established among the people:—Meatia, Tahiti (Otahete), Eimeo, Maiaioiti, or Charles Sander's Island, Tetuaroa, Huahine, Raiatea, Tahaa, Borabora, Mauarua, Tuba, Lord Howe's Island, and Scilly Island.

The first five are those called the Georgian Islands, and the rest the Society Islands, when the two groups are distinguished. The list is exclusive of several islets which surround or are interspersed among these. The entire cluster extends from 16° 10' (Mauarua) to 17° 53' S. lat. (Meatia), and from 148° 9' 45" (Meatia) to 155° 24' 45" W. long. (Scilly Island).

Otaheite, or more properly O Tahiti, the largest of the islands, is about 35 miles long, and more than 130 miles in circumference. It consists of two peninsulas, of unequal extent, united by a low isthmus, somewhat more than 3 miles wide. The north-western and larger peninsula is called Opureone or Tahiti-nue (Great Tahiti), and the south-eastern Tiarrabooa, or Tahiti-iti (Little Tahiti). The surface is estimated to be about 430 square miles. The most remarkable of the anchorages on the coast, within the coral reef which surrounds the island, are, Mattaway Bay, near the north-eastern extremity; Soanoo Harbour, 4 miles westward of Mattaway; and Papiete, towards the north-western extremity of the island, which is now most frequented by European vessels and by American whalers. The interior of both peninsulas is occupied with mountain masses, which terminate in high and sharp peaks. The most elevated of these peaks, called Opureone, rises to between 7000 and 8000 feet above the sea-level; it is nearly in the centre of the larger peninsula. Some of the summits of the smaller peninsula are nearly as high. Except these peaks, the whole island, especially the lower hills, is covered with thick woods. The valleys are watered by fine streams, on the banks of which, as well as on the shores of the sea, are built the dwellings of the inhabitants. Lava, basalt, and pumice-stone, occur in several places.

The climate is very mild, the difference of temperature in the winter and summer months being inconsiderable. It is also very healthy, except during the rainy season. The bread-fruit trees and cocoa-palms are regularly planted, and batatas, yams, taro, and bananas are cultivated with care; the sugar-cane, which is of excellent quality, tobacco, and some other tropical plants are also cultivated. Cotton and indigo are cultivated to some extent, principally by Europeans. Arrow-root is exported in considerable quantities. Cloth is made, as in other islands of the Pacific, of the inner bark of the bread-fruit tree, the paper mulberry-tree, and the hibiscus; of the last also ropes are made. Oil is extracted from the cocoa-nut. Forests cover all the mountains of Tiarrabooa, and the southern declivities of those of Opureone. Some vessels have been built of the timber.

Otaheite was discovered in 1606, by the Spaniard Quiros, and called Sagittaria; Captain Wallis, who visited the island in 1767, called it King George's Island; and Bougainville, who visited it in the following year, named it Nouvelle Cythère. Cook, who visited it between 1769-78 several times, gave it the native name. He estimated the population at 200,000. After having been visited by several other navigators, missionaries were sent there to convert the islanders, in 1797. They found the natives friendly to strangers and devoid of treachery; but the tribes were continually at war with each other, and infanticide and human sacrifices were practised. The missionaries laboured without success till 1816, when the king of the island, Pomaree II., embraced Christianity, and introduced it among the natives. After his death (1821) during the minority of his son, the missionaries acquired influence, and by their advice a constitution was formed, and written laws were made (1825); but neither the constitution nor the laws appear to have been much attended to. The introduction of Christianity has effected the abolition of infanticide, of human sacrifices, and other immoral practices. The government is despotic, in the hands of the sovereign, who has absolute power in respect of landed property; each chief in his own district has a like arbitrary power over the land. The natives belong to the Malay race, and have made some progress in civilisation.

All the islands are mountainous in the interior, and have a border from one to four miles wide, of rich level land, extending from the base of the high land to the sea; and although the outline of each has some peculiarity distinguishing it from the rest, in their general appearance they resemble each other. Tetuaroa, Tubai, Lord Howe's, and the Scilly islands however form exceptions, as they are low coral

islands, seldom rising many feet above the sea. Eimeo is supposed to be about 25 miles in circumference; Huahine probably more than 30 miles; and Raiatea is somewhat larger. The others are of smaller extent. A corresponding resemblance prevails in the geological structure of the principal clusters and surrounding islands; the component substances being the same in all, although each has some distinguishing peculiarity of its own. There seems no reason to suppose that any of these islands are of altogether volcanic origin, like the Sandwich Islands. In the Society Islands there are basalts, whinstone dykes, and homogeneous earthy lava, retaining all the convolutions which cooling lava is known to assume; there are also kinds of hornstone, limestone, siliceous, breccia, and other substances, which under the action of fire do not appear to have altered their original form. Some are found in detached fragments, others in large masses. All the Society Islands, and many others in the Pacific, are surrounded by a belt of coral rock, from two or three to twenty yards in width, and situated at distances from a few yards to perhaps two miles from the shore. Against this barrier the long rolling waves of the wide Pacific are driven with terrific violence by the trade-winds, and, arrested by it, often rise 10, 12, or 14 feet above its surface. These reefs protect the low lands from the violence of the sea; for while beyond them the surface of the water is agitated by the slightest breeze, all within is smooth water. There is usually a break or opening in these marine barriers, which offers an easy passage for shipping. The soil is various. The sides of the mountains are frequently covered with a thin layer of light earth; but the summits of many of the inferior hills present a thick stratum of stiff red ochre or yellow marl. This is usually found on the lower hills that rise between the interior mountains and the shore. The natives use it as a pigment for staining or painting their doors, window-shutters, canoes, &c., and, when mixed with lime, the walls of their houses. The level tracts along the coast are the most valuable parts of the land. The soil of those tracts is a rich alluvial deposit, with a considerable mixture of vegetable mould, and is exceedingly prolific.

The climate, products, character, and condition of the inhabitants of the other islands are similar to those of Tahiti, as above described.

In the Society Islands the rainy season, the only variation of the tropical year, occurs when the sun is vertical, and generally continues from December to March: during this time the climate is more insalubrious and the sickness of the inhabitants greater than at any other period. Thunder and lightning are frequent, especially in the rainy season.

Hogs and dogs, and sometimes rats, were the only animals whose flesh was formerly eaten by the natives. The missionaries have introduced all our domestic animals; and all have succeeded very well, except the sheep. Many of the natives now possess hundreds of cattle, which, with their other produce, they sell, with mutual advantage, to the ships which touch at the islands for refreshments. Rabbits could not be preserved; cats have become common in houses, and are great favourites. The birds of these and the neighbouring islands are not distinguished by brilliancy of plumage or melody of song. There are however several varieties, and some of them in immense numbers. The most numerous class are the aquatic fowl. The albatross, the tropic bird, several kinds of petrel, with others, abound in all the islands, especially in Borabora and Mauarua. Among the lakes are several kinds of heron; and wild ducks resort to the lagoons and marshes. There are several kinds of birds of prey, and a number of the woodpecker tribe, with some small paroquets of rich and splendid plumage. The turtle-dove is found in the inland parts of some of the islands, and pigeons among the mountains. Among the few singing-birds the most conspicuous is that called by the natives 'omaomao,' which in appearance and note much resembles the thrush. Domestic fowl are abundant, and were found in the islands when originally discovered.

The Society Islanders are generally above the middle stature, but their limbs are much less muscular and firm than those of the Sandwich Islanders, whom in many respects they resemble; but they are more robust than the Marquesans, who are the most light and agile of the inhabitants of Eastern Polynesia. In size and physical power they are inferior to the New Zealanders. The countenance of the Society Islanders is open and prepossessing, though the features are bold and sometimes prominent. The facial angle is frequently as elevated as in the European. The prevailing complexion is an olive, a bronze, or a reddish-brown.

The mental capacity of the Society Islanders has hitherto been only partially developed. They are remarkably curious and inquisitive; and, compared with other Polynesian nations, may be said to possess considerable ingenuity, mechanical invention, and imitation. The distinguishing features of their civil polity—the imposing nature, numerous observances, and diversified ramifications of their superstition—the legends of their gods—the historical songs of their bards—the beautiful, figurative, and impassioned eloquence sometimes displayed in their national assemblies—and, above all, the copiousness, variety, precision, and purity of their language, with their extensive use of numbers, warrant the conclusion that they possess no mean mental capabilities.

By diseases, wars, infanticide, and the use of ardent spirits, the large population which these islands formerly contained was reduced

to a mere remnant when the missionaries came among them. The general adoption of Christianity put a stop to the evils in which this decline had originated; but for some years after the number of deaths considerably exceeded the births. About the years 1819 and 1820, the births were nearly equal to the deaths, and since that period the population has been rapidly increasing. The latest information estimates the inhabitants of these islands at 18,000 or 20,000. Most of the natives can now read and write. Their moral conduct has become more regular, and their social condition much improved; they have acquired the knowledge of various useful arts, and profitable branches of commerce have been opened. Numerous vessels of from 30 to 80 tons burden are usefully employed in trade, and in maintaining an intercourse between the several islands. A press has for many years been actively engaged in supplying the natives with publications in their own language, suited to their wants and their condition.

(Elliis, *Polynesian Researches*; *Voyages of Wallis, Cook, and Wilson*; Tyerman and Bennet, *Voyage round the World*; Williams, *Missionary Enterprises*; the *Reports and Magazine of the London Missionary Society*, &c.)

SOCORRO. [NEW GRANADA.]

SOCOTRA, is an island in the Indian Ocean, situated about 200 miles from Cape Guardafui, the most eastern point of Africa. It lies between 12° 16' and 12° 45' N. lat., 53° 25' and 57° 34' E. long., and extends about 70 miles from west to east, with an average width of 15 miles. It contains 1100 square miles.

Socotra consists chiefly of a table-land, which is between 700 and 800 feet above the level of the sea. North and south of the table-land are two plains. The surface of the island is in many parts level for a considerable extent; many hills are dispersed over it, and a granitic range of mountains stands on the northern edge of the table-land. This mountain mass may have a general elevation of about 3000 feet, but some of its numerous peaks rise to 5000 feet. On the more level parts of the table-land there are many wide depressions, which generally extend south and north, and form long valleys. The table-land descends to the plains generally with a steep declivity, but in a few places it comes close to the sea, as at Ras (Cape) Shuab, the western extremity of the island, and at Ras Kattany: near Ras Feling, on the southern coast, the cliffs skirt the shores for 8 miles.

In the southern plain, the force of the south-west monsoon, to which the coast is exposed, has carried the sand from the sea coast to some distance inland, where it forms a continuous range of sand-hills parallel to the beach, and hence it has spread over the plain, up to the very base of the table-land. The shores run in a continuous line without being broken by any inlet. The northern plain is not so low as the southern, nor so level, the surface being intersected by flat valleys in many places, and in others some masses of hills rise from 300 to 600 feet. The western districts of this plain, though less sterile than the southern plain, are more adapted for pasture than for cultivation, but the eastern districts have a superior soil, which is a reddish-coloured earth, covered at certain seasons with abundant grass, and well adapted for the cultivation of grain, fruit, and vegetables. With the exception of a few rivulets the streams on the island do not contain water all the year round. The inhabitants therefore collect rain-water in reservoirs. In most parts of the northern plain water is found at a distance of from 8 to 10 feet below the surface. The climate of Socotra is sultry. During the north-east monsoon there is an almost daily fall of rain. The south-west monsoon brings a clear and cloudless sky, and while it continues the stars generally shine with remarkable brilliancy.

The principal commercial products are derived from the aloe and dragon's-blood tree. The aloe plant (*Aloe spicata* or *Socotrina*) in the western districts covers the hills for many miles, at an elevation of from 500 to 2000 feet above the plains. The dragon's-blood tree grows in the same part of the island, at an elevation of from 800 to 2000 feet. These two plants are very abundant. There are several forest-trees, but none fit for timber. Yams, wild orange-trees, and date-trees are among the products of the island. Agriculture is limited to the cultivation of dukkum, a species of millet, beans and tobacco, with a little cotton and indigo.

There are no horses. The camel is the only animal of burden, and is nearly as sure-footed as the mule. The cows are small, and few in number. Sheep and goats in the western districts constitute the principal wealth of the inhabitants. The sheep are small, but yield good wool, of which thick cloaks are made. There are several kinds of goats, and one of them is found in a wild state on the mountains. There are civet-cats all over the island, rats, mice, and chameleons. There are several kinds of vultures, and also the flamingo. Turtles are found on the southern coast. Fish abound in several parts of the coast, and some families live on the produce of their fishing.

The population is estimated by Wellsted at 4000 individuals. It consists of two different nations, of which one called Socotran Arabs, is foreign, and the other called Beduins, is apparently aboriginal. The Arabs are the only cultivators of the ground; they also make ghee. They are zealous Mohammedans. The aborigines are called Beduins in consequence of their pastoral habits and their wandering mode of life. Their language appears to differ considerably from that of the Arabs. They are tall, with strong, muscular, and remarkably well-formed limbs; a facial angle like that of Europeans, the

nose slightly aquiline, the eyes lively and expressive, and the mouth well-formed. Their hair curls naturally, but does not approach to a woolly or crisp texture. Their general complexion is fair, but a few of them are as dark as the Hindoos. As they frequently change their abodes, and live in a country not abounding in building materials, they inhabit the numerous caverns which are found in the limestone hills of their country. They are Mohammedans, but they do not show much zeal in reference to religious duties. They are divided into families or tribes.

Socotra possesses no place which can be called a town. The capital is Tamarida, which is built not far from the northern shores, and contains a population of about 150 persons.

Socotra was known to Ptolemaeus, and to Arrian. It was visited by the Portuguese Fernandes Perara in 1604, and taken possession of by Albuquerque in 1507. It is not known at what time the Portuguese evacuated the island, but they probably left before the 16th century elapsed. It then returned under the sway of the sultan of Kisseen on the southern coast of Arabia. It now belongs to the Imam of Muscat.

SODOM. [DEAD SEA.]

SOFA'LA is a country on the east coast of Africa, extending from Cape Corrientes (25° S. lat.) to the vicinity of the river Luabo, the most southern arm of the Zambesi (19° S. lat.). This country, together with the province of Senna [SENNA], was formerly known by the name of Monomotapa, and was noted for the quantity of gold which was supposed to exist there. The name of Monomotapa is now antiquated, and the few gold-mines which exist are included in the province of Senna. [SENNA, vol iv., col. 499.]

The coast is low, and beset with shoals and sandbanks. Along the coast are the Bazaruta Islands, Chuluwan, and other islands. The mouths of several rivers have been visited. The most northern is the river Boosy, commonly called Jarra, which falls into a large shallow bay called Massangany. The river Sofala forms at its mouth a tolerable harbour, which is difficult of access on account of the bar. The most southern river is Inhamban, which is easy of access, and forms an excellent harbour. Ships may ascend to the town, about 8 miles from the entrance.

Ivory and bees-wax constitute the principal articles of export: they are sent to Mozambique. The native tribes are warlike. They use spears, and shields made of hide. They are divided into numerous tribes, and their chiefs come annually to the Portuguese settlements, where they receive some trifling presents. The most northern of the Portuguese settlements is Sofala, which consists only of a paltry fort and a few miserable mud-huts. The most important settlement is Inhamban, which is a small trading town with tolerably good buildings.

Sofala was visited in 1480 by Pedro Cavalhao, a Portuguese, before the way to India by sea was known. Albuquerque took possession of it, and in 1503 the fort of Sofala was built. The Portuguese have remained in possession of the country; but these settlements have been neglected.

SOHAM, Cambridgeshire, a town, in the parish of Soham, is situated in 52° 20' N. lat., 0° 20' E. long., distant 19 miles N.E. by N. from Cambridge, and 68 miles N. by E. from London. The population of the town in 1851 was 2756. The living is a vicarage, with the curacy of Barway annexed, in the archdeaconry of Sudbury and diocese of Ely. Soham parish church is a spacious cruciform edifice of the transition period from Norman to early English, and has a very fine embattled tower at the west end, erected in the 15th century; the chancel has been recently restored. There are chapels for Wesleyan and Primitive Methodists, Independents, Baptists, and Unitarians; an Endowed and a National school. St. Felix, the first bishop of the East Angles, is said to have founded a monastery at Soham, and to have placed here (about 630) the episcopal see, afterwards removed to Dunwich. In the vicinity of the town are orchards, gardens, and dairies; and cheese is made similar to the Stilton cheese. Trade in corn, coals, and malt is facilitated by a navigable cut from the river Ouse to Soham. A fair for cattle is held on May 9th, and a feast or pleasure fair is held for three days about the middle of June. A county court is held in the town.

SOIGNIES. [HAINAUT.]

SOISSONS, an episcopal town in France, capital of the second arrondissement in the department of Aisne, is prettily situated on the left bank of the river Aisne, 60 miles N.E. from Paris, on the high road from Paris to Brussels, in 49° 22' 53" N. lat., 3° 19' 40" E. long., at an elevation of 162 feet above the level of the sea, and has 7893 inhabitants in the commune, which does not comprise all the suburbs. It is the *Augusta Sessionum* of the Romans, which D'Anville and others identify with the Noviodunum of Cæsar ('De Bell. Gall.' ii. 12.) The city gave title to a bishop from very early times. The Roman roads popularly called 'Chaussées de Brunehaut' are near this town, which in the later period of the Roman domination was one of the most important places in the north of Gaul; and one of the last which remained under the government of the emperor. It was the seat of government of Ægidius and his son Syagrius, and near it the latter was defeated A.D. 486 by Clovis, who made Soissons the capital of the Franks.

Under the early Frankish princes, Soissons continued to be of

importance. Here Clovis espoused Clotilde; and upon the division of his dominions among his descendants, it gave name to one of the kingdoms formed out of them. Here, A.D. 752, Childéric III., the last Merovingian king, was deposed, and Pepin, son of Charles Martel, the first of the Carolingian dynasty, was raised upon a shield and proclaimed king in the Champ-de-Mars. Not content with this the then ordinary mode of inauguration, Pepin employed the ceremonies of the church at his coronation, and had himself consecrated in the cathedral of Soissons by the Pope's Legate. Charlemagne established famous schools in Soissons for the education of the clergy and the sons of the rich, in the monastery of St. Médard. The same abbey was twice the prison of Charlemagne's son, the emperor Louis le Debonnaire, and in the abbey church he was deposed by a decree of a council at the instigation of his own son Lothaire. In 922 Charles the Simple was defeated at Soissons by the troops of Robert, who fell in the battle. Under the kings of the third race Soissons was the capital of a county, and received from Louis VI. a municipal charter; but the burghesses, weary of the contentions which they had with their counts, surrendered their charter to the king Charles IV., in 1325. Philippe VI. (de Valois) granted them some privileges, but would not re-establish the municipality. In 1418 the town, then garrisoned by the Bourguignon party, was taken by the rival faction of the Armagnacs, who committed the most dreadful excesses. Having again fallen into the hands of the Bourguignons, it was a second time taken and pillaged by the Armagnacs. In the religious wars of the 16th century it suffered again. In the campaign of 1814 it was twice taken by the allies and as often retaken by the French; it was a third time besieged by the allies, bombarded, and much damaged.

A handsome stone bridge over the Aisne unites the town to the suburb of St. Vaast on the right bank. The town and the suburb of St. Vaast are fortified; the circuit of the walls includes many gardens and void spaces. The other suburbs are without the walls. The streets are for the most part neatly built, and well laid out; the houses are built of stone, and many of them covered with slate. The cathedral, founded in the 12th century, is a large and fine gothic church, with a tower 160 feet high. The painted glass in the rose windows of the transept, and in the nine large ogival windows which light as many chapels behind the choir, are admirable specimens of the art. Of the abbey of St. Jean-des-Vignes (in which Thomas à Becket, archbishop of Canterbury, was received in his exile), the west front of the church, with its two noble towers and spires, remains and is of rich gothic architecture. On the right bank of the Aisne are some remains of the abbey of St. Médard, mentioned above,—the crypt and supposed prison room of Louis le Debonnaire; but the chief part of the site is occupied by an asylum for deaf-mutes. In the crypt were buried kings Clothaire and Siegebert. These fine old abbatial buildings were demolished in the fury of the first French revolution. Soissons has an excellent public library of above 24,000 volumes, and several hundred valuable manuscripts; a college, a diocesan seminary; tribunals of first instance and of commerce; public walks, a theatre, and baths.

The manufactures are carpets, woollens, hosiery, coarse linen, twine, beer, seed-oil, leather, room paper, &c. Considerable trade is carried on in corn, flour, peas and beans, in hemp and flax for the supply of Paris; timber, firewood, and charcoal, which are sent down the Aisne to the capital. There is a good weekly market. A linen market is held on the last Saturday of every month; two six-day fairs are held, one the week before Whit-Sunday, and another the week after Martinmas. A railway has been commenced to connect Soissons with the Paris-Amiens railway, between Senlis and Creil.

SOKENS, THE. [ESSEX.]

SOKNA. [FEZZAN.]

SOKOLOW. [POLAND.]

SOL-GALITZKAIA. [COSTROMA.]

SOLANA. [CASTILLA-LA-NUOVA.]

SOLESME. [NORD.]

SOLEURE. [SOLOTHURN.]

SOLIHULL, Warwickshire, a town, and the seat of a Poor-Law Union, in the parish of Solihull, is situated in 52° 25' N. lat., 1° 45' W. long., distant 13 miles N.W. by N. from Warwick, and 103 miles N.W. by W. from London. The population of the parish of Solihull in 1851 was 3277. The living is a rectory in the archdeaconry of Coventry and diocese of Worcester. Solihull Poor-Law Union contains 11 parishes and townships, with an area of 46,015 acres, and a population in 1851 of 11,931. The houses in the town are generally modern and well built, and some of them are handsome. The church is a large and curious cruciform building, partly of decorated and partly of late perpendicular character. There are in Solihull chapels for Baptists, Independents, and Roman Catholics. The Grammar school, founded in the 43rd of Queen Elizabeth, is free to sons of residents; in 1851 the number of scholars was 16. There are a Free school for boys, and Palmer's Charity school for boys and girls. An annual fair is held on April 29th.

SOLIMANSK. [PERM.]

SOLINGEN. [DÜSSELDORF.]

SOLOMON'S ISLANDS. [NEW GEORGIA.]

SOLOR. [SUNDA ISLANDS.]

SOLOTHURN, or SOLEURE, a canton of Switzerland, is bo

N. by Baale, E. by Aargau, S. by Bern, and W. partly by Bern and partly by France. Its area is about 254 square miles, and the population at the census of 1851 amounted to 69,674, of whom 61,556 were Catholics, 21 Jews, and 8097 Protestants of different sects. The canton is crossed in the direction from south-west to north-east by the Jura, which forms several parallel ridges, and covers the greater part of the canton. The principal valley is that of the Aar, which runs in the same direction, flowing eastward of the Jura. The highest summits of the Jura in the canton of Soleure are the Weissenstein and the Hasenmatt; the latter is about 4400 feet above the sea. The canton of Soleure is one of the most productive in Switzerland, especially in corn, fruit, and vegetables. The vine thrives only in certain localities. The mulberry-tree is cultivated, and some silk is made. Horned cattle, sheep, goats, and pigs are numerous; the number of horses is about 5000. The horse-fair of Soleure is one of the principal in Switzerland. A considerable quantity of cheese is made, both of cows'-milk and goats'-milk, and part of it is exported. Part of the mountains are covered with timber-trees, especially fir and beech. The canton abounds in iron-mines, and the ore is smelted in the furnaces of St. Joseph, and worked at the iron-works of Klus. The other manufactures consist of leather, paper, woollens, and kirschwasser. There are also quarries of marble and gypsum.

A dialect of the Swiss-German is the language of the country. Most families are possessed of landed property. Every commune has an elementary school, and a normal school is established at Soleure. Most of the communes have a fund for the relief of their own poor.

The constitution of Soleure was for a long time aristocratical, but in 1831 a constitution was framed on a more popular system. The canton is divided into 10 electoral circles, each having its electoral college, which names a certain proportion of members to the Great Council, or legislature. The town of Soleure returns 34 out of the 109 members who compose the Great Council. A Little Council, chosen from among the members of the Great Council, constitutes the executive. The members of the Great Council are renewed every six years. Soleure returns three members to the National Council, or central representative chamber of Switzerland.

Soleure, or *Solothurn*, the chief town of the canton, and a bishop's see, is built on the Aar, 1320 feet above the sea, and is surrounded by walls. The population is 5870. The cathedral is reckoned the finest church in Switzerland; the tower is 190 feet high. The other remarkable buildings of Soleure are—the town-house, which is very old; the arsenal, the theatre, the hospital, the fountain in the market-place, the former church of the Jesuits, and several convents. Soleure has a gymnasium with six professors and a good library, a lyceum with three professors, and a faculty of theology divided into three classes. The town library has about 20,000 volumes and some valuable manuscripts. Soleure is 19 miles N. from Bern, and 26 miles S. from Basle.

Ober, on the left bank of the Aar, about 20 miles N.E. from Soleure, is a small place, with above 1500 inhabitants.

SOLRE-LE-CHATEAU. [NORD.]

SOLSONA. [CATALUÑA.]

SOLVA, or SOLFACH. [PEMBROKESHIRE.]

SOLWAY FRITH, an inlet of the Irish Sea, separating in one part England from Scotland, and extending inland from a line drawn between Rayberry Head in Kirkcudbrightshire to St. Bees' Head in Cumberland, 41 miles N.E. to the mouth of the Esk. The distance between the two above-mentioned headlands is more than 20 miles. About 17 miles up, between Southerness Point, Kirkcudbrightshire, and the Cumberland shore near Allonby, the width is 7 miles; it afterwards expands, then again contracts, and 15 miles farther up, between the mouth of the Annan, Dumfriesshire, and Bowness, Cumberland, is only 2 miles, which is its width for the remaining 9 miles.

On the Scottish shore the Solway Frith receives the rivers Urr, Nith, and Annan. [DUMFRIESSHIRE.] On the English shore it receives the Esk, with its tributaries the Liddle and the Line; the Eden, with numerous tributaries; the Wampool, the Waver, the Ellen, and the Derwent. [CUMBERLAND.] A considerable part of the frith is occupied by broad sands dry at low water, and intersected by the channels formed by the streams which flow into the frith. It is navigable through the greater part of its extent for vessels of 300 tons, and for vessels of 100 tons up to the head. It affords a supply of different kinds of fish, especially salmon. The tide sets into it with great force, the flood sometimes advancing with a head four feet high. The water has a whitish colour, from the great extent of sand over which it flows.

SOMBOURN, KING'S. [HAMPSHIRE.]

SOMERCOTES, NORTH. [LINCOLNSHIRE.]

SOMERSETSHIRE, a county in the west of England, is bounded N. by the Bristol Channel, the estuary of the Severn, and Gloucestershire; E. by Wiltshire; S. by Dorsetshire and Devonshire; and W. by Devonshire. It lies between 50° 49' and 51° 30' N. lat., 2° 14' and 3° 50' W. long. The longest line that can be drawn upon its surface from east to west measures 68 miles, from north to south 43 miles. A portion of the county however, extending 33 miles westward from Bidewater, has a mean breadth from north to south of only 13 miles. The area is 1636 square miles, or 1,028,090 acres. The population in 1841 was 435,599; in 1851 it was 443,916.

Surface, Coast-Line, and Geology.—Somersetshire is a hilly county,

and the ranges of hills are separated by low marshy flats. The north-eastern part is occupied by the eminences round Bristol and Bath, through which the Avon makes its way to the Severn. These eminences are irregularly grouped, and extend from Pill on the Avon, below Bristol, into Wiltshire: many of the valleys, called combes or coombs, which separate the hills, are drained by small feeders of the Avon. The principal heights in this part of the county are—Falkland Knoll, near Norton St. Philip, between Bath and Frome; Lansdown (813 feet high), and Claverton, Combe, and Odd Downs, near Bath; Dundry Hill, west of Keynsham (790 feet high); the summits of Broadfield Down, south of Bristol; and Leigh Down, west of that city. The summits of the hills in the immediate neighbourhood of Bath are of the oolitic formations. The great oolite furnishes the stone commonly known as Bath stone. Sometimes the lower oolitic beds form outlying eminences, such as Stantonbury Hill, Dundry Hill, and Mays Knoll. The inferior oolite is extensively quarried in Dundry Hill. The oolites rest on a platform of the lias formations, which appear on the lowest part of the slope of the oolite hills, or form detached hills to the south-west of them.

The valleys of the Avon and its feeders are occupied by the new red-sandstone formations, capped in some places by the newer magnesian limestone, which crowns the hills or rests in horizontal strata against the elevated beds of the coal-measures or of the mountain limestone, which latter, with the old red-sandstone, forms the constituent mass of Leigh and Broadfield Down, near Bristol. The mountain limestone of Leigh Down is prolonged across the Avon, and forms the well-known precipices of St. Vincent's rocks, Clifton, between which the Avon flows. Broadfield Down has two precipitous combes or valleys, Cleve and Brookley, less magnificent than the defile of Cheddar, but possessing, from the abundance of wood, more beauty. The coal-measures, mountain limestone, and old red-sandstone, belong to the carboniferous group of the Somersetshire and South Gloucestershire coal-field, and occupy the northern part of the county, extending to the Mendip Hills, though covered in most places by more recent formations. In this field are numerous coal-pits.

The eastern side of the county, extending from Bath to Yeovil, and the southern side, from Yeovil to Wellington, are occupied by hills of similar geological character to those around Bath, and uniting with them near that city. This range is divided into detached parts by the transverse valleys of the Brue, the Yeo or Ivel, the Parret, and the Isle. The vale of Taunton is occupied by the new red-sandstone. Good freestone is quarried in the inferior oolite near Shepton Mallet, and at Norton-under-Hamden; and the lias is much used for building cottages in the neighbourhood of Ilchester.

The Mendip Hills are a distinct range, stretching from west by north to east by south, and separated from the hills about Bath and Bristol by the narrow valley of the Yeo, a small stream which flows into the Bristol Channel near St. Thomas's Head. They extend at their western end to the coast, and unite at their eastern extremity with the hills near Frome. The length of the Mendips is about twenty-five miles; their breadth, between Stoke Rodney and West Harptree, six or seven miles. "This chain consists of a central axis of old red-sandstone, flanked on its opposite declivities by parallel bands of mountain limestone, dipping from it in opposite directions in angles varying from 30° to 70°. This central axis is not however visible throughout its whole course, being occasionally over-arched and concealed by the calcareous strata; but it appears in four ridges, forming the most elevated points of the chain, and disposed at nearly equal distances through its length. The cavern of Wookey Hole, and the defile of Cheddar cliffs, with its long line of stupendous mural precipices, certainly among the most magnificent objects of this kind in Britain, are the well-known features of this chain" (Conybeare and Phillips). The mineral treasures of the Mendips are important; zinc and calamine are obtained abundantly in the central and western part of the range. There are numerous coal-pits in the villages which lie north-west of Frome. The Mendips rise in some parts to more than 1000 feet. The long low ridge of Polden Hill is an offset from the eastern hills, extending about twenty miles in a direction parallel to the Mendips, from which it is separated by a wide fenny flat. Gypsum occurs abundantly in the red marl on the south side of Polden Hill, near Somerton.

In the western part of the county are the Quantock Hills, which in their culminating point, Bagborough Station, or Will's Neck, reach the height of 1270 feet. They consist of an elevated mass of a coarse gritstone, and belong to the slate formation which overspreads the north of Devonshire, separated however from the principal slate district by an intervening tract of new red-sandstone, which formation nearly surrounds the foot of the range. At the northern foot of the hills lias occurs, covering both the red-sandstone and the slates. Limestone, gypsum, and copper are found in these hills. The greater part of the county west of the Quantock Hills is occupied by an irregular hilly district, forming part of the wild moorlands of Exmoor Forest, and extending into the counties of Devon and Somerset. This hilly district is bounded south by the valley of the Tone, and north by the Bristol Channel. It is occupied by the slate-rocks of the Devonian range; but in some of the valleys near the coast these are covered by the new red-sandstone. The highest point in this district is Dunkerry Beacon, which is situated a little to the east of the Black

Barrow Down, and has an elevation of 1668 feet. Slate is quarried near Wiveliscombe.

There are mineral springs at Bath, Glastonbury, Alford, near Castle Cary, and Queen Camel, near Ilchester.

The coast from the mouth of the Avon runs about 15 or 16 miles south-west to Sand Point. About half of this extent is occupied by low cliffs, the remainder being chiefly marshy ground. From Sand Point the coast runs southward to Brean Down, a hill of mountain limestone, precipitous on every side, and surrounded by the sea, except just at its eastern end, where a marshy flat connects it with the mainland. On Uphill Bay, at the foot of Anchor Head Cliff, is the watering-place of Weston-super-Mare. From Brean Down the coast runs about seven miles southward, and then westward about seven or eight miles along the south of Bridgewater Bay. The greater part of the shore of the bay is formed by sand-hills, bounding the marshes which extend between the Mendip Hills and the lower offsets of the Quantock range. Towards the western extremity of the bay the coast is higher, and is lined by lias cliffs. From the extremity of Bridgewater Bay the coast runs westward 25 miles to the boundary of the county, and consists of alternations of cliffs and low ground. The coast is lined, with very little interruption, by sands, but except in Sand Bay, Uphill Bay, and Bridgewater Bay, they have little breadth. These three bays are filled up with sand, dry at low water, except in the channel of the Parret. The only islands are, Stert Island, opposite Stert Point, and Fenning's Island, both at the mouth of the Parret; and Flat Holm and Steep Holm, in the midst of the Bristol Channel. These two islands consist of limestone, and are both girt with cliffs: there is a lighthouse on Flat Holm, and another on the shore near Burnham, opposite Stert Island. The only harbours of any importance are formed by the rivers Avon and Parret. The roadstead of King's Road is at the mouth of the Avon.

Hydrography, Communications, &c.—The Avon flows on or within the northern border of the county for about 31 miles, and falls into the estuary of the Severn at King's Road, 10 miles below Bristol. [AVON.] It is navigable up to Bath (where the Kennet and Avon Canal locks into it) for barges, and to Bristol for sea-borne vessels. At the mouth of the Avon the spring-tides usually rise between 40 and 50 feet. The Avon receives the Frome and the Midford Brook above Bath, and the Chew at Keynsham. The Frome rises not far from Bruton, flows northward past the town of Frome, and joins the Avon between Bradford and Bath; its course (of about 20 miles) is within or upon the border of Somersetshire. The Avon is connected with the Thames by the Kennet and Avon Canal, which enters this county by the Dundas aqueduct over the Avon, and then follows the valley of that river to Bath. The Somersetshire Coal Canal is cut from the coal-works near Paulton into the Kennet and Avon Canal, on the border of the county: it is $9\frac{1}{2}$ miles long. Connected with this canal is a railway from the adjacent coal-works at Radstoke.

The Yeo rises at Compton Martin, on the northern slope of the Mendip Hills, and flows north-west 13 miles between them and Broadfield Down into the Bristol Channel. The Axe rises in Wookey Hole or Cavern, on the southern side of the same hills, near Wells, and flows north-west 21 miles, through the flats at their foot, into the Bristol Channel, at the eastern extremity of Brean Down. The Brue rises on the slope of the chalk-marl and green-sand hills, on the border of Somerset and Dorsetshire, and flows westward past Bruton and Glastonbury, 35 miles through the marshy flat between the Mendip and the Polden Hills into the estuary of the Parret. It has been made navigable for about a mile from its mouth to High Bridge, whence the navigation is continued to Glastonbury (13 miles) by a canal, that runs parallel to the Brue, and at some distance from its left bank.

The Parret, anciently the Pedred, the principal river in the county, rises at South Perrot, near Beaminster, in Dorsetshire. It reaches the border of Somersetshire about a mile from its source, and flows northward for 15 miles, passing South Petherton and Langport, between which towns it receives the Isle on its left bank and the Yeo on the right. From Langport the Parret flows north-west 12 miles, through a marshy flat to Bridgewater, receiving midway between that town and Langport the Tone on the left bank. Below Bridgewater the Parret has a winding course of 16 miles into Bridgewater Bay, receiving the Cary on its right bank, and uniting just at its outfall with the Brue. The Isle rises between Chard and Crewkerne, and flows north and north-east 15 or 16 miles into the Parret, through marshes which cover the lias formation. It passes near Ilminster. The Yeo or Ivel, not to be confounded with the Yeo previously described, rises in Dorsetshire, and flows first south-west and then northward to Yeovil, receiving several streams from the Dorsetshire chalk downs on the left bank. From Yeovil it flows in a circuitous course north-north-west to Ilchester, and thence west-north-west through marshes into the Parret, at Langport. The Tone rises in the southern slope of Brendon Hill, north-west of Wiveliscombe, and flows 10 miles south to the Devonshire border; it then turns eastward and flows 23 miles through the vale and past the town of Taunton into the Parret, on the north-western side of the Isle of Athelney. The Cary rises near Castle Cary, and flows westward through the marshes, across which it flows in an artificial bed, called the Sedgemoor Cut, into the Parret; its whole course is about 30 miles.

The navigation of this system of rivers commences at Ilchester on the Yeo, which is navigable for seven miles into the Parret at Langport. A little above Langport the navigation of the Parret commences, and continues to the mouth of that river. Ships of 200 tons can get up to Bridgewater. The Tone is navigable from Taunton to its junction with the Parret. The Bridgewater and Taunton Canal runs from the Parret, a little above Bridgewater, to Taunton, a distance of $12\frac{1}{2}$ miles. Another canal unites Chard and Ilminster.

In the fork between the Tone and the Parret is the *Isle of Athelney*, in which Alfred the Great took refuge when the Danes overran Wessex, and which still retains its name. It consists of a rising ground, of about 100 miles in extent, and was anciently covered with alder-wood. There is a farm-house on the isle.

The Ex rises in Exmoor Forest, in the most western part of the county, and flows first south-east and then south into Devonshire, which it enters a little west of Bampton, having previously formed the boundary between the two counties for about two miles. The Barle, a considerable feeder of the Ex, also rises in the most western part of Somersetshire, and flows south-westward past Dulverton into the Ex, on the Devonshire border.

The principal coach roads are those from London to Bristol, which unite near Bath; the road from Bath to Bristol through Keynsham; the road from London to Exeter through Salisbury, which passes through Yeovil, Crewkerne, and Chard; the Falmouth road, which runs through Wincanton, Ilchester, and Ilminster; the road from Bristol through Axbridge to Bridgewater, whence one road runs along the coast through Watchet, Dunster, and Porlock to Ilfracombe in Devonshire; a second by Milverton and Wiveliscombe to Barnstaple, Devon; and a third to Taunton, whence there are two roads to Exeter; the road from Bath to Taunton, through Wells and Glastonbury; the roads from Bristol and Bath, which unite at Shepton Mallet; and two roads leading westward from Frome, one to Shepton Mallet, Glastonbury, and Taunton, and the other to Bruton, Castle Cary, and Ilchester.

The Great Western railway enters the county near Bath, and runs by Bath to Bristol, where it is connected with the Bristol and Exeter railway, which runs past Bridgewater, Taunton, and Wellington into Devonshire. Short branch lines connect Clevedon and Weston-super-Mare with the Bristol and Exeter railway. The Wilts, Somerset, and Weymouth railway, which leaves the Great Western at the Corsham station, is open thence to Frome on the east of this county. All these railways are on the broad gauge, which system is carried northward by the Bristol and Birmingham line.

Soil, Climate, and Agriculture.—The county of Somerset possesses a soil and climate well suited to the growth of wheat and all the agricultural produce usually raised in England. There is a fair proportion of woodland without any extensive forests. In some of the vales, such as the extensive vale of Taunton, the soil is of a rich nature, and the wheat grown there is of superior quality. Excellent butter and cheese are made on the best pasture lands. The Cheddar cheese is famous for its quality. The cows are mostly of the Devon breed, but there are also many short-horns. The oxen fattened are either Devons or Herefords and short-horns. The state of agriculture has greatly improved of late years. The sheep on the best lands are of the Leicester or South Down breeds, with crosses between these and the Cotswold sheep. Many hogs are fattened, and very good bacon is cured. There are a few hop-gardens, and some good cider orchards.

Divisions, Towns, &c.—The county is divided into 40 hundreds, which we enumerate, commencing with the eastern division at the mouth of the Avon:—1, Portbury: 2, Hartcliffe and Beaminster: 3, Keynsham: 4, Bath-Forum, in which is the city of Bath: 5, Hampton and Claverton: 6, Wellow, on the eastern border: 7, Chew: 8, Frome: 9, Kilmersdon: 10, Chewton: 11, Winterstoke: 12, Wells-Forum, containing the city of Wells: 13, Whitstone: 14, Bruton: 15, Norton-Ferris: 16, Horethorne, the most south-eastern part of the county, including the town of Milborne Port: 17, Cateash: 18, Glaston-twelve-hides, in which is the town of Glastonbury: 19, Bempstone: 20, Brent-with-Wrington, along the east coast of Bridgewater Bay to the Brue, which river in the lower part of its course separates the eastern from the western division of Somersetshire.

In the western division are:—1, Huntspill and Puriton: 2, North Petherton, in which is the town of Bridgewater: 3, Whitley: 4, Somerton: 5, Pitney: 6, Tintinhull, which contains the town of Ilchester: 7, Martock: 8, Stone, on the southern border, containing Yeovil: 9, Houndsborough, Barwick, and Coker: 10, Crewkerne, also on the southern border, containing the town of Crewkerne: 11, South Petherton, which comprises the most southern part of the county, and extends west of Crewkerne up to the Parret: 12, East and West Kingsbury, consisting of several unconnected portions, and containing the towns of Chard, Wellington, and Wiveliscombe: 13, Abdick and Bulstone, containing the town of Ilminster: 14, Taunton and Taunton Dean, which includes the vale of Taunton and the greater part of the basin of the Tone: 15, North Curry: 16, Andersfield, including the isle of Athelney: 17, Cannington: 18, Williton and Freshmanning: 19, Carhampton, which includes all the coast beyond Watchet to the Devonshire border: and 20, Milverton, which lies on the Devonshire border, and contains the town of Milverton.

Somersetshire contains the cities of BATH and WELLS, a part of

the city of BRISTOL, the parliamentary boroughs of TAUNTON, BRIDGEWATER, and FROME, and the following places, some of which are municipal boroughs, and nearly all market-towns—AXBRIDGE, BRUWON, CHARD, CLUTTON, CREWKERNE, DULVERTON, GLASTONBURY, KEYENHAM, LANGPORT, SHEPTON MALLET, WELLINGTON, WILLITON, WENCARTON, and YEovil; all of these are noticed under their respective titles. The other towns, including Castle Cary, Dunster, Ilchester, Milborne Port, Milverton, Minehead, South Petherton, Somerton, Watchett, and Wiveliscombe, we notice here; the populations are those of 1851:—

Castle Cary, population of the parish 1860, is about 26 miles S.S.W. from Bath. The castle was built or strengthened by William Gouel de Percheval, in the reign of Stephen. The earthworks alone remain. The town is irregularly arranged; the houses are neatly built. The village of Almsford is almost part of the town. Castle Cary church is a handsome building on an elevated site. There are chapels for Wesleyan Methodists and Independents, National schools, and a savings bank. Flax-mills afford some employment. There are three fairs and seven great cattle-markets in the year.

Dunster, population of the parish 1184, is 18 miles N.W. by W. from Taunton. The West-Saxon kings had a fortress here. Dunster sent members to parliament in the 34th and 36th Edward III. There was a Benedictine priory here, founded by the De Mohuna. Dunster castle is a building in the Elizabethan style, in a richly-wooded park. The church is a spacious and handsome building, erected in the reign of Henry VII. A tower in the centre rests on four pillars. There are a chapel for Wesleyan Methodists, and an Endowed school. The market is on Friday, and there is a yearly fair on Whit-Monday.

Ilchester, or *Ivelchester* (from the river Ivel or Yeo, on which it stands), population 889, is about 38 miles S.S.W. from Bath. This town was an important Roman station, the Iechalis of Ptolemæus, who mentions it as one of the chief towns of the Belgæ. The Roman town was defended by a wall and deep ditch, comprehending an oblong quadrangle, through which the Fosse-way passed from north to south. Roman hypocausts and baths, foundations of ancient buildings, vast arches, tessellated pavements, urns, lachrymatories, pateræ, fibulæ, bracelets, and other relics of antiquity, have been discovered, and medals, especially of Vespasian, Trajan, and Antoninus Pius. Under the Saxons, who called the town Givelcestre, it was a place of note. It sent members to parliament in the reigns of Edward I. and Edward II., and with intervals subsequently till it was disfranchised by the Reform Act. There were three religious establishments in the town. The town lies in a rich valley, and consists of two parts—Ilchester proper and the village of Northover, which are separated by the Yeo or Ivel, which is crossed by a stone bridge of two large arches. The church is an ancient building, consisting of a nave, chancel, and north aisle or chapel, with a low octagonal tower. There are National schools. The county jail is at Ilchester. It is a spacious building of freestone. The town-hall is a neat modern building. Ilchester was the birthplace of Roger Bacon.

Milborne Port, population of the parish 1746, is on the Dorsetshire border, about 8 miles E. by N. from Yeovil. It was a borough and market-town at the time of the Domesday survey, and sent members to parliament in the time of Edward I., after which it ceased to send them till the reign of Charles I., when it regained the franchise, which it finally lost by the Reform Act. The town is pleasantly situated in a valley, and consists chiefly of detached houses. The ancient town-hall has a curious Norman doorway. The church is a large cruciform edifice, with a square tower: there are chapels for Wesleyan Methodists and Independents, and National schools. Leather-dressing and glove-making are carried on.

Milverton, population of the parish 2146, about 7 miles W. by N. from Taunton, was a market-town at the Conquest. The church, which occupies an elevated site in the centre of the town, is a spacious building of perpendicular character, 112 feet long by 60 feet broad: there are meeting-houses for Quakers and Independents, and a school for children of all denominations. Silk-throwing and the manufacture of flannel and woollen-cloth afford some employment to the inhabitants. The market is on Friday, and there are three yearly fairs.

Minehead, population of the parish 1542, is on the shore of the Bristol Channel, about 23 miles N.W. by W. from Taunton. The town was incorporated by Queen Elizabeth, and returned two members to parliament, until disfranchised by the Reform Act. The town consists of three parts: the upper town; the lower town, which is the principal part; and the Quay-town along the shore. The church, which is in the upper town, is large and handsome, with an embattled tower, 90 feet high, at the west end; it contains an alabaster statue of Queen Anne. The Baptists have a chapel. At Quay-town is a quay, faced with masonry and with a parapet towards the sea: also a custom-house. The herring-fishery is carried on along the coast. The market is on Wednesday, and there is a yearly fair. Minehead is resorted to by invalids on account of the mildness of the climate.

South Petherton, population of the town 2165, is about 16 miles E.S.E. from Taunton. Wigborough, in the parish of South Petherton, is supposed to have been the site of a Roman town. The Anglo-Saxon kings had a residence at South Petherton. In Domesday Book the town is called Sudperet. The church is cruciform, with a lofty but

plain octangular tower at the intersection. There are chapels for Independents and Wesleyan Methodists. Markets are held on Thursday and Saturday; a fair is held on July 6th.

Somerton, population of the parish 2140, about 17 miles E. by N. from Taunton, was a fortified town in the Saxon times. The West-Saxon kings had a palace here. The town is called Summertone in Domesday Book. It stands on a hill on the left bank of the river Cary, over which is a stone bridge. The houses are built of blue lias from quarries in the neighbourhood. The church, which is ancient, has an octangular embattled tower on the south side. There are a chapel for Independents, an Endowed Free school, and a range of almshouses. The market is on Tuesday, and there are seven fairs in the year. Alabaster and lias are quarried near the town.

Watchett, population of the hamlet about 950, is on the shore of the Bristol Channel, about 19 miles N.W. from Taunton. It was twice taken by the Danes, and the last time entirely ruined, in their war with Ethelred II. The parish church of St. Decuman's is in the village of that name, about a mile S. from Watchett, and is a large and handsome edifice. In Watchett are chapels for Baptists and Wesleyan Methodists. There is here a small harbour, formed by a pier, and some coasting trade is carried on; coals are imported from Wales, and lime and alabaster are exported. A market is held on Saturday, and a fair on November 17th.

Wiveliscombe, population of the parish 2861, is about 12 miles W. by N. from Taunton. On a hill a mile east of the town is a Roman camp. The town is in a valley or combe, inclosed by hills on all sides except the south-east. The church consists of a nave and side aisles, with a western tower and spire. There are Independent and Wesleyan Methodist chapels, National and Infant schools, an infirmary, and the ruins of an old residence of the bishops of Wells. The woollen manufacture is carried on. The markets are on Tuesday and Saturday; the former is a considerable corn-market, and the market on the last Tuesday in February is also a great cattle-market. There are two yearly fairs.

The following are a few of the principal villages, with the population of each parish in 1851:—

Long Ashton, population 1921, including 322 inmates of Bedminster Union workhouse, about 3 miles S.W. from Bristol, has several iron-works and collieries. The parish church is a neat edifice in the perpendicular style. There are National schools partly endowed. In the parish are two remarkable camps, on the hills overlooking the river Avon, opposite Clifton. *Backwell*, population 1074, about 7 miles S.W. by W. from Bristol, is situated just under Broadfield Down. There are here the parish church and National schools. Several collieries in the parish afford employment. *Banwell*, population 1878, about 15 miles S.W. from Bristol, is pleasantly situated under the northern slope of the Mendip Hills. The parish church is a fine building with windows of stained glass. The Wesleyan Methodists have a chapel, and there is a Free school. Fairs are held in January and July for cattle and sheep, and for cheese. Two remarkable caverns have been discovered here, one filled with diluvium, in which were embedded various fossil bones, the other covered with beautiful stalactites. During the existence of the West Saxon kingdom there was an abbey at Banwell, of which the abbacy was given by Alfred to his friend Asser. There are remains of an episcopal palace of the bishops of Bath and Wells, now a private residence. *Bath Easton*, population 1795, is on the right bank of the river Avon, about 3 miles N.E. from Bath. The parish church, a fine gothic structure, has at its west end a handsome embattled tower, 100 feet high; there are National and Infant schools. A silk-mill affords some employment. *Bathwick*, population 5162, is a suburb of the city of Bath, with which it has communication by Pulteney-bridge over the Avon. The Kennet and Avon Canal and the Great Western railway run through the parish. Many Roman antiquities have been found here. *Beckington*, population 1173, is about 3 miles N.N.E. from Frome. The woollen manufactures of Frome give employment to a considerable number of the inhabitants. The Baptists have a chapel here. *Burnham*, population 1701, on the Bristol Channel, near the mouth of the river Parret, 9 miles N. from Bridgewater, has a church whose lofty tower is useful as a sea-mark, and a lighthouse. The altar-piece of the church, sculptured in white marble, was designed by Inigo Jones. *Camerton*, population 1543, is about 7 miles S.W. by S. from Bath; many of the inhabitants find employment at the coal-pits of the Mendip coal-field. The Somerset Coal Canal passes through the parish. There are two Endowed schools. *Chew Magna*, population 2141, about 6 miles S. from Bristol, is chiefly dependent upon the coal-mines in the Mendip coal-field. In ancient times Chew Magna was a borough, and possessed a good woollen manufacture. There are National schools. *Old Cleve*, population 1550, about 16 miles N.W. from Taunton, possesses extensive remains of an ancient Cistercian monastery. An old cross with four steps, the pedestal and pillar almost entire, stands in the churchyard of the parish church. There is here a National school supported chiefly by the vicar. The hamlet of *Blue Anchor* in this parish is resorted to as a bathing-place. *Clevedon*, population 1906, on the shore of the Bristol Channel, 12 miles W. by S. from Bristol, is visited for bathing in the summer. The shore here is rocky, and the cliffs rise to a considerable height. The parish church is situated on a lofty rock. There are here a

chapel for Independents, and National and Infant schools. *East Coker*, population 1340, about 3 miles S.S.W. from Yeovil, has a fine cruciform church, a village school, an Infant school, and a row of almshouses for 12 persons. The remains of a Roman villa were discovered here in the middle of the last century. *Congresbury*, population 1258, on the left bank of the Yeo River, about 11 miles S.W. from Bristol, had anciently a market, which has been disused. A fair for cattle and horses is held on September 14th. There are National schools. *Curry Rivell*, population 1637, about 2 miles S.W. from Langport, has quarries of lias. Two fairs are held annually. In this parish, on a commanding eminence, is Burton Pynsent, the seat of the great Earl of Chatham, to whom a monument was erected in the park by his widow. There is a village school. *Huntspill*, population 1594, near the mouth of the Parret, 7 miles N. by W. from Bridgewater, was formerly a market-town. There are a National school and a village school. *Kilmerdon*, population 2196, about 9 miles S.S.W. from Bath, derives its chief support from the coal-mines in the vicinity. Besides the parish church there are a chapel for Wesleyan Methodists, an Endowed and an Infant school. *Lyncombe* and *Widcombe* form one parish, population 9974, properly a suburb of the city of Bath, from which it is separated by the Avon: the part nearest the river may be considered as the manufacturing part of Bath. Farther off are many detached villas and rows of good private houses. There are here National and Infant schools. The valley of Lyncombe is very beautiful. *Martock*, population 3154, about 7 miles W.N.W. from Yeovil, formerly a market-town, has a church with a tower 90 feet high, and a handsome altar-piece. In the market-place are the former market-house with an assembly-room over it, and a fluted column supporting a dial. Many of the inhabitants are employed in glove making and the weaving of sacking and girth-web. *Mells*, population 1186, about 3 miles W.N.W. from Frome, has numerous collieries and an extensive iron-work in the neighbourhood. Two fairs are held annually. There are National and Infant schools. Remains of two ancient encampments are in the parish. *Merriot*, population 1439, about 2 miles N. from Crewkerne, has a parish church, a chapel for Dissenters, and National schools. Glove-making and the weaving of sail-cloth and sacking are carried on. *Midsomer-Norton*, population 3799, about 9 miles S.W. from Bath, possesses a new church, a chapel for Wesleyan Methodists, and National and Infant schools. An annual fair is held on April 25th. *Montacute*, population 1042, about 4 miles W.N.W. from Yeovil, has extensive quarries. Some of the inhabitants are employed in glove-making. There is a chapel for Baptists. An annual fair is held on May 13th. Here was formerly a priory, richly endowed. *Naishsea*, population 2543, about 8 miles W. by S. from Bristol, gives name to the adjacent coal-field, the pits of which employ a considerable number of men; there are also stone quarries and important glass-works. There are National and Infant schools. *Paulton*, population 2104, about 8 miles S.W. from Bath, has a parish church, chapels for Wesleyan Methodists and Baptists, and National and Infant schools. Many of the inhabitants are engaged in the neighbouring collieries. *North Petherton*, population 3845, about 3 miles S. from Bridgewater, one of the largest villages in the county, was formerly a market-town, and still retains two fairs, which are held in May and November. *Pill*, or *Crockern-Pill*, population of the hamlet about 1600, is a pilot station on the Avon, about 6 miles below Bristol. There are here an Episcopal chapel, chapels for Independents and Baptists, and the Pill Benevolent schools. Several Roman antiquities have been found here. *Porlock*, population 854, is in the hilly district which occupies the western extremity of the county, 6 miles W. from Minehead. The church is an ancient gothic edifice, with a tower at the west end. Surmounting the tower are the remains of a spire, which was partly destroyed in a storm in the 17th century. The Danes were repulsed in an attack on this place in 918; but it was burned, and the neighbourhood plundered, by Harold, in the revolt of his family against Edward the Confessor in 1052. *Porlock Quay* is 2 miles N.W. from the village, on the shore; a small harbour is here formed by means of a pier. A very few small sloops and some fishing-boats belong to the place. The ancient market-cross is still standing. There are three yearly fairs for cattle and sheep. *Portishead*, or *Porteshead*, population 1084, about 11 miles W. by N. from Bristol, is frequented in summer for bathing. The parish church is a substantial building, with a tower surmounted with pinnacles. There are here a chapel for Independents, and National and Infant schools. *Radstock*, or *Radstoke*, population 1792, is situated in the Mendip coal-field, about 8 miles S.S.W. from Bath. Besides the parish church there is a chapel for Wesleyan Methodists. *Stogumber*, population 1456, about 11 miles S.S.W. from Taunton, was formerly a market-town: it has still two yearly fairs. The parish church is an ancient edifice of large size and handsome appearance; over the south aisle is an embattled tower, 72 feet high. There are a chapel for Baptists and a parish school. Brewing is carried on. *Timsbury*, population 1639, about 7 miles S.W. from Bath, has a parish church, a chapel for Wesleyan Methodists, and National schools. The Andover Canal affords facilities for transmitting the produce of the neighbouring collieries. *Twiverton*, or *Twerton*, population 2958, about 2 miles W. from Bath, is the seat of a considerable cloth manufacture. Over the Avon is an iron bridge of 120 feet span between the centres of the supporting piers, and 230 feet length in all. Besides

the parish church there are chapels for Wesleyan Methodists and Baptists. *Wedmore*, population 3905, about 5 miles S. by E. from Axbridge, stands on a gentle elevation; it was at one time the occasional residence of the West-Saxon kings. The parish church is a handsome cruciform edifice, with a tower 100 feet high rising from the intersection. The Wesleyan Methodists and Baptists have places of worship, and there are a National school partly endowed, and a Wesleyan school. *Weston*, population 3088, about 2 miles W.N.W. from Bath, has a parish church, a chapel for Wesleyan Methodists, and National and Infant schools. *Weston-super-Mare*, population 2103 in 1841, and 4034 in 1851, on the shore of the Bristol Channel, about 22 miles S.W. from Bristol, is a watering-place much frequented, especially by the inhabitants of Bristol; it has commodious inns, lodging-houses, and baths. The Bristol and Exeter railway has a short branch to Weston. The church, a neat building, occupies a commanding site on the slope of a hill. The Independents have a chapel, and there are National and Infant schools. Some of the inhabitants are engaged in the sprat and herring fishery. The town is lighted with gas. *Wrington*, population 1620, about 11 miles S.W. from Bristol, on the bank of the river Yeo, was formerly a market-town and had a yearly fair. Barley Wood, the residence of the late Hannah More, is in this parish. The Independents have a chapel, and there are National schools. Wrington was the birthplace of Locke.

Divisions for Ecclesiastical, Legal, and Parliamentary Purposes.—Somersetshire (except Bedminster, which is in the diocese of Bristol) constitutes the diocese of Bath and Wells, and is divided into the archdeaconries of Bath, Wells, and Taunton. The county is in the western circuit. The spring assizes are held at Taunton; the summer assizes at Bridgewater and Wells alternately. The quarter sessions are held at Wells, Bridgewater, Taunton, and Bath. County courts are held in Axbridge, Bath, Bridgewater, Bristol, Chard, Clutton, Crewkerne, Langport, Taunton, Wellington, Wells, Weston-super-Mare, Williton, Wincanton, and Yeovil. There are a county jail at Ilchester, a county jail and house of correction at Wilton near Taunton, and a county house of correction at Shepton Mallet. There are a city jail at Bath, a borough jail at Bridgewater, and a city and county lock-up house at Wells. The city jail and house of correction of Bristol are at Bedminster in this county. Before the Reform Act Somersetshire returned 16 members to the House of Commons, namely, two for the county, two each for the cities of Bath and Wells, and two each for the boroughs of Taunton, Bridgewater, Minehead, Ilchester, and Milborne Port. By the Reform and Boundary Acts the county has been formed into two divisions, each returning two members. Bath, Wells, Taunton, and Bridgewater still return two members each; Ilchester, Milborne Port, and Minehead have been disfranchised; and Frome has been constituted a parliamentary borough to return one member, so that 13 representatives are now sent by Somersetshire to the House of Commons. By the Poor-Law Commissioners the county is divided into the unions of Axbridge, Bath, Bedminster, Bridgewater, Chard, Clutton, Dulverton, Frome, Keynsham, Langport, Shepton Mallet, Taunton, Wellington, Wells, Williton, Wincanton, and Yeovil. These unions comprise 490 parishes and townships, with an area of 1,062,972 acres, and a population in 1851 of 461,844.

History and Antiquities.—In the earliest historical period part of this county was probably inhabited by the Belgæ. The territories of the Hædi and Cimbri were separated by the Parret, anciently called Uxella. In the Roman division of the island, Somersetshire was included in the province of Britannia Prima. The Antonine station *Aquæ Solis* (called also *Thermæ* by Richard) was Bath; the river on which it stands is called *Abona* by Richard, a name evidently identical with Avon. *Ad Sabrinam* is supposed to have been Portishead, or Portbury, west of Bristol. The *Avalonia* of Richard was in all probability Glastonbury; and the towns *Isolalis*, *Uxella*, and *Ad Aquas* are supposed to have stood on or near the sites now occupied by Ilchester, Bridgewater, and Wells respectively. The ancient road, the Fosse-way, enters the county near Bath, and runs south-west by Radstoke, Stratton-on-the-Fosse, Shepton Mallet, Street-on-the-Fosse near Shepton Mallet, East and West Lydford, Ilchester, and Petherton Bridge near South Petherton; and appears to have quitted the county not far from Chard. A Roman road from the coast runs along the crest of the Mendip Hills in the direction of *Sorbiodunum* (Old Sarum), crossing the Fosse-way at right angles. Roman antiquities have been found in considerable abundance at Bath, Ilchester, Yeovil, and other places. At South Cadbury, between Wincanton and Ilchester, is a remarkable camp commonly called Cadbury Castle, of irregular form, according to the shape of the hill on which it stands, with an inner and higher fort or prætorium. It is partly hewn in the solid rock, partly formed with a rampart of loose stones, and is defended by ditches. Various Roman antiquities, especially coins, and pavements, and other remains of buildings, have been dug up in the inclosure, which is about 30 acres in area. Another camp, three miles in circuit, of irregular form, on Hamden Hill, is supposed to have been Roman. The vallum is almost entire; the north-western part, the most difficult of access, is separated from the rest by an intrenchment. There are other Roman camps near Wiveliscombe, Milverton, Brompton Regis, near Dulverton, at Strington, between Bridgewater and Watchet at Cadbury, between Bristol and Clevedon, and at a third Cadbury between Bristol and Weston-super-Mare, on Brent Knoll, a lo.

eminence rising out of the flats between the Mendip and Polden hills, and at Long Ashton near Bristol, opposite Clifton. Coins in great abundance have been found in various places.

Besides the Roman camps above-mentioned there are several other ancient forts or camps scattered throughout the county. Doleberry Castle, on Mendip, is one of the most remarkable. Barrows are numerous, especially on the Mendip Hills, on the Quantock Hills, and the hilly districts west of these. The remarkable intrenchment called Wansdyke, is partly in this county. Commencing near Andover in Hampshire, it crossed the Wiltshire Downs, and entered Somersetshire near Bath-Hampton; and turning westward and then north-westward, so as to make a circuit round Bath, it ran along the hills by South Stoke, English Combe, Stanton Prior, Compton Dando, Norton Malreward, and Long Ashton, to the Bristol Channel at Portishead. The ancient camps on Bath-Hampton Down, Stantonbury Hill near Stanton Prior, and Mays Knoll near Norton Malreward, are just on the line of Wansdyke. This singular work is of unknown origin and date: it is intersected by a Roman road on Marlborough Downs in such a manner as to show it to be of earlier date than the road, and consequently earlier than the Roman conquest and settlement.

Of what are usually regarded as primeval antiquities, Somersetshire possesses but few. The principal is at *Stanton Drew*, 6 miles S. from Bristol, near the road to Wells: it consists of four groups of stones, which formed when complete two circles; and two other figures, one an ellipse, the other perhaps a rectangle. Some of the stones are 9 feet high, 22 feet in girth, and 15 tons in weight.

In the Saxon invasion this county was the scene of conflict: the battle of Mount Badon, in which the Britons under Arthur repulsed the Saxons under Cerdic, founder of the West-Saxon kingdom, is commonly fixed at or near Bath. In the reign of Cealwin of Wessex (A.D. 577), Bath was taken by the Saxons. About 658 the county was incorporated with Wessex by Cenwalch, who defeated the Britons at Penzelwood, near Wincanton. In the reign of Ethelwulf (845), a body of Danes was repulsed with great slaughter at Pedridan-muth, or the mouth of the Parret; and in the reign of Alfred, Somersetshire was again attacked by them. Alfred, when driven from his throne, found security in the marshes of the Isle of Athelney, at the junction of the Tone and Parret. After the battle of Edington, Guthrum the Dane was baptised at Alre, now Aller, near Langport; and Alfred and Guthrum spent twelve days at Wedmore, between Glastonbury and Axbridge, on the occasion. Edgar, in the latter part of his reign, was consecrated king at Acemannesceastre, now Bath (973). On his death (975) he was buried at Glastonbury. In the short reign of Edmund II. (Ironside), a severe battle took place between him and Canute at Penzelwood; and on the death of Edmund, the same year, he was buried at Glastonbury, near his grandfather Edgar. In the rising of Odo and other supporters of Robert of Normandy against William Rufus (1088), Bath and the neighbourhood were plundered by the insurgents. Some military operations were carried on in the reign of Stephen, who took Castle Cary and Richmond castles.

Of the middle ages there are several memorials, some of which are noticed above, and others in the articles on BATH, WELLS, GLASTONBURY, &c. The Augustinian priories of Stavordale near Wincanton, and Woodspring, near Weston-super-Mare, are tolerably entire, and are now converted into farm-houses. The remains of Montacute Cluniac priory, near Yeovil, and of Muchelney Benedictine Abbey, founded by King Athelstan, near Langport, are of considerable interest. Of the Carthusian priory of Hinton Charterhouse, near Bath, there are several remains: the present manor-house was built out of the ruins. Cannington church and Stogursey church, north-west of Bridgewater, and Witham Friary church, between Frome and Bruton, were all conventual churches: the first is a very fine building. The only important castellated remains are—Farleigh Castle, between Bath and Frome; Nunney, near Frome; and Walton Castle, near Clevedon. The ancient mansions of Montacute, near Yeovil; Shapwick, between Glastonbury and Bridgewater; Fairfield, near Stogursey, north-west of Bridgewater; Sutton Court, near Chew Magna, between Keynsham and Axbridge; Hinton St. George, near Crewkerne; and Barrow Court, near Bristol, all belong to the period which preceded the general revival of classical architecture.

In the civil war of Charles I. several memorable events occurred in this county, the principal of which were the defeat of the Parliamentarians under Sir W. Waller, on Lansdown Hill, near Bath, by a Royalist force under Prince Maurice and the Earl of Caernarvon, July 5th, 1643; and the blockade and siege of Taunton in 1645. [TAUNTON.] In the action on Lansdown Hill the Royalists lost many of their chiefs, among others Sir Bevil Grenville, to whom a monument, still remaining, was erected on the hill. Somersetshire was the principal scene of Monmouth's rebellion against James II. From Lyme in Dorsetshire, where he landed June 11th, 1685, Monmouth marched against Bridport, which he took by assault, and thence advanced by Axminster to Taunton, where he was received with great enthusiasm, and declared himself king. After a delay of some days at Taunton, he proceeded to Bridgewater and Glastonbury. The duke, after an unsuccessful attack upon Bristol, retired towards Wiltshire. A fierce engagement took place on the 6th July, in which Monmouth's army was defeated with great loss. In the subsequent severities under the commission of which Chief-Justice Jeffreys was at the head, Somersetshire was made

to bear a full share. The prisoners for trial in this county exceeded 1000, of whom at least 239 were executed, the sentences being carried into effect in thirty-six different towns and villages, among which they were distributed.

Statistics: Religious Worship and Education.—According to the Returns of the Census for 1851 there were then in the county 1129 places of worship, of which 553 belonged to the Church of England, 313 to six bodies of Methodists, 110 to Independents, 89 to Baptists, 15 to Quakers, 12 to Plymouth Brethren, 8 to Roman Catholics, 8 to Unitarians, and 6 to Mormons. The total number of sittings provided was 288,333. There were 1381 day schools, of which 490 were public schools, with 36,512 scholars, and 891 were private schools, with 17,208 scholars. The number of Sunday schools was 719, with 56,090 scholars; of these, 430 schools, with 32,444 scholars, belonged to the Church of England. Of evening schools for adults there were 19, with 272 scholars. There were 14 literary and scientific institutes in the county, with 1744 members, and possessing libraries numbering about 10,000 volumes.

Savings Banks.—In 1853 the county possessed 10 savings banks, at Bath, Bridgewater, Castle Cary, Crewkerne, Frome Selwood, Nether Stowey, Taunton, Wells, Wrington, and Yeovil. The amount owing to depositors on November 20th, 1853, was 778,897*l.* 2*s.*

SOMERSHAM. [HUNTINGDONSHIRE.]

SOMERTON. [SOMERSETSHIRE.]

SOMMA. [NAPLES, Province of.]

SOMMARIVA-DEL-BOSCO. [ALBA.]

SOMME, a department in France, is bounded N. by that of Pas-de-Calais, E. by Nord and Aisne, S. by Oise, and W. by the new department of Seine-Maritime and the English Channel. Its greatest length, from the neighbourhood of Ham to the mouth of the Seine, is about 80 miles; the greatest breadth, from the Bresle near Aumale to the neighbourhood of Lucheux, is 47 miles. The area is 2878.4 square miles. The population in 1841 was 559,680; in 1851 it was 570,641, giving 239.92 inhabitants to a square mile, or 65.34 above the average per square mile for the whole of France. The department is formed out of the old Picard districts of Amienais, Santerre, Ponthieu, and a part of Vermandois, which had Amiens, Péronne, Abbeville, and Ham respectively for their chief towns.

The surface of the department is generally level, in parts undulating and hilly. The coast, which runs nearly due north and south, is divided into two nearly equal parts by the estuary of the Somme; to the north of that river the shore is lined by sand-hills or downs, which protect the low grounds from the incursions of the sea; to the south of the Somme commence the cliffs which extend along the coast to the neighbourhood of Havre. The coast-line has undergone a considerable change even in comparatively recent times. In the 9th century the waves covered the low ground between the Somme and the Authie, several miles inland from the present shore. When the sea retired there remained for some time a large lake, long since dried up, the site of which forms one of the most fertile districts in the department. The whole of the department is occupied by the formations of the cretaceous group. The extensive chalk-plains are intersected at intervals by valleys, watered by streams, and presenting green meadows and trees, which contrast favourably with the general nakedness of the country. Some sandstone for paving is quarried, and peat is dug in some of the valleys.

The department is watered by the Somme and its tributaries, and by the Bresle and the Authie. The *Somme* rises in the department of Aisne, not far from St.-Quentin; it has first a south-western course for about 18 or 20 miles, and enters this department just above the town of Ham, below which it flows about 20 miles to the north-north-west to Cléry, below Péronne, and thence westward 30 miles to Amiens. Below Amiens its course is north-west in a tolerably direct line, past Abbeville, 45 miles to the sea. Its whole course is about 115 miles, 95 miles of which are in this department. Vessels of 150 tons and small steamers ascend the river as far as Abbeville; and barges of 40 to 50 tons ply between Abbeville and Amiens. By means of lateral canalisation, and the improvement of the bed of the river, the Somme has been made navigable from Amiens almost to its source. By means of this lateral canal a communication is opened into the canal of St.-Quentin, which used to be called the Angoulême Canal, and thus a communication is formed with the Escaut or Schelde, the Oise, and the Seine. [AISNE.] The principal feeders of the Somme are the Miraumont, the Nieve, and the Maie, on the right bank; and the Ayre, which receives the Dam or Don and the Noye, and the Celle, on the left bank. These are all small; but the Ayre has been made navigable for about 12 miles. The *Authie* rises not far from Doullens, and flows past that town in a north-west direction into the sea. It separates the department from Pas-de-Calais. The *Bresle* rises in the department of Oise, and flows north-west into the sea between this department and Seine-Maritime. Neither the Authie nor the Bresle is navigable; but the mouth of the latter forms the harbour of Tréport. [SEINE-INFÉRIEURE.]

The department is traversed by 10 imperial, 8 departmental, and a great number of communal roads; and also by railroads from Amiens to Paris, Boulogne, and Lille. A railway has been recently authorized to be made from Amiens to Rouen through Gournay.

The department is by no means naturally fertile; the soil consists

for the most part of a sandy clay resting upon chalk—nevertheless a great weight of corn is raised. Of the whole area, about 1,500,000 acres, four-fifths are under the plough. The principal crops are wheat, rye, and mixed grain. Barley and buckwheat are also grown; but oats and potatoes are comparatively little cultivated. A great quantity of corn is exported to the departments of Seine-Inférieure, Seine, and Nord. The meadows do not exceed 40,000 acres, nor do the open pasture-grounds much exceed 20,000 acres; yet horses, cows, and sheep are numerous. Poultry is very abundant and good. Pulse, seeds for oil, hops, hemp, and flax are grown. There are no vineyards, but the orchards and gardens are numerous and extensive. The apple is the fruit chiefly cultivated, and a considerable quantity of cider is made; it forms, with beer, the ordinary drink of the inhabitants. Game abounds, and sea fish and fresh-water fish are plentiful. The woodlands amount to about 138,000 acres.

The climate resembles that of the south of England, but is rather colder in winter. Among the minerals are building- and limestone, gypsum, potters'-clay, and coal, which is found near Doullens.

The manufactures comprise woollen-cloths, cotton fabrics, silks, linens, Cashmere shawls, chintzes, muslins, carpets, hosiery, glass, hardware, paper, leather, seed-oil, soap, pottery, and chemical products. The department has numerous bleach-works, cotton-factories, beet-root sugar-mills, dye-houses, and oil- and tan-mills. Steam-machinery is used in all the chief industrial establishments, especially in the neighbourhood of Amiens.

The department is divided into five arrondissements, which, with their subdivisions and population, are as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Amiens . . .	8	249	189,968
2. Doullens . . .	4	88	60,010
3. Montdidier . . .	5	144	69,850
4. Péronne . . .	8	179	112,176
5. Abbeville . . .	10	171	138,637
Total . . .	35	831	570,641

1. Of the first arrondissement, and of the whole department, the chief town is AMIENS. *Airaines*, on the high road from Abbeville to Beauvais, and near the railway from Amiens to Abbeville, has a great number of oil- and corn-mills driven by three small streams that meet in the town, and 2200 inhabitants, who manufacture woollen-cloth, soap, and leather. *Corbie*, on the Somme, 10 miles E. by railway from Amiens, has some woollen manufactures and tan-mills, and about 2800 inhabitants. *Picquigny*, a small place of about 1500 inhabitants, on the left bank of the Somme, 9 miles from Amiens by railway, has some historical note. Here Guillaume, Longue-Epée, duke of Normandy, was assassinated in 942. Louis XI. had an interview with Edward IV. of England in 1475 on the bridge that spans the Somme, opposite Picquigny. *Poix*, a small well-built town, situated in a valley 17 miles W. from Amiens, midway between Beauvais and Abbeville, on the high-road from Boulogne to Paris, has a large tile-yard, a church which dates from the 12th century, and about 1100 inhabitants. A little east of Poix, on the Celle, is *Conty*, or *Conti*, formerly the capital of a principality, which gave title to one of the branches of the house of Bourbon. *Villers-Bretonneux*, a few miles S. from Corbie, has about 3200 inhabitants, who are engaged chiefly in the woollen manufactures.

2. In the second arrondissement the chief town, *Doullens*, situated on the left bank of the Authie, 19 miles N. from Amiens, is defended by a double citadel, formed by two forts or citadels communicating with each other. It has a tribunal of first instance, public offices, a theatre, two hospitals, and 4254 inhabitants. Trade is carried on in coarse linen, corn, oil, hemp, flax, and cattle.

3. In the third arrondissement the chief town is *Montdidier*, a wretched ill-built place with 3798 inhabitants, 22 miles S.E. from Amiens. Montdidier is situated on a hill on the right bank of the Dam, a feeder of the Avre; it is an old town, with some remains of the fortifications which formerly defended it. It has tribunals of first instance and of commerce, a college, and an agricultural society. Cotton-yarn, cotton-hose, and leather are manufactured; and trade is carried on in grain, pulse, cattle, poultry, peat, and coals. *Moreuil*, a well-built little town of 2200 inhabitants, is situated on the right bank of the Avre, 12 miles by railway S.S.E. from Amiens. *Roye*, built on the slope of a hill on the right bank of the Avre, 10 miles N.E. from Montdidier, has narrow streets and ill-built houses. The town-hall, a gothic building, is in the public square, which is large. The church of St.-Pierre is lighted through stained glass windows, representing the coronations of Clovis, Charlemagne, and St. Louis. There are manufactures of cotton-yarn, cotton and woollen stuffs, stockings, &c., and considerable trade is carried on in corn and flour for the supply of Paris. Roye was a place of strength in former times, and was repeatedly besieged.

4. In the fourth arrondissement the chief town is *Péronne*, which is situated on a hill above the right bank of the Somme, 30 miles E. from Amiens; and has a tribunal of first instance, a college, and 4142 inhabitants in the commune. Péronne was a place of importance in

the middle ages. Charles le Simple died here in captivity in 929. It was the scene of the interview (1468) between Louis XI. and Charles, duke of Bourgogne, described by Sir Walter Scott in 'Quentin Durward.' In 1536 it was besieged by Henri of Nassau, one of the officers of the emperor Charles V., but without success. It is still fortified by a brick rampart and a strong castle. The town has two suburbs; the houses are tolerably well built, and there are two churches, a nunnery, an hospital, and a theatre. Calico, dimity, muslin, lawn, and other cottons and linens are manufactured; also leather, seed-oil, and beet-root sugar. *Albert*, a station on the Great Northern of France railway, 15 miles N.W. from Péronne: population about 3000, who manufacture woollen-cloth, cotton stuffs, linen, leather, and paper. *Bray*, population 1500, on the Somme, afforded shelter to Philippe of Valois after the battle of Crécy. *Honnin*, 13 miles S.E. from Péronne, is situated in a marshy plain near the left bank of the Somme, and was in the middle ages a place of strength. It is surrounded by the ruins of its ancient fortifications, and has a castle, used as a state prison, and memorable as the place of confinement of the ministers of Charles X. and of Prince Charles Louis Napoleon Bonaparte, now emperor of the French, who for his attempt at revolution in Boulogne, underwent here part of his sentence to perpetual imprisonment from October 6, 1840, to May 26, 1846, when he effected his escape disguised as a workman. There are three parish churches and an hospital. The townsmen manufacture blankets and cotton goods, sabots, beet-root sugar, and oil. Population 2500.

5. In the fifth arrondissement the chief town is ABBEVILLE. *Cayeux* is a fishing village with about 2800 inhabitants, on the coast between the Somme and the Bresle. Above it is a lighthouse, which marks the entrance of the Somme. *Crécy*, a village of about 1700 inhabitants, 8 miles N. from Abbeville, was the scene of the memorable battle in which Edward III. defeated the French, August 26, 1346. *Rue*, on the little river Maie, near the coast between the Somme and the Authie, is celebrated for its chapel dedicated to the Holy Ghost, which is beautifully adorned with sculptures and stone tracery. Among the statues are those of Isabel of Portugal, Philippe, duke of Bourgogne, Louis XI., Louis XII., and Cardinal Bertrandi, in whose time the chapel was famous for its miraculous crucifix. Population above 2000. *Rue* was once a sea-port. *St.-Valery* is at the mouth of the Somme, on the southern bank of the river, which forms the harbour. It is built on the side of a hill, and has large warehouses, rope-walks, ship-building yards, and 3850 inhabitants. The harbour is capable of receiving ships of 300 tons. The tide rises about 12 feet. Considerable trade is carried on in sail- and packing-cloth, cordage, glass, wine, and brandy. Vessels are fitted out for the fisheries and the coasting trade. Steamers ply between St.-Valery and London. St.-Valery has a theatre, an hospital, and a school of hydrography. *St.-Riquier*, anciently called *Centule*, took its present name from St. Riquier, a native of the town, who founded here, in the 7th century, one of the most celebrated Benedictine abbeys in France. The church of the abbey still remains, and is the finest ecclesiastical building in the department after the cathedral of Amiens; there is also an hospital. Population 1600.

The department constitutes the diocese of Amiens. It is in the jurisdiction of the High Court of Amiens, and within the limits of the University-Academy of Douai. There are colleges in Amiens, Abbeville, and Péronne; an academy of sciences and a diocesan seminary in Amiens; and a preparatory ecclesiastical seminary at St.-Riquier. The Calvinists have a consistorial church at Amiens. The department belongs to the 3rd Military Division, of which Lille is head-quarters; and returns five members to the Legislative Chamber of the French empire.

SOMMERDA. [ERFURT.]

SOMMIÈRES. [GARD.]

SOMOROSTRO. [BASQUE PROVINCES.]

SONDENBORG. [ALSEN.]

SONDRIO. [VAITELLINA.]

SONGARIA is the name of a country in Asia, which constitutes the north-western portion of the Chinese empire. The name is derived from the Songares, one of the great divisions of the Kalmucks, or Olghs, who had taken possession of this country, and erected a powerful empire, which was destroyed by the Chinese after the middle of the 18th century. Songaria lies between 42° and 49° N. lat., and extends from 76° to 95° E. long. In length it extends upwards of 900 miles; but the width varies so much that on an average it probably does not much exceed 300 miles. This gives an area of 270,000 square miles.

Songaria occupies a very remarkable position on the globe. It forms the most northern portion of an isthmus, which separates the two largest deserts on the surface of the globe, with the exception of the Sahara in Africa. On the east of this isthmus is the Gobi, which, according to a rough estimate, has a surface exceeding 1,200,000 square miles. [GOBL.] On the west of the isthmus extends the low desert system that spreads out round the Caspian Sea on the north and east, and is even larger than the Gobi, covering an area of nearly 1,300,000 square miles. In this estimate the Descht Kowar, between the Caspian and the lower course of the Oxus, is considered as the most southern, and the Barabzinza Steppe in Siberia, between the rivers Irtysh and Obi, as the most northern portion; and it is assumed

that the Kalmuk Steppes, between the lower Volga and the Black Sea, constitutes its most western part.

The isthmus which separates these two large deserts is connected on the south (near 36° N. lat.) with the range of the Hindu Koosh, and on the north (near 50° N. lat.) with the western extremity of the Altai Mountains. South of 40° it lies north and south, and comprehends the countries known under the names of Badakshan and Bokhara. North of 40° it lies south-west and north-east, and comprehends the countries called Kokand and Songaria. South of 40° N. lat. the descent from the elevated Gobi to the low Caspian Desert is formed by an elevated range, a great part of which is always covered with snow, and the descent is rapid; but north of 40° N. lat., and especially in Songaria, it is formed by a number of extensive terraces, which, taken together, extend from east to west over a space of 500 miles.

On the east Songaria opens to the Gobi, and on the west to the Caspian Desert; but on the north and south it is bounded by two elevated mountain-ranges, the Thian-shan and the Altai Mountains. The space between the two ranges is traversed by numerous minor ranges, which lie in every direction, and divide the surface into numerous river-basins, which are entirely separated from one another, and each of which contains a lake, the receptacle of its drainage.

Thian-shan Mountains.—This extensive range of mountains extends in its western prolongation far into the Caspian Desert. The most western branch is known by the name of Ak-tagh, which occurs about 50 miles N. from Samarcand in Bokhara, near 41° N. lat., 67° E. long. From this point it extends eastward to the east of the meridian of the town of Hami in Chinese Turkistan; and seems, as far as is known, to terminate near 95° E. long. The extent from west to east is about 1400 miles. The Thian-shan do not greatly deviate from a circle of latitude, as their western extremity is near 41° N. lat., and their eastern between 43° and 44° N. lat.

The *Ak-tagh* rises boldly out of the steppe, but not to a great elevation, nor does it occupy a great width. Where it approaches the descent from the high table-land to the lower country it decreases in elevation and width, and takes the name of the *Aferah Mountains*. At the road which traverses the chain between Kashgar in Chinese Turkistan, and Khokhand, the range is probably 100 miles across, and rises so high that it is covered with snow nearly the whole year round: some parts even seem to rise above the snow-line. East of this road the mountains are called *Mus-tagh*, or *Moosoor*, and this name has been adopted to designate the range of the Thian-shan as far east as the great mass of the Bogdo Oölo Mountains, near 85° E. long. The western part of the *Mus-tagh* is stated to contain many high summits which are always covered with snow; but south of the Lake of Issikul, or *Temurtoo*, where it is crossed by two roads leading from Kuldsha, or Ili, to Uchi and Kashgar, the mountains are much below the snow-line. About 60 miles farther east however, where the road between Kuldsha and Aksoo traverses the chain, the snow-masses occupy from 9 to 10 miles of the central portion of the range, and those masses are stated to extend to a great distance east and west of the road. The higher portion is said to occupy about 40 miles in width; and when the lower heights which are contiguous to it on both sides are added, the whole breadth of the Thian-shan at the road can hardly be less than 80 miles. East of 85° E. long. is the *Bogdo Oölo*, which lies north of Karashar, and seems to be the most elevated and most extensive mountain mass of the Thian-shan. According to the information of the natives, the masses of snow and ice, and the glaciers which cover its summit, occupy a great space, and attain a considerable elevation above the snow-line. There is no road over this range between that which leads from Kuldsha to Kutche (83° E. long.), and another by which the range is traversed west of Turfan (89° E. long.), a distance of 300 miles. The most eastern part of the Thian-shan, or that which lies between 89° and 95° E. long., is very little known. Along the road west of Turfan, which leads from this place northward to Urumtsi, there are some snow-covered mountains; but farther east the range is considerably lower, and near 95° E. long. it terminates as abruptly in the eastern desert as the *Aktagh* rises in the western. It is indeed supposed that this mountain range continues through the Gobi until it unites, near 106° or 107° E. long., with the *In-shan*, which lies north of the great northern bend of the Hoang-ho; but this supposition is not borne out by the scanty information that we possess about this part of Asia.

Altai Mountains.—The Altai Mountains which bound Songaria on the north are described in a separate article. [ALTAI MOUNTAINS.] The part of the Altai range which lies south of the rivers Naryn and Bukhtarma, and consequently within the Chinese empire, and in Songaria, has been found to be the most elevated part of this mountain system which is known. South-east of the Kolson or Kolzun Bielki, or the Snow-Mountains of Kolson, which are the highest in Siberia, is what is called by the Russians the *Kurtahum Bielki*, or the Snow-Mountains of Kurtahum, which attain a much greater elevation, and form on their snow-covered tops an extensive ice-field above which no summit rises. But a very high summit stands near 88° 20' E. long., and this properly is called by the natives *Egtag Altai*, or *Great Altai*.

Mountain-Chains within Songaria.—It was formerly supposed that a continuous elevated chain of mountains connected the *Mus-tagh* with the Altai Mountains, and that this chain ran in a direction south-west and north-east. Such a chain does not exist. There is however an

uninterrupted continuation of high ground between both mountain systems. So far as is known, this high ground does not in any place fall to the common level of the country, nor even sink low enough to lose the appellation of mountains, and in some places it rises above the snow-line. The most elevated portion is the range called *Iren Khabirgan*, which at its eastern extremity is connected with the Bogdo Oölo. From the point of connection with that mass it first runs north-west, but afterwards turns west, and may be said to terminate with a considerable depression north of the town of Ili, or Kuldsha. The length of this chain may be about 200 miles, and we infer that it must rise to a great elevation and contain much snow on its summits, from the circumstance that the great road from Peking to Kuldsha traverses the chain at the depression north of Kuldsha, and does not cross it farther east, though if it did the road would be considerably shorter. The western continuation of the *Iren Khabirgan* is called the *Tokty Mountains*. This chain soon turns to the north-west and north, and extends along the western shore of Lake Alakul, or Alaktau-kul, until it terminates at the *Tarbagatai Mountains*. This last-mentioned chain runs east and west. The *Tokty Mountains* are of moderate elevation, but it is stated that near Lake Alakul a summit occurs which is always covered with snow. The chain is much lower which extends from the northern declivity of the *Tarbagatai Mountains* first northward and then north-eastward, until it terminates on the banks of the river *Irtish*, constituting in this part the boundary between the empires of China and of Russia. This most northern prolongation is called the *Kheirek Mountains*, which are separated from the Altai by the narrow valley of the *Irtish*. Another chain of mountains is connected with the *Tokty Mountains* near the south-western corner of the Alakul Lake. It is called *Ala-tau*, a name frequently occurring in these parts of Asia; and it extends first eastward to a short distance, and then north-east, until it joins the *Egtag*, or *Great Altai*, near the sources of the *Irtish*. The eastern extremity of the *Tarbagatai Mountains* is immediately connected with the *Ala-tau*. The *Tarbagatai Mountains* run about 400 miles east and west, and terminate, like the *Ak-tagh*, abruptly in the western desert. They seem to rise from 4000 to 6000 feet above the sea, and in some places snow in small patches is found even in summer. These ridges, and some others, less elevated or less known, divide the greater part of Songaria into numerous closed basins.

The basin of Lake *Issikul*, or *Temurtoo*, occupies the most south-western part of Songaria. The lake is nearly 100 miles long from east to west, and about 35 miles wide. At no great distance from its shores mountains inclose it on all sides, from which the lake receives a great supply of water. The surplus waters are carried off by the *Tchoui*, a river which leaves the lake at its western extremity, and traverses a great extent of the *Khirghis Desert*. On the south of the lake is the *Mus-tagh*, and on the north of it is a chain called *Ala-tau*. It is said that these mountains contain iron-ore which is worked.

East and north of Lake *Issikul* is the basin of the river *Ili*, which falls into the Lake of *Balkash*. It is the largest and most important of the basins of Songaria; it extends more than 400 miles east and west, and about 100 miles south and north, and probably has an area of 40,000 square miles. The *Ili* is formed by two head streams, the larger of which originates between 81° and 82° E. long., and runs under the name of *Tekes* north-east for more than 100 miles; the other and smaller branch originates in the angle between the *Iren Khabirgan* and the *Bogdo Oölo*, and runs west. From the place where these branches unite the river is called *Ili*, and runs to the west, inclining towards its termination to the north-west. It falls into Lake *Balkash* by several arms, after a course of more than 300 miles. Lake *Balkash* is the largest of the lakes of Songaria, and has no outlet, though it receives several other rivers from the north and east. The eastern half of the *Ili* basin has a very hilly surface, but it contains numerous tracts which are fit for agriculture. Since it has fallen under the sway of the Chinese the government has sent there a great number of military colonies, Mongols and *Mandshooes*, who unite agriculture with the breeding of cattle. Chinese convicts also are transported to the banks of the *Ili*. These Chinese are said to have already greatly contributed to change the face of the country by introducing several branches of cultivation. Farther west, about 80° E. long., the hills disappear, and the surface sinks to a level. The soil is much less fertile, and is chiefly covered with extensive bogs, in which only canes and rushes abound. It is nearly a desert, mainly tenanted by innumerable herds of wild hogs and other animals; but in approaching the country of the *Khirghis Cossaks*, south of Lake *Balkash*, it becomes a dry steppe, affording pasture-ground for horses, cattle, and sheep for several months in the year.

North of the eastern part of the basin of the river *Ili*, and separated from it by the *Iren Khabirgan* and the *Tokty Mountains*, is the basin of the Lake of *Borotala*, which is followed on the east by that of the Lake of *Ayar*, whose eastern extremity is contiguous to the basin of the Lake *Khulusutai*. The three basins occupy a line of at least 460 miles from east to west, near 45° N. lat. Only the western portion of the first basin has been visited by Europeans, and of the others some account is given in the Chinese geography. According to this information, it seems that this region, which extends to the base and over the northern declivities of the *Thian-shan*, is well watered, as a number of small rivers descend from the snow-covered

mountains, which in summer supply abundant means of watering the soil. It is stated that the Chinese and Mongols who have been transplanted to this country have made considerable progress in cultivating the ground, and that it is rather populous. But the cultivable and cultivated space is not of great width, as the rivers at a distance of 20 or 30 miles from the base of the mountains arrive at the lowest depression of the basins, and there form the three above-mentioned lakes, which are surrounded by extensive swamps. We have no information respecting the country to the north side of the lakes, nor respecting the extent of the lakes themselves.

North of the basins of the lakes of Ayar and Khulusutai are several smaller basins, and a larger one which is drained by the river Urungku, which falls into a large lake called *Kisibash*, or *Khassibash*. We are entirely unacquainted with the natural capacities of this region, and only know that the greater part of the Turgut Mongols, who left Russia in 1771 and 1772, were settled in these parts, whence we may infer that it is more fit for pasture than agricultural purposes.

The basin of the Lake Kisibash lies south-east of the basin of the river *Irtish*, which occupies that extensive tract of country which is south of the *Egtag*, or Great Altai, and north of the chain of the *Tarbagatai* Mountains, and is closed on the west by the low ridge of the *Kheirek* Mountains. This extensive basin was explored by command of Peter the Great. The expedition sailed to the Lake of *Zaisang*, from which the river issues. The lake is about 70 miles long and 10 miles wide, and abounds in fish. The banks are swampy and overgrown with reeds. The river *Irtish*, which originates in the *Egtag* Altai, enters the lake at its eastern extremity, after a course of about 250 miles. It may be navigated to a considerable distance by large river barges. The country about the lake was, when first visited, in possession of the Songares, and no part of the basin at that time seemed to be cultivated. At present, some tribes of *Khirghis* Cossaks are found in these parts, and they occupy this country exclusively, with the exception of a few Chinese and *Mandshoo*, who are established along the boundary-line of Siberia. In the eastern districts of the basin however some tribes of the Songares have maintained their footing. Nearly all of them lead a wandering life, and some live by the produce of the chase. The Russians, who dwell farther north on the banks of the *Irtish*, with the permission of the Chinese authorities carry on an extensive fishery in the river below its efflux from the lake, and a few of them advance even across the lake to the upper course of the river.

Between the *Tarbagatai* Mountains on the north, and the *Alatau* range on the south, is the basin of Lake *Alakul* and of the river *Imyl*. The lake is said to extend more than 60 miles east and west, and about half that length north and south. The course of the river does not much exceed 100 miles. The level part of the basin has a soil consisting of gravel, and consequently of little fertility, but at the base of the mountains and along the rivers there are many fertile tracts of considerable extent, which are cultivated with care by the *Khirghis* Cossaks, who came after the Songares had left the country.

In the Lake *Alakul* there is a lofty island called *Aral-tube*, which is an extinct volcano. Two other extinct volcanoes occur in the *Thian-shan* Mountains, the western called *Pe-shan*, near 83° E. long., and the eastern called *Hotaheou*, north of *Turfan*, near 90° E. long. Along the northern declivity of the *Thian-shan* Mountains there are several tracts which are covered with volcanic products, and on which sal-ammoniac and sulphur abound. It seems therefore that here, nearly in the centre of Asia, and at a distance of from 1000 to 1800 miles from the sea, an extensive volcanic system has once been in action, and the earthquakes, which even in modern times have been felt in this country, show that this powerful cause is still in operation.

Climate.—As this country is placed between two great deserts, which are no less distinguished by great heat in summer, than by severe cold in winter, we may suppose, in the absence of all positive information on the subject, that Songaria partakes of both in a considerable degree. Rain, which is so rare in the deserts, does not appear to be abundant in Songaria, as we must infer from the circumstance that where the ground is cultivated irrigation is practised; in winter however snow falls in considerable quantities.

Productions.—Wheat, barley, and millet are cultivated, but rice only in the southern districts, especially on the banks of the *Ili*. Tobacco is very extensively grown, and vegetables abound. There are excellent melons of several kinds. The lower declivities of the mountains are covered with trees, but the greater part of the country is destitute of them. The most common trees are pines, mountain-ash, poplars, willows, lime-trees, and birch.

The herds of the wandering tribes consist of horses, camels, cattle, and sheep. Deer, argali, and wild hogs are extremely numerous. Most of the lakes abound in fish. The fish taken by the Russians are chiefly sterlets, sturgeons, white salmon, *Salmo Aviatilis*, and *Gadus lota*.

The minerals which are mentioned are sal-ammoniac, sulphur, salt, iron, and coal. The last two minerals are found in abundance a few miles west of *Kuldsha*.

Inhabitants.—The *Khirghis* Cossaks possess the western districts since the downfall of the empire of the Songares. In the other parts of Songaria the different nations of the *Olöth* or *Kalmucks* form the

bulk of the population. The most numerous are the *Turgut*, or rather *Toorgoot*, who emigrated from Russia in 1771 and 1772, and were then estimated to amount to about 80,000 families. The two united nations of the *Olöth* proper and the Songares are dispersed over the whole country, and among them are settled the nations which, since 1757, have been sent there by the court of Peking, the *Tshagar* Mongols, the *Mandshoo*, and the Chinese themselves. The *Mandshoo* and Chinese are engaged in agriculture, commerce, trade, or employed by government. The *Tshagars* are soldiers and agriculturists, and chiefly live in the military colonies. The majority of the other tribes live on the produce of their herds, but many of them apply themselves to agriculture.

Divisions and Towns.—The eastern districts, or those which extend along the northern base of the *Thian-shan* Mountains, have been incorporated into the province of *Kansi*, which constitutes an integral part of China proper. The western districts are united under a provincial government, established at *Kuldsha* on the *Ili*, and constitute the government of *Ili*. These two parts together are also known under the name of *Thian-shan Petsu*, or the North Road of *Thian-shan*, as the great road from Peking to the north-western boundary of the Chinese empire traverses them in their length. The northern districts, that is, the basin of the rivers *Irtish* and *Urungku*, and some smaller basins, constitute a part of the government of *Khobdo*, or *Gobdo*, the greater portion of which lies east of the *Egtag* Altai.

That part which belongs to the province of *Kansi* contains the towns of *Barkol* and *Oorum-tai*. *Barkol*, called by the Chinese *Tshin-si-fu*, is near the eastern extremity of the *Thian-shan* Mountains, north of *Hami*; it is a fortress with a considerable garrison, and it has some commerce on account of the great road passing through it. The country in which it is built seems to be very elevated, as it is stated that snow sometimes occurs in July. *Oorum-tai*, or *Urum-tai*, which lies about 250 miles farther west, near the base of some offsets of the *Bogdo Oöla*, in a very fertile district, consist of two towns, *Old* and *New Oorum-tai*, which are about two miles from one another. They are well built, with wide streets. The military colony originally established at these places consisted of 8000 families. The town has a large population, and is considered to be the most thriving and industrious place in Songaria. The Chinese have established several manufactures and schools. The Chinese name of *Oorum-tai* is *Ty-hu-ohoo*. It is a town of the second class, the capital of the western district of *Kansi*. It carries on a considerable trade with *Kuldsha* and *Tarbagatai*.

The capital of the government of *Ili* is *Kuldsha*, or *Gouldsha*, called also *Ili* and *Kura*, and by the Chinese *Hoei-yuan-shing*. It stands about a mile from the banks of the river *Ili*, and is inclosed with a wall built of hewn stone 18 feet high. It contains about 10,000 houses and 50,000 inhabitants, and is the seat of the provincial government, and of the military administration of the army, which is posted along the western boundary of the Chinese empire. It carries on a considerable trade with *Oorum-tai* and *Signan* in *Shensi*, and also with *Kashgar* in Chinese *Turkistan*, and with *Tarbagatai*. About 9 miles N. from *Kuldsha* is *Kashmir*, or *Kashmir-hure*, a modern town with 3000 houses, mostly inhabited by Chinese settlers, who are very industrious. *Tarbagatai*, called by the *Khirghis* Cossaks *Toogotshuk*, and by the Chinese *Sou-shing-ching*, is situated not far from the southern base of the *Tarbagatai* Mountains, and is fortified. It contains about 600 houses, and 5000 inhabitants, of whom 2500 belong to the garrison. It carries on a considerable commerce with the *Khirghis* Cossaks, and has some trade with *Kuldsha*, *Oorum-tai*, and *Khobdo*.

That part of Songaria which belongs to the government of *Khobdo* appears to be almost entirely occupied by wandering tribes, and cultivation is hardly known. There are neither towns nor villages.

Commerce.—The town of *Kuldsha* is the centre of a considerable commerce with China. The most active branches seem to be the trade with China proper, and with the town of *Aksoo* in Chinese *Turkistan*; that with *Semipalatinskaya* in *Siberia* is less important. The principal imports are Chinese manufactures, which are consumed by the Chinese and *Mandshoo* families established in Songaria. Some of these articles, especially chinaware, are sold to the nomadic tribes.

The road from *Kuldsha* to *Aksoo* in Chinese *Turkistan* runs directly south, and crosses the *Thian-shan* Mountains a considerable distance east of the town of *Aksoo*. On the summit of the range a space 10 miles wide is covered with snow. The principal imports from *Aksoo* are cotton stuffs, made in the place or imported from *Kashgar* and *Khoten*. By this route also a few of the manufactures of *Hindustan* are brought to *Kuldsha*, especially muslins of indifferent qualities; some stuffs, half silk and half cotton; and several kinds of calicoes.

The road from *Kuldsha* to *Semipalatinskaya* separates from the road to *China* proper at the foot of the *Tokty* Mountains running northwards to *Tarbagatai*, and from this place it continues north, passing along the western banks of Lake *Zaisang*, until it enters *Russia*, where it turns north-west to *Semipalatinskaya*. The Russians import only cattle and sheep; and this they are permitted to do not as Russians but as subjects of some khan of the *Khirghis* Cossaks. They are paid in cotton stuffs of *Aksoo*, *Kashgar*, and *Khoten*.

Government.—The government of this province is on a military footing. The commander-in-chief of the troops is also invested with

the civil authority. The army stationed in Songaria probably consists of more than 60,000 men, of whom 28,000 are quartered in Kuldsha and the neighbourhood. The whole population of the country probably falls short of two millions, and three-fourths of this number are wandering tribes, who are very lightly taxed. The expenses therefore are much greater than the revenues. The Chinese government sends many goods from China, which are partly disposed of to the Khirghis Cossaks for cattle and sheep for the soldiers: a considerable quantity of silver also is annually received from Peking.

History.—After the eastern Mongols had conquered China, in the second half of the 13th century, the greater part of that nation settled in the conquered countries. Thus the population of their own native country was considerably diminished; and the Western Mongols, or Olöth, also called Kalmucks, began to extend farther to the east, and to increase in numbers. On the downfall of the Mongol dynasty in China, in 1368, the greatest number of the Eastern Mongols who had been settled in China perished in war, and only a small remnant returned to their native country. They found that their neighbours the Kalmucks were now more powerful than themselves; but the great fame which the Eastern Mongols had acquired by the exploits of Ghengis Khan and the conquest of China, kept the Olöth in awe for more than two centuries. In the 17th century however a war broke out between the Khalkas Mongols and the Galdan, or Khan of the Olöth, who wished them to acknowledge his supremacy as he had compelled the Songares and other tribes to do. The Khalkas were expelled from their country, and compelled to fly towards the country occupied by the Sunnites and Tahagar, two tribes which were already subject to the Mandshoos. To avoid destruction they submitted to the Chinese emperor (1688), and requested protection against their enemies. The emperor Kang-hi sent three armies against the Galdan. These forces, aided by Tse-vang Arabdan, the khan of the Songares, defeated the Galdan in several engagements, so that he was abandoned by nearly all his followers, and died by taking poison (1697). The Khalkas Mongols now returned to the country from which they had been expelled by the Olöth. On the ruins of the power of the Olöth rose that of the Songares. Tse-vang Arabdan subjected to his authority all the chiefs of the Olöth proper, conquered Turkistan, obliged another branch of the western Mongols, the Toorgut, to abandon the country west of Songaria, and to retreat to the banks of the Volga and Don, and took possession of Tibet. Thus nearly all the elevated region of Central Asia was subjected to his sway. A war with China followed, in which the Chinese armies were generally successful in expelling the Songares from the conquered provinces, but they could not get possession of Songaria. The death of the emperor Kang-hi and that of Arabdan occurred about the same date (1723), and for some time Songaria was torn by internal wars, in the course of which the throne was occupied by two usurpers, called Davatai and Amursana. Though at first closely united, they soon disagreed, and Amursana took refuge in China, where he was well received, and sent back (1755) with a Chinese army, as the lawful occupant of the throne of the Songares. The expedition was successful: Davatai was taken prisoner, and died soon afterwards. But Amursana did not intend to be a vassal of the emperor: he soon collected a large force, and destroyed two Chinese armies which were sent against him; but he was obliged to yield to the third (1757), which took possession of the whole country of Songaria and Turkistan. These continual wars nearly reduced the country to a desert. The Chinese wishing to re-people it, induced the Toorgut, who had taken refuge in Russia, to return to their native country in 1771 and 1772.

(Ritter, *Erdkunde von Asien*, vol. i.; Humboldt, *Fragments Asiatiqnes*.)

SONNING. [BERKSHIRE.]

SONORA. [MEXICO.]

SONSONATE. [SAN SALVADOR.]

SOODAN, or BELE'D EL SU'DAN ('the Country of the Blacks'), is a term applied by the Arabs to designate the interior of Africa; but, according to the geographical position of the country in which it is used, this term indicates different portions of that continent. The inhabitants of Egypt apply it to the countries south of the second cataract of the Nile (22° N. lat.), and a province has been formed of the countries in these parts which have been subjected to the sway of the pasha of Egypt, under the name of Beléd el Súdán. [SENNAAR.] The Arabs who trade to or are settled in Bornou, which is about 400 miles west of the Egyptian province, call 'Súdán' the countries which are still farther west, towards the middle course of the Quorra. The geographers of Europe designate all the countries along the southern edge of the Sahara from Senegambia and Sierra Leone on the west, to Dar-Fur on the east, by the term Súdán. Thus Súdán extends from 10° W. long. to 25° E. long., and is 2400 miles in length, with a supposed average width of about 350 miles, including an area of about 900,000 square miles. Its northern boundary towards the Great Desert is imperfectly known. In one part, at the most northern bend of the Quorra or Joliba, the fertile country extends to 17° N. lat.; but in other places, as in the vicinity of Lake Tchad, it does not come up to 14° N. lat. West of the course of the Quorra the southern boundary is formed by the Kong Mountains, between 7° and 11° N. lat.

Nearly up to the end of the last century this country was only known by the descriptions of the Arabian geographers and of Leo

Africanus. At that time (1790) the first European traveller, Houghton, entered Súdán from the west; but he was killed in 1791. The succeeding travellers were Mungo Park, in 1796 and 1797, Denham and Clapperton, between 1822 and 1826, Caillié in 1828, and Richard Lander, in 1830. The information we possess refers chiefly to the western and central districts of Súdán, the eastern not having yet been described by any European traveller.

Western Súdán comprehends the country west of the course of the Quorra, from Timbuctoo to its entrance into the delta at Abbazaca. The southern border of Western Súdán is formed by the Kong Mountains. Most of the rivers that descend from this mountain range to the south and north have very little water in the dry season. In the eastern part of the Kong Mountains the surface generally consists of a fertile soil, covered in some places with forests, but in others cleared and cultivated. The forests consist chiefly of tall trees, the intervening spaces being covered with luxuriant grasses. These forests abound in deer, antelopes, lions, leopards, elephants, wild asses, buffaloes, and hyænas; and in the Quorra the hippopotamus is common. The country, where cultivated, yields plentiful crops of indigo, tobacco, yams, wheat, and other kinds of corn, rice, onions, and other vegetables; and in the extensive pastures, great numbers of horses, bullocks, sheep, and goats are fed. In the neighbourhood of the river Quorra, the region is rather densely inhabited, and villages are numerous. There are also several large towns.

The country extending from the northern base of the Kong Mountains to the edge of the Sahara may be considered as a plain, the elevation being inconsiderable, and at wide intervals apart. The soil of this extensive tract is chiefly gray sand, alternating in some places with red sand, and frequently mixed with gravel, argillaceous earth, clay, and mould. In the vicinity of the watercourses it is subject to inundations for more than six months of the year. The more distant parts have the advantage of abundant rains. There are many shea-trees and nedés, the fruits of which are much esteemed by the natives; and the indigo plant abounds in several parts. The more fertile tracts are cultivated. The most common objects of cultivation are maize, millet, rice, tobacco, yams, onions, cotton, French beans, and water-melons. The colat or gora nuts are here collected, which constitute an important article of commerce all over the Western Súdán, and are carried from the Kong Mountains to Timbuctoo, and even to Tripoli. Domestic animals abound in most parts, especially black cattle of good size, sheep, and goats; the horses are of a small breed, except at Tangra, where they are rather large and of fine form. There are also asses and abundance of poultry. Dogs, serpents, lizards, rats, and mice serve as food to the natives. Fish abounds in the rivers. Wild bees are numerous, and wax and honey are largely consumed, and are also sent to other parts of Africa.

In this country the month of August is extremely stormy; and rain incessantly falls. It continues to fall every day until October, when though less frequent, the showers are still heavy, and set in with hurricanes from the south-east. In proportion as the rain diminishes, the heat increases, and the air becomes less damp and more salubrious. About the end of October the rains cease entirely, the days become exceedingly hot, and the nights cool. In November and December the weather is very fine, and the wind blows frequently from the north-east and sometimes from the north. A cold north wind begins to prevail at the end of December. At this season the trees shed their leaves.

The country between 10° 30' N. lat. and the southern banks of the Joliba River is less fertile. The surface of the country is slightly undulating or a level. Several tracts which are a little depressed below the general surface are swamps during the greatest part of the year, whilst others are always in this state. The first are either used as pasture-grounds, or rice is cultivated on them, as well as on the borders of the others, and along the alluvial banks of the rivers. Shea-trees and nedés are dispersed over large tracts, and here nearly all the vegetable butter is collected which is consumed on the banks of the Joliba as far as Timbuctoo. In a few places the baobab trees abound, whose leaves and fruit supply another article of trade to the countries farther north. In the more fertile tracts millet is extensively cultivated. The *Hibiscus cannabinus* abounds in many places, and ropes are made for sale at the markets on the Joliba, where these ropes are used to fasten together the boards of which the barges are made. The marshes are frequented by numbers of aquatic birds. From the ferruginous stones, which are so frequent in this region, iron is extracted, and is an article of export to the banks of the Joliba. The country along the banks of this river is annually inundated to a considerable extent. A great part of it has been converted into marshes, which serve as pasture-grounds; but on the drier parts rice, maize, and other grains are cultivated.

That part of Western Súdán which is north of the Joliba and the marshes contiguous to the river is tolerably fertile to a considerable distance from its banks. It is a plain, with occasional sandy hills and rocky eminences. The soil produces plentiful crops of millet and maize. Villages and towns are numerous. But in proceeding farther north, the soil becomes less fertile, as the sand of the Sahara is frequently thrown upon it by the strong north-eastern winds. There are numerous wild animals, as elephants, lions, panthers, leopards, and wild hogs. Among the domestic animals are camels.

The country on both sides of the Joliba is sultry and oppressive before the setting in of the rains. About the middle of June the heated atmosphere is agitated by violent gusts of wind, accompanied with thunder and rain. These usher in the rainy season, which continues to the month of November. The prevailing winds are from the south-west. The termination of the rainy season is likewise attended with violent tornadoes, after which the wind shifts to the north-east, and continues to blow from that quarter for the rest of the year. When the north-east wind sets in the grass becomes dry and withered, the rivers subside very rapidly, and the trees shed their leaves. At this period the 'hamattan' is commonly felt, a dry and parching wind blowing from the north-east, and accompanied by a thick smoky haze, through which the sun appears of a dull red colour. As this wind passes over the Great Desert, it becomes exceedingly hot and dry as it approaches Súdán, and parches up everything which is exposed to it.

Central Súdán comprehends that portion which extends from the river Quorra, where it flows southward, as far east as Lake Tchad and the river Shary, which falls into the lake, or from 5° to 16° E. long. It may be divided into two regions, a hilly, and an alluvial plain. The first occupies the country west of 11° E. long., and the plain occupies the remainder.

The hilly region seems to extend to the very border of the Sahara, which in these parts occurs between 14° and 15° N. lat. The surface is extremely diversified in character and in productiveness. The highest hills which have been seen are not much more than 700 feet above their base, and the general level of the country seems to be about 1000 or 1200 feet above the sea. A great part of this region extends in level plains, which are chiefly converted into large swamps or temporary lakes during the rainy season, but this circumstance is favourable to fertility. A large tract in which the swamps exist all the year round, situated north of 13° N. lat. and between 6° and 8° E. long., is known by the name of the Gondami Swamps. Hills of granite, of moderate elevation, inclose this tract on all sides, and prevent the water which collects on its surface from running off in any direction. These hills are covered with stunted trees, whilst the country between them and the swamps is overgrown with forests. Nearly all the rivers and watercourses of this region are very rapid and deep during the rainy season, but in the dry season only pools, sometimes single, sometimes in rows, occupy the lowest part of their bed. The soil retains moisture all the year round. Clay constitutes the predominant soil; in several places it is intermixed with gravel, and in others covered with a thin layer of sand. Its quality of retaining moisture for a long time, even under a burning sun, renders this region the most fertile tract of Africa north of the equator, and is populous in spite of the continual wars between its sovereigns, and its being situated in the centre of Africa and being nearly secluded from commercial intercourse with other parts of the world. The grains which are generally cultivated are rice, Indian corn, Guinea corn, and millet. Cotton, tobacco, and indigo are grown to a great extent. Yams, sweet potatoes, beans, and other vegetables are cultivated. In the districts south of 10° N. lat. palm-oil and cocoa-nut trees abound. In the same places plantains and bananas are grown in abundance. In the eastern districts date-trees are common. The fruit-trees which are most common are figs, pomegranates, limes, papaws, and tamarinds; the butter-tree also abounds in several places; the mango tree is cultivated, and occurs also in a wild state. The fields are often watered from deep wells.

The domestic animals are goats, sheep, asses, horses, and cattle. The horses are small, but along the northern border they are large and of a good breed, which is derived from that of the Tuariaks of the Sahara, but it is not equal to the Arab breed. In these districts many camels are also raised. Poultry abounds. In some woody parts, especially in the neighbourhood of the swamps of Gondami, there are numerous wild animals. Iron is the only mineral: it occurs in many places, and a small quantity is exported to the countries farther east. In this region the rainy season sets in at the end of May or beginning of June, and continues to the middle of September. The fall of rain is less, and is not so continuous, as in some other districts. Even in the height of the season, in August, there are several days without rain, and a continuation of rain for 24 hours is a rare occurrence. The prevailing wind changes regularly to all quarters of the compass. The diurnal change of the temperature is very great, the difference often amounting to 20 degrees, and sometimes to 25 and even 30 degrees, especially during the north-eastern winds. The natives keep fires all the year round in their huts.

The Plain of Central Súdán extends from 10° E. long. to Lake Tchad and the river Shary, and from 14° to 10° 30' N. lat., where it lies contiguous to a hilly country. This plain is probably the largest alluvial tract on the globe which occurs far inland, if the plain surrounding the Caspian Sea is excepted, which is of a different character. The alluvial plain of Súdán is nearly a dead level. It is very fertile, but not easily cultivated, owing to the rank vegetation caused by the rains. The southern districts however are in general rather populous, and a considerable portion of them is cleared and cultivated, but the country on both sides of the river Yeou is not much cultivated, and it is exposed to the predatory incursions of the Tuariaks, who inhabit that part of the Sahara which extends north of the plain. In many

parts there are extensive forests. The soil is a dark clay, which cracks during the dry season. The climate of this region differs considerably from that of the hilly region. It is in general much hotter, but the daily range of the thermometer is much less. The country therefore, notwithstanding the moisture of the air during and after the rainy season, is more healthy than in the hilly region. The mean annual temperature is 83·6°, that of the winter (December-February) 76·2°, of the spring (March-May) 90·3°, of the summer 84·6°, and of the autumn 82·7°. From the beginning of March to the end of July the heat is excessive, but not uniform. The nights are oppressively hot, but towards sun-rise the thermometer usually falls to 86° or 85°. Towards the middle of May the rains set in with violent tempests of thunder and lightning. The rain pours down in torrents, and continues sometimes for two or three days. Up to the end of June the ground, having been parched during the dry season, absorbs all the rain, but towards the end of July the lakes and rivers begin to overflow, and tracts of many square miles in extent are quickly converted into large lakes. The weather is without interruption cloudy, damp, and sultry; the wind hot and violent, and generally from the east and south. In October the rains are less frequent, the air mild and more fresh, and the weather serene; the wind blows from the north-west. December and January are rather cold. In February the heat increases rapidly. The principal objects of cultivation are gussup, which is a kind of millet, maize, cotton, and indigo. Kaheia and meloheia are two kinds of grass growing wild, the seeds of which are used as grain.

The domestic animals constitute the wealth of this country. Sheep, goats, cows, and oxen are numerous. In the lowlands, along the banks of Lake Tchad and the river Shary, many thousand head of cattle are pastured, and all over the country black cattle are very numerous. There is also a good breed of horses. Domestic fowls are very common; they are small, but well flavoured. Bees are very numerous, and honey constitutes an important article of food. There are lions, panthers, tiger-cats, leopards, hyenas, elephants, gazelles, antelopes, and other wild animals. The most common wild birds are pelicans, spoonbills, and Balearic cranes of large size. Ostriches are found along the northern boundary-line. Fish are numerous in the lake and the lower course of the river.

Rivers.—The largest river is the Quorra, which in the upper part of its course is called Joliba. This river is navigated in its whole extent, nearly from its source. Its course and its affluents are mentioned in the article NIGER, in which is also a notice of Lake Tchad, and of the rivers which flow into it.

Inhabitants.—The population is composed of aborigines who belong to the negro race, and foreigners. The negroes are almost exclusively the inhabitants of the mountain region of Kong, but in the plain north of that range they live intermixed with Mandingoes and Foulahs. In the hilly region of Central Súdán the negroes constitute the bulk of the population, but they are governed by Felláts, and in the eastern plain they are intermixed with Arabian tribes, which have here the ascendancy. These negroes live in small well-built huts, and generally wear a slight but decent dress, which is adapted to the climate. They apply themselves to agriculture, and in some parts the ground is cultivated with a considerable degree of skill. They manufacture great quantities of cotton-cloth, only from 5 to 6 inches wide, but of good texture. They are also expert in forging iron. They make arms, agricultural implements, and even needles. They also make earthenware of a grayish colour. The foreigners settled in Súdán are Mandingoes, Felláts, and Arabian tribes. The Mandingoes are only met with in the plain north of the Kong Mountains, where they have settled as merchants. They have attained a superiority by their higher degree of civilisation, and by being Mohammedans. Their language is generally spoken in all that part of the country in which they have settled. The Felláts are the same nation which in Senegambia is known by the name of Foulahs (SENEGAMBIA), and they speak the same language. It appears that the Felláts first settled in considerable numbers in the negro towns, like the Mandingoes, but towards the end of the last century they entered the country as conquerors, under the conduct of Danfodio, with a large army, and subjected in a few years the whole of Central Súdán to their sway. After the death of Danfodio however the sheik of Bornou succeeded in expelling them from the alluvial plain, but in the mountain region south of Mandara they have maintained their footing. The Arabs settled in Súdán are only found in the neighbourhood of Lake Tchad, where they lead a wandering life, living on the produce of their cattle, and are known by the name of Shouas.

Political Geography and Towns.—Súdán contains many large and small states, and there occur also extensive tracts, in which the inhabitants live in a peaceful state of society, without having entered into a political union. We shall notice these political divisions in the order of the natural regions:—

I. The Mountain Region of Western Súdán, or that of the Kong Mountains, is only partially known, between 3° and 7° E. long., and comprehends two extensive countries, Yarriba and Borgoo. The small river Moussa, which falls into the Quorra near 9° 20' N. lat., divides Yarriba from Borgoo. Borgoo seems to extend westward to a great distance. This region is very populous, and contains many

villages and towns. The kingdom of *Yarriba* seems to extend westward to the very boundary-line of *Ashantee*: on the south-west and south it is separated from the *Bight of Benin* only by the kingdom of *Dahomey* and a country called *Jaboo*. The *Quorra* divides *Yarriba* from the kingdoms of *Nyfi* and *Yaouri*. The present capital is *Eyeco*, or *Katunga*, which is situated in a fertile valley, about 20 miles from the river *Quorra*. It is inclosed by walls built of clay, about 20 feet high, and surrounded by a dry ditch. The walls are built in an oval form, and are about 15 miles in circumference. The king's houses are built of clay and have thatched roofs. A considerable part of the space inclosed by the walls is laid out in gardens or cultivated, and the population is about 20,000 individuals. The second town of the kingdom is *Bohoo*, which was formerly the capital of the kingdom. It has a triple wall, which is rather more than 20 miles in circuit, and is built on the slope of a very gentle and fertile hill, in an exceedingly well-cultivated country.

There are several large towns built on the banks of the *Quorra*, as *Lever* or *Lyaba*, near the boundary of *Borgoo*, which is very extensive and has a great population; *Bajiebo*, a flourishing and important trading town of great extent; *Lechee*, a very large and thriving place; *Egga*, which is of considerable extent, and has a large population; and *Kakunda*, which is governed by a sovereign independent of *Yarriba*, and consists of three or four considerable villages, situated within a short distance of one another. On the road leading from *Badagry* to *Eyeco* several other large towns are situated. Between *Eyeco* and *Bohoo* are *Etcho*, *Atoopa* (6000 inhabitants), and *Jagata*, a large and well-fortified town. South-west of *Bohoo* is *Kooso*, a large double-walled town, which has 20,000 inhabitants, and is a place of great trade; *Cháadoo*, with 7000 inhabitants; *Duffoo*, with 15,000 inhabitants, and considerable manufactures of cotton-cloth; *Assoudo*, with 10,000 inhabitants; *Assula*, with 6000 inhabitants; and *Jenna*, with from 8000 to 10,000 inhabitants.

Within the territories of the kingdom of *Yarriba* the *Fellátahs* have established some independent states, among which the towns of *Racca*, not far from *Eyeco* towards the north-east, and *Aloria*, south-west of the capital, are said to be very populous.

Borgoo, which lies to the north of *Yarriba*, consists, so far as we know, of ten states, governed by independent kings, and loosely connected with one another. The most powerful is the sovereign of *Niki*, and he is styled, by way of distinction, king or sultan of *Borgoo*. The countries of the kings of *Wawa*, *Kiáma*, and *Boosa* were visited by *Clapperton* and the *Landers*. The capitals have the names of the countries. *Kiáma* is built on the southern side of a rocky ridge, and surrounded by an extensive low clay wall; it is a commercial town, with 30,000 inhabitants. The houses consist of circular huts, built of clay and thatched. Inside the walls are plantations of corn and yams. *Wawa*, or *Wowow*, is a very neat and compactly built town, in the form of a square; it is surrounded by a good high clay wall and dry ditch. The streets are wide and airy, and the houses are of circular form, as in *Kiáma*. The town of *Boosa* is built on the banks of the western arm of the *Quorra*, which at this place divides into three branches, and it contains from 10,000 to 12,000 inhabitants. The houses are built in clusters inside the wall, and do not occupy above one-tenth of the ground inclosed.

Two caravan roads traverse this region, and are much frequented by merchants from *Houssa* and other countries of *Central Africa*. The most northern passes through *Kiáma*, and the southern through *Bohoo* and *Kooso*. These two roads lead to *Gonja*, a country lying west-north-west, either within the range of the *Kong Mountains* or along their northern base. The frequent fairs and market-days, which are regularly held in all the larger towns, show the degree of civilisation which this country has attained.

II. The southern part of the *Plain of Western Súdán* presents a remarkable instance of people living in society, and having attained a certain degree of civilisation, without entering into close political union. Towards the west, near the boundary of *Soolima* in *Sierra Leone*, and of *Foota Jallon* in *Senegambia*, there are some small states, among which we know *Sangara*, *Amana*, *Kankan*, and *Wassoolo*; but east of 7° W. long, each town and village, according to *Caillié*, is independent of the neighbouring towns and villages. Each place is inhabited by a mixture of *Mandingoes*, who are *Mohammedans*, and of *Bambarras*, most of whom are pagans. Still they live peaceably together, and the elders of each nation decide the differences arising among the people belonging to their nation. In this region no large towns are met with: some of them, which are situated on the caravan roads, contain a population of from 5000 to 7000 inhabitants, as *Kankan*, *Tangrera*, *Toomaneh*, and *Doosao*. *Kayaye* is said to be a larger place, but it has not been visited by Europeans. The commerce of this country is not considerable, and consists almost exclusively in the transport of the *colat-nuts* from *Gonja* to the countries on the banks of the *Joliba*, where salt is the principal article taken in exchange.

On the banks of the *Joliba* there are several kingdoms. That of *Booreh* comprises the greater part of the country between 9° and 7° W. long, on both sides of the river. It is inhabited by *Mandingoes*. The mountains which divide it from *Senegambia* are very rich in gold, of which a considerable quantity is annually obtained. The town of *Booreh* is said to be of considerable extent.

East of *Booreh* is the kingdom of *Bambarra* [*BAMBARRA*], in which

several towns of considerable extent are situated on the banks of the *Joliba*:—*Bammakoo*, a town from which the gold obtained from *Booreh* is sent down the river; *Marraboo* and *Koolikorro*, two places of some extent, which trade extensively in salt; *Baba*; *Yamina*, a place of considerable trade; *Sai*; *Sego* [*SEGO*]; *Sansanding* [*SANSANDING*]; and *Silla*.

East of *Bambarra* is the kingdom of *Jenneh*, the territory of which extends to the vicinity of 15° N. lat. It has obtained its name from *Jenneh*, the principal commercial town; but the capital and residence of the sultan is called *Ellam doo Lillahi* ('to the praise of God'), where there are said to be public schools in which children are taught gratuitously, and also schools for adults. The town of *Jenneh* is about six miles from the banks of the *Joliba*, but the whole country between the town and the river is cut up by numerous watercourses, so that river-vessels of 80 or 100 tons burden can come up to the town in the rainy season, and smaller vessels all the year round. The population may amount to 10,000. They send ivory, gold, rice, millet, honey, bees-wax, cured provisions, and onions; and also tamarinds, pimento, long pepper, leaves and fruits of the baobab, pistachio-nuts, beans, and colat-nuts, to *Timbuctoo*. Wax candles are made in *Jenneh*, and sent to *Timbuctoo*.

North of the kingdom of *Jenneh* is *Masina*, on the left side of the *Joliba*, and *Banan* on the right; they extend to the lake *Debo*. [*NIGER.*] North of the lake *Debo*, and on the east of the river, is an extensive country called *Dirimans*, whose capital is said to be *Alodia*. This country apparently extends to the vicinity of *TIMBUCTOO*.

In the north-western corner of *Súdán*, and contiguous to the boundary of *Senegambia*, are the kingdoms of *Kaarta* and *Ludamar*. *Kaarta* lies partly within the mountain range which constitutes the boundary between *Senegambia* and *Súdán*; and *Kassan*, which formerly was an independent kingdom, but has been conquered and united to *Kaarta*, is properly within *Senegambia*. *Kaarta* contains several very fertile plains and valleys. The capital is *Kemino*, and there are two large towns called *Asamangatory* and *Somantari*. The walls of *Asamangatory* are higher, stronger, and better constructed than those of any other town in these parts of *Africa*; and the town covers an extensive plain, noted for the quantity of earthenware which is there manufactured, and its great fertility in rice and onions. The kingdom of *Ludamar* borders on the *Sahara*, and consists of a succession of fertile and cultivated tracts and sandy deserts. The capital, *Yarra*, is of considerable extent, and the houses are built of stone cemented with clay. Other large places are *Deena* and *Sampaka*, which lie farther east than *Yarra*.

A large tract of *Súdán* extends along the southern border of the *Sahara*, between *Ludamar* and *Timbuctoo*. Of this tract the greater part belongs to the kingdom of *Boroo*, which appears to resemble *Ludamar* in productive powers, but is separated from the neighbouring states by sandy deserts. Its capital, *Wallet*, is said to be as large as *Timbuctoo*, and to carry on a very extensive trade in salt, which is brought from the great rock-salt mines of *Shingarín* [*SAHARA*], and sent to *Sansanding*, *Sego*, and *Yamina*, in *Bambarra*, where it is exchanged for corn and provisions.

III. The greater part of the hilly region of *Central Súdán* constituted at the beginning of the present century an integral part of the kingdom of *Houssa*, or was subject or tributary to it. This kingdom owed its foundation or its extension to *Danfodio*, after whose death most of the countries which he had subjected to his sway rose against his successor *Bello*, and several of those countries recovered their independence. The most populous and best cultivated districts are those which lie along the course of the *Quorra*, and the northern districts, between 11° and 13° 30' N. lat.

Along the banks of the river *Quorra*, from north to south, are *Yáoori*, *Nyfi*, and *Funda*. The capital of *Yáoori* bears the same name. It is a place of great extent and very populous, and is surrounded by a high wall upwards of twenty miles in circuit. The space inclosed is covered with clusters of huts, between which are cultivated tracts. In this place very neat saddles, country cloth, and gunpowder are manufactured. Where the countries of *Yáoori* and *Nyfi* join one another is the basin of the river *May-yarrow*, which is extremely fertile and thickly inhabited. There are here several large towns. *Tabra*, on both sides of the river, about 30 miles above its mouth, has about 20,000 inhabitants; *Koolfu*, on the northern banks of the river, a central point of inland trade, about 15,000 inhabitants; *Rajadawa*, about 7000 inhabitants; *Womba*, about 11,000 inhabitants; and *Guari*, a large and well fortified place, is the seat of a negro chief, who has made himself independent of *Houssa*. The capital of *Nyfi* is the town of *Nyfi*, which is known over all *Western Africa* for the excellent cotton-cloth made there. In *Nyfi* is the town of *Rabba*, built on the banks of the *Quorra*, on a gentle slope. It is the emporium of all the surrounding countries to a great distance, and several articles are brought to this place from *Tripoli* on the *Mediterranean*. It contains a population exceeding 40,000, and has manufactures of saddles and bridles made of red and yellow leather, cloth, shoes, boots, and sandals. Opposite the town, and near the western banks of the *Quorra*, lies the island of *Zagózhi*, which is 15 miles long and 3 miles in breadth, and being low is partly inundated in the rainy season. The inhabitants are partly sailors and fishermen, and partly employed in the manufacture of country cloth, which is of excellent quality.

There are several other branches of useful manufactures. Funda, the capital of the kingdom of Funda, is situated near the banks of the river Shary; it contains about 30,000 inhabitants, and has some manufactures of cotton cloth.

In the central districts of this region we are only acquainted with the countries of Zegzeg, Kano, Kashna, and Houssa proper. Zegzeg apparently extends between 8° and 11° E. long., 9° and 12° N. lat. In this country is the town of Kuttup, near 9° 40' N. lat., which comprises nearly 500 small villages, almost adjoining each other, and occupying nearly the whole of a vast and beautiful plain. A considerable traffic is carried on here in slaves and bullocks. Eggebee (near 9° E. long., 10° 50' N. lat.) is a very large and extremely neat town, surrounded with a high wall, and situated in the centre of a fine and highly cultivated plain. Zaria, or Zegzeg, the capital of this country, is inclosed by good walls, and contains a population of between 40,000 and 50,000, but a large portion of the area is occupied by swamps, corn-fields, and green plots. Rice of the finest quality is raised in the neighbourhood, and sent to distant countries. North of Zegzeg is Kano. Among the most remarkable places is Baesægie (11° 34' N. lat., 9° 13' E. long.), which is built in the midst of a large plain, and contains about 20,000 or 25,000 inhabitants, who are all engaged in trade. East of it is the town of Girkwa, a large place; and north-west of Girkwa is Kano, the capital of the country, and, as it appears, the most commercial town of Central Africa. It contains about 40,000 inhabitants, of whom more than one-half are slaves. During the dry months this place is resorted to by numerous travellers from all parts of Africa, from the Mediterranean and the Mountains of the Moon, and from Sennar and Ashantee. The city is of an irregular oval shape, about 15 miles in circumference, and surrounded by a clay wall 30 feet high, with a dry ditch in the inside, and another on the outside. Kano is both a commercial and a manufacturing town, and the division of labour is carried to a considerable extent. Within the walls of the city is a separate district or village for blind people, who are maintained at the expense of the government.

In the country of Kashna are the large towns of Jaza, Ratah, and Kutri, but the largest is the capital, also called Kashna, which is an important commercial town.

In Houssa proper, which lies west of Kashna, is the large town of Zirmie, and the capital, Sackatoo, or Sockatoo, which is built on the banks of the river Zirmie, which runs south-west, and is said to join the Quorra. Sackatoo was built about the year 1805, by Danfodio, the Fellâtah conqueror. The houses are laid out in regular well-built streets, and come close up to the walls. The walls are between 20 and 30 feet high, and have twelve gates, which are regularly closed at sun-set. The inhabitants are principally Fellâtahs, and possess numerous slaves, of whom a considerable number are employed in manufacturing cotton stuffs, and in tanning and iron-work. The commerce of Sockatoo is important.

IV. Nearly the whole of the alluvial plain of Central Sûdan constitutes the kingdom of Bornou, or may be considered as an appendage to it. [BORNOU.] It contains many towns, some of which are very populous. The capital, Kouka, is only a few miles distant from the banks of Lake Tchad. It is the residence of the sheik, and may have a population exceeding 10,000. The walls are well built of clay, and the whole space inclosed by them is occupied with houses, but the extensive market in the centre and some other open places take up about one-fourth of the area. Angornou, the largest and most populous place in Bornou, is likewise only a few miles from the Tchad. It contains above 30,000 inhabitants, but is a straggling place without walls. It is the principal commercial town of the country, where the caravans arriving from Fezzan or from Kano dispose of their goods. A few miles W. from Angornou is New Birnie, the residence of the sultan, which contains about 10,000 inhabitants. Farther south are the towns of Dugos, with 30,000 inhabitants, and Affagay, with 20,000 inhabitants. On the banks of the river Shary is Loggan, where much cotton-cloth is made and dyed. On the banks of the river Yeou are the towns of Kabshari, Kukabonea, Bedeekarfi, and Katgum. Burwha, north of the mouth of the river Yeou, and not far from Lake Tchad, is a well-fortified place, with about 5000 inhabitants.

South of Bornou is the kingdom of Mandara, which extends from 10° 30' to 9° 30' N. lat. Steep and rather high ridges inclose wide and open valleys, which are abundantly watered, and on this account, as well as the fertility of the soil, it is rich in natural productions, well cultivated, and densely peopled. The inhabitants are exclusively negroes, and are governed by a sovereign of their own race. The valleys of Mandara contain some considerable towns. Delow contains at least 10,000 inhabitants, and Mora, the residence of the sultan, is a strongly-fortified place, but of less extent.

Eastern Sûdan extends from 17° to 25° E. long. According to information furnished to European travellers by natives of Africa, who visited this district, it is divided into three countries or states. Kanem is contiguous to the eastern banks of Lake Tchad, and south of it lies Begharmi.

As a comparatively small portion of Sûdan has been seen by Europeans, it would be premature to give a decided opinion as to the relative importance of this part of Africa. But if we may judge from what we know of it, we must pronounce it superior to any other part in fertility, cultivation, and population.

(Park; Caillié; Denham, Clapperton, and Oudney; Richard and John Lander; Laird and Oldfield.)

SOOLIMANA, a country situated among the sources of the rivers which enter the sea at and immediately to the north of Sierra Leone. This territory extends between 9° 20' and 10° 28' W. long., and mostly south of 10° N. lat., being about 60 miles in breadth from north to south, and reaching from the present site of Falaba to the left bank of the Joliba or Niger. This is the native country of the Soolimas; but they now chiefly occupy a strip of land in the adjoining Kooranko territory, which is bounded S. by the river Rokelle, N. by Foola Jallon, W. by Limba and Tamisso, and E. by Kooranko proper and Soolimana, which latter is now used merely as a farming-ground, and only as a temporary residence.

The Soolima country is diversified with hills, vales, and meadows, belted with strips of wood, and decorated with clumps of trees of the densest foliage. The hills are composed of a light whitish granite. The soil of the valleys is remarkable for its fertility, and requires very little labour to prepare it for the seed. After sowing, which is generally before the 15th of June, the Soolima leaves his farm in Soolimana, until October, to the care of his wives, who clear the crop of weeds in the early stages of its growth. In October the husband returns from Kooranko, and both sexes labour together in getting in the harvest. Rice is the chief object of culture. Yams and ground-nuts, bananas, pine-apples, and oranges are the principal fruits. The Soolimas have numerous herds of cattle; and they also rear sheep, goats, and small poultry. The wild animals are numerous, especially elephants, buffaloes, a species of antelope, monkeys, leopards, and wolves.

All the principal towns of the Soolimas are in Kooranko. These are Falaba, the capital, Sangouia, Samba, Mousiah, and Konkodogore, containing in all about 25,000 souls, of which Falaba has about 6000. It derives its name from the Fala-Ba, or river Fala, on which it stands, and is nearly a mile and a half long by a mile in breadth, although closely built for an African town. The town is surrounded by a thick stockade of hard wood, and by a ditch 20 feet deep by as many broad. It is of an oblong shape, containing about 4000 circular houses or huts, which though built of clay and covered with conical roofs of thatch, are extremely neat, clean, and in many cases elegant. The palaver or court-house stands on an open piece of ground towards the south end of the town. In the centre of the town a large open piece of ground is left vacant for the purposes of exercise, of receiving strangers, and of holding grand palavers.

The Soolimas are partly heathen, partly Mohammedan; their stature ranges from 5 feet 6 inches to 5 feet 8 inches. They are well formed and muscular. In battle they use the spear, musket, sling, and bow. They exercise the most open hospitality to the strangers who visit them as traders. The trade of the country, which is monopolised by the king, is chiefly with the Sangaras and the Mandingoes. The former bring horses and gold, for which they receive a share of the goods—cloth, powder, flints, beads, &c.—brought from the coast by the Mandingoes, who in their turn receive slaves and other spoils of war, with a little ivory.

Except sowing and reaping, the principal cares of husbandry are left to the females, while the men look after the dairy and milk the cows. The women build houses and plaster walls, act as barbers and surgeons, &c., while the men employ themselves in sewing, and often in washing clothes. The dress of both sexes is very similar to that of the Mandingoes. Murder is the only crime punished with death; for all other crimes, fines, stripes, or slavery are the punishments. Death is inflicted by strangling. The mode of trial appears not unlike trial by jury.

SOOLOO ARCHIPELAGO is situated in the Indian Ocean, between the Philippines and the island of Borneo. It consists of two chains of islands, which lie nearly parallel, and, together with Borneo and the Philippines, inclose a portion of the ocean which is usually called the Sooloo Sea, sometimes the Mindoro Sea, from the Isle of Mindoro which lies north of it. The southern chain of islands, which is properly called the *Sooloo Islands*, begins on the west, opposite to the peninsula of Unsong in Borneo, near 5° N. lat., 119° 30' E. long., and extends east-north-east to 6° 50' N. lat., 122° 30' E. long., where it is separated from the south-western part of the island of Mindanao by the strait of Basilan. The northern chain, which is called the *Palawan Islands*, begins on the south near 7° N. lat., 116° 30' E. long., opposite Sampanmanjo Point in Borneo; and its southern portion, which is on both sides of the strait of Balabac, lies nearly south and north, but the remainder lies south-west and north-east. It terminates with the island of Busvagon on the south side of the Mindoro Strait, near 12° 20' N. lat., 120° 30' E. long. Large vessels enter and leave the Sooloo Sea by the straits of Basilan, Balabac, and Mindoro. The group of islands between the island of Palawan and the Apo bank in Mindoro Strait, is called *Calamianes*. Between Palawan and Panay, one of the Philippines, is the group of the *Ouyos Islands*. South of these is the *Cagayanes group*, and in the south part of the Sooloo Sea, near the northern coast of Borneo, lies the little group of the *Cagayan Sooloo*.

Though there are volcanoes in the islands of the Sooloo Archipelago, it does not appear that any of the numerous islands that compose these groups are of volcanic origin. The larger islands of the chain are of moderate height, but the mountains on the island of Palawan

attain a considerable elevation. Some of them are covered to the very summits with lofty trees, and others with rich pasturage, here and there intersected by cultivated grounds, whilst others again exhibit cultivation to the highest point, diversified only by groves of fruit-trees. Along the foot of the hills there are level grounds two or three miles wide, which are partly swampy, but mostly cultivated or planted with fruit-trees.

The wet season lasts from May to September, during the prevalence of the south-western monsoon, and the dry season lasts from October to April. But showers frequently occur during the dry season, and the rains of the other season are much more interrupted and irregular than in Hindustan. The heat is considerable, but not oppressive, being mostly tempered by the land and sea breezes. In summer it varies between 76° and 87°. The thermometer however falls to 75° only early in the mornings. The interior mountainous districts have a much lower temperature.

The soil of the country is generally rich, and the crops are abundant. The produce of rice, of which eight species are cultivated, is not sufficient for the consumption of the inhabitants, who are comparatively very numerous. Rice is imported from the Philippine Islands, and from the eastern coast of Borneo, which is (or was) subject to the Sultan of Sooloo. Two kinds of yams, sweet potatoes, and the Chinese potato, some wheat, pumpkins, cucumbers, radishes, &c. are grown. Fruit is extremely plentiful and of a delicious flavour; the chief kinds are mangoes, oranges, mangustan, durian, jack, champaka, plantains, and a great number of other fruits unknown in Europe. Sago-trees are numerous. Pepper, formerly cultivated with success, is grown only for home consumption. The cinnamon is particularly fine. The cacao-tree grows all over the island of Sooloo, and yields the common beverage of all classes. Indigo, cotton, and tobacco are also grown. The plant from which the Manila white rope is made and the gamuty are plentiful, and also a species of hemp and flax, of which the inhabitants manufacture their fishing-lines. Turmeric and ginger grow to perfection.

The forests which cover a large portion of the surface of the islands yield excellent timber, including teak, mahogany, ebony, &c. Many of the useful trees which grow in this archipelago are not yet known to botanists. The camphor bars collected in these woods is not inferior to that of Sumatra, and sells well in Japan and China. Sapan-wood, red-wood, and various dyeing woods are exported to Amoy in China. The sandal-wood and the clove and nutmeg-trees are said to exist here, and the bread-fruit and laka trees are abundant.

Buffaloes are not numerous; but Sooloo black cattle abound, and they are used as beasts of burden, and even for the saddle. The horses are of good breed and hardy. Hogs are not rare, though the inhabitants, being Mohammedans, do not eat them: they are consumed by the Chinese. Wild hogs are abundant. There are goats, some with spotted skins, and some beautiful small antelopes. The Sooloo Islands are the most eastern country in which the elephant is found: it was introduced from Borneo. The swallow which makes the edible bird's-nest is common in most of the islands.

The seas are abundantly stocked with fish. The most important productions of the sea are the sea-slugs, which under the name of tripang are sent to China, and the prawns and shrimps, which, after being pounded in a mortar into a soft mass, are an important article of commerce all over the Indian Archipelago and the countries beyond the Ganges, under the name of blachang. Sea-weed is exported to China. In several places pearls are found, which also go to China. A little gold has been found. Common salt is not used, but a salt made from burnt sea-weed is in general use.

The Sooloo chain consists of three groups, those of Basilan on the north-east, Sooloo in the middle, and Tawi-Tawi on the south-west. The first-mentioned group is composed of the large island of Basilan and several smaller ones. Basilan is about 45 miles long, and the average width may be 12 miles. The centre is hilly, but the sea-coast low and woody. It is very fertile, and sends much rice to Sooloo. It exports birds'-nests, mother-of-pearl, tortoise-shell, and a few pearls; cowries are abundant. The principal ports are Maloza on the south-west side and Gubawang on the north-east coast.

The Sooloo group consists of the larger island of that name and of several small islands. Sooloo is about 40 miles long and 10 miles wide on an average. The surface presents two hilly tracts, separated by a low and level plain. The population is variously estimated at 60,000 to 200,000. There are many small towns on the coast. The largest is Sooloo, Soung, or Soog, near the western extremity of the island, with a permanent population of 6800, among whom are 800 Chinese. The inhabitants of the town of Sooloo are said to be of Arabic descent. The coast population is of Malayan race and Mohammedans; but in the interior the mountains are inhabited by idolatrous Dyaks. More than half of the inhabitants are always engaged in trading voyages, in the pearl and tripang fisheries, and the collecting of birds'-nests. On the north coast is *Bokol*, with 6000 inhabitants, and on the south coast *Parang*, with 8000 inhabitants. All the products which have been mentioned as articles of export, are shipped from these towns. The larger of the other islands belonging to this group are *Pangutaran*, *Tapul*, and *Sikant*, or *Siant*, lying north-west and west of Sooloo.

Tawi-Tawi, is about 40 miles long and 12 miles wide. In the centre

are some hills of considerable elevation, and two lakes. One of the lakes, called *Dungon*, is united to the sea by a channel which is from five to seven fathoms deep, but has a bar, on which there are only a fathom and three quarters at low-water, and about four fathoms at spring-tides. The lake itself is about eight fathoms deep and is fresh at low-water. It is an excellent harbour for vessels which can pass the bar. The island is thinly inhabited. It exports tepey, tripang, birds'-nests, and many valuable pearls, but does not produce rice enough for the consumption. The principal town is *Dungon*, on the banks of the lake. The chain of small islands which extends along the southern coast of Tawi-Tawi consists of low islets, with numerous shoals between them. The channels that divide them are from six to eight fathoms deep, extremely intricate, and so narrow that the Chinese junks in some places require to be pushed on with poles. The most valuable pearl fishery is in these straits, which are accessible at all seasons, and fish is very plentiful and of large size. North of Tawi-Tawi is the *Tahaw Bank*, which consists of coral rocks covered with a layer of sand, and is in some places overgrown with shrubs and trees. It has no fresh water, but the pearl fishery is very valuable.

Between the north-eastern extremity of Borneo and the large island of Palawan are several smaller islands, and the three islands of Banquet, Balambangan, and Balabac, which are of some extent. They are thinly inhabited, and overrun with jungle and timber-trees. They produce chiefly wax, tripang, and tortoise. Balambangan, together with the north-eastern part of Borneo, was ceded to the British by the sultan of Sooloo, and a settlement was established there in 1763. But the British were expelled in 1773 by the Sooloo, who, finding the garrison weak and sickly, and off their guard, murdered them and set fire to the settlement. In 1803 the settlement was re-established, but again abandoned in the following year, on account of the expense of maintaining it.

The large island of *Palawan*, or *Palwan*, is more than 275 miles long, and on an average 32 miles wide. A continuous range of hills runs along the west side of the island. But along the eastern shores a low and generally level country extends from 10 to 20 miles inland. The northern portion of the island has been long subject to the Spaniards, and is called *Paragua*. It forms a part of the province of Calamianes, one of the political divisions of the Philippines. The low country south of 10° 20' N. lat. is tolerably well peopled, and subject to the sultan of Sooloo, but the hilly and mountainous region is in possession of the aboriginal inhabitants, who resemble the Papuas, and are continually at war with the inhabitants of the plains. The productions of the low lands and the adjacent seas are canes, cowries, wax, tortoise, tripang, and gum copal. Rice is also exported. The principal town is Babuyan, which is fortified, and has a population of about 2000.

The islands north of Palawan, namely, Linacapan, the Calamianes, and Coron, form politically a portion of the Philippines. Besides the islands hitherto noticed, the sway of the sultan of Sooloo extended until recently over a large portion of the north-eastern part of Borneo, as far south as Kaniungan Point at the entrance of Macassar Strait, and over more than a million and a half of people. [BORNEO.] Each Sooloo chief is sovereign in the country which belongs to him, and his authority depends on the number of his followers, or rather slaves, called *ambas*, who are his soldiers. The sultan was aided by a privy council called 'Ruma Bechara', the members of which were styled *Datu*. He derived all his revenues from his own estates, as no taxes are paid by the noblemen or their subjects, and the only revenue, consisting of the customs on goods imported, is shared between the king and his council. The petty chiefs of the more remote islands and those on the coast of Borneo, acknowledged the authority of the sultan, in order that they might be protected from the piracy of his subjects, or share the advantages arising from such predatory expeditions.

The fleets of piratical junks and prahus, or prows, belonging to the Sooloo sultan and his barbarous dependent chiefs, were for centuries the terror of the neighbouring seas. The Spaniards ever since the occupation of the Philippines in 1566, have been at war with these people. In 1646 they seized the island of Sooloo (which has been always the central nest of the atrocious gang), and gave it up to the sultan on condition of his paying tribute, but reserving the sovereignty and protectorship to her Catholic majesty. The atrocities recently committed on the inhabitants of the Philippines, induced the Marquis de Solana, governor of the Philippines, to proceed to the capital of Sooloo in December 1850 to demand redress. Instead of listening to his friendly warnings, the sultan ordered the batteries of the forts to fire upon the Spanish vessels, which formed the governor's escort. The Spaniards withdrew, collected a force at Zamboangan, in the island of Mindanao, and on the 28th of February, 1851, the governor-general opened fire with a small squadron on the forts and batteries of the town, while 3500 men, with 20 field pieces, were landed from transports to attack the place. After a desperate resistance the forts, which were defended by double rows of stockades filled between with coral reef, were taken and burnt. The Spaniards took out of these forts 143 pieces of artillery of English manufacture, which these piratical hordes had got from the English settlement, which they murdered in 1773. This important victory has completely

destroyed the power of the sultan of Sooloo, and deprived him of the means of defence and injury which it cost his ancestors nearly a century to acquire. We know not whether the Spanish government have annexed the Sooloo Islands to their possessions in the East.

The Sooloos belong to the Malay race, and most of the chiefs speak the Malay language. But the indigenous language is the Bisayan, which contains a great number of words that are used in the language of Sumatra. Many of the chiefs speak the Spanish language, and some the Chinese fluently. The Sooloos have made considerable progress in civilisation in the last two centuries. Many Chinese are settled in the islands, and great numbers of Christian slaves who were kidnapped from the Philippines. The people profess Mohammedanism, but they know little of their faith, and observe its religious rites still less.

Besides the Christian slaves, there are two classes of men, the 'Bajows' and the Lanuns. The Bajows inhabit the small towns on the coast, and fish for pearls, tripang, and sea-weed. They speak the same language as the Sooloos, and are Mohammedans. Though free, they are much oppressed by the datus and other chiefs. The Lanuns are, without exception, the greatest pirates on the globe. Their depredations are conducted in large fleets of prows in the Straits of Macassar, among the Moluccas, but more particularly among the Bisayas, or southern Philippines. The whole produce of their enterprises previous to the late Spanish expedition was sold at Sooloo, which was their grand entrepôt. But they have stations on most of the other islands. They paid the sultan 25 per cent. on their captures; and were bound to respect the Sooloo flag, and commit no depredations on vessels at anchor in Soog roadstead. The chiefs advanced them guns and powder, for which they were paid by a stipulated number of slaves.

The manufacturing industry of the inhabitants is very limited; but a large number of prows is built. Cotton-cloths of very fine texture and tartan-striped are woven, and some of them are exported. Sugar, indigo, saltpetre, and chocolate are only made for home consumption. There are cutlers who make 'crosses' or daggers, and some goldsmiths who make jewellery.

The commerce of the Sooloo Islands would be very considerable if it were not continually interrupted by the pirates. At present it is limited to the produce of the country, which chiefly goes to China. It is carried on by Chinese from the harbours of Amoy and Pactow. Their junks import furniture, particularly chests, brass utensils and wire, iron unwrought and iron pans, raw silk, mankeens, linen, a great quantity of porcelain and crockery, some piece-goods of flowered silk, cutlery, sugar-candy, tea, and some smaller articles. They take in return pearl-shells, betel-nuts, tripang, wax, sugar, sea-weed, birds'-nests, shark fins, camphor, tortoise-shells, pearls, ebony, sapan-wood, clove-bark, cinnamon, cowries, pepper, and sago. British vessels from Singapore sometimes visit the Sooloo Islands. Their cargo consists mostly of opium, cotton goods, chintzes, Swedish iron and steel, large spike nails for prow building, and some hardware. They receive in return the various products of the country, which they take to Canton, and thence return with a cargo of tea and other Chinese articles.

SOONERGONG. [DAGGA.]

SOORY. [BIRBHM.]

SOPHIA, a city in Bulgaria in European Turkey, situated on the route from Constantinople to Belgrade, about midway between Nissa and Philippopolis, near the point indicated by 42° 37' N. lat., 22° 27' E. long., in a wide plain bounded by high ramifications of the Balkan, and traversed by the Isca, a feeder of the Danube, and has about 10,000 inhabitants, the greater part of whom are Christians. It is a large place, and has a beautiful appearance from a distance, but the streets are narrow, tortuous, dirty, and lined by high mud walls, which here and there inclose good houses, but in general the houses are poorly built. It has a great number of mosques and Christian churches, which are the principal buildings in the city; there are also a large and well-frequented bazaar, public baths (which are supplied from a hot-spring), and khans. The chief industrial products are—knitted-stockings, for which Sophia is celebrated, broad-cloth, some silk-stuffs, leather, and tobacco. Sophia was formerly the residence of a pasha and capital of an eyalet of the same name, but the eyalet is now named from its capital, Nissa, called by the Turks Nish. It gives title to a Greek archbishop and to a Catholic bishop. There are hot-springs in the environs. Sophia is a place of considerable commerce. It was founded by the emperor Justinian on the site of the ancient *Sardica*. The only remains of antiquity are the ruins of the church founded by Justinian. *Sardica* is famous for the council held in it A.D. 347, which confirmed the decree of the Pope acquitting St. Athanasius of the charges brought against him at the council of Antioch. The council of *Sardica* also passed twenty canons, one of which permits a bishop condemned by a provincial council to appeal to the Pope. The Arian bishops, to the number of about eighty, withdrew from the council of *Sardica* to the town of Philippopolis, and held what they called the council of *Sardica*, in which they pronounced sentence of excommunication against Osius, St. Athanasius, and the Pope. (*Frontier Lands of the Christian and Turk; L'Art de Vérifier les Dates.*)

SORA. [LAVOBO, TERRA DL.]

SOREL. [CANADA.]

GEOG. DIV. VOL. IV.

SORIA. [CASTILLA LA VIEJA.]

SOROCABA. [BRAZIL.]

SORRENTO. [NAPLES, Province of.]

SORSO. [SARDEGNA.]

SOSPELLO. [NICÈ.]

SOULLAC. [LOT.]

SOULTZ and SOULTZ-SUR-FORÊT. [RHIN, BAS.]

SOUSTONS. [LANDES.]

SOULAINES. [AUBE.]

SOUTH AUSTRALIA is a British colony, established on the southern shores of Australia, and extending between 132° and 141° E. long., from the coast, to the parallel of 26° S. lat., which constitutes its northern boundary. It is bounded E. by the colonies of New South Wales and Victoria, or Port Philip; S. by the Southern Ocean; and W. by the unoccupied territory which separates it from the colony of Western Australia. It has a coast line extending from the south-east to the north-west about 1500 miles. Within its boundary are contained two large bays, Spencer Gulf and the Gulf of St. Vincent, and the lower part of the course and basin of the river Murray. Kangaroo Island, which lies before the entrance of the Gulf of St. Vincent, is also annexed to it. The area of the colony is estimated at 300,000 square miles, or nearly 20,000,000 acres, of which the greater proportion is waste land. The population in 1840 was 14,610; in 1845 it was 22,390; in 1853 it was 70,000, exclusive of about 3700 natives.

The western portion of the territories is a mere waste. Near the western boundary-line, and as far east as Streaky Bay, the country along the sea coast is low and barren, without trees or high bushes, but covered with scrub. It is almost entirely destitute of grass, and also of water, except during the rains and a few days after they have ceased. South from Streaky Bay, the shore is skirted by low sand hummocks. Towards the southern extremity of the peninsula lying west of Spencer Gulf, especially east of Coffin's Bay, there are hills which attain an elevation of between 600 and 800 feet; they consist of sandstone, and are covered with wood. The interior of the peninsula is low and barren, but interspersed with salt-lakes. Between Streaky Bay and the head of Spencer Gulf lies a mountainous tract, exhibiting a succession of lofty rugged ranges, running from east to west, but turning north-west at their western extremity. They are called Gawler's Range, and attain an elevation of about 2000 feet above the sea-level, but decrease as they advance farther east. These ranges have a barren appearance, but are overgrown with prickly grass. There are no rivulets or springs, but between the hills are small salt-water lakes, with salsolaceous plants growing round their margins; fresh water is only found after the rains in the clefts of the rocks. In the country north from the Gawler range are extensive tracts of good pasture land, interspersed with fresh-water lakes.

The country situated on the western shores of Spencer Bay is of a much better description. It contains Port Lincoln, the most extensive and the best harbour in the colony. The harbour is protected at its mouth by Boston Island, and consists of three basins—Spalding Cove, Port Lincoln, and Boston Bay, in each of which there is not less than 10 or 12 fathoms water, with a bottom of muddy sand; they are capable of holding the navies of all Europe. Round these extensive sheets of water are many large tracts well wooded, and others grassy with single trees dispersed over them. The peninsula south of Port Lincoln is hilly, but well wooded, and has much good pasture ground, as has also the country north of it to the distance of 10 or 12 miles; but farther north the hills disappear and are followed by a low tract which extends along the shore, and is densely wooded with brush, among which are scattered a few small patches of grass. Water is only found near a few rocky elevations. At the back of this low and rather narrow tract is a moderately-elevated table-land, whose edge is broken, by deep gorges, into portions resembling hills. The soil is a sandy red loam, greatly mixed with stones, and presents only here and there a little grass, with patches of scrubby bushes, and a few small pines. No water has been discovered.

The table-land just mentioned is continued northward from the head of Spencer Gulf, where a rather narrow low tract separates it from Flinder's range. This tract is quite level, and has a sandy soil almost without vegetation. It is intersected by a watercourse, which comes down to the head of Spencer Gulf from Lake Torrens, a salt-water lake extending northward, and spreading towards the west, with a breadth, as far as it has been explored, of 14 or 15 miles. Flinder's range constitutes the western borders of a mountainous tract of considerable extent. It occupies in width a space more than 60 miles from west to east, lying east of Spencer Gulf. It may be said that this mountain tract terminates on the south of the banks of Broughton River, in 33° 30' S. lat., where a higher summit, Mount Bryan, occurs, with an elevation of 3012 feet. From these parts it extends nearly due north, with a small declination to the east to Mount Hopeless, in 29° 20' S. lat. This region is traversed by a great number of ridges, which in general run south and north, but grow gradually narrower toward the north; for in 31° S. lat. the region is only 30 miles across, and it is still less towards its northern termination. In the southern portion of this mountain region several summits attain an elevation of more than 2000 feet. Mount Brown, not far from the head of Spencer Gulf, rises 3000 feet above the sea. Farther north the mountains decrease in elevation. Between these ridges are plains

of considerable extent. The higher portions of the hills consist invariably of naked rock, generally sandstone. The lower slopes are covered with dense brush, and the valleys with low shrubs and occasional small patches of thin wiry grass. Some of the plains have an undulating surface, and then it is found that the higher parts are quite destitute of vegetation, whilst the slopes and valleys are overgrown with scrub. In other parts the plains are level, and some of them are covered with salsolaceous plants. During the rains, and a short time afterwards, running water is found at a few places among the hills. A little to the south of Mount Hopeless some good pastoral tracts have lately been discovered and occupied. The northern extremity of this mountain region is bounded by a level desert. A salt crust is found at intervals on the surface of the sand, and a few pieces of what appear to be drift timber are lying about. This desert is about 300 feet above the level of the sea. The river Broughton may be considered the southern boundary of this barren mountain region. It rises on the declivities of Mount Bryan, and appears to be of considerable size during the rainy season. In the dry season its upper course consists of extensive reaches of water connected by a strongly-running stream, into which several chains of ponds discharge their water during the rains. Lower down the Broughton winds through some broken hills of an open but barren description, and here the water is lost in the sands; only water-holes are found at intervals. Still farther down the channel, though very wide and deep, is quite dry. After the rains however the waters come down to Spencer Gulf.

South of the Broughton a few high hills are found, as the Razorback (2900 feet above the sea) and the Lagoon Hill (2260 feet), but they soon sink much lower. The country between these hills and the shores of Spencer Gulf presents open grassy downs, which are well adapted for sheep, and abundantly watered by ponds. With this part is connected Yorke Peninsula, which separates Spencer Gulf from the Gulf of St. Vincent. This peninsula is about 100 miles long, with an average width of 15 miles. Its surface is level, rising gently towards the interior; the soil is a light sandy loam, and generally wooded in a park-like manner, except towards the eastern shores, where the woods are thick and have underwood.

The best portion of the colony is the country lying on the east of the Gulf of St. Vincent. The interior of this tract is hilly. The hills run in a series of distinct ridges called ranges, from Mount Bryan range in the north, to Wakefield range, which spreads over the peninsula, between the Gulf of St. Vincent and Encounter Bay. The intervening space is occupied by the Belvidere, Barossa, and Mount Lofty ranges. Mount Lofty, which is about 12 miles E. from the city of Adelaide, rises to the height of 1200 feet. The several ranges are mostly well wooded with large timber-trees. Along the shores of the gulf are low sand-downs, on which only bushes grow. Between these downs and the hills is an undulating country, which contains a great portion of land capable of cultivation.

In this part the town of Adelaide, the capital of the colony, is situated. [ADELAIDE.] It is built on the southern border of the Torrens, a river which rises in the hills about 6 miles E. from the town. It can be called a river only in the rainy season, when the banks are full, and it runs with great velocity. In the dry season it consists of a number of expansions like small lakes, which are very deep and of considerable length, but rarely more than 30 or 40 feet wide. These pools are connected with each other by shallow places, in which the water is hardly a foot wide and an inch deep. At these places scarcely a current is perceptible in the dry season. The Torrens in that season does not reach the sea, but is lost in what is called the Reed-bed, a swampy flat depression overgrown with reeds, which is separated from the shores by the sandy downs. When the river is full the surplus water finds its way to the sea by running from the Reed-bed to the Creek, which is an inlet branching off from the Gulf of St. Vincent about 12 miles N.W. from Adelaide. It runs about 4 miles eastward and then 12 miles southward, terminating not far from the Reed-bed. Though there is a bank at the entrance of the creek, with only 14 or 15 feet of water over it, vessels of 500 tons burden can sail up to Port Adelaide, which is only four miles from the town, and has a good landing-place and wharfs. As the water in the wells of Adelaide is brackish, that of the Torrens River is used for all purposes, and is even transported to Port Adelaide for the consumption of the people there, and for the vessels. Besides the Torrens, the rivers Wakefield and Gawler, and the united streams of the Gilbert and Light, fall into the Gulf of St. Vincent north of Adelaide, as do on the south the Onkaparinga, Curralinga, Yankalilla, and several other streams, most of which are partly dried up during summer.

The Murray is the largest river in Australia, and its remotest tributaries rise in the Australian Alps, not far from the eastern shores of the continent. [AUSTRALIA.] It enters South Australia near 34° S. lat., and flows west for about 80 miles, when it suddenly turns to the south, and runs in that direction to the sea, before entering which it expands into a large lake called Lake Victoria, or Lake Alexandrina. This navigable river, which within the province has a uniform width of about 300 yards, and a minimum depth of 12 feet, runs in a level bottom about 4 miles wide, inclosed by grounds from 20 to 40 feet higher. Between the winding course of the stream and the base of the higher grounds, on both sides, are flats of greater or less extent, overgrown with reeds. The soil is of the richest kind,

being formed by an accumulation of vegetable matter, and as black as ebony; but as the destruction of the reeds requires much labour, little has been done to bring it under cultivation. Lake Victoria is about 30 miles long and 15 miles across in the widest part. It has a depth of from 36 to above 100 feet, and is united to Encounter Bay by three shallow channels, the shortest of which is four miles long. From the southern side of Lake Victoria branches off a narrow channel, which after two miles gradually expands into another lake of smaller dimensions, called Lake Albert. This lake is separated from the sea by a sandy neck of land and the Coorong. The whole course of the Murray, from the junction of the Darling, some miles east of the province line, to the Goolwa, which connects Lake Victoria with Encounter Bay, is about 350 miles. In August, September, and October, 1853, an experimental voyage up the river Murray was accomplished by Captain Cadell, with a steamer, the Lady Augusta, which had been specially constructed with a view to this service. Sir Henry Young, the governor of South Australia, accompanied the party; and the steamer reached Swan Hill, about 800 miles from the mouth of the river. The navigation of the Murray for such a distance into the interior, and the circumstance of its being available for about six months in the year, are of great importance to the prosperity of South Australia. Large quantities of wool can now be sent down the river from remote inland districts, and facilities of communication are afforded between the provinces of New South Wales, Victoria, and South Australia.

The higher country between the Murray River and the ranges which form the watershed between it and the Gulf of St. Vincent, is rather hilly near the bend of the river, and overgrown with light woods; it appears to be adapted for sheep-walks. The whole district between the Gulf of St. Vincent and the river Murray is generally computed to be one-third part barren, another third covered with forest or scrub, and the remaining third available for tillage or pastura. The country between the Murray and the eastern boundary of the province is generally barren.

At the sea-mouth of the Murray begins a narrow arm of the sea, which extends south-eastward along the shores, and parallel to them for more than 100 miles. It is called *Coorong*, and is separated from the open sea by a narrow strip of land covered with sand-downs of moderate elevation. At the back of the northern half of the Coorong is a belt of grassy hills overgrown with casuarina, and divided by plains of some extent with a good soil; fresh water is found at a depth underground rarely exceeding six feet. At the back of the southern half of the Coorong is a succession of salt-swamps and low shrubby hills. A low range, called the Wombat range, runs for 20 miles parallel to the Coorong at a distance of about 3 miles.

The Coorong terminates near 36° 30' S. lat., but beyond it, in the same line, are a number of lakes, which are separated from the sea by grassy flats. South of Cape Bernouilli, near 37° S. lat., the country consists of several ranges of wooded hills, generally running parallel to the shores, which are separated from each other by low level grounds, a great portion of which is subject to inundation; but the soil is excellent, and in many places these flats are dry and available for pasturage or agriculture. Within a few miles of the Cape is Guichen Bay, a convenient roadstead. In the district adjacent to the bay the grass is said to be unhealthy for sheep and young cattle.

The south-eastern portion of South Australia is one of the richest in the colony. A line drawn from Rivoli Bay, nearly due east to the boundary-line, divides it from the desert, which is farther north. Near the sea-shore low narrow ranges of wooded hills alternate with grassy plains and a few swamps. In approaching the higher country plains of considerable extent occur, which are covered with luxuriant forests. They extend to the foot of Burr range, a mountain tract divided into several ridges, which cover a great extent of surface, and are pretty well wooded. The highest point of this range rises to about 1000 feet above the sea. Between this range and the isolated mountains called Mount Gambier and Mount Schank, lies a well-wooded tract with large timber-trees and an excellent soil. The two last-mentioned summits are of volcanic origin. The soil of this region is of the richest description, being mostly of a black-brown loam, and the vegetation luxuriant. The value of this country for settlers is increased by having a good and safe harbour in Rivoli Bay.

Kangaroo Island, which lies before the entrance of the Gulf of St. Vincent, is 100 miles long from east to west, and on an average about 20 miles wide, which gives an area of 2000 square miles. It rises gradually from the sea, and does not attain a great elevation, the interior being occupied by extensive plains. Close to the shore, within a quarter to half a mile from the sea, it is covered with a thick forest; in the interior the country is open, and contains numerous ponds. Near the shore are lagoons, which are generally filled with fresh water, but some are salt. On the shore of Nepean Bay is a salt lagoon, on the banks of which large masses of crystallised salt are found. Nearly the whole of the island is available for agriculture or pasturage. In Nepean Bay, on the north-eastern shore, vessels may ride in perfect security during the western gales. On Cape Willoughby, its south-eastern extremity, is a lighthouse called Sturt Light.

Although the greater part of the territory of South Australia is unproductive, there are many good tracts of land. The richest portions of the colony are the Mount Gambier district, the Mount Barker

valleys, the Inman valley near Encounter Bay, the neighbourhood of Rapid Bay, the Willunga and Aldinga plains south of Adelaide, the Adelaide plains, Morphett vale, Lymedoch valley, and the Barossa and Angas lands.

The climate of South Australia is one of the finest in the world, resembling that of the south of Italy. The atmosphere is generally clear and elastic, and the sky remarkable for the variety and brilliancy of its colours. There are no prevalent diseases. On entering the country some are attacked with dysentery, which with a little care may be avoided. Adelaide has been occasionally visited with influenza; and at particular seasons there are some cases of ophthalmia, which is rather a swelling of the eyelids, caused by a small insect. The seasons are divided into dry and wet. The dry season begins at the end of August and continues to the end of March. In December and January, corresponding in temperature to our June and July, the heat is very great, and the ground so arid that the least breeze raises clouds of dust. Occasionally in summer a hot wind from the north blows over the plains, and compels all to seek shelter from the close and dusty atmosphere; but it seldom lasts many hours before it is succeeded by a cooling breeze from the south-west. The thermometer ranges as high as 115° Fahr. Its highest range in 1852 was 105°; its lowest, 44°; the average was 67°. The temperature is subject to sudden and very extraordinary changes; but these do not in general affect the health injuriously, neither do they occasion much inconvenience. During the wet season, from the end of March to August, it rains frequently and sometimes very heavily. During this period the earth is covered with the richest verdure, and the weather is so genial that the approach of summer is scarcely perceptible. In summer the grass is speedily parched, and frequently becomes so dry as to break when trampled on; but the ground is as rapidly clothed with fresh pasture by the showers which fall at no great intervals. The long droughts, with which New South Wales is periodically visited, are not known in the settled parts of South Australia. During the rainy season the wind blows from the west or south-west, and frequently in hard gales. In the dry season northern and north-eastern winds prevail. No fall of snow has been experienced, and in the Mount Barker district, the coldest part of the colony, the frost has only in rare instances been of such force as to form a thin crust of ice. The lowest temperature for the year is about 37°.

During the rainy or cold season a great number of whales visit the coasts of the colony, and are chased by British, American, and French vessels. The black whale is most frequent, but the sperm-whale also occurs. The native animals are—the kangaroo, the wallabi, a smaller species of the same genus, the wombat, the opossum, and the dingo, or Australian dog. Porcupines, although unknown on the mainland, are found in considerable numbers on Kangaroo Island. For several years locusts have appeared in great numbers, and caused much damage to gardens and young crops in the district around Adelaide. Birds are numerous, and distinguished by their beauty. The emu, several kinds of parakeets and cockatoos, partridges, and quails are common. The most common sea-fowl are—pelicans, black-swans, wild-ducks, divers, waders, cormorants, and Cape pigeons. Several kinds of fish are taken in the sea, as salmon, snappers, porpoises, and large and small sharks. There are several kinds of snakes and lizards: among the latter the iguana, which is eaten; among shell-fish, oysters and periwinkles are plentiful.

The colonists have imported horses from Tasmania and New South Wales, and ponies from the island of Timor in the Indian Archipelago; cattle and sheep from the Cape, Tasmania, New South Wales, and Victoria; hogs from New Zealand. Fowls are common, both the common species and the larger one from the countries of the Malays. The kangaroo-dog is a valuable cross-breed of the bull-dog and greyhound, and is used for chasing the emus and kangaroos.

The woods of South Australia contain many large trees, of which the stringy bark, the blue, white, and peppermint gum-trees, different species of the Eucalyptus, are the most useful, their timber serving for building and fencing, for the construction of carts and ploughs, and the manufacture of agricultural implements; but timber for finer purposes is imported from New South Wales and New Zealand. All kinds of grain are successfully cultivated: maize grows well, and also potatoes. Melons, water-melons, pumpkins, and cucumbers attain an uncommon size, as do also cauliflowers. Onions are cultivated to a great extent in Kangaroo Island. No edible fruit is indigenous, except some berries, which are eaten by the natives. Fruit-trees have been extensively introduced. At Adelaide a prize was awarded in 1851 for a collection of sixty varieties of apples grown about ten miles from the city. The peach grows luxuriantly. Oranges and lemons, olives and mulberries are cultivated to some extent. Every approved variety of grape is grown.

South Australia is rich in minerals. Iron-ore is found in many places, especially in the deserts. Copper-ore is very widely distributed in great abundance, and of the richest quality. Lead also exists in considerable quantity, and some gold has been found. Salt occurs in many places. Twelve copper-mines were in operation in 1851. These are—the Burra-Burra mine, 90 miles N. by E. from Adelaide; the Kapunda and North Kapunda mines, 50 miles N.N.E.; Karkulso mines, 76 miles N. by W.; Werthing mine, 14 miles S.S.W.; Perseverance mine, 12 miles N.E. by E., where parties were engaged digging for gold on licences; Tungkillo, or Reedy Creek mine, 35 miles E.N.E.;

the Consolidated mines in Barossa and Lymedoch Valley, 38 miles E. by N.; the Kanmantoo, Bremer, Wheel Mary, Wheel Maria, and Wheel Friendship mines, all in a group about 25 miles E.S.E. from Adelaide. The ore of the Burra-Burra mine is peculiarly rich. It contains 75 per cent. of metal, in the form of a pure oxide requiring no flux to smelt it, the heat of a blacksmith's forge sufficing to run the metal. The lode is 17 feet wide, of great extent, and is quarried like stone, in masses. The mine yields annually about 20,000 tons of copper ore, valued at 20*l.* per ton. The lead-mines are Glen Osmond and Wheel Watkins mines, about six miles south from Adelaide, and the Wheel Gawler and Yattagolings mines, the first two yielding 75 per cent. of metal.

The natives of South Australia, like those of New South Wales, belong to that race which is called Negro Australian. They have not yet attained an equal degree of civilisation with the native population of the eastern coast, but measures have been adopted for their improvement with some degree of success. There are schools at Adelaide and Port Lincoln for the education of the children. Connected with the latter is a training institution under the superintendence of Archdeacon Hale, in which the youths, after leaving school, are kept separate from the tribe, and instructed in the Christian religion and in some industrial pursuit. A number of youths are employed on stockholders' stations along the Murray. Though it appears certain that all the natives of the southern and eastern coast of Australia speak the same language, a marked difference exists in the dialects spoken in different parts. Various dialects are used within the territories of South Australia: one is spoken by the few isolated families which live in the districts west of 136° E. long.; another by the tribes inhabiting the vicinity of Adelaide; and the tribes along the banks of the Murray below the junction of the Darling, have been found to use four different dialects, three of which were unintelligible to natives from the neighbourhood of Lake Victoria. The tribes within the settled parts of the colony are generally peaceable and inoffensive.

The settled parts of the colony have been distributed into the counties of Frome, Burra, Stanley, Gawler, Light, Eyre, Adelaide, Sturt, Hindmarsh, Grey, Robe, Russell, all lying to the eastward of the gulfs of Spencer and St. Vincent; and the county of Flinders on the south-west shore of Spencer Gulf. Besides the city of Adelaide, Port Adelaide, and Albert Town, which are all noticed under ADELAIDE, a number of villages and small towns have sprung up around the capital and in the remoter parts of the colony. Within a few miles of the city are the villages of Thebarton, Hindmarsh, Bowden, Islington, Walkerville, Klemsig, Brighton, Kensington, and Good. The county towns, as they are called, are Gawler Town, 23 miles north from Adelaide; Angaston, farther north and east; and Koorunga, at the Burra-Burra mines; as also Mount Barker, Nairne, Bahannah, Macolesfield, Strathalbyn, Hhandorf, and Noarlunga, in the district south from Adelaide. A township has been laid out at Port Wakefield, at the head of the gulf of St. Vincent, where a considerable quantity of copper from the Burra-Burra mines has been shipped for Swansea. Roads and bridges have been liberally provided for as settlements have been formed.

The government of the colony is vested in a lieutenant-governor, an executive council, and a legislative council. The executive council consists of the governor, the colonial secretary, the advocate-general, and the surveyor-general. The legislative council, which was instituted in 1851, in terms of an Act of the Imperial Parliament, passed in August, 1850, consists of 24 members, 8 of whom are nominated by the crown, and 16 are elected by 10*l.* householders and the possessors of freehold property of the value of 100*l.* sterling, in the 16 districts into which the colony is divided for the purposes of the Act. The main source of revenue is the customs, the greater part of which is derived from the duties of 1*s.* per gallon on wines, and 10*s.* per gallon on spirits. There are no differential duties between British and foreign goods; but an 'ad valorem' duty of five per cent, or an equivalent rated duty, is charged on all imports except wines and spirits. The general colonial revenue in 1852 was 102,325*l.*, the expenditure was 88,238*l.* The land fund revenue was 121,187*l.*; the expenditure was 84,601*l.* The total exports in 1852, exclusive of bullion and coin, amounted to 736,267*l.*; the imports were 583,973*l.* The tonnage of shipping inwards and outwards during 1852 amounted to 202,507 tons. The postal revenue was 7200*l.*

For the promotion of education in the colony, an inspector of schools has been appointed. Schoolmasters obtain an annual grant of 20*l.* for the first 20 scholars, and 1*l.* for each additional scholar, the aid however in no case rising above 40*l.* per annum. The number of day schools receiving government aid in January 1853 was 69, with about 3800 scholars. The amount paid to teachers during the year was about 8100*l.*

In 1850 there were about 150 places of worship in the colony. The ministers of religion were 17 of the Church of England, under the superintendence of the Bishop of Adelaide; 11 of the Roman Catholic Church, under the Roman Catholic Bishop of Adelaide; 2 of the Church of Scotland; 2 of the Free Church of Scotland; 1 of the Scotch Presbyterians; 6 Wesleyan Methodist ministers, besides many local preachers; 2 Primitive Methodist missionaries, and several local preachers; 15 Independent, 8 Baptist, 6 German Lutheran, 1 German Independent, 3 Christian, and 2 Bible Christian ministers. The Ne

Church, the Quakers, and Jews, have each a place of worship in Adelaide.

The settlement of Adelaide was founded in 1836, but some months previously a few families had settled on Nepean Bay, in Kangaroo Island, at a place called Kingscote. At first the emigration to this colony was very great: and in 1840 the number of the white population was estimated at 15,000. In 1838 the colonies of Port Philip and New Zealand were founded, which offered greater advantages to the settler, and the current of emigration was directed to those colonies, to which it has continued mainly to run. In 1844, when South Australia was in a state of great depression, the discovery of its rich mines commenced, and since that period it has enjoyed almost continuous prosperity, and has received a large accession to its population. Settlements have been formed in all directions around Adelaide, over the hill country and plains between the Gulf of St. Vincent and the river Murray. The discovery of gold-fields in New South Wales and Victoria again checked emigration to South Australia, and withdrew a considerable number of its population. Some of the emigrants however returned, and the prosperity of the colony was not materially affected.

SOUTH BEND. [INDIANA.]

SOUTH BRENT. [DEVONSHIRE.]

SOUTH KINGSTON. [RHODE ISLAND.]

SOUTH MIMMS. [MIDDLESEX.]

SOUTH MOLTON, Devonshire, a market-town, municipal borough, and the seat of a Poor-Law Union, in the parish of South Molton, is situated on the right bank of the river Mole, in 51° N. lat., 3° 51' W. long., distant 26 miles N.N.W. from Exeter, and 178 miles W. by S. from London. The population of the town in 1851 was 4482. The borough is governed by four aldermen and 12 councillors, of whom one is mayor. The living is a perpetual curacy, in the archdeaconry of Barnstaple and diocese of Exeter. South Molton Poor-Law Union contains 29 parishes and townships, with an area of 123,233 acres, and a population in 1851 of 20,566.

South Molton consists of a spacious market-place and several streets, well-paved and lighted. The town buildings are the guildhall and the borough jail. The church, which is adjacent to the market-place, is a handsome building in the perpendicular style; it has a rich stone pulpit adorned with statues and a profusion of variously-carved foliage. The Wesleyan Methodists, Baptists, and Independents have chapels. Squier's Endowed school had 64 scholars in 1851, of whom 30 were free. There are also National and Infant schools. A county court is held in the town. Coarse woollens are made; the lace manufacture is also carried on. The market is on Saturday for corn and provisions; and there are several great markets and fairs held in the course of the year. Iron-ore is found in the vicinity.

SOUTH POLAR COUNTRIES. [POLAR COUNTRIES AND SEAS.]

SOUTH SHETLAND. [POLAR COUNTRIES.]

SOUTH SHIELDS. [SHIELDS, SOUTH.]

SOUTH STONEHAM, Hampshire, a village and the seat of a Poor-Law Union, in the parish of South Stoneham, is situated on the right bank of the river Itchin, where it expands into an estuary, in 50° 57' N. lat., 1° 22' W. long., distant 9 miles S. by W. from Winchester, and 71 miles S.W. from London. The population of the parish of South Stoneham in 1851 was 4961. The living is a vicarage in the archdeaconry and diocese of Winchester. South Stoneham Poor-Law Union contains nine parishes and townships, with an area of 30,715 acres, and a population in 1851 of 15,974. South Stoneham may in some respects be regarded as a suburb of Southampton, from which it is little more than two miles distant. A canal from Winchester comes to South Stoneham, communicating with the Southampton water by the estuary of the Itchin.

SOUTHALL. [MIDDLESEX.]

SOUTHAM, Warwickshire, a market-town, and the seat of a Poor-Law Union, in the parish of Southam, is situated in 52° 51' N. lat., 1° 23' W. long., distant 9 miles E. by S. from Warwick, and 82 miles N.W. by W. from London. The population of the parish of Southam in 1851 was 1711. The living is a rectory in the archdeaconry of Coventry and diocese of Worcester. Southam Poor-Law Union contains 19 parishes and townships, with an area of 49,260 acres, and a population in 1851 of 10,426. Southam parish church is of various dates; some portions are of decorated and others of perpendicular character. It has a western tower and spire. The Independents have a chapel, and there are National schools partly endowed, a dispensary, and an infirmary for diseases of the eye and ear. The market is on Monday, and there are several fairs in the course of the year. A county court is held. Near the town are two mineral springs.

SOUTHAMPTON, Hampshire, a town, a municipal and parliamentary borough, a seaport, and a county of itself, is situated on a peninsula between the rivers Alre, or Itchin, on the east, and the Test, or Anton, on the west, at the head of Southampton water, in 50° 54' N. lat., 1° 24' W. long., distant 12 miles S. by W. from Winchester, 74 miles S.W. from London by road, and 80 miles by the London and South-Western railway. The population of the borough in 1851 was 35,305. The borough is governed by 10 aldermen and 30 councillors, of whom one is mayor; and returns two members to the Imperial Parliament. The livings are in the archdeaconry and diocese of Winchester. For Poor-Law purposes the town is governed under a Local Act.

The Roman town of Clausentum, though not on the exact site of Southampton, may be regarded as its predecessor. Clausentum stood on a point of land formed by the winding of the Itchin, on the left bank of that river, about 1 mile N.E. from Southampton, now occupied by Bittern Farm, where still exist traces of a fosse and vallum which defended the place on the land side. The foundation of the present town is ascribed to the Anglo-Saxons. The town was attacked but without success, by the Danes, in 837; plundered by them in 980; and again occupied as their winter-quarters in 994. In the Saxon Chronicle the town is called Hamtune and Suth-Hamtun; in the Domesday-Book, Hantone and Hentune. In 1339, being the year after the sack of Southampton by the French or Genoese fleet [HAMPSHIRE], the defences of the town were repaired and strengthened. It was at Southampton that Henry V. embarked in his first invasion of France in 1415. In 1512 the Marquis of Dorset, who was sent to the support of Ferdinand the Catholic in his war against France, embarked with 10,000 men at Southampton.

The county of the town of Southampton comprehends the whole of the point of land between the rivers, and extends about 3 miles along the bank of the Itchin. The town is built on a gravelly soil, somewhat elevated on the bank of the Anton, which washes it on the west and south sides. The principal street (High-street) runs north and south, and is divided into two parts by an ancient 'bar' or gateway belonging to the old town wall, considerable portions of which, with the west gate and south gate, are still standing. That part of the street which is south of the bar was included in the town, and is about half a mile long; the remainder, distinguished as 'High-street above bar,' or 'Above-bar-street,' belonged to the suburbs. The principal streets are lighted with gas and well paved. On the south side of the town is the quay, near which is the pier, a structure of considerable extent and elegance, erected some years since, and called Victoria Pier, after her Majesty, by whom, before her accession, it was opened. On the platform or battery near the quay is a long brass gun which bears the date 1542, and was presented to the town by Henry VIII. The Winchester road is adorned by a fine avenue of elms, which, however, are gradually disappearing as new houses are erected. The New Town, on the northern side, contains several spacious streets of excellent houses. A road from the southern part of the town to the Itchin leads to the floating bridge which forms the communication with Fareham, Gosport, and Portsmouth.

Southampton has five parish churches. Holy Rood church, a large and ancient structure, consists of a nave with side aisles and a choir or chancel; it has a tower and spire at the south-west angle, and a colonnade, or portico, which occupies the whole front. All Saints church is of Grecian Ionic architecture, and has been much admired; it contains the monuments of Carteret, the circumnavigator, and of Bryan Edwards, the historian of the West Indies. St. Michael's, the oldest church in Southampton, is in a square in the west part of the town; it has a tower between the nave and chancel; there are several Norman portions and some of later date; the windows are chiefly of perpendicular character. This church contains an ancient font of Norman character, and the monument of Chancellor Wriothesley. St. Mary's church was rebuilt in the last century on the foundations of the older structure. The total number of places of worship in Southampton in 1851 was 29, of which 10 belonged to the Establishment. The others belonged to Independents, Baptists, Wesleyan Methodists, Bible Christians, French Protestants, Quakers, Roman Catholics, Irvingites, and Mormons. The number of sittings provided in all was 17,959. The Grammar school, founded in 1553, and free to all boys of the town, had 11 scholars in 1851. The endowment yields 26l. 5s. per annum. The Diocesan Collegiate school, commenced in 1842, had 90 scholars in 1854. There are several Parochial, National, British, and Infant schools; a mechanics institution, with library and museum; a literary and scientific institution, also with a library and museum, and a savings bank. There are several ranges of almshouses, an infirmary, a dispensary, and various other charities.

Among the places of amusement are a theatre, two sets of assembly-rooms, billiard-rooms, and a racecourse. There are also bathing-rooms and a botanic garden. The Royal Yacht Club-house is a handsome structure. Little remains of the ancient castle, but a tower has been built on the site from the materials of the keep.

Southampton was anciently a place of great trade; wool and tin were exported; but it declined very much when the export of wool was prohibited. During the 18th century it revived, and since the beginning of the present century it has more than quadrupled its population. It is much frequented as a watering-place. The harbour, which is secure, affords good anchorage. Ship-building is extensively carried on; and extensive docks have been constructed. The tidal dock is paved with granite, and is lined on three sides with extensive warehouses. It is chiefly used by the large steam-vessels which frequent the port. The area of the basin is 16 acres; and it has 18 feet at low-water of spring-tides. The inner dock is for colliers and sailing vessels. Timber is imported from the Baltic and from America; coals from the north of England; stone from the western counties; and wine and brandy from Spain, Portugal, and France. There is a considerable Irish trade. A new custom-house has been erected in the vicinity of the docks.

The number and tonnage of vessels registered as belonging to the port

of Southampton on December 31st, 1853, were as follows:—Of and under 50 tons, 136 vessels, tonnage 3588; above 50 tons, 85, tonnage 10,744; with 21 steamers of 2129 tons burden. During 1853 there entered the port in the coasting trade 1757 sailing-vessels of 169,418 tons, and 172 steam-vessels of 48,243 tons; and there cleared 115 steam-vessels of 19,015 tons. In the colonial trade there entered 63 sailing-vessels of 4097 tons, and 252 steam-vessels of 68,127 tons; and cleared 70 sailing-vessels of 7533 tons, and 268 steam-vessels of 73,407 tons. In the foreign trade 236 sailing-vessels of 29,828 tons, and 361 steam-vessels of 150,124 tons entered; and 195 sailing-vessels of 21,172 tons, and 347 steam-vessels of 152,245 tons cleared during the year.

Southampton is now the largest packet port in the kingdom. The Peninsular and Oriental Steam-Packet company, the Royal West India Mail-Packet company, and several other steam-packet companies make the port their place of arrival and departure. The town possesses a large and increasing retail trade, chiefly in connection with the shipping. There are coach factories, a large iron-foundry, breweries, and an extensive sugar refinery. There are general markets on Tuesday, Thursday, and Saturday; a fish-market every day; and two yearly fairs, at one of which a great number of cattle are sold.

SOUTHAMPTON, COUNTY OF, the name in legal proceedings, of HAMPSHIRE.

SOUTHAMPTON ISLAND. [HUDSON'S BAY TERRITORIES.]

SOUTHEND. [ESSEX.]

SOUTHERNDOWN. [GLAMORGANSHIRE.]

SOUTHFLEET. [KENT.]

SOUTHGATE. [MIDDLESEX.]

SOUTHMINSTER. [ESSEX.]

SOUTHPORT. [CONNECTICUT; LANCAHIRE.]

SOUTHWARK. [LONDON.]

SOUTHWELL, Nottinghamshire, a market-town and the seat of a Poor-Law Union, in the parish of Southwell, is pleasantly situated in 53° 5' N. lat., 0° 58' W. long., distant about 15 miles N.E. from Nottingham, and 132 miles N.N.W. from London by road. The population of the town of Southwell in 1851 was 3516. The living is a rectory in the archdeaconry of Nottingham and diocese of Lincoln. Southwell Poor-Law Union contains 60 parishes and townships, with an area of 117,142 acres, and a population in 1851 of 25,596.

Southwell is a place of considerable antiquity. There appears to have been a Roman station or outpost here. A church was established here by Paulinus, one of the early missionaries to the Anglo-Saxons. This church became collegiate, and was afterwards richly endowed by the liberality of prelates and nobles. Charles I. was frequently at Southwell during the civil war, and here he surrendered himself to the Scotch commissioners. The town contains many good houses. The collegiate church is a magnificent cruciform building, consisting of nave and aisles, transepts, choir, and eastern transepts, two western towers, and a central tower. The nave and transepts and the towers are Norman, of very bold character and well-executed details. The extreme length of the church is 306 feet, breadth of the nave and aisles 59 feet, breadth at the transepts 121 feet. The north porch is a large and much-enriched specimen of Norman. The nave and transepts have a wooden flat ceiling; the aisles have a stone groined roof. The choir and eastern transepts, which are of early English character, are among the finest specimens of that style in the kingdom, and are in good preservation. The entrance into the Minster-Yard is by ancient gateways, of which the western has a semicircular arch. In the yard are the extensive ruins of a former palace of the archbishops of York. The chapter of Southwell collegiate church consists of six canons and two minor canons. Annual meetings of the Nottinghamshire clergy are held at Southwell, which is the mother-church of the county. At Southwell are chapels for Wesleyan Methodists and Baptists; a Grammar school, which had 8 scholars in 1854; National and Infant schools, a savings bank, assembly-rooms, a theatre, and a house of correction for the county. The lace and hosiery manufactures employ a considerable number of workmen. Tanning and silk-throwing employ some of the inhabitants. The market is on Saturday, and there are fairs on Whit-Monday and October 21st.

SOUTHWOLD, Suffolk, a market-town, sea-port, and municipal borough, in the parish of Southwold, is situated on the east coast, near the mouth of the river Blyth, in 52° 19' N. lat., 1° 39' E. long., distant 37 miles N.E. from Ipswich, and 105 miles N.E. from London. The population of the borough of Southwold in 1851 was 2109. The borough is governed by 4 aldermen and 12 councillors, of whom one is mayor. The living is a perpetual curacy in the archdeaconry of Suffolk and diocese of Norwich.

Southwold was in the middle ages a place of some importance. In the reign of Henry VII. the town was incorporated by Act of Parliament. The hill on which the town stands forms a cliff towards the sea, and sinks on the other side into marshes. The only entrance to the town is on the north-west side, by a bridge over the Buss Creek. The top and sides of the hill round the town are chiefly uninclosed common. The church is a large and handsome building of perpendicular architecture, mostly of flint and stone. The western tower is about 100 feet high, and there are two low hexagonal towers at each angle of the eastern end of the chancel. There are chapels for Baptists, Wesleyan Methodists, and Independents. The town-hall is a

modern building, and there is a small jail. Thursday is the market-day: an annual fair is held on Trinity Monday and the two following days. Rope- and sail-making and brewing are carried on; but the principal branch of industry is the fishery, which employs a considerable number of men: there are some salt-works. The town is frequented in the bathing season by visitors.

SOUVIGNY. [ALLIER.]

SOWERBY. [YORKSHIRE.]

SPA. [LIEGE.]

SPAIN (*España* in Spanish), a kingdom of Europe, occupying the greater part of that peninsula which is divided from France by the mountain range of the Pyrenees. It is sometimes called the Spanish Peninsula, or briefly the Peninsula. It is situated between 36° and 43° 46' N. lat., 3° 20' E. long., and 7° 23' W. long. The most northern point is Cape Ortegal, and the most southern Tarifa. From its most north-western point, Cape Finisterre, to the most eastern point, Cape Creus, is a distance of nearly 600 miles; from Tarifa to Fuentarabia, near the boundary of France, on the Bay of Biscay, nearly 540 miles; and from Cape Ortegal to Cape de Gata, the most south-eastern promontory, about 556 miles. Spain is bounded E. by the Mediterranean Sea; S. by the Mediterranean Sea, the Strait of Gibraltar, and the Atlantic Ocean; E. by Portugal and the Atlantic Ocean; N. by the Bay of Biscay and France. The area of Spain is 177,718 square miles. The population in 1849 was 13,705,500. The political divisions, with the area and population of each, are given in the next page.

Colonial Possessions.—The **BALÆRIC ISLANDS** in the Mediterranean, and the **CANARIES** on the west coast of Africa, have been formed into two modern provinces, as shown in the following table. **CUBA**, **PUERTO RICO**, and some smaller islands in the West Indies, are under the government of the Capitan-General de la Havana. The **PHILIPPINES**, in the Indian Archipelago, are also under a captain-general. **FERNANDO PO**, and some other small islands in the Gulf of Guinea, belong to Spain; and Ceuta, Gomera, and Melilla, on the coast of Barbary, are used by the Spanish government as places for the transportation of convicts.

Coast.—The length of the coast-line of Spain, without taking into account the numerous small inlets, is about 1350 miles, of which about 750 are washed by the Mediterranean Sea, and about 600 by the Atlantic Ocean. The northern coast, from the boundary of France to Cape Ortegal, is about 300 miles. The north-western coast, from Cape Ortegal to the mouth of the Minho, is about 160 miles. The south-western coast, from the Punta de Europa on the Bay of Gibraltar to the mouth of the Guadiana, is about 140 miles.

The northern coast of Spain, from the boundary of France to the Punta de los Cairos (7° 17' W. long.), runs nearly in a continuous line, without any considerable break. The whole line is rocky, and the rocks nearly always approach the sea, where they form a mural line varying in height between 30 and 300 feet; but with the exception of one or two places the coast is free from rocks and islands, and the water is deep up to the shore. The coast farther west, between Punta de los Cairos and Cape Ortegal, preserves the same character, except that the inlets which occur along this short distance are wider, and the headlands project farther. From Cape Ortegal to Cape Finisterre, and thence to the mouth of the Minho, the coast is less elevated, though it is rocky, and the rocks come up to the beach. It is also very broken, and several headlands advance some miles into the sea, and some of the inlets enter several miles into the land, and form spacious harbours. [GALICIA.] The south-western coast-line is of a different character. From the high ground on which the town of Ayamonte is built, at the mouth of the Guadiana, a low shore begins and extends eastward to the harbour of Huelva, which is formed by the estuary of the rivers Odiel and Tinto. The coast-line is well defined, but skirted by low and sandy islands. Between the harbour of Huelva and the mouth of the river Guadalquivir the coast is extremely low, swampy, and sandy. Even small vessels cannot approach the beach. South of the mouth of the Guadalquivir the shores are again well defined, though low and occasionally swampy. Approaching Cape Trafalgar the coast begins to rise, and a moderately high shore runs along the northern side of the Strait of Gibraltar, and into the bay as far as the town of Algeciras. The remainder of the bay has a low and sandy shore, with the exception of the rock on which Gibraltar stands.

The coast of the Mediterranean from Punta de Europa to Cabo de Palos is in general elevated and rocky. The western portion, between the strait and the mouth of the river Guadalfeo near Motril, does not rise to a great height, and occasionally sinks down nearly to the level of the sea. East of Motril the coast is generally very high, sometimes several hundred feet, and there is no flat along the sea. This elevated coast extends to Cabo de Gata, and north of it to the town of Mojacar. From Mojacar to Cabo de Palos the rocks along the coast are of moderate elevation, and in a few places interrupted by flats. This extensive line of rocky coast has no indentations, and no harbour which vessels of moderate size can enter, with the exception of the excellent harbour of Cartagena and the harbour of Malaga, the latter being partly artificial. The open bay of Almeria, between Punta de Elena and Cabo de Gata, has good anchorage; but it is exposed to southern, south-eastern, and south-western winds, and to the violent gales which sometimes blow from the mountains that surround the bay.

AREA AND POPULATION OF POLITICAL DIVISIONS.

Old Provinces.	Modern Provinces.	Area in Sq. Miles.	Population in 1849.	
Aragon . . .	Zaragoza	5,254	350,000	
	Huesca	5,052	247,105	
	Teruel	4,404	250,000	
		14,710	847,105	
Asturias . . .	Oviedo	3,686	510,000	
Basque Provinces	Bilbao (Vizcaya)	7,821	130,000	
	San Sebastian (Guipuzcoa)	622	141,732	
	Vitoria (Alava)	1,082	81,397	
		9,325	373,143	
Castilla la Vieja	Burgos	7,674	432,022	
	Logroño		185,519	
	Santander		190,000	
	Soria	4,076	140,000	
	Segovia	3,466	155,000	
	Avila	2,570	132,986	
		17,786	1,235,477	
Castilla la Nueva	Madrid	1,315	405,737	
	Toledo	8,773	330,000	
	Guadalajara	1,946	199,746	
	Cuenca	11,293	252,723	
	Ciudad Real (La Mancha)	7,543	302,594	
		30,879	1,490,800	
Cataluña . . .	Barcelona	12,180	583,895	
	Tarragona		390,000	
	Lerida		197,445	
	Gerona		262,594	
		12,180	1,383,734	
Cordova . . .	Cordova	4,160	348,958	
Extremadura . . .	Badajoz	14,330	336,136	
	Caceres		264,958	
		14,330	601,124	
Galicia	Cornua	15,897	511,492	
	Lugo		419,437	
	Orense		380,000	
	Pontevedra		420,000	
		15,897	1,730,928	
Granada	Granada	9,622	427,250	
	Almeria		292,334	
	Malaga		438,000	
		9,622	1,157,584	
Jaen	Jaen	4,446	307,410	
Leon	Leon	20,059	288,833	
	Salamanca		240,000	
	Valladolid		3,239	310,000
	Zamora		3,568	184,000
	Palencia		1,733	180,000
		20,059	1,098,633	
Murcia	Murcia	7,877	400,000	
	Albacete		195,531	
		7,877	595,531	
Navarra	Navarra	2,450	280,000	
Sevilla	Sevilla	8,989	420,000	
	Cadix		358,446	
	Huelva		153,463	
		8,989	931,908	
Valencia	Valencia	7,688	500,000	
	Alicante		363,219	
	Castellon		247,741	
		7,688	1,110,960	
Total		184,072	13,908,900	
	Balearic Islands	1,767	258,000	
	Cannery Islands	3,349	257,719	

At Cabo de Palos a low and sandy coast begins, which extends as far north as Cabo de Santa Pola, a short distance south of Alicante. It has no harbours even for small vessels or large boats, though it is intersected by several creeks, which in some places form small lagoons. From Cabo de Santa Pola to Villajoyosa the coast-line is generally low but rocky, and in some places the ridges which traverse the adjacent country terminate on the sea with steep hills of small extent and moderate elevation. From Villajoyosa to Denia the coast is almost without exception rocky and high, but does not rise to a great elevation. Between Cabo de Palos and Denia there is no harbour except that of Alicante.

From Denia to the mouth of the Ebro the coast is low and sandy. North of Castellon de la Plana a few low ridges terminate on the sea, forming a moderately high shore. This coast-line has no harbours even for vessels of moderate size; and Grao, the port of Valencia, is only a bad roadstead. Along this low coast there are many small lagoons, called Albuferas. [ALBUFERA DE VALENCIA.] South of the mouth of the Ebro is the Puerto de los Alfaques, which can only be entered by vessels drawing not more than fifteen feet.

From the mouth of the Ebro to the boundary of France the coast is alternately high and low, and both the low and the high shores generally continue for many miles. In this part there occur several harbours for small vessels; and two, Barcelona and Rosas, are deep enough for large ships. The small harbour of Salou, which is the port of Reus, is only fit for small vessels.

Surface.—Spain presents greater and more marked differences in the form of its surface than any other country of Europe of equal extent. The interior is an elevated table-land, which is from 2000 to 3000 feet above the sea-level. Though situated at the western extremity of Europe, and near the sea, which surrounds that part of the world, its elevation is higher than that of any other table-land of Europe. The table-land comprehends nearly the whole country which lies between 38° and 43° N. lat., and extends from near 1° to near 8° W. long. It does not advance to the sea, but on the north and west it is divided from the Bay of Biscay and the Atlantic by a comparatively narrow tract of mountainous country. Nor does it extend to the base of the Pyrenees, being separated from them by the basin of the river Ebro. Between the table-land and the Mediterranean there is also a lower country, which in some parts is hilly and even mountainous, and in others extends in wide plains. South of the table-land is the basin of the river Guadalquivir, by which the table-land is separated from another more elevated and more mountainous region, that of the Sierra Nevada, which extends over the southern part of Spain along the Mediterranean and the Strait of Gibraltar.

The table-land comprehends the eastern districts of Galicia, the whole of the province of Leon, that of Old Castile, with the exception of about one-fourth of its area which lies in the basin of the Ebro and along the Bay of Biscay, the whole of New Castile and Extremadura, the south-western districts of Aragon, and the northern districts of Murcia. According to a rough estimate it extends over a surface of about 92,000 square miles, or over more than one-half of the area of Spain.

The table-land is nearly surrounded by mountains. Along its northern edge rise with a steep ascent the mountains of Asturias, which in elevation nearly rival the Pyrenees. From the Sierra de Sejos, at the source of the Ebro, to the Sierra de Peñamarela, which lies near 7° W. long., the direction of the chain is from east to west, or nearly so, but in this part of the range the highest edge of the mountains runs south-west, but soon turns north, inclosing a narrow glen, in which the river Navia descends to the Bay of Biscay. For about 40 miles the range runs northward, until it approaches the Bay of Biscay within about 12 miles, when it again turns westward, and after having run about twenty miles in that direction, turns southward, dividing the basin of the upper Minho from the lower country which lies to the west of it. Near the town of Orense the mountain-chain terminates, or rather there is a depression through which the Minho flows; for on the east of the river rises another ridge, which runs east-south-east till it approaches the Duero, where it begins to form the boundary between Spain and Portugal.

The high grounds which divide the table-land from the basin of the Ebro cannot be considered as a mountain ridge in all their extent. Towards the western extremity of the river basin no mountain range divides it from the table-land. East of the town of Burgos rises the Sierra de Oca, which extends from west-north-west to east-south-east, and is followed by the Sierra de Cameros. Contiguous to it, and in the same direction, is the Sierra de Moncayo, which has its eastern termination near 2° W. long. From this point the edge of the table-land is less marked. It runs to the river Jalon, which it crosses near Calatayud, and afterwards in a south-eastern direction along the high grounds which form the right bank of the river Jiloca, which gradually rise into mountains near the town of Montalban, whence the mountain chain continues to the boundary between Aragon and Valencia. Thence the edge of the table-land runs southward along the elevated ridge which extends east of the river Turia, or Guadalaviar. It crosses this river north of Requena, and afterwards the river Jucar below its confluence with the Cabriel, and then continues southward, leaving the town of Almansa to the west, to the vicinity of Villena. South of the Jucar the edge of the table-land is not marked by a continuous

ridge, though some isolated mountains occur along it. Near Villena is the Sierra del Carache, which runs first south-west, and afterwards north-west, to the neighbourhood of Albacete (39° N. lat., 1° 55' W. long.). The Sierra del Carache seems to rise only a little above the table-land, but it presents a considerable ascent from the deep valley of the Segura, and that of the Mundo, a tributary of the Segura. Along the southern border of the table-land extends that range, or rather mountain region, which is called Sierra Morena. [ANDALUCIA.]

Other mountain ranges occur on the table-land itself. One of them constitutes a continuous range, traversing the plain in all its extent from east to west. It begins on the east near the high summit of the Sierra de Moncayo, and extends in a west-south-west direction through Castilla la Vieja, separates the province of Leon from Extremadura, and then passes into Portugal. [CASTILLA LA VIEJA.]

The table-land of Castilla la Nueva and Extremadura comprehends these two provinces, with the south-western districts of Aragon and the northern part of Murcia. The surface is much more diversified by hills and mountains than that of the northern plain. The mountain chains are of considerable extent, but they do not form continuous ranges, being interrupted by several depressions, which sink nearly to the level of the country. In the eastern districts of the table-land is the Sierra Molina, which begins north-west of the town of Molina, and south of the confluence of the Jiloca with the Jalón, in 41° N. lat. and 1° 30' W. long. It does not appear to be connected with the Sierra de Deza by a mountain ridge, but only by high ground. The Sierra de Molina runs southward, and does not rise much more than 1000 feet above the general level of the country in the northern parts. Where the rivers Tagus and Turia originate it sends off a branch, the Sierra de Albarracin, which runs south-east between the Turia on the east and the Júcar on the west, and extends to the edge of the table-land, near the town of Requena. From the sources of the Tagus the Sierra de Molina runs south-west, but near 40° S. lat., west of the town of Cuenca, it turns again to the south, and soon subsides into hills, which are slightly elevated above the level of the country. The Sierra de Molina is of very inconsiderable width, but it constitutes the watershed between the rivers which fall into the Mediterranean and those that run to the Atlantic. West of Cuenca a ridge of low mountains branches off from the Sierra de Molina, and runs westward, dividing the upper branches of the Tagus from those of the Guadiana. It terminates probably near Tarragona, east of Aranjuez. Thence to about 4° W. long., where the Sierra de Toledo seems to take its rise, the watershed between the Tagus and Guadiana is formed by high ground broken into steep hills. The Sierra de Toledo extends to 5° W. long., running east and west; but we are very imperfectly acquainted with this ridge. It does not appear to occupy a great width, nor to rise more than 1000 feet above the plain. It is not traversed by any road. Near 5° W. long. it sinks down to the level of the plain, but another range rises out of it, called the Sierra de Guadalupe, which extends westward to the boundary of Portugal, and enters that kingdom, where it is called Sierra de Portalegre. The Sierra del Guadalupe resembles the Sierra Morena more than the Mountains of Toledo. It consists of a number of narrow steep ridges, whose general direction is north-east or north-west, and they are sometimes connected by other ridges running east and west, but frequently unconnected, and separated by flats. The width of this region is considerable, as it fills nearly the whole tract between the rivers Tagus and Guadiana west of 5° W. long. None of the summits attain a great elevation above the level of the country.

The eastern portion of the table-land of Castilla la Nueva and Extremadura, comprehending the province of Cuenca, the northern districts of Murcia, and the adjacent countries, is the highest part of the table-land, and about 3000 feet above the level of the sea. The surface is very uneven, with the exception of the higher ground between the river-basins, which in some places extends in plains, and in others is diversified by numerous hills or low ridges. A very small portion of this region, which lies in the valleys along the rivers, and in some depressions of the plain, is under cultivation; the remainder has rather a sterile and very dry soil, and is either quite useless or only used as sheep-walks.

The central region of the table-land is between 3° and 5° W. long. It consists of two plains, the Plain of Madrid and Toledo, which lies north of the Mountains of Toledo, and the high broken ground which forms the watershed between the rivers Tagus and Guadiana; and the Plain of La Mancha, which lies to the south. These two plains are about 2000 feet above the sea-level. The productive powers and the surface of these two plains are nearly the same. The country consists of extensive levels, intersected by short ridges of low hills and rocks. It is destitute of trees, except some groves of evergreen oak, which are found near the hills, and plantations of olive-trees and vines near the villages. The level tracts produce wheat, but as part of these tracts are at a great distance from the villages, in which alone the farms are situated, a large portion of them is badly cultivated, and some tracts are partly overgrown with broom and the flax-leaved daphne (*Daphne Gnidium*).

The western portion of the table-land of Castilla la Nueva and Extremadura comprehends the country from 5° W. long. to the boundary of Portugal, or the province of Extremadura. This country has a very mountainous surface. The ridges of the Sierra de Guada-

lupe cover nearly all the country between the Tagus and the Guadiana. North of the Tagus several offsets of the Sierra de Gata traverse the country in a south-western direction. South of the Guadiana several branches of the Sierra Morena advance within a short distance of the river. Plains of some extent occur only along the banks of the principal rivers. They are small on the banks of the Tagus, but rather extensive on those of the Guadiana. The general level of the country is lower than in the plains farther east, as we may infer from the circumstances that snow and frost are not common in the Sierra de Guadalupe, in which the merino sheep pass the winter without the least injury in the open air. The productive powers of this region differ greatly in different parts. In the districts north of the Tagus there are wide valleys, containing much level ground, between the ridges of the Sierra de Gata; they have a rich soil, are well cultivated, and yield good crops. The hilly tract between the Tagus and Guadiana is nearly a desert. The summits of the ridges are bare; their slopes are clothed with forests of the evergreen oak, but the lower parts are destitute even of bushes. They are never cultivated, but preserved as the pasture-grounds of the merino sheep in winter. The cultivated spots are only found in the narrower valleys, and they are few and of small extent, even in the level country on the banks of the Guadiana, between Merida and Badajoz. To the south of the Guadiana the country improves. At no great distance from the river are plantations of olive-trees, which increase in number as we proceed up the valleys of the Sierra Morena. [CASTILLA LA NUEVA; EXTREMADURA.]

Rain is comparatively scarce on the table-land of Spain. It is stated that the annual quantity on an average does not amount to more than 10 inches, which is partly to be ascribed to the elevation of the more level part of the table-land, and partly to the circumstance that it is in most parts bounded by mountains which rise considerably above the general level of the plain, and prevent the moisture from reaching the flat country. The rain generally falls in the winter, and only a few showers occur in other seasons. The least quantity of rain falls in the mountain region of the Sierra de Guadalupe, and on the high plains of Cuenca and Murcia, where sometimes eight or nine months pass without a drop of rain falling. To this scarcity of rain the want of cultivation is chiefly to be attributed which is observed in the two last-mentioned regions. In summer excessive heat, and in winter a great degree of cold, are experienced.

The maritime region of the Atlantic and Bay of Biscay incloses the table-land on the north-west and north, and contains the western districts of Galicia, the province of Asturias, and the northern portion of Castilla la Vieja. That portion which lies south of Cape Ortegal is hardly more than 40 miles in width, and is traversed by numerous ridges, which have usually gentle slopes, so as to admit of cultivation to a considerable distance from their base. Their summits are crowned with forests. The lower country, which about Santiago de Compostella stretches out in extensive plains, is tolerably fertile and well cultivated. The climate is wet. The heat of the summer is moderate, and the winters far from being severe, except when the north winds blow, but they are not of long duration. [GALICIA.]

The country east of Cape Ortegal is of a somewhat different character. The Asturian Mountains, which descend southward to the plains of Leon and Castilla la Vieja with a very rapid slope, decline towards the north in long ridges, which grow lower as they approach the Bay of Biscay. In the vicinity of the principal range these lateral ridges are too steep and too high to be cultivated, and are only used as pasture-ground for cattle and goats: a considerable part of them is covered with forests. Towards the sea the ridges are lower and their declivities less steep, and here cultivation has ascended to some distance from their base. The valleys which lie between these ridges are narrow and elevated near the great chain, but they grow wider towards the sea. They have a tolerably fertile soil, and are well cultivated. Wheat, barley, and maize are grown. Great quantities of cider are annually made and exported. Chestnut-trees are so common that the chestnuts not only supply the lower classes with food, but also are exported to a great extent. The climate does not differ much from that of the western maritime tract, being also very wet, but the cold is greater, though the northern winds are not experienced in the same degree as in Galicia. [ASTURIAS; BASQUE PROVINCES.]

The basin of the river Ebro occupies a part of Castilla la Vieja, of the provinces of Vitoria and Navarra, the greater part of the provinces of Aragon, and a considerable portion of Cataluña. The northern boundary, from the sources of the river Segre on the east to those of the Arga on the west, is formed by the high chain of the Pyrenees. West of the sources of the river Arga a chain of mountains begins, which runs westward until it meets, near the sources of the Ebro, the Sierra de Sejos, or the eastern portion of the Asturian Mountains. This range, which is called Sierra de Aralar, is about 120 miles in length. It is much less elevated than the two great mountain systems which it connects. The mean elevation probably does not exceed 3000 feet above the sea-level.

The higher portion of the basin of the Ebro is considerably lower than the plain of Castilla la Vieja, which joins it on the south. This part of the basin of the Ebro forms a considerable depression between Castilla and Biscaya. The interior of the basin in this part is nearly a plain.

which extends north to Vitoria and south to Nagera, and is here and there intersected by detached groups of limestone hills. It has a tolerably fertile soil, and produces good crops of corn. Farther east many offsets branch off from the Sierra de Aralar and the Pyrenees, and west of the river Aragon these ridges cover at least three-fourths of the country north of the Ebro. Near the principal ridges they constitute extensive mountain masses, which are separated by narrow valleys. The masses themselves are unfit for cultivation, but are used as pasture-grounds, and a great part of them is covered with forests containing many fine timber-trees. The valleys are cultivated. About 12 miles from the river the mountain masses decrease in size and elevation, and soon sink down to hills, which extend to the banks of the river. Their slopes are partly cultivated, and yield good crops of maize, wheat, and other grain; there are also numerous plantations of vines, olive-trees, and chestnut-trees. Hemp and flax are extensively grown. Grain, oil, and wine, are exported to a considerable amount. [NAVARRA.]

East of the river Aragon more than half of the country north of the Ebro is covered with the branches of the Pyrenees. Between the sources of the rivers Aragon and Segre (that is, between 1° W. long. and 2° E. long.) is the highest portion of the Pyrenean Mountains, containing the lofty summits and extensive mountain masses of the Pic du Midi, of Monte Perdido, and Monte Maladeta. In this part the northern declivity is extremely steep; but towards the south the range slopes down in a long inclined plain, which terminates about 40 miles from the highest part of the range, north of 42° N. lat. The irregularly-inclined plain is furrowed by deep and narrow valleys. Near the great chain these valleys are almost unfit for cultivation, on account of the severity of the climate; but farther down narrow tracts occur which are cultivated with the grains of Northern Europe and with flax. As the mountains terminate north of 42° N. lat., a considerable tract of country extends between them and the banks of the Ebro. This tract is partly cultivable and partly a desert. The desert is not far from the banks of the river, and extends from the vicinity of Zaragoza on the west to near Mequinenza on the east, a distance of more than 50 miles in a straight line. It is about 10 or 12 miles in width, and formed by a swell of the ground, which in its highest part may rise 1500 feet above the level of the Ebro. The surface is a succession of slight ascents and descents, and the soil is extremely arid. This tract is called the Sierra de Alcubierre. It is nearly uninhabited, and almost a useless waste. A cultivated country surrounds it on all sides, though the soil is in general of indifferent quality, and the crops far from being abundant. But the plain of Lerida is an exception: it is distinguished by fertility, cultivation is general, and the waste lands are of small extent. It produces good crops of maize, wheat, rye, barley, oats, leguminous vegetables, fruit, wine, and oil. The countries within the basin of the Ebro south of the river contain a much larger proportion of arable land, and are much more populous than those on the north of the river. [ARAGON.]

The country which extends between the Sierra de Llena and the Mediterranean, and the lower course of the Ebro, may be considered an appendage of the basin of the Ebro. With few exceptions the surface is very hilly, and in some parts even mountainous. The ridges of hills which traverse it run partly parallel to the Sierra de Llena, and partly in an opposite direction towards the Mediterranean. The fertility is various. [CATALUÑA.]

The countries included in the basin of the Ebro differ greatly in climate, the valleys within the Pyrenees being so cold that the common kinds of grain do not succeed, while along the sea-shore and towards the mouth of the river most of the fruits of Southern Europe attain perfection. In general it may be observed that the part of the basin which is north of the river, with the exception of the tracts immediately situated on the shores of the Mediterranean, has more severe winters and colder summers than the great table-land, whilst the countries south of the river have a mild winter, and a much more temperate summer. The mean annual quantity of rain is between 20 and 26 inches, but it is much more in the elevated valleys of the Pyrenees. In the interior the climate is healthy, but not so on the coast. Barcelona has occasionally suffered from the yellow fever.

The eastern declivity of the table-land, from the mouth of the Ebro to Cabo de Palos, contains four regions, which differ in their natural features and productive powers. The most northern extends from the Ebro to Murviedro. Along the sea-shore there is a narrow strip of level ground, hardly more than two or three miles wide, which in a few places is interrupted by low hills. It is generally fertile, and in some places highly fertile. The hills which lie at the back of it, and the valleys between them, are also tolerably fertile and well cultivated, but where the country approaches the high table-land of Cuenca the soil is dry and less productive.

South of this hilly country is the plain of Valencia, which extends on the sea-shore from Murviedro to Gandia, a distance of more than 40 miles, and in its widest part, at the back of the town of Valencia, it extends about twenty miles inland. It is abundantly irrigated, and the whole is under cultivation. It is no less noted for the great variety of its fruits, and rich crops of rice, wheat, and other grain, than for the mildness of the climate, which never experiences frost, but yet is not considered healthy.

The country which lies south of the plain of Valencia, and extends

along the sea-shore from Gandia to the vicinity of Alicante and Elche, is extremely broken. It may be considered the most eastern offset of the great table-land, for its central districts are at a great elevation above the sea-level, as may be inferred from the severe cold which is experienced in the winter months, and from the circumstance that the most elevated ridges south of Alcoy, for some months of the year, are covered with snow. The valleys are usually narrow, and the level tracts between the mountains are of small extent, and their fertility not much above mediocrity, but all the arable land is cultivated with great industry, and the crops of maize and corn are tolerably abundant. [VALENCIA.]

South of this mountainous region the eastern declivity of the table-land extends much farther inland. On the west it reaches to the Sierra de Segura, and on the south it extends to 37° 20' N. lat. The western portion of this region (west of 2° W. long.) is almost entirely filled up with mountains which rise to between 4000 and 5000 feet above the sea-level. It is probable that the general elevation of the valleys is not less than 2000 feet, and that this tract unites the great table-land with the mountain region of the Sierra Nevada. The long narrow valleys are not fertile, and they are badly cultivated. East of 2° W. long. the mountains recede and leave wide valleys between them, which are distinguished by considerable fertility, and are covered with corn-fields and plantations of fruit-trees. [MURCIA.]

The basin of the river Guadalquivir lies between the great table-land and the mountain region of the Sierra Nevada. On the north is the Sierra Morena, and on the east the Sierra de Segura and the Sierra de Sagra. The mountains which constitute the southern boundary-line run along 37° 35' N. lat., east of 4° 30' W. long., but west of that meridian they decline to the south-west and terminate on the Atlantic in Cape Trafalgar. The lower level of this country is about 1500 feet below the high countries which lie north and south of it. The source of the river Guadalquivir is only 526 feet above the sea-level. Such a difference in the level of the country must of course be attended by a corresponding difference in vegetation and productions. [ANDALUCIA.]

Rivers.—Spain is drained by a great number of rivers, and some of them run for several hundred miles; but only a very few are navigable for small boats, and that only towards their mouths. Most of the rivers have only a very small quantity of water. This is mainly to be ascribed to the small amount of rain which falls on the table-land and the adjacent tracts, in which almost all the rivers rise; and this small quantity is very soon evaporated, as the highest parts of the interior are destitute of trees. Though the number of mountain ranges is very great, most of them are only for a few months of the year covered with a thin layer of snow, which dissolves very rapidly. It is remarkable that those rivers which are navigable become so only at places where they are joined by tributaries which originate in such mountains as rise above the snow-line. The Ebro becomes navigable at Tudela, after having been joined by the Aragon, which originates with numerous branches in the snow-covered mountains which surround the Pic du Midi. The Tagus is not navigable even for small boats above Alcantara, a town situated near the boundary of Portugal, and where it is joined by the Alagon, which river is supplied during the whole year with water from the snow-covered summit of the Sierra de Gredos. The Guadalquivir can only be navigated by small boats from the town of Palma downwards, for at that place it receives the Jenil, which derives the great supply of water that it brings down from the Sierra Nevada. The Duero begins to be navigable at the confluence of the Sabor, and after having received the Esla, which originates in the Asturian Mountains. But though the rivers of Spain are nearly useless for the transport of its productions, they are of great importance for fertilising the ground by irrigation. This practice is nearly general in all the countries which extend along the Mediterranean, and in the basin of the Guadalquivir. It cannot be introduced on the table-land, as the rivers which water it generally run in so deep a bed, and so much below the general surface of the country, that their waters cannot be made available for that purpose. In the northern and north-western maritime countries the rains are sufficiently abundant for the growth of corn without such artificial means.

The largest rivers are noticed under their proper heads. [DUERO; Ebro; TAGUS.] The other principal rivers are noticed under the names of those provinces in which they have the whole or the greatest part of their course. The Miño (Minho in Portuguese) is noticed under GALICIA; the Guadiana, under CASTILLA LA NUEVA and ALEMTEJO; the Guadalquivir, under ANDALUCIA; the Segura, under MURCIA; the Guadalajara, under CASTILLA LA NUEVA; and so the rest.

Geology.—The several mountain ranges of the Spanish peninsula, mostly extending from east-north-east to west-south-west, consist of primary rocks, but are separated from each other by extensive basins of tertiary strata.

The central portion of the Pyrenees, and the continuation of the chain through Biscaya and Asturias, is composed of quartzose and schistose rocks, red sandstones, shales, and gray limestones. The sierras east of Burgos extending to the Moncayo are crystalline schists, flanked by masses of sandstone and shale. The Sierra de Guadarrama, the main ridge of the Castilian table-land, consists of gneiss and other crystalline schists, with subordinate limestones pierced by granite. These central crystalline rocks are flanked by schists and silicious sandstones. The Sierra Morena consists mostly of lower silurian

rocks, which extend eastward into Murcia, and there occupy the largest part of the mountain region. The inferior portion of the Sierra Morena consists of schists and intercalated dark limestones, with quartzose sandstones, which, being very hard, form the peaks of the lower ridges. The upper silurian rocks are slightly exhibited in parts of the Sierra Morena, and also in some places on the southern flank of the Pyrenees. The rocks of the Sierra Nevada have been much metamorphosed. They seem to be of the same age as those of the Sierra Morena and the sierras of Murcia.

The same paleozoic succession seems to have prevailed over all the peninsula previous to the surface having been thrown up into those ridges which now form lines of separation between the different provinces. They have all been conformably and apparently simultaneously elevated.

The lower silurian limestones of Murcia contain the richest silver and lead-mines in Spain, particularly near Cartagena and in the Sierra de Almagrera. In Asturias carboniferous deposits are superimposed on limestones, some of which rise to the summits of the highest mountains. About 80 beds of coal have been recognised, most of which are nearly vertical. Valuable ores of iron exist among the Asturian Mountains, and some of them are wrought to advantage. Carboniferous deposits occupy a considerable area on the southern flanks of the Sierra Morena, and some of the beds of coal are wrought. The valuable quicksilver-mines are in a formation of dark-coloured slates. [ALMADEN.]

Climate and Productions.—The climate of Spain varies exceedingly in consequence of the great differences of elevation and diversity of position. The central table-land is exceedingly hot in summer, and cold in winter. [MADRID.] The coasts of the Mediterranean Sea are very hot in summer, and the atmosphere is very mild in winter. The winter is the season for rain. On the northern and western coasts the annual fall of rain is from 25 to 35 inches, while on the central table-land it is only 10 inches.

The most common kinds of grain which are cultivated in Spain are wheat, maize, barley, and rice. The largest quantity of wheat is produced in the northern provinces, in Cataluña, and on the plains of Castilla la Vieja and Leon. Rice is only grown in the countries along the Mediterranean, from the boundary of France to Cabo de Palos. Other objects of agriculture are hemp and flax, especially in the basin of the Ebro, and madder and saffron on the table-land in the vicinity of Cuenca. In the southern districts the sugar-cane and cotton are cultivated. The most common vegetables are onions, pumpkins, cucumbers, melons, water-melons, potatoes, beans, and peas. Many fruit-trees are cultivated, as almonds, figs, pomegranates, lemons, oranges, pistachio-nuts, carobas, dates in the southern districts, walnuts, hazel-nuts, and especially chestnuts. The chestnut-trees in some of the northern districts cover large tracts. Olive-trees occur in all parts, except the northern mountainous tracts, and the vineyards are extensive, except on the most elevated regions. Several of the Spanish wines are considerable articles of commerce, as Xeres (sherry), Malaga, Alicante, Malvasia, Tinto, and Val de Peñas. The annual produce of wine in Spain is about 120,000,000 gallons, of which Malaga produces from 30,000 to 40,000 butts (3,500,000 gallons), Andalucía 400,000 butts (40,000,000 gallons), Cataluña 600,000 pipes (60,000,000 gallons), Toledo 6,000,000 gallons, and Valencia 9,000,000 gallons. Brandy and raisins also are articles of export. Among the wild-trees are the sweet-acorn oak (*Quercus ballota*), the cork-tree (*Quercus suber*), the kermes oak (*Quercus coccifera*), and the sumach-tree. On the Asturian Mountains and on the southern slopes and offsets of the Pyrenees, there are large forests of fine timber-trees. The plant from which the barilla is obtained is cultivated in the plain of Murcia and some adjacent districts. The liquorice-plant is abundant in the vicinity of Sevilla and near the mouth of the Ebro, and the prepared juice is sent to all parts of Europe. The sparto-rush is used for making ropes, mats, baskets, &c.

Among the domestic animals the sheep and horses are distinguished. The sheep are noted for their fine wool, which forms an important article of export. They pass the summer on the Sierras de Guadarrama, Avila, and Gata, and the winter in the low mountains of Estremadura which lie between the Tagus and Guadiana. Their number amounts to five or six millions. Sheep are also numerous in other parts, but they have generally a coarse wool. The horses of Spain, and especially those of Andalucía, are noted for their beauty; but during the French occupation (1808-1814), nearly all the fine breeds were sent to France, and they are now comparatively scarce. Cattle are only numerous and of large size near the higher mountain ranges; in other parts they are small, with the exception of those fed in the salt-marshes of Sevilla. The asses and mules are distinguished by their size and beauty. Pigs are not very numerous. Goats are more numerous than in any country of Europe, especially on the table-land. There are a few mountain-goats on the Pyrenees. The mountains also contain wolves and other wild animals. The care of the silkworm, the cochineal insect, and bees, are branches of industry. In no country of Europe, except Italy, is so much silk obtained as in the eastern and southern provinces of Spain. The cochineal insect has been reared for the last forty years in Andalucía, Granada, and Estremadura. Bees are very abundant, and much honey and wax are obtained.

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Spain abounds in minerals, but, with the exception of the silver and lead-mines of Murcia and Andalucía, the quicksilver-mine of Almaden, and the iron-mines of Asturias, they are very imperfectly wrought.

Inhabitants.—The inhabitants of the Peninsula appear in the earliest historical times to have been Iberians, who were perhaps an aboriginal people, mingled with a considerable number of Celts, who had crossed the Pyrenees, and had partly overpowered the Iberians. The two races seem to have afterwards coalesced, and to have formed the nation of Celt-Iberians, but pure Iberian and pure Celtic tribes still remained in various parts of the Peninsula. During the whole period of ancient history the great bulk of the population remained unchanged, and all the subsequent infusions of Roman, Gothic, and Moorish blood have in no degree obliterated and but slightly altered the leading characteristics of the Iberian and Celtiberian races. Arnold, quoting Strabo (iii. p. 145), remarks, that "the grave dress, the temperance and sobriety, the unyielding spirit, the extreme indolence, the perseverance in guerilla warfare, and the remarkable absence of the highest military qualities, ascribed by the Greek and Roman writers to the ancient Iberians, are all more or less characteristic of the Spaniards of modern times. The courtesy and gallantry of the Spaniard to women has also come down to him from his Iberian ancestors." ("Hist. of Rome," iii. 396.) So also have the habits of brigandage, and the dislike and disunion which still subsist not only between the natives of Spain and Portugal, but between the inhabitants of several of the different provinces of Spain itself.

Commerce and Manufactures.—Spain, from the extent of its coast-line, its large ports of Cadix, Cartagena, and Ferrol, the number of its smaller harbours, its geographical position, and its abundance of natural productions, possesses very great commercial advantages, but those advantages have been diminished, and in a great measure destroyed, by the restrictive laws of the government. Smuggling to an enormous extent is carried on almost everywhere along the coast, especially at and near Gibraltar, and also from France across the Pyrenees, and from Portugal across the frontier. The articles smuggled through Gibraltar consist of cottons, linens, muslins, thread, stockings, and the like, and tobacco to a large amount.

The total imports into Spain during the year 1849 amounted to 587,171,795 reals (about 6,160,000*l.*). Of course these are the registered imports. The amount of goods smuggled into the country cannot be estimated. The exports during the same year amounted to 478,162,822 reals (about 5,000,000*l.*). The imports consist of colonial produce, dried fish and salted provisions, cotton and woollen goods, cutlery, glass, butter, and cheese. The exports consist of wool, wine, brandy, oil, fruits, chestnuts and nuts, cork, quicksilver, iron, silver, lead, and salt, with a small quantity of silk and manufactured goods. Of late years a large amount of wheat and flour has been exported from the northern provinces, chiefly to Cuba and Brazil.

The manufacturing industry, formerly considerable, has greatly declined. The government has still manufactures of tobacco, saltpetre, gunpowder, cannon, fire-arms, and porcelain, but they are all in a decayed state except the manufactory of cigars at Sevilla. Other manufactures are silks, coarse cottons and woollens, and leather. Cutlery and iron-ware are made to some amount in the Basque Provinces and Asturias.

Roads, Canals, and Railways.—The public roads in Spain, except those around the capital and the royal road from Madrid through Leon to Oviedo and the coast, are amongst the worst in Europe. The only canal of importance is the Imperial Canal, commenced by Charles V., extending along the southern bank of the Ebro. [ARAGON.] There are three or four small canals in the Castillas and in Murcia. The railways at present completed are—from Barcelona to Mataro, 17½ miles, opened in 1848; from Valencia to Alcoira, 22½ miles; from Valencia to Grao, 3 miles; from Madrid to Aranjuez; from Aranjuez to Almansa; from Alcazar to Pemblique.

Revenue, Army, and Navy.—The revenue in 1853 amounted to 12,751,000*l.* The public debt amounted to 115,186,000*l.* The army in 1854 numbered 99,489 men and 11,395 horses, exclusive of troops in the colonies. The navy in the same year consisted of 6 ships of from 80 to 90 guns, 12 frigates of from 30 to 40 guns; 12 corvettes of from 20 to 30 guns, 14 gun-brigs, 6 war-steamers, and other minor vessels. The fleet was manned by 9000 sailors and 15,000 marines.

Religion and Education.—The established religion is the Roman Catholic, and no other is allowed in the Spanish dominions. The crown presents the archbishops and bishops, who are confirmed by the Pope. The wealth of the church was at one time immense. After the revolution of 1836-7, the monastic orders were suppressed, and the convents and the lands belonging to them were sold; but the convents of nuns were suffered to remain till the death of the then occupants. A law has this year (1855) been passed for the sale of the whole of the church-property, and its conversion to secular uses.

Education is very little diffused. The lower classes receive little or no instruction, except in the principal cities, where infant-schools have of late years been established. The children of the upper classes are mostly educated in France and other countries. The universities, formerly numerous and of great reputation, are now reduced to about 14, and those are attended by only a comparatively small number of students in theology, law, and medicine. There are

however several academies and literary societies in Madrid, Cadiz, Sevilla, and other large cities.

Constitution and Government.—The government of Spain during the middle ages was absolute, though, from the earlier development of popular rights, the power of the king was more restricted than in any other country of Europe. Ferdinand the Catholic (Fernando V. of Castilla) aimed the first blow at Spanish liberty, by avoiding, as much as possible, the convocation of the Cortes. His successor, Charles V., completed the ruin of the Cortes, by entirely disregarding their petitions and defeating the citizens who rose in arms to support the cause of national liberty. Spain continued to be ruled despotically by the kings of the houses of Austria and Bourbon until the French invasion in 1808, when the deputies of the several provinces assembled at Cadiz, and framed a new constitution, which was sworn to and promulgated in 1812. At the close of the war however, Ferdinand VII. refused to give it his sanction, and he re-established the old forms of government; but being compelled soon after (1820) by a military insurrection, to swear to the constitution of 1812, it again became the law of the land, until it was a second time put down with the assistance of a French army.

On the death of Ferdinand (1833), his widow, Queen Christina, wishing to conciliate the liberal party, gave the nation a new charter, and re-established the ancient Cortes, with certain restrictions and modifications which rendered it of little or no value for the support of popular rights. At length, in 1836, the revision of the constitution was intrusted by the government to the two chambers of peers and deputies, and the new constitution of the Spanish kingdom was sworn to by the queen-regent in June, 1837. Two chambers were instituted—that of the Diputados and that of the Senadores—the members of which are invested with equal powers, but all bills relating to taxation are to be presented in the first instance to the lower chamber. Both chambers are elected by the people, the crown having the privilege of choosing one out of every three senators presented by the electors of the provinces. The new constitution has in most points been assimilated to those of the other representative states of Europe. The constitutional government however was gradually more and more neglected and violated, till in 1854 military insurrections in Barcelona and Madrid caused a revolution, and Espartero restored the constitutional government.

History.—Spain was named *Ispania*, *Iovavia*, and *Zrovia*, by the Greeks, Iberia and Hispania by the Romans. Hardly anything was known of the country till the Carthaginians and afterwards the Romans subdued and colonised it. The Phœnicians had previously numerous settlements on the southern coast, and the narrow tract between the sea-shore and the Sierra Nevada was inhabited by a mixed race of Iberians and Phœnicians called *Misopovikes*. The Rhodians and Phœceans also seem to have had settlements on the eastern coast. The Carthaginian general Hamilcar, about the year B.C. 237, began to introduce colonies on the southern coast; and the Carthaginian power continued to be extended under Hasdrubal and Hannibal till the Carthaginians were conquered and expelled by the Romans in the year B.C. 206. The Peninsula was then erected into a Roman province, and a struggle commenced between the Romans and the native inhabitants, which lasted till the subjugation of the northern mountaineers, the Gallaici, the Cantabri, and the Astures, by Augustus, about 25 years before the Christian era.

The Peninsula was at first politically divided by the Romans into two provinces, Hispania Citerior (Hither Spain) and Hispania Ulterior (Farther Spain); Hispania Citerior comprising the eastern and north-eastern districts, and Hispania Ulterior the southern districts, and the western as far as they had been subjugated. Afterwards, when the whole Peninsula had been conquered, it was divided into the three provinces of Tarraconensis (the eastern and northern districts), Bœtica (the southern district, or Andalusia), and Lusitania (the western district, or Portugal, and certain portions of Spain). This political division subsisted till the reign of Constantine the Great. During this period Spain was considered one of the most valuable and flourishing provinces of the Roman empire. According to Pliny, it contained 360 large cities. The organisation of the Spanish provinces is fully stated by Pliny (iii. 1, &c.).

About the beginning of the 5th century the Sueves, the Alans, and the Vandals crossed the Pyrenees, and settled in the Spanish Peninsula. They were succeeded by the Visigoths, who in A.D. 411 entered Catalonia, and in a short time compelled the Alans and Vandals to quit Spain for Africa. After a series of battles the Visigoths subdued the Sueves, and retained the command of the Peninsula till the year 711, when Tarik Ibn Zeyad, after defeating the Gothic armies on the banks of the Guadalete, took their capital city, Toledo. In a very few years the Moors obtained possession of the whole of the Peninsula, with the exception of the mountainous districts of the north, where they were successfully resisted. A series of battles gradually extended the Gothic conquests and power southward [ARAGON], till at length, in 1492, the Moorish capital [GRANADA] was taken by assault by the armies of Fernando and Isabel. On the death of Isabel in 1506 the crown of Castilla devolved on her daughter Joanna, wife of Philip, archduke of Austria; and on the death of the latter, on his son Carlos I., afterwards Charles V. and Emperor of Germany. Fernando died January 23, 1516, after appointing Cardinal Ximenes regent of

Castilla till the arrival of his grandson Carlos, who was then only 16 years of age. Ximenes governed the kingdom till 1518, when Carlos I. assumed the government of Spain. In the following year he was elected Emperor of Germany. With him commenced the dynasty of the house of Austria in Spain. After a reign of nearly 40 years he resigned all his power and possessions to his son Felipe II., and in 1567 retired to a monastery near Placencia in Estremadura, where he died in 1558. During the reign of Felipe II. the Moors were compelled by religious persecution to quit the kingdom, and to settle in Africa. Felipe died in 1598, and was succeeded by his son Felipe III., who died in 1621. He was succeeded by his son Felipe IV., whose reign lasted till 1665, in which year he died. He was succeeded by his son Carlos II., who died in 1700. Felipe V., who succeeded, was the second son of Louis, dauphin of France, and the first king of Spain of the house of Bourbon. He died in 1746, and was succeeded by his son Fernando VI., who died in 1759, without issue. His successor, Carlos III., was a son of Philip V. and king of the Two Sicilies. His death took place in 1788, when he was succeeded by his son Carlos IV. In 1807 the French armies began to enter Spain for the purpose of obtaining possession of the kingdom. On the 19th of March, 1808, Carlos IV. abdicated in favour of his son, Fernando VII. In the following May Carlos IV. and Fernando VII. signed a convention at Bayonne, by which they ceded the Spanish monarchy to Napoleon Bonaparte. But the inhabitants of Portugal and Spain refused to submit to the domination of the French. They rose almost universally against the invaders, and having entered into alliances with Great Britain, the Peninsular war was commenced, and continued till 1814, when the French were finally driven over the Pyrenees, and pursued into France.

After the capitulation of Paris in March, 1814, Fernando VII. regained his throne, and reigned till September 29, 1833, when he died, having left by his will his infant daughter Isabel heir to his throne. The queen-mother, Christina, was appointed queen-regent (Reina Gobernadora). Immediately afterwards Don Carlos, the late king's brother, laid claim to the throne on the ground that by the Salic law females were declared ineligible. A civil war ensued, which lasted till September, 1840, when the partisans of Don Carlos were finally defeated.

Early in 1854, in consequence of the arbitrary and unconstitutional measures of the Spanish government, insurrectionary movements occurred in Barcelona and other places. On the 22nd of February the whole kingdom was declared in a state of siege. On the 15th of July the city and garrison of Barcelona issued a 'pronunciamento' (a public declaration) against the government. This was followed, July 17, by an insurrection in Madrid. The streets were barricaded, and the people fought against the soldiers till July 19, when the ministry fled, the soldiers gave up the contest, and a National Junta was established. Espartero was reinstated in power; the constitutional government was re-established; and the queen-mother was banished from the kingdom, August 28, 1854.

Language.—Of the languages or dialects spoken in the Peninsula before it became a Roman province little or nothing is known. Strabo (iii. p. 139, Casaub.) says that various dialects were in use in his time among the inhabitants of the Peninsula. The Phœnicians and Greeks who settled in Spain must also have introduced their own languages, whilst the Celts, who occupied the northern and western districts, spoke their own tongue. During the long period of Roman domination all these languages seem to have made room for the Latin, except in the northern part of the Peninsula, where the Basque language was always and is still spoken. The northern nations who invaded Spain in the 5th century made no effort to introduce their own tongues, but adopted that of the natives, and spoke Latin, which they corrupted by making the nouns indeclinable, and extending the use of prepositions.

Then came the Arabs, whose language at one time must have been very generally spoken in the Peninsula. Nearly two centuries after the taking of Toledo by Alfonso VI., Arabic was still spoken there in preference to the Castilian, and most legal writings, even between Christian parties, were made in Arabic. Up to the end of the 13th century the kings of Aragon were in the habit of signing their names with the letters of the Arabic alphabet. On the taking of Sevilla by Fernando III., it was deemed necessary to translate the Gospels into Arabic, in order to instruct the Christian population of that city in the duties of religion, which, as well as their native language, they had completely forgotten.

Out of these heterogeneous elements the Castilian language, as the modern Spanish is properly called, was originally formed, though it would be difficult to say at what time it began to assume its present shape.

About the beginning of the 13th century three principal languages were spoken in the Peninsula. The Castilian (the Lengua Castellana) prevailed exclusively in the two Castiles and Leon; the Catalanian, a dialect resembling the Provençal, or Limosin, of the south of France, was spoken in Catalonia, Aragon, part of Valencia, and the Balearic Islands; and, lastly, the Cantabrian, or Basque, still maintained its ground, though greatly corrupted, along the northern side of the Pyrenees. About the same time the Portuguese, which originated in a mixture of the Galician dialect and the language spoken by the

French who served under Henry of Besançon, became more distinct from the Castilian. [PORTUGAL.] How far the Arabic has contributed to the formation of the modern Spanish is a contested point among Spanish critics. That the Castilian language has borrowed a considerable number of its words from the Arabic is a fact beyond all doubt. If any one opens the 'Diccionario de la Lengua Castellana,' published by the Royal Academy of Spain, he will find that most words beginning with *al*, or with the letters *j*, *x*, *z*, are of Arabic origin. The names of plants, flowers, drugs, minerals, furniture, dresses, weights and measures, &c., are, with a few exceptions, all Arabic, although there are also corresponding names derived from the Latin. All words relating to the different branches of the mechanical arts which were introduced by the Moors into Spain are likewise borrowed from their language. In general, nouns of Arabic origin abound more than either adverbs or prepositions, and these in proportion are more numerous than the verbs. The connection of both languages would be still greater, if the writers of the best age of Spanish literature had not formed their style on the Latin, and avoided, as much as possible, words of Arabic origin; to which may be added, that when the Academicians compiled the above-mentioned dictionary, they left out many words authorised by use, which are found in the oldest Spanish works. It was about the beginning of the 16th century, and during the reigns of Fernando and Isabel and Carlos V., that the Castilian became the general language of the Peninsula, though works in Valencian, Catalanian, and Basque continued to be published from time to time, and those languages were and are still spoken by a large number of the inhabitants of Spain.

SPA'LATRO, or SPA'LATO, a town of Dalmatia, situated on a promontory in a bay of the Adriatic, formed by the islands of Braza and Bua and the mainland. It is about midway between Zara and Ragusa, in 43° 30' N. lat., 16° 26' E. long. Spalatro has a harbour, sufficiently extensive, but not very safe. The town is walled and fortified, but the principal defence on the land side consists of the fort of Clissa, which commands a defile in the mountains towards the Turkish borders. Spalatro stands principally on the site of the extensive palace which the emperor Diocletian built for himself near the ancient town of *Salona*. *Salona* was destroyed by the Slavonians in the 7th century, but many remains of antiquity have been found by digging among the vineyards which occupy its former area between Spalatro and Clissa. The outer walls of the residence of Diocletian, which formed a square of nearly one mile, are in great measure still existing, as well as some of the gates. The cathedral of Spalatro is formed out of a temple built by Diocletian in the middle of the area of his residence; it contains some fine columns and is adorned with a handsome frieze. Other considerable remains of the Imperial buildings are seen within the precincts of Spalatro.

Spalatro is one of the most commercial towns of Dalmatia; the population is about 10,000.

SPALDING, Lincolnshire, a market-town, and the seat of a Poor-Law Union, in the parish of Spalding, is situated on the banks of the river Welland, in 52° 48' N. lat., 0° 9' W. long., distant 43 miles S.S.E. from Lincoln, 98 miles N.N.W. from London by road, and 93 miles by the Great Northern railway. The population of the town in 1851 was 7627. The living is a perpetual curacy, in the archdeaconry and diocese of Lincoln. Spalding Poor-Law Union contains nine parishes and townships, with an area of 70,181 acres, and a population in 1851 of 21,290.

As early as the Saxon times Spalding was a place of some consequence. A Benedictine monastery existed here. The district in which the town stands is fenny, but well drained. The town is clean, well paved, lighted with gas, and contains many neat houses. The town-hall is a strong brick building. The sessions-house is a large and handsome structure. There are assembly-rooms, a theatre, and a house of correction. The high bridge over the river Welland was rebuilt in 1838. The church, a fine edifice, chiefly of perpendicular character, has an elegant tower, surmounted with a crocketed spire. The Wesleyan Methodists, Independents, Baptists, and Quakers have places of worship. The Royal Free Grammar school, founded in 1568, which has an income from endowment of 174*l.* a year, had 19 scholars in 1854. There are also National schools, Endowed Blue-Coat schools, Willesby's Endowed Charity school, a Union school, and a savings bank. There is a considerable trade in corn, meal, flour, coal, timber, wool, oil-cake, and wine. Brick-making, bone-crushing, coach-making, brewing, and malting are carried on. There are some extensive steam flour-mills. Markets are held on Tuesday and Saturday. Fairs are held seven times a year. The river Welland is navigable up to the town for vessels of 70 tons burden. Quarter and petty sessions, and a county court, are held in the town.

SPANDAU. [BRANDENBURG.]

SPANISH TOWN. [JAMAICA.]

SPARTA, or, as it was sometimes called, *Lacedæmon*, the capital of Laconia, and the chief city of Peloponnesus, was situated on the right bank of the Eurotas, about 20 miles from the sea, in 37° 4' N. lat., 22° 26' E. long. It was built in a plain of some extent, and was bounded E. by the Eurotas, and S. by a smaller stream running into it, now called Trypiótiko, and supposed to be the ancient Knakion. On the north-west the torrent Labyca separated the height on which the acropolis stood from the spur of Mount Taygetus. On

the left or eastern bank of the Eurotas, is a range of hills at a little distance, on which stood the suburb Menelaïum. These hills of the Menelaïum form a part only of a steep bank which rises on the eastern side of the Eurotas to the height of 500 or 600 feet and is surmounted by a table-land, beyond which again lies an uneven country, intersected with ravines and rivers, gradually rising to Mount Parnon and the other summits of the range of mountains which bounds the view from the plain of Sparta on the east. A corresponding boundary on the west is formed by the more elevated range of Mount Taygetus; hence Homer applies the term 'hollow Lacedæmon' to the plain of Sparta, and to the city itself, which Strabo (vol. viii. p. 367) also speaks of as being in a hollow. There are two villages—Magúla and Psykhikó—on the site of Sparta, nearly a mile apart. The former is a little south of the ancient theatre; the latter in the south-east part of the site, near the left bank of the Trypiótiko. The principal modern town in the neighbourhood is Mistra, which lies about two miles to the west, on the slopes of Mount Taygetus.

The only considerable remnant of Hellenic workmanship is the theatre, from which Mistra and the surrounding neighbourhood have been supplied with stone for building. Colonel Leake thought that the exterior masonry and brickwork which still subsist are not older than the time of the Roman empire. Nevertheless, the theatre itself may have existed from an early period, though not originally used for dramatic purposes, but for gymnastic and choral exercises and public meetings. (Herod., vi. 67.) The centre of the building was excavated in a hill, but the ground does not afford much advantage compared with the situations of other Greek theatres. The largest diameter, says Sir W. Gell, was 418 feet in length; the orchestra is 140 feet wide, and adjoining are two parallel walls about the length of a furlong. In front of it there is a sepulchral chamber carefully built of large quadrangular stones. "Not far from the theatre," observes Colonel Leake, "I found two opposite doors, each formed of three stones, and buried almost to the soffit. On one side of these doors is some appearance of seats, as if the building had been a place of public assembly." In another place he found two other similar doors buried in the ground to nearly the same height. Another relic is an ancient bridge over the Trypiótiko, which is still in use, constructed of large single blocks of stone reaching from side to side. There is also part of an old causeway of similar construction at each end of the bridge.

Every part of the site of ancient Sparta is covered with fragments of wrought stones; and here and there are scattered pieces of Doric columns of white marble, and other relics of ancient buildings. The materials of the Roman walls, now nearly ruined, which once surrounded the principal heights of the city, are formed of similar fragments.

Of Sparta, Thucydides (i. 10) observes, that if "it were evacuated, and only the temples and foundations of its buildings left, posterity would be very incredulous about the extent of its former power, of which no adequate idea would be afforded by the city itself, as it was not embellished with temples and splendid edifices, nor built in contiguity, but in separate quarters." Such was the state of Sparta about B.C. 400; but with the increase of riches in after times, public monuments also multiplied with more rapidity than in earlier ages. These monuments, it appears from Pausanias, were still remaining about A.D. 200, in a more perfect and uninjured state than those of any other Grecian city except Athens.

The following summary of the topography is taken from Pausanias:—The Agora, or public square, which was in the north-west of the city, between the theatre and the acropolis, contained the council-house of the senate and the offices of the principal magistrates. The most remarkable building in this part of the city was the Persian portico, originally built of the spoils taken in the Persian war. It was ornamented with statues, in white marble, of some of the Persian generals, including that of Mardonius; and also with one of Artemisia, the queen of Halicarnassus, an ally of Xerxes. The Agora also contained shrines of Julius Cæsar and the emperor Augustus. A part of it was known by the name of the chorus, or dancing-place, in which young men danced at the games in honour of the Dorian god Apollo. In its immediate neighbourhood were various statues and temples. Southward from the Agora ran a street called Aphete, along the line of which was a number of public monuments, including a temple of Minerva Keleutheia, with a statue said to have been dedicated by Ulysses. At the end of the street, close to the city walls, was a temple of Dictynna, or Diana, and the royal tombs of the Eurypontidae.

The street in which the Skias was situated also led out of the Agora, a little eastward of the preceding street, and ran nearly parallel to the river, but at the distance of nearly half a mile. It extended to the walls, and crossed the Knakion by a bridge, of which there are still some remains. The Skias was an ancient place of assembly, of a circular form, and with a roof shaped like an umbrella. (Pausan., 12, 8.) Along this street also were various temples, statues, and altars, erected in honour of the tutelary divinities of Sparta and its heroes. In connection with these, Pausanias also mentions a quadrangular structure, surrounded with porticoes in which second-hand goods were sold. To the west of the Agora was a cenotaph of Brasidas

and near it a splendid theatre of white marble; opposite to which were the monuments of Pausanias and of Leonidas; near the latter was a pillar inscribed with the names of those who fell at Thermopylae, with the names of their fathers.

There was a place called Theomelida at Sparta, in which were the tombs of the royal house of the Agidae. In the same quarter was the temple of Diana Iasôra, or Pitanatis, and those of other divinities. Not far off, and on the banks of the Eurotas, was the Dromus, or racecourse, which contained two gymnasia. The Dromus was also embellished with various statues and temples. A little outside of the Dromus, Pausanias was shown the site of the house of Menelaus, one of the Grecian leaders at Troy. At the south-east of the Dromus was the Platanistes, which was nearly surrounded by running water, and so called from the plane-trees growing there. Two bridges formed the approaches to it, on one of which was a statue of Lycurgus, and of Hercules on the other. Like other parts of the city it contained several architectural remains in the time of Pausanias.

In another part of the city was the decorated public-hall, with various chapels dedicated to heroes, about it. Not far from the theatre, he adds, was a temple of Neptune Genethlius; and, after advancing a little, there was a small height, on which was an ancient temple, with a wooden statue of Venus in armour, and having an upper story sacred to Venus Morpho.

Lastly, there were temples of Diana Orthia and Latona in the place called Limnaeum, not far from which the Acropolis was probably situated. The Lacedaemonians had not a citadel of conspicuous elevation, like the Cadmeia at Thebes and the Larissa at Argos; but as there were several hills within the city, the highest of these was called the Acropolis. It contained, amongst a great number of other buildings, the temple of Minerva Chalciocous (that is, of the bronze house), begun by Tyndareus, and afterwards made of bronze, on which the actions of Hercules and of Castor and Pollux were worked in relief, together with other representations, of which the largest and most admirable were the Birth of Minerva and the figures of Neptune and Amphitrite. Of the other monuments in the same locality we shall only mention a bronze statue of Jupiter, which Pausanias says was the oldest extant of that material; it was formed of several separate pieces hammered together with nails.

Sparta was divided into five local tribes—the Pitanates, in the centre; the Limnates or Marshmen, north-west; the Messaetes, south-east; the Egidae, west; and Cynosurenses, south. The general form of the city was semicircular, and its circumference was about six Roman miles. It was not regularly fortified till the time of the Roman interference in Greece: it was completely surrounded with walls by order of Appius, the Roman legate. (Pausan., vii. 9, 8.) Two hundred and fifty years afterwards, when Pausanias visited Sparta, both walls and gates were in existence: no traces of them are visible now.

Constitution and Government.—This was of a very mixed nature, consisting of three or even four distinct elements, namely, royalty, a council of elders or senate, a general assembly, and, in later times, the Ephoralty.

The kingly authority existed at Sparta from the time of the conquest of the Peloponnesus by the Spartans, and was always shared by two persons at the same time. The two kings were the successive representatives of the two royal families descended from Eurysthenes and Procles, the twin sons of Aristodemus, under whom the conquest of Laconia was achieved. (Herod. vi. 52.) The constitutional powers of the kings were very limited. They presided over the council of elders (Herod. vi. 57; Thucyd. i. 20), and the vote of each counted for no more than that of a private senator. They had the right of addressing the public assembly; they sat as judges in a separate court of their own, where they decided upon private matters of importance. They were the commanders of the Spartan forces, and had the power of choosing from among the citizens persons to act as Proxeni, or protectors of foreigners visiting Sparta. When they had once crossed the borders of Laconia at the head of their forces, their authority became unlimited; on their return home, however, they were accountable for their conduct as generals. In fact in some instances the kings were dethroned or punished for misconduct and mismanagement as generals. They were not allowed to conclude treaties, or to determine the fate of cities, without communicating with the authorities at home. In the most ancient times the two kings had a joint command, but this led to inconvenience, and a law was passed, that in future one only of the two kings should have the command of the army on foreign service. The Spartan kings united the characters of priest and king (Herod. vi. 50), and officiated as high priest of the nation at all the public sacrifices offered for the state. On the accession of a king, all debts due from private individuals, to the state or the king, were remitted; and on the death of one of the kings, his funeral solemnities were celebrated by the whole community. There was a general mourning and suspension of all public business for ten days. (Herod. vi. 58.)

The senate (Gerusia) or council of elders was the aristocratical element of the constitution, and not peculiar to Sparta alone, but also found in other Dorian states. It included the two kings, who sat as presidents, and consisted of 30 members, 10 from each of the three tribes, and one from each of the divisions called obe. It was confined

to men of distinguished character and station: no one was eligible to it till he was 60 years of age (Plut., 'Lycur,' 26), and the additional qualifications were also of an aristocratic nature. (Arist., 'Pol,' ii. 6, 15.) The election was determined by vote, and the office was held for life, and irresponsible. The duties of the councillors were deliberative, judicial, and executive. In the first capacity they prepared measures and passed preliminary laws, which were laid before the popular assembly. As a criminal court they could punish with death or degradation, and that too without being restrained by a code of written laws. (Arist., 'Pol,' ii. 6.) They also appear to have exercised a judicial superintendence and censorship over the lives and manners of the citizens (Aul. Gell. xviii. 3), and probably were allowed a kind of patriarchal authority to enforce the observance of ancient usage and discipline. (Thirl., 'Hist. of Greece,' i. p. 318.)

The Ekklesia, or general assembly of the Spartan citizens, was not competent to originate any measure, but only to adopt or reject without alteration the laws and measures submitted to it by the proper authorities, a limitation which almost fixed the character of the Spartan constitution, and justifies an observation of Demosthenes ('Lept,' p. 489), that the Spartan senate was in many respects supreme. All citizens above the age of 30, not labouring under any disabilities, were admissible to the Ekklesia, or Apella, as it was called in the old Dorian dialect; but except magistrates, and especially the ephors and kings, no one addressed the people without being called upon. The same public officers also put the question to the vote; and as the magistrates only were the speakers and leaders of the assembly, the resolutions of the whole people are (particularly in foreign matters) spoken of as the decrees of those authorities alone. The voting was by acclamation. The regular meetings were held every full moon, and in cases of emergency extraordinary assemblies were called.

The popular assembly alone had the power to "proclaim a war, conclude a peace, enter into an armistice for any length of time, and all negotiations with foreign powers, though conducted by the kings and ephors, could be ratified by the same authority only." (Müller, 'Dorians.') The highest officers of the state, such as magistracies and priesthoods, were filled up "by the votes of the people; cases of disputed succession to the thrones were decided by them; changes in the constitution were proposed before them, and all new laws, after a previous resolution of the senate, were ratified by them." According to the theory of the constitution, the Ekklesia possessed the supreme political and legislative authority at Sparta, but subject to so many checks and limitations, that the government of the state is often spoken of as an aristocracy. One of these limitations was the Ephoralty, a power apparently foreign to the constitution as established by Lycurgus, and which appears in the first instance to have owed its aggrandisement to the connection established between itself and the assembly. In after times it encroached upon and overpowered the royal authority, and became the supporter of oligarchical principles and privileges.

The free citizens of the community were divided into two classes: one composed of the Spartans, or descendants of the Dorian conquerors of Laconia, and other individuals from time to time, but sparingly, associated with them; the other, of a subject population, living not in the city, but in the country, and called Perioeci, or 'dwellers round,' who, though personally free, were denied all political privileges, the government and administration of the state being confined to the Spartans exclusively.

In theory and name, the constitution as settled by Lycurgus was a democracy, with two hereditary magistrates at its head; but in practice (at least before the encroachments of the ephoralty) it worked as if the supreme authority had been placed in the hands of a minority, and therefore was in reality a limited aristocracy, independent and irrespective of the relation between the subject and the ruling classes. From his very birth every Spartan boy was treated as the child of the state, and as such was liable to be exposed to die at the discretion of his father's kin, if he was a deformed or sickly infant. In his earliest years he was not left entirely to the management of his parents, though under their care, and at the age of seven he entered upon a course of public discipline, increasing in severity as he approached manhood; and as this education had only one end in view, that of training citizens to serve and defend their country, the discipline was in every respect subservient to this object. No accomplishments or arts, except of a military character, were taught, while every effort was made to ensure military skill, activity, fortitude, and bravery. The Spartan was to be taught both to dare and to bear with fortitude; and for this purpose he was inured from his youth to a coarse and scanty fare, to insufficient clothing, to self-denial, and the severest trials of pain and hardship. (Cicero, 'Tus. Quæst.' v. 27.)

By another custom, the Spartan youths were compelled, sometimes from hunger, sometimes at the command of their captains, to get provisions or anything else by foraging in the fields or plundering houses; if successful, they retained their spoil, and were honoured with praise; if detected, they were punished, not for the attempt, but for their want of ingenuity. They were taught music, to sing, and to play on the flute and the harp, but only with the view of forming their moral tastes; and therefore the airs and the songs that they learnt were of a sacred or martial character. Hence the poetry of Homer was in very early times introduced into Sparta; and

Tyrtaeus, the martial poet, was held in especial honour, as animating and encouraging their youth. Gymnastic dancing also formed a part of Spartan education; and the Pyrrhic dance was taught to boys as a warlike exercise, imitative of the movements and actions of a combatant in battle. But the lessons most strongly impressed upon the young Spartan, and the duties most carefully inculcated, were those of modesty, obedience, and respect to rank and age. Together with all this, the young Spartan was impressed, both by precept and example, with a sense of shame; and taught to consider dishonour and disgrace as more terrible than death, when met either for the honour or at the command of his country. At the expiration of eighteen years, the Spartan youths passed from boyhood; and from this period to thirty they were considered to be in a state of transition to manhood. At twenty they served in the ranks. ('Dorians,' iv. 5, 8.) Even after maturity the Spartans were still expected to employ themselves in gymnastic exercises and amusements. (Xen., 'De Rep. Lacon,' v. 7.) Nor were they exempt from military service till sixty. The last years of their life were spent in the service of the community, in the council of the Gerusia, or in superintending the education of the young; and nowhere, it has been remarked by Cicero, had old age a more agreeable or more honourable position than at Sparta. Another important feature of the Spartan institutions was the *Syssitia*, or public meals, in which all the citizens of a suitable age joined. The guests were divided into societies, or clubs, generally of fifteen men; any vacancy was filled by ballot, and unanimous consent was requisite for the admission of new members. The repeat of each club was of a frugal and temperate character, but enlivened by social and cheerful conversation, and the entertainment was provided by the contributions of the individual members.

The chief strength of the Spartan forces was in the heavy-armed infantry, which was superior to that of any other state in Greece. Cavalry service was not thought highly of amongst them, the country being not fitted for the production of horses. The horsemen of Sparta, in the Peloponnesian war, were at first only 400, and afterwards rose to 600 men. (Müller, iii. 12, 6.) The naval service was chiefly confined to the *Periœci*.

The Spartan institutions, though almost entirely of a military tendency, incidentally served other important ends, such as the invigoration and health of the body, and the production of physical beauty. About B.C. 540 the Spartans were the most healthy of the Greeks (Xen., 'Rep. Lacon,' v. 9), and the handsomest men and women were found amongst them. But Sparta did not produce among her citizens the painter, the sculptor, the poet, or the historian. They were all warriors; and therefore the cultivation of the arts and sciences, and even of agriculture, was left almost entirely to the *Periœci* and the *Helots*. Lyrical and choral poetry indeed, for which the Dorian communities were famous, were cultivated and encouraged, but chiefly for religious purposes. The arts of rhetoric and eloquence too were studiously discouraged among them, as being instruments of deceit and misrepresentation, and inconsistent with the concise and sententious method of expression on which the Spartans prided themselves, and which they enforced on their youth by a regular training. Trade and commerce also were alien to their character; and these were left entirely to their provincial subjects. Any extensive trade indeed was rendered almost impossible by the want of a gold and silver coinage, iron being till the latest time their only legal currency. The very possession of gold or silver money was prohibited by their laws. And yet owing probably to the tendency of human nature to long for what is forbidden, "avarice appears to have been the vice to which the Spartan was most prone: money, for which he scarcely had any use, was a bait which even the purest patriotism could not resist." (Thirl., 'Hist. of Greece;' 'Dorians,' iii.)

Spartan girls were in many respects brought up similarly to the boys. They had their own gymnasia, and practised themselves in running, wrestling, and other exercises, which contributed to their health and vigour of constitution, in order that they might prove the mothers of a healthy progeny. The Spartan virgins, even in the company of men, generally wore but a single robe, without an upper garment; in which respect they were distinguished from married women. But the most remarkable feature in the social position of the Spartan women was the indulgence and respect universally shown to them, presenting a strong contrast with the treatment of the female sex among the Athenians and other nations of the Ionian race. So great was the influence of the women at Sparta, that the Spartans were often censured by other nations for submitting to their yoke.

The Spartans, and the Dorians generally, also differed from the rest of the Greeks in the freedom of intercourse which they allowed in public between the youth of both sexes, who were especially brought into contact at religious festivals and choruses. Hence at Sparta it was very possible for marriage to be the result of affection and love, which was seldom the case in the Ionian states of Greece. But still in this, as in everything else, private feelings and wishes were made subordinate to the interests of the community; and marriage was not considered merely as a private relation, but as a public institution, the chief end of which was to supply the state with a strong and healthy progeny. Intermarriage with foreign women was forbidden to all the Spartans, and to the *Heracleids*, or royal family, by a particular rhetra, or constitutional ordinance.

History.—The occupation of Laconia by the Spartans dates, according to the received chronology, from the year B.C. 1104, the 80th year after the Trojan war: but some writers place that event in B.C. 1048. About one of those periods the Dorians migrated from Doria, a district lying between the chains of Mount Ceta on the north and Parnassus on the south, and, under the command of three leaders, Aristodemus, Temenus, and Cresphontes, reputed descendants of Hercules, invaded the Peloponnesus; they were accompanied and guided in their expedition by Oxylus, an Ætolian chief, and soon succeeded, according to the poetical legend, in making themselves masters of the country. In the division which took place, Laconia was assigned to Aristodemus, Argos to Temenus, Messenia to Cresphontes, while Elis was given to Oxylus as a reward for his assistance. Till the conquest of Laconia was thoroughly effected, the Spartans were probably too much occupied at home to engage in foreign wars. Their earliest expeditions were into Arcadia and Argos. Against Tegea, the capital of the former country, they continued to wage war, and always unsuccessfully, for many generations. The first of the Messenian wars commenced about B.C. 743, and terminated in the defeat and subjection of Messenia. The struggle was renewed in B.C. 685, but ended in a like result B.C. 668.

From B.C. 668, the close of the second Messenian war, Sparta continued in a course of uninterrupted success, till she became supreme in the Peloponnesus, and pre-eminent in all Greece. The old contest with Tegea was at last decided in her favour, about the year B.C. 545. (Herod., i. 68.) Nearly at the same time the contest with Argos, for the possession of the tract of land called Thyrea, of which the Spartans had made themselves masters in the third generation after the conquest, was decided by a battle of 300 champions on each side, in which Argos lost the day, and Thyrea was won by the Spartans. (Herod., i. 82.) About B.C. 525, the Spartans were again in hostilities with Argos, and victorious over them in a decisive battle. At the instigation of the Delphian oracle they invaded Attica, under their king Cleomenes, for the purpose of expelling the usurper Hippias, an object which they effected in B.C. 510. Five years afterwards they again appeared in Attica as the supporters of the aristocratic party headed by Isagoras: they were led by Cleomenes; but the Spartan king, who had occupied the citadel, was obliged to capitulate, and submit to the terms dictated by the popular party at Athens. The expulsion of the Pisistratidæ from Athens, and the aid furnished by the Athenians to some of the revolted subjects of Persia, gave occasion to the Persian war. The battle of Marathon followed (B.C. 490), the honour of sharing in which the Spartans lost, from a superstitious regard to an ancient custom which forbade them to set out on an expedition before the moon was at the full. (Herod., vi. 106.) But ten years afterwards, when Xerxes invaded Greece, they fought against him, first at Thermopylæ, then at Salamis, and lastly at Plataeæ. At Thermopylæ, Leonidas, the Spartan king, with a handful of troops, long defied the hosts of the enemy; and at last, after dismissing his allies, fell, with his 300 Spartan citizens, in obedience, as their epitaph recorded of them, to the laws of their country. At Salamis, the chief command on the Greek side was entrusted to the Spartan Eurybiades, though the Lacedæmonians furnished only 16 ships, and the Athenians 180; and had not Themistocles interposed, Greece would have been ruined by his irresolute and narrow-minded policy. At the battle of Plataeæ, B.C. 479, the Spartans were present with a force of 5000 citizens, 5000 provincials, and 35,000 *Helots*; the chief command was in the hands of Pausanias, their general, and the valour and firmness of his troops mainly contributed to the success of the Grecian arms.

In the year B.C. 477 commenced what is called the Athenian ascendancy. The war was still carried on against Persia, in the Hellespont, and off the coast of Asia Minor, by the confederates, under the command of the Spartan Pausanias; the Athenian admirals being Aristides and Cimon. Pausanias by his haughtiness and arrogance disgusted the allies, who, with the exception of Ægina and the Peloponnesian states, called upon the Athenians to accept the supremacy in the alliance. (Thucyd., i. 95.) In the mean time Pausanias was recalled, and another commander was sent out in his stead; but it was too late; the confederates refused to submit to his command, whereupon he and his colleagues retired altogether from the conduct of the war, and left it to the Athenians.

The Spartans were on the eve of invading Attica as allies of the Thæsians, when a domestic disaster occurred to prevent them. This was caused by a shock of an earthquake (B.C. 464), so violent that the whole of Laconia was shaken by it, and, according to one account, only five houses were left standing in Sparta. The *Helots*, the descendants of the conquered Messenians, took advantage of this occurrence to rise against their oppressors, and, in conjunction with some of the *Periœci*, occupied their former stronghold of Ithome. The Spartans, not being very skilful as besiegers, solicited the assistance of the Athenians, who sent Cimon with a force to help them. Their assistance however not proving so efficacious as was expected, the Spartans doubted their good faith, and dismissed them. The Athenians resented the affront by allying themselves with the Argives, the old enemies of the Spartans, and shortly afterwards met them at Tanagra in Bœotia, as they were returning from an expedition into Doria, their mother country. A pitched battle was the consequence,

in which the Athenians were defeated with great loss (B.C. 457). In B.C. 455 the third Messenian war was concluded by the surrender of Ithome. The jealousy and distrust between the two states led to the Peloponnesian war, which lasted from B.C. 431 for 27 years. The issue of this war is related in the article ATHENS (vol. i. col. 637). It ended in the overthrow of Athens and the restoration of Sparta to the undisputed supremacy over the rest of Greece, after Athens had divided it with her for 73 years. One of Sparta's most valuable allies in the latter part of the war was the Persian Cyrus, and to show their gratitude to him, the Spartans furnished him with auxiliaries in his attempt to dethrone his brother Artaxerxes, the king of Persia. Cyrus failed; and the Ionian cities which had favoured him refused to submit to the satrap Tissaphernes, the successor of Cyrus in his province. Being too weak to resist him, they applied to Sparta, who sent a considerable force to aid them in asserting their independence. A reinforcement was afterwards (B.C. 396) sent out under the king Agesilaus, with a view of anticipating a threatened invasion of Greece by the Persians. His successes against the Persians were so great as to encourage him to form the design of overthrowing the Persian empire. But he was unexpectedly stopped in his preparations for this design. The satrap Tithraustes, unable to cope with him in the field, sent agents with a sum of money into Greece, raised a confederacy against Sparta, which included amongst its members Thebes, Argos, Corinth, and Athens. War first broke out between Thebes and Sparta; and the Lacedæmonians, having invaded Bœotia, were defeated at Haliartus, B.C. 395, with the loss of their general Lysander, who was slain under the walls. Agesilaus was summoned home. But before he arrived another engagement was fought, "the great battle," that of Corinth (B.C. 394), in which the Lacedæmonians gained the victory with a very trifling loss. This victory however was counterbalanced by a naval defeat by the Athenians off Cnidus. An army of the confederates was again assembled on the plain of Coroneia, where Agesilaus met them on his march homewards, and completely defeated them. The Spartans however were dispirited by the defeat of a brigade of their heavy-armed infantry (the mora) by the light-armed targeteers of Iphicrates, an Athenian general; and harassed by the descents on the Laconian coasts by Conon and Pharnabazus, they consented to negotiate a peace in the eighth year of the war, under the mediation of the Persian king. The convention was known by the name of the peace of Antalcidas (B.C. 387) and was highly favourable to Sparta.

The first use Sparta made of the advantages she had gained was to make an attack upon the people of Mantinea, a truce of thirty years with that city having just expired. The city was taken, and the inhabitants distributed into four country towns, so as to be under the influence of the aristocratic party, which was powerful and supported by Sparta (B.C. 385).

In B.C. 382 Sparta sent forces to aid the cities of Acanthus and Apollonia in Chalcidice against Olynthus, the ally of Thebes and Athens. One division of the forces, commanded by Phœbidæ, marched by Thebes, of which aided by the oligarchic party in the city, they seized the Cadmeia, or citadel, and thus made Thebes entirely dependent on Sparta. The war against Olynthus lasted four years, and ended in the capture of the city, B.C. 379.

The Spartans were now at their highest point of power. Olynthus was overthrown, Bœotia was dependent, Corinth friendly, Argos reduced, and Athens without allies. But a change soon came upon them. The Cadmeia was soon recovered by a band of exiles of the democratical party, and the Lacedæmonians were entirely expelled from the city; and shortly afterwards, Athens allied herself with Thebes against Sparta (B.C. 379). Hostilities were carried on for six or seven years, during which Sparta greatly distressed Thebes by ravaging and plundering its territory, and the Athenians were victorious at sea under Chabrias, off Naxos (B.C. 376). Athens soon after however concluded a separate treaty with Sparta (B.C. 374), which, though soon broken on account of the restoration of the Zakynthian exiles to their country by the Athenian admiral, was re-established, B.C. 371, and Thebes and Sparta now met single-handed. A Spartan army, then in Phocis, under Cleombrotus, was ordered to invade Bœotia. The Spartans met the Theban forces, commanded by Pelopidas and Epaminondas, on the plain of Leuctra, and were utterly defeated in a regular pitched battle, by inferior numbers, a circumstance unparalleled in the previous history of Sparta (B.C. 371). The battle was most decisive, and from it we may date the decline of the Spartan power. The people of Mantinea again assembled in one fortified city, which they called Megalopolis, and established a democratic government. The Thebans invaded Laconia under Epaminondas, and advanced into the immediate neighbourhood of the unwall'd capital, burning and pillaging. For the first time, the women of Sparta saw fires kindled by an enemy; and but for the vigilance and energy of Agesilaus, the city would have been taken. The whole plain of the Eurotas, as far as the sea-coast, was devastated. The Theban general collected together the expatriated Messenians, and restored them to their fatherland, thus establishing a permanent enemy close to Sparta (B.C. 367). In his last expedition into the Peloponnesus, Epaminondas nearly surprised and took Sparta in the absence of Agesilaus. He then resolved on a general engagement, and met the Spartans and their allies, amongst whom were the Athenians,

at Mantinea. His army was victorious, but he himself was slain. (B.C. 362.)

From this time Sparta ceased to be one of the leading states of Greece. Another power soon assumed the control in Grecian affairs, and when the Spartans attempted to enforce their claim to Messenia, Philip of Macedonia opposed their pretensions, and supported the independence of that country. After the battle of Chæroneia (B.C. 338), he invaded Laconia, and, according to Polybius (ix. 28), obliged her to surrender several small districts to the Argives, Arcadians, and Messenians. In the reign of Alexander, and while he was engaged in his eastern conquests, the Spartans made an attempt to overthrow the Macedonian empire, but they were defeated by Antipater, Alexander's lieutenant, and Agis, their king and commander, was slain, B.C. 331. In the contests which divided Greece after the death of Alexander, Demetrius, the son of Antigonus, was at war with the Spartans, and victorious over them in two engagements. Their next assailant was Pyrrhus (B.C. 288), against whom they made a gallant defence, assisted and animated by the women, whose spirit saved the city from capture. At that time it was walled. After that event we hear little of Sparta till the reigns of Agis III. and Cleomenes (B.C. 240). The institutions of Lycurgus, though existing in name, were then no longer of any force at Sparta. The regulation by which every head of a family was ensured the possession of a plot of land had been repealed. The number of Spartan citizens was considerably reduced, and a great accumulation of property was vested in the hands of a few people, many of whom were females. Agis and his friends wished to return to the original constitution, and the mode of life of former times. He perished in the attempt to carry out his views (B.C. 240), being murdered in prison at the instigation of the ephors, who had now monopolised almost all authority in the state. In B.C. 236, Cleomenes III. ascended the throne, and by stratagem and force succeeded in the attempt in which Agis had failed; a general division and re-distribution of property took place; some of the Periœci were adopted amongst the Spartan citizens; the old mode of education and the public meals were resumed; the ephors put to death, and their office abolished. Cleomenes also defeated the troops of the Achaean league in several engagements, and had conquered a great part of the Peloponnesus, when Aratus, the general of the Achæans, summoned Antigonus Doseon from Macedonia to oppose his progress. The Macedonians and Spartans met at Sellasia, on the borders of Laconia, and after a hard-fought and decisive battle Antigonus was victorious. He then marched to Sparta, and restored the former state of things. Cleomenes fled to Egypt.

Pausanias (iii. 6, 5) observes of him, that he was the last of the Agides, and shortly afterwards the sovereignty was sold by the ephors to Lycurgus, who was not even a Heracleid. He was succeeded by Machanidas, who is called a tyrant, and was conquered and slain by Philipœmen, the general of the Achæans. (Livy, xxviii. 5.) Nabia, the last of these usurpers, resisted the Achæans and Romans, who had now appeared in Greece. Nabia was assassinated, B.C. 192, and the Spartans were compelled soon after to join the Achaean league. After the capture of Corinth (B.C. 146) all Greece was reduced to a Roman province, but the inhabitants of Laconia enjoyed more freedom than the other states, being treated not so much like subjects as allies. The colonies of Sparta were but few; the principal were the island of Calliste or Thera, Cnidus, and Tarentum.

SPEEN. [BERKSHIRE.]

SPENCER GULF. [SOUTH AUSTRALIA.]

SPERLUNGA. [LAVORO, TERRA DL.]

SPEYER. [DORSETSHIRE.]

SPEY, RIVER. [ELGINSHIRE.]

SPEYER, or SPIRES, an ancient city in the kingdom of Bavaria, is situated in 49° 20' N. lat., 9° 35' E. long., at the mouth of the Speyerbach, on the left bank of the Rhine, in a pleasant and fertile country, 43 miles by railway S. from Mayence, and has about 9000 inhabitants. It is surrounded with walls and ditches, and has five gates. Of the churches 15 are Roman Catholic and 2 Lutheran. The most remarkable is the venerable cathedral, which was founded by the emperor Conrad in 1030, and completed by Henry IV. in 1061. It was very richly adorned, and contained the mortal remains of eight emperors, three empresses, and two imperial princesses; but their marble sepulchres, their statues, and silver coffins were desecrated and plundered by the French in 1689, and their bones scattered by order of Louvois. Some of the sepulchres have been restored. The diet of the German empire was frequently held at Speyer. In the diet of 1529, a protest made by the Reformers against certain proceedings of the emperors procured them the name of Protestants. The city has a gymnasium, a lyceum, an old town-hall, an hospital, an orphan-house, a botanic-garden, and a collection of antiquities. The principal manufactures are—snuff, sugar of lead, and wax; there are likewise some vinegar-works, cattle- and corn-markets, and a good transit trade in wine, corn, timber, &c., on the Rhine.

SPEZZIA. [GENOA.]

SPHACTERIA. [NAVARINO.]

SPIELBURG. [BRÜNN.]

SPILSBY, Lincolnshire, a market-town, and the seat of a Poor-Law Union, in the parish of Spilsby, is situated in 53° 10' N. lat., 0° 5' E. long., distant 30 miles E. by S. from Lincoln, and 129 miles N. by E.

from London. The population of the parish of Spilsby in 1851 was 1461. The living is a vicarage, in the archdeaconry and diocese of Lincoln. Spilsby Poor-Law Union contains 66 parishes and townships, with an area of 140,269 acres, and a population in 1851 of 28,937.

The town of Spilsby is neat, clean, and healthy. The town-hall is a plain brick-building on arches. The market-cross is a plain octagonal shaft, rising from a quadrangular base, and terminating in a vane. There is a court-house and house of correction. The parish church is a large edifice, of irregular architecture. The Wesleyan Methodists and Independents have places of worship. The Grammar school, founded by Edward VI., which is free to 30 boys, had 52 scholars in 1854. There are National schools, libraries, a young men's literary institution, and a savings bank. The market is held on Monday, and there are three fairs in the year. A county court is held.

SPINALONGA. [CANDIA.]

SPIRES. [SPYER.]

SPITZBERGEN, a group of islands situated nearer to the arctic pole than any other country on the globe. It lies between 76° 30' and 80° 30' N. lat., 9° and 22° E. long., between the Greenland Sea on the west, and Spitzbergen Sea, which separates it from Nova Zembla, on the east.

The group consists of four large and numerous small islands. The largest island, Spitzbergen proper, extends from 76° 30' to 80° N. lat.; a peninsula connected with it on the eastern side, is called New Friesland, or East Spitzbergen. South of New Friesland is *Edges Island*, which is separated from New Friesland by a strait called Tymens Fiord, or Freeman's Inlet. This strait is somewhat more than 50 miles long, and less than 10 miles wide. Along the southern coast of Edges Island numerous small islands cover the sea to a distance of 15 miles from the shores, and this group goes by the name of the *Thousand Islands*. To the east of New Friesland lies North-East Land, which extends from 79° 10' to 80° 10' N. lat., and is divided from the larger island by the Henlopen, or *Waygats Strait*, which is about 70 miles long, and varies in breadth from 4 to 11 miles. A considerable number of smaller islands are dispersed over the sea which surrounds North-East Land on the north and east, in Henlopen Strait, and round the north-western coast of Spitzbergen. At the distance of 12 to 15 miles from the western coast of Spitzbergen is *Charles Island*, or *Forland*, which is about 40 miles long. A long bay, called *Weide Jans Water*, with numerous inlets, runs north-north-east between Spitzbergen Proper and Spitzbergen East and Edges Island, to the isthmus that connects the two former. To the north of the isthmus is *Weide Bay*, which runs south-west.

The west coast of Spitzbergen is mountainous. The mountains generally rise within three miles of the sea, but in several places they commence at the coast. Between the shore and the mountains is a low level tract. It is commonly somewhat above the level of high-water mark, but in some places it is below it, and only prevented from being covered by the sea by a natural bank of shingle of the height of 10 or 15 feet. The mountains, which fill the interior of the island, rise to between 8000 and 4000 feet above the sea. Many branches of them run westward, and come close to the shore. Where these mountain ridges are at no great distance apart from one another, the intervening valleys, being of moderate extent, are filled with glaciers, which in several places constitute the very shores of the sea, forming a high perpendicular wall of ice from 100 to 400 feet high. The inland valleys, in all seasons, present a smooth and continuous bed of snow.

The southern extremity of Spitzbergen is called *Point Look-Out*, or *South Cape*; a low flat, about 40 square miles in surface, constitutes the termination of the coast. On the isthmus which joins this flat tract to the main body rises a mountain chain, which runs north, and soon attains a considerable elevation, as a large glacier, or iceberg, lies here along the sea-shore. On the west coast, or 77° N. lat., is a wide bay, called *Horn Sound*, near the southern shores of which lies *Mount Horn*, or *Hedge-Hog Mount*, which has several summits, the highest of which is 4395 feet. *Horn Sound* has tolerable anchorage. A little to the northward of *Horn Sound* is a glacier of immense extent, occupying 11 miles of the sea-coast, and 400 feet thick. *Bell Sound*, another wide bay, occurs between 77° 35' and 77° 40' N. lat., and within it are several anchoring-places. North of 78° is *Ice Sound*, where good anchorage is found at *Green Harbour*. That portion of Spitzbergen which is south of 78° 50' N. lat. consists of groups of isolated mountains, partly disposed in chains, having conical, pyramidal, or ridged summits, sometimes round backed, frequently terminating in points, and occasionally in acute peaks not unlike spires.

To the north of 78° 50' N. lat. are *English Bay*, *King's Bay*, and *Cross Bay*, in which there is good anchorage. Near the head of *King's Bay* there are three piles of rocks of a regular form, called the *Three Crowns*. They rest on the top of a mountain, and each commences with a square table or horizontal stratum of rock, on the top of which is another of similar form and height, but of smaller area; this is continued by a third and fourth, and so on, each succeeding stratum being less than that immediately below it, until it forms a pyramid of steps, almost as regular as if it were worked by art. North of *Cross Bay* the mountains are more disposed in chains than farther south. An inferior chain of hills, six or nine miles from the coast, runs

parallel to the shore, and from this chain several lateral ridges project into the sea. Between these lateral ridges are the *Seven Icebergs*, each of which is, on an average, about a mile in length, and about 200 feet high near the sea. The higher mountains terminate near 79° 35' N. lat., and the lower coast, which extends hence to the north, is indented by many small inlets, surrounded by numerous small islands of considerable height. In this part there are several very good harbours and anchorages, both in the inlets and between the islands, as *Magdalena Bay*, the excellent harbours of *Smeerenberg*, *Fair Haven*, *Vogel Sang*, the *Norways*, *Love Bay*, *Hecla Cove*, in the *Bay of Treurenburg*, on *Waygats Strait*, and others.

The centre of *Charles Island*, which lies opposite the western coast of Spitzbergen, is occupied by a mountain chain about 30 miles in length, rising on the west side from the sea, and on the east from a narrow strip of level ground only a few feet above the sea-level. The central part of this chain is perhaps the highest land near the sea. It rises from the water's edge by a continual ascent, at an angle at first of about 30 degrees, and increasing to 45 degrees and more, until it terminates in five distinct summits, of which the highest is 4500 feet and the lowest 4000 feet above the sea-level.

Along the north shores of Spitzbergen and North-East Land the country is neither so elevated nor are the hills so sharp-pointed as on the west coast. Some of the smaller islands, which occur along these shores, and considerable tracts of the mainland, are comparatively level. They also contain much more earth and clay, and the vegetation is rather more vigorous. Along the east coast of North-East Land there is a continuous line of glaciers extending to the shore. The *Seven Islands*, *Walden Island*, and *Ross Island* (the northernmost land known) lie to the north of it.

Extending to within 10 degrees of the pole, the climate of Spitzbergen is intensely cold. The mean temperature of the three warmest months on the western coast does not exceed 34° 50', and even at that season this part of the island is occasionally subject to a cold of 3, 4, and more degrees below the freezing-point. In the northern parts the longest day is four months; but from the 22nd of October to the 22nd of February the sun does not rise above the horizon. This long night however is not quite dark, for the sun, even during its greatest south declination, approaches within 18½ degrees of the horizon, and causes a faint twilight for about one-fourth part of every twenty-four hours. If we add to this the aurora-borealis, which sometimes exhibits a brilliancy approaching to a blaze of fire, the stars, which shine with unusual brightness, and the moon, which in her north declination appears for twelve or fourteen days together without setting, we may conceive that during the long night there is generally sufficient light to enable a person to go abroad. The winter sets in at the end of September. In the middle of October the frost is sometimes very intense, and it increases rapidly in November. But throughout the whole winter, when strong south winds occur, they are generally accompanied with mild weather, and sometimes with thaw. Storms at this season are frequent. A great quantity of snow falls every winter, but it accumulates principally in the sheltered gullies, lying on the level ground seldom more than five feet deep. Captain Parry however found that the climate of the northern coast is remarkably temperate in summer for the latitude, and very agreeable, but only so near the land, that of the adjacent sea being of a totally different character, owing to the almost continual fogs. In May and June the sea was almost entirely covered with large fields or floes of ice, but in August it was hardly possible to discover a single piece of ice, so great was the change which had been produced by the continual presence of the sun. The Spitzbergen sea is said to be much more open than any other part of the Arctic sea in so high a latitude.

The number of species of plants which have been found in Spitzbergen hardly exceeds forty, but vegetation is very rapid. Most of the plants spring up, flower, and produce seed in the course of a month or six weeks. They are of a dwarf size, and the only plant which partakes of the nature of a tree is a *Salix herbacea*, which grows to the height of three or four inches. The islands do not produce vegetables suitable or sufficient for the nourishment of a single human being; yet Russian whalers who frequent the east coast have, in several instances, resided for years upon Spitzbergen; and one, M. Sharostin, is named in the 'London Geographical Journal for 1858,' who passed thirty-nine winters on the island, and resided there fifteen years without having once left the island. In some parts of *King's Bay* a very beautiful marble and coal of good quality are abundant.

The quadrupeds are—polar foxes, polar bears, and rein-deer. The adjacent sea abounds in many species of whales and some other large fish. There are also many mooses, or walruses, and abundance of seals. Sea-fowl are exceedingly numerous.

Spitzbergen was discovered in 1596 by Barentz, Hemskeke, and Ryp, in their endeavour to effect a north-east passage to the Indies. It was named by them Spitzbergen (*Pointed Mountains*) from the numerous peaks observed on the coast.

SPLUGEN. [ALFA.]

SPOLETO, a province of the States of the Church, consists of the valley of the Nera, one of the principal affluents of the Tiber, of the valley of the Maroggia, another affluent of the Tiber, and of several ridges of highlands between them. This country is part of

the ancient Umbria. It is bounded N. by the provinces of Perugia and Camerino; E. by the province of Ascoli and the kingdom of Naples; S. by the province of Rieti; and W. by that of Viterbo, from which it is divided for the most part by the Tiber. The area is 1180 square miles, and the population by the census of 1850 was 123,765. The Central Apennines cover the eastern part of the province, in which are Monte della Sibilla (7300 feet) and Monte Vittore (8130 feet), the two highest summits in the States of the Church. Ramifications from the main chain stretch over other parts of the surface, rendering the province a very hilly country. A part of the province extends to the eastern slope of the Apennines, and is drained by the Tronto. The rest of the surface belongs to the basin of the Tiber. The Maroggia flows northward past Spoleto, and joins the Topino below Foligno, on its way to meet the Tiber. The Nera flows south past Terni, and being joined by the Corno and the Velino, also enters the Tiber. The Nera and the Maroggia are separated by the mountains of Somma, a ridge which is crossed between Spoleto and Terni. The most fertile part of the country is the valley of Spoleto, traversed by the Maroggia and yielding good crops of maize; wheat, pulse, melons, vines, almonds, chestnuts, and olives also flourish in the valleys. Horned cattle are numerous, and much cheese is made. Bees and silkworms are reared. The chief minerals are limestone, marble, gypsum, and potters' clay.

The province of Spoleto proper is divided into the three districts of Spoleto, Norcia, and Terni. *Spoleto* (ancient *Spoletum*), the head town of the province, is situated on a hill above the Maroggia, on the high road from Rome to Ancona, and has about 8000 inhabitants. An aqueduct, which served also as a bridge, crosses the Maroggia; it is a work of the Longobard times, but is now in a ruinous state. Spoleto has a handsome cathedral, adorned with frescoes by Filippo Lippi. Several other churches, the town-house, and the palace of the family Ancajani, are also worthy of notice. The castle of Spoleto contains some remains of Cyclopean walls. There are also remains of a Roman theatre, of several temples, and other antiquities. Spoleto is a bishop's see, and has a college and manufactories of hats and woollens. It carries on a considerable trade in corn, oil, wine, and truffles, which are found in the neighbourhood. Spoletum, then a Latin colony of Rome, was attacked by Hannibal after the battle of Trasimenus, but the inhabitants repulsed his attack, and thus checked his advance towards Rome. (Livy, xxii. 9.) An inscription above the gate called the Gate of Hannibal records the event. Half-way between Spoleto and Foligno are the sources of the Clitumnus, a small limpid feeder of the Maroggia. The fine large-horned cattle which fed on the banks of the Clitumnus were preferred by the ancient Romans for sacrifice, and also for the ceremony of their triumphs. (Virgil, 'Georg.' ii. 146.)

The other towns of the province are:—*Terni*, the ancient *Interamna*, built near the confluence of the Velino with the Nera, a bishop's see, with an old cathedral, the remains of an amphitheatre, two ancient temples and thermae, and about 6000 inhabitants. About three miles above Terni is the celebrated cascade of the Velino (sometimes called the 'Falls of Terni'), which is described in the article Rieti (vol. iii., cols. 303, 304). *Narni*, situated on a lofty precipitous hill on the left bank of the Nar, about eight miles above its junction with the Tiber, is the ancient *Narnia*. Before the conquest of the town by M. Fulvius, B.C. 299, it was called *Nequinum*, and it was an important city of Umbria. The Romans colonised it, and changed the name to Narnia, from its position on the Nar. Under the republic and the empire Narnia was a flourishing municipal town, and its strong position commanding the Flaminian Way, made it an important military post. The bridge constructed by Augustus, by which the Flaminian Way was carried across the ravine in which the Nar flows, was one of the most magnificent structures of the kind. It consisted of three arches, and the whole was built of massive blocks of white marble. The piers and one arch still remain. Narni at an early period (A.D. 360) became, and still is, the seat of a bishop. The principal buildings are—the castle, a convent crowned with towers, and the cathedral, which dates from the 13th century, and is dedicated to St. Giovenale, the first bishop of the see. The emperor Nerva and Pope John XVIII. were natives of Narni. Population, 3300. *Amelia*, a small town of 2000 inhabitants and a bishop's see, situated on a hill not far from the left bank of the Tiber, and above the confluence of the Nera, is noted for its raisins and its prunes. It occupies the site of the ancient *Ameria*, which is said to have been built by the Umbri several centuries before the foundation of Rome, and was afterwards in possession of the Etruscans. (Pliny, 'Hist. Nat.', iii. 19.) A considerable portion of the ancient polygonal walls still remain. *Bevagna*, the ancient *Mevania*, likewise a town of the Umbri, near the confluence of the Maroggia with the Topino, has about 2000 inhabitants. *Norcia*, the ancient *Narnia*, at the northern extremity of the province, and at the foot of Monte della Sibilla, is a bishop's see, and has 3000 inhabitants. A great number of swine are reared in the neighbourhood. The Corno, an affluent of the Nera, flows through a deep glen near Norcia.

SPREE, RIVER. [BERLIN; BRANDENBURG.]

SPRINGFIELD. [ILLINOIS; MASSACHUSETTS; OHIO.]

SPROWSTON. [NORFOLK.]

SQUILLACE. [CALABRIA.]

STACKPOLE. [PEMBROKESHIRE.]

STADT, a fortified town in Hanover, the capital of the province of

Stade, is situated in 55° 36' N. lat., 9° 24' E. long., about 22 miles W. from Hamburg, in a marshy country on the banks of the Schwinge, a navigable stream which falls into the Elbe about three miles below the town. Among the public buildings are three churches, a town-hall, a gymnasium, an orphan asylum, and a poorhouse. The town, with the suburbs, contains about 6000 inhabitants, who have manufactures of flannel, worsted stockings, hats, and lace. There are breweries and brandy distilleries, a cannon foundry, and a rope-walk. The transit trade is of some importance. The exports are fat oxen, wooden wares, and stockings. Some vessels go every year to the Greenland whale-fishery, and also to the seal and herring fishery.

At the mouth of the Schwinge is the castle of Brunshausen, off which an armed vessel is constantly stationed, for the purpose of collecting the duties levied by the Hanoverian government on all vessels passing up or down the Elbe. Since the completion of the railroad and the commercial harbour at Harburg, the Hanoverian government has reduced the toll on ships bound for this port, but still maintains the higher dues on vessels making for Hamburg.

STAFFA, a small uninhabited basaltic island on the western side of Scotland, about 8 miles W. from Mull, in 56° 28' N. lat., 6° 20' W. long.

The island is composed of amorphous and pillared basalt: the pillars have in many parts of the rugged coast yielded to the action of the sea, and permitted the formation of caves, some of them uncommonly picturesque, which are generally arched over by what seems to be amorphous trap-rock, but really is often prismatic in an irregular manner. The island has a very broken and unequal surface, affording poor pasture.

Skirting the coast in a boat, the caves and ranges of pillars, erect, or curved beneath a huge entablature of rock, and the regular pavement formed by the angular sections of the pillars, astonish the spectator. Fingal's Cave, the largest and most attractive of the caves, may be entered on foot on the south side, along a rugged pavement of pillar-tops. Its roof is formed partly of pillar-sections, and partly of the already-mentioned amorphous trap; the sides are straight vertical prisms of basalt, washed at their base by a deep and often tumultuous sea. Its length from the rock outside is 371 feet, from the pitch of the arch 250 feet; the breadth at the mouth is 54 feet, at the farther end 20 feet; the height of the arch at the mouth is 118 feet, at the inner end 70 feet; the pillars outside vary from 40 to 55 feet in height. The Boat Cave, the Cormorant Cave, and Fingal's Cave, may, in ordinary weather, be explored in a boat, and a landing may be effected on Buachailé (Boo-cha-la), the 'Herdaman's Isle,' which is remarkable for its arched columns of basalt.

The basaltic mass of Staffa may be regarded in three parts: a sub-jacent amorphous and lava-like mass, 11, 17, or 20 feet exposed, on which (especially beyond the north-west side of Fingal's Cave) the pillars rest, and these are covered by a seemingly amorphous but really irregularly prismatic entablature, from 30 to 66 feet in thickness. The tops of the pillars are usually in a nearly regular plane declining to the south-east, and their bases are also in a surface nearly parallel. The section of the pillars is rarely triangular or quadrangular, generally pentagonal or hexagonal. Some of them are two feet in diameter, others as small as one foot, nine inches, or even six inches. They are less regularly jointed than those of the Giants' Causeway, and usually the joint surfaces are concave in the lower stone. Zeolitic minerals occur sparingly in the basalt and in the interstices of the pillars. Steamers make excursions from Oban to Staffa during summer.

STAFFORD, the county town of Staffordshire, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, is situated on the left bank of the river Sow, in 52° 48' N. lat., 2° 7' W. long., distant 141 miles N.W. by W. from London by road, and 132½ miles by the London and North-Western railway via Trent Valley. The population of the borough of Stafford in 1851 was 11,829. The borough is governed by 6 aldermen and 18 councillors, of whom one is mayor, and returns two members to the Imperial Parliament. The living is a rectory in the archdeaconry of Stafford and diocese of Lichfield. Stafford Poor-Law Union contains 20 parishes and townships, with an area of 49,685 acres, and a population in 1851 of 22,632.

According to the 'Saxon Chronicle,' Ethelfleda, 'lady of Mercia,' built a fort at this place in the year 913 to keep the Danes of the neighbourhood in check. There was a castle near it in the middle ages. In the civil war of Charles I. the Royalists, after the capture of Lichfield Close by the Parliamentarians, retired to Stafford; and an indecisive battle was fought at Hopton Heath, two or three miles from the town, March 19th, 1643. The town was subsequently taken by the Parliamentarians; at a later period the castle was also taken. The castle, which is a mile and a half S.W. from the town, in Castle Church parish, has been of late years rebuilt. The town is well supplied with water, and the streets are lighted with gas and paved. The houses are in general well built, mostly of brick, and roofed with slate. Over the river Sow is a neat bridge. The public buildings are the county hall, a spacious stone building in the market-square; the county jail, and house of correction; the county infirmary; and the county lunatic asylum, a capacious and well-arranged building. There are two parochial churches: St. Mary's, formerly collegiate, is a large

and fine cruciform building, chiefly of early English date, with an octagonal tower at the intersection. The transept is 100 feet long and 25 feet broad. In 1847 this church was repaired and restored at a cost of about 16,000*l.* The church of St. Chad has a Norman chancel, with an east window of modern date, a modern nave, and a tower between the nave and chancel, of perpendicular character. In the town is a new district church. The Wesleyan Methodists, Baptists, Independents, Quakers, and Roman Catholics have places of worship. King Edward VI.'s Free Grammar school, founded in 1556, is free to all; its income for all purposes amounts to 312*l.* a year; it had 27 scholars in 1854. There are also National, British, and Ragged schools, a savings bank, a library, and a mechanics institute.

Stafford has sent members to Parliament since the 23rd Edward I. The assizes, quarter sessions, and a county court are held in the town. The manufacture of shoes, chiefly for the London market or for exportation, employs a considerable number of men. Cutlery is manufactured to a small extent. Tanning is carried on. The market is on Saturday; and there are five yearly fairs, chiefly for horses and cattle.

STAFFORDSHIRE, a midland county of England, bounded N.E. by Derbyshire, E. for a very short distance by Leicestershire, S.E. by Warwickshire, S. by Worcestershire, S.W. and W. by Shropshire, and N.W. by Cheshire. It lies between 52° 23' and 53° 14' N. lat., 1° 36' and 2° 27' W. long. The form of the county is irregular: its greatest length is from north to south, from Ax-edge Common, at the junction of Cheshire, Derbyshire, and Staffordshire, to the neighbourhood of Bewdley (Worcestershire), 60 miles; the greatest breadth, at right angles to the length, is from the junction of the Dove with the Trent, below Burton, to the neighbourhood of Market-Drayton (Shropshire), 38 miles. The area of the county is 1138 square miles, or 728,468 statute acres. The population in 1841 was 510,206; in 1851 it was 608,599.

Surface, Geology, and Mineralogy.—The northern is the highest part of the county. It consists chiefly of wild moorlands, formed by long ridges, extending from north-west to south-east, separated from each other by deep dells, or by valleys watered by the tributaries of the Trent, and gradually subsiding towards the banks of that river. The principal summits are—Cloud-end, Biddulph Moor, Mow Cop (1091 feet above the level of the sea), Bunster Hill, High Roches, Moreedge, Ecton Hill, Wever Hill (1154 feet), and Swinecote, or Swincoo Hill, in the northern part of the county. On the eastern side, between Abbots Bromley and Burton-upon-Trent, are the high grounds of Needwood Forest; and south of the Trent, toward the centre of the county, between Stafford and Lichfield, are the high grounds of Cannock Chase, one part of which (Castle Ring) is 715 feet high. The western side of the county is occupied by a tract of high ground, which separates the waters that flow westward by the Severn into the Atlantic, from those which flow eastward by the Trent and the Humber into the North Sea.

Nearly the whole of the county is included in the new red-sandstone district of central England. The northern part is indeed beyond the limit of this formation; and there are some insulated districts occupied by the coal-measures or other subrecent formations, which rise through the red-sandstone. Gypsum is quarried in Needwood Forest and in the adjacent part of the valley of the Dove. The pure white gypsum, or that slightly streaked with red, yields plaster of Paris, which is much used in the potteries for moulds; selected blocks are turned, or otherwise converted into ornamental articles. Limestone is quarried near Newcastle, in the pottery district. Brine-springs abound near the Trent, particularly at Weston, near Stafford, where salt-works have been established.

The Dudley, or South Staffordshire, coal-field extends from Crannock Chase to the Worcestershire border near Stourbridge, about 20 miles in length from north by east to south by west; and from King's Swinford to Soho, near Birmingham, 10 miles in breadth from west to east. The hills south-east of Dudley consist of one mass of basalt and amygdaloid, round which the coal-measures do not crop out, as round the limestone, but preserve their usual level in approaching it. The basalt is very pure, and is locally termed Rowley Rag. It is quarried for mending the roads and paving the streets of Birmingham. Trap rock (greenstone) is found in that part of the coal-field which is near Walsall; it is apparently part of a thick vertical greenstone dyke, with a wedge-shaped prolongation penetrating the adjacent carboniferous strata. The coal of the southern part of the Dudley field is distinguished by the occurrence of an extensive bed called the Main-coal, 30 feet thick, but this dips to the south, and crops out at Bilston. On the east side of the coal-field, near Walsall, the transition limestone again rises, and the carboniferous beds crop out against it. At Beaudesert, at the northern extremity of the field, cannel coal is obtained.

In the northern part of the county another coal-field (the Pottery coal-field) occurs, of triangular form, extending from Lane-End in the Potteries to Congleton in Cheshire. Its greatest breadth, which is in the southern part, forming the base of the triangle, is 8 or 10 miles. There are 32 beds of coal in this field, generally from 3 to 10 feet thick. The coal-works of the county are very numerous and important; in the south they supply the iron and other hardware manufactures of Birmingham, Dudley, Wolverhampton, &c.; and furnish

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fuel to the neighbouring counties to a considerable distance, and in the north they supply the fuel to the Pottery district. Ironstone is abundant in the Dudley coal-field.

The high moorlands of the northern part of the county consist partly of millstone-grit and shale; partly of carboniferous or mountain limestone. The millstone grit occupies the central and western portion, cropping out from beneath the Pottery and South Lancashire coal-fields, and overspreading the intervening country. The mountain limestone district comprehends the eastern moorlands, and extends across the upper valley of the Dove into Derbyshire. There are several lead-mines and copper-mines in this district.

Hydrography, Communications, &c.—The county belongs almost entirely to the basin of the Humber. The Trent, the most important tributary of that estuary, rises from three springs on the northern border of the county, near Knypersley Hall; and runs by Trentham, the seat of the Duke of Sutherland, past Stone and Rugeley to Burton, where it becomes navigable; and 2 or 3 miles below Burton quits the county altogether. [TRENT.]

The principal tributaries of the Trent are the Lymc from Newcastle-under-Lyme, the Sow, the Blyth, the Tame, the Mease, and the Dove. The Lymc joins the Trent on the right bank, not far from its source. The Mease during a part of its course separates the county from Derbyshire. The Sow rises about 6 miles N.W. from Eccleshall, near the western border of the county, and after a course of a few miles is joined on the left bank by the Mease Brook, which rises near the Sow, and has a course nearly parallel to it, but of rather greater length. The Sow flows through the town of Stafford to the junction of the Penk. The Penk rises near Wolverhampton, and flows 20 miles northward through Penkridge into the Sow, which it joins on the right bank. Four miles below the junction of the Penk, the Sow joins the Trent on the right bank. Its whole course is about 19 or 20 miles; it is not navigable. The Blyth rises about 4 miles E. from Hanley in the Potteries, and flows south-south-east 23 miles into the Trent, which it joins on the left bank, 5 miles below Rugeley. The Tame rises in Essington Wood, 4 miles N.W. from Walsall, and flows 15 miles south-east to Aston, a suburb of Birmingham, where it receives on the right bank the Rea brook, which flows through Birmingham. From the junction of the Rea the Tame flows eastward, receiving on the right bank the united streams of the Cole and the Blyth, each about 16 miles long; it then turns northward, and receives at Tamworth the Anker on the right bank, after which it flows into the Trent; its whole course is about 42 miles, partly in Warwickshire, but chiefly in Staffordshire.

The Dove rises near the northern extremity of the county, and flows south-south-east by or near Longnor, Ashbourne (Derbyshire), and Uttoxeter, into the Trent below Burton, dividing through nearly its whole course the counties of Derby and Stafford: its length is nearly 45 miles. It is not navigable. The upper part of its course is through the beautiful scenery of Dovedale on the border of the Peak. The *Manifold*, about 9 miles from its source, sinks into the ground, and after a subterraneous course of 4 miles rises again near Ilam, and shortly after joins the Dove; its tributary, the Hamps, sinks in like manner, and the junction of the two streams takes place underground. The *Churnet* rises on Biddulph Moor, 5 miles N.W. of Leek, and soon after expands into a sheet of water, or lake, from the lower end of which it continues its course by Leek, Alveton (or Alton), and Rochester, a little way below which it joins the Dove. The western border of the county belongs to the basin of the Severn, which flows for about 2 miles across the south-western corner of the county, near Over Arley. About 14 miles of the course of the *Stour* (which rises near Hales Owen (Shropshire), and joins the Severn at Stourport) are on or within the southern border of the county. The rivers of Staffordshire abound with fish, such as pike, trout, grayling, chub, perch, &c. Salmon are caught in the Severn, and occasionally in the Trent.

The canals of this county are numerous. The most important is the Trent and Mersey, or, as it is sometimes called, the Grand Trunk Canal. This canal, commencing in the Trent at the junction of the Derwent in Derbyshire, enters the county near the junction of the Trent and Dove, and follows the valley of the Trent to Stoke in the Potteries, from whence it continues its course north-west to the Mersey, at Runcorn Gap. About 50 miles of its course belong to Staffordshire. The Birmingham Canal and the Birmingham and Liverpool Junction Canal form another important line, entering the county near Birmingham, and passing through the iron and coal district, by Dudley and Wolverhampton, and then running north-west into Shropshire. The length of this line is about 32 miles. The Staffordshire and Worcestershire Canal commences in the Severn at Stourport, and enters Staffordshire near the village of Whittington, follows the valleys of the Stour and the Smestow, passes near Wolverhampton, and joins the Trent and Mersey canals near the junction of the Sow and the Trent. Its length in this county is nearly 40 miles. The Stourbridge Canal commences in the above canal at Stewponney, and extends to the town of Stourport. The Dudley Canal commences in the Birmingham and Worcester Canal (which, though not in this county, is connected with the Birmingham Canal noticed above), and proceeds to Dudley. A part only of the line is in Staffordshire. A cut unites it with the Stourbridge Canal, and consequently with the

Staffordshire and Worcestershire Canal. The Coventry Canal, from its commencement in the Trent and Mersey Canal at Fradley Heath to Fazeley near Tamworth, 11 miles, belongs to this county. At Fazeley it unites with the Birmingham and Fazeley Canal, which forms a part of the Birmingham Canal Navigations, and of which only a small part is in Staffordshire. In the northern part of the county is the Caldon Canal, which is a branch of the Trent and Mersey Canal, extending from the main line at Hanley in the Potteries north-eastward to the neighbourhood of Leek, to which town there is a cut; and from thence south-eastward to Uttoxeter, in the valley of the Dove. The Newcastle-under-Lyme Canal is a short canal from the Trent and Mersey Canal at Stoke-upon-Trent to Newcastle-under-Lyme. There are several other short canals in the county.

The London and North-Western railway enters the county near Bilston, and runs throughout in a north-north-west direction, quitting it a few miles south of Crewe. The Shrewsbury and Birmingham and one or two other short connecting lines pass from it in its progress through the county. The Trent Valley branch of the North-Western railway enters the county near Tamworth, and passes in a north-west direction to Stafford. It is continued from Colwich through the Pottery district to Congleton, by the North Staffordshire line. There are also several branch railways.

The principal coach-road in the county is the parliamentary road from London to Holyhead, which enters Staffordshire at Soho, near Birmingham, and runs through Wednesbury, Bilston, and Wolverhampton, a few miles beyond which it enters Shropshire. The Chester and Holyhead road enters the county at Tamworth, and runs by Lichfield, Stafford, Eccleshall, and Knighton, into Shropshire. The London and Liverpool road, branching from this at Wolsley Bridge, runs through Stone and Newcastle-under-Lyme into Cheshire. The road from London by Derby to Manchester crosses the northern part of the county through Leek. The road from Birmingham to Derby passes through Lichfield and Burton-upon-Trent. There are numerous minor roads.

Climate, Soil, Agriculture.—The air of this county is sharp in comparison with that of the counties situated to the south of it; while Staffordshire is more subject to continued rains, which make the crops later and the harvest more precarious. The average quantity of rain which falls in Staffordshire in the year is about 36 inches, while in the neighbourhood of London the average fall is only about 21 inches. The heavy soils consequently require thorough draining. The middle and southern portions of the county are comparatively flat, and have only gently undulating hills. This portion also contains the most fertile lands, and is in the best state of cultivation.

Of the entire area of the county about 150,000 acres are in roads, wastes, and woods. The remainder is productive either as arable land or pasture, the proportion of arable to pasture land being nearly as five to one. Along the banks of the rivers are rich and productive meadows, which are continually renovated by the depositions of fine mud in floods; but sometimes they are flooded at a time when the grass is fit for the scythe or already cut, in which cases much loss is sustained.

There is not much land in this county devoted to the grazing of cattle, or to extensive dairies, but many fine beasts are fattened in stalls on turnips, hay, and oil-cake, chiefly for the sake of the manure. The breed most esteemed is that of the short-horns. Of sheep, every breed is to be met with which is in any repute. The farm-horses in Staffordshire are active and strong, and in general well kept. The Staffordshire hog of the old breed is coarser than the Berkshire or Essex, but better pigs have been introduced.

Divisions, Towns, &c.—Staffordshire is divided into five hundreds, as follows:—Cuttleston or Cuddleston, central and west; Offlow or Offlow, east and south-east; Pyrehill or Pirehill, north-west and central; Seisdon, and Totmonslow, south, south-west, north, and north-east; with the city of Lichfield and the boroughs of Newcastle-under-Lyme and Stafford. It contains the county town and borough of STAFFORD; the city of LICHFIELD; the old boroughs of NEWCASTLE-UNDER-LYME, and TAMWORTH, and the new parliamentary boroughs of STOKES, WALSALL, and WOLVERHAMPTON; and the market-towns of Brierly Hill, BILSTON, BURSLEM (included in the borough of Stoke), BURTON-UPON-TRENT, CHEADLE, Eccleshall, Hanley (also included in Stoke), LEEK, LONGNOR, Longton, Rugeley, STONE, Tunstall (included in Stoke), UTTOXETER, and WEDNESBURY. The towns printed in small capitals are described under their respective titles; the others we notice here, with the decayed market-towns and principal villages; the population is that of 1851:—

Brierly Hill, population of the ecclesiastical district 8770, about 3 miles S.W. from Dudley, is a market-town, consisting chiefly of one long street, which is lighted with gas. The parochial chapel occupies an elevated site; there are chapels for Wesleyan and Primitive Methodists, Independents, and Baptists; National and Infant schools; a literary society, and a branch savings bank. The inhabitants are employed in coal-mines, iron-works, glass-works, brick-kilns, iron-rolling-mills, boiler-works, nail, chain, and spoke-making establishments, and malt-kilns. The market, which is important, is held on Saturday.

Eccleshall, population of the township 1427, about 7 miles N.W. by W. from Stafford, near the right bank of the river Sow. There is

here a residence of the Bishop of Lichfield. Eccleshall contains many well-built houses. In 1829, the chancel and north side of the church were rebuilt. The Independents have a chapel, and there are National schools. The market is held on Friday, and there are four cattle fairs in the year. Tanning, malting, and shoemaking are carried on.

Hanley, population of the town 25,369, is near the centre of the pottery district, about a mile from Stoke. It is the largest market-town in the district. The streets are wide, have a brick pavement for foot passengers on each side, and are lighted with gas. The market-place is large and surrounded by spacious shops. The market-hall is a convenient building. The church is a commodious brick building, with a tower 100 feet high. The Wesleyan and New Connexion Methodists, Independents, and Baptists have chapels, and there are National and British schools. There is a large paper-mill. The markets are on Wednesday and Saturday.

Longnor, population of the chapelry 561, about 10 miles N.E. from Leek, stands on the left bank of the river Manifold, near its source. The town possesses a neat stone chapel, with a lofty pinnacled tower; a chapel for Wesleyan Methodists; and two schools. The market is held on Tuesday, and there are eight fairs in the course of the year.

Longton, population 15,149, forms with Lane End one town, about 14 miles N. from Stafford. The town is irregularly laid out, but the more modern portions are built with some degree of uniformity. Gibraltar on the north and Dresden on the south are new towns or suburbs. The earthenware and china manufactures are the chief support of the place. Besides the parish church and St. John's chapel, there are chapels for Wesleyan and New Connexion Methodists, Independents, and other Dissenters, National schools, an athensium, a literary institution, libraries, and savings banks. Markets are held on Wednesday and Saturday, and fairs at Easter and Whitsuntide.

Rugeley, population 3054, about 8 miles N.W. by N. from Lichfield, near the north-eastern border of Cannock Chase, is irregularly laid out, but clean and neat. The town-hall is a good building. There are extensive gas-works. The church, a gothic edifice, was rebuilt in 1822. The tower and chancel of the old church still remain; the chancel is used for a school-room. There are chapels for Independents and Roman Catholics. The Grammar school, which is free to inhabitants of Rugeley and Brereton, has an income from endowment of 270*l.* a year, with a house; it had 30 scholars in 1854. There are also Endowed, National, Infant, and Roman Catholic schools, and a savings bank. There are iron-works in the town. Ropemaking, the manufacture of sheet-iron and tin-plate, the hat manufacture, and the making of agricultural implements employ some of the inhabitants. Tuesday is the market-day; four yearly fairs are held, one of which is a large horse-fair, and another a large horse, cattle, and sheep fair. Hagley Hall, the seat of the Hon. Robert Curzon, a fine old gothic mansion, stands in a spacious park near the town.

Tunstall, or *Tunstall Court*, population of the township 9566, about 4 miles N. from Newcastle-under-Lyme, is situated on elevated ground. There are here a market and court-house; a church; chapels for Wesleyan and Primitive Methodists; and National schools. The market is held on Saturday. Earthenware and blue tiles are manufactured; and there are corn-mills and chemical works.

The following places formerly had markets, but they have been discontinued:—*Belley*, population of the parish 882, about 7 miles W.N.W. from Newcastle-under-Lyme, is a well-built town, occupying a cheerful situation. The parish church is a neat structure, with a tower at the west end. The Wesleyan Methodists have a chapel, and there are National schools, partly endowed. In the vicinity are considerable market gardens. Fairs are held in April, July, and October. *Brewood*, population of the parish 8565, is about 8 miles N.N.W. from Wolverhampton, near the left bank of the river Penk. The parish church has a fine spire; there are chapels for Wesleyan Methodists, Independents, and Roman Catholics. The Grammar school, which is free to the inhabitants of Brewood, has an income of about 450*l.* a year. It had 61 scholars in 1852. There are National schools, a Roman Catholic Free school, and a savings bank. There was formerly a Benedictine nunnery at Brewood. *Cannock*, population 2099, about 9 miles S.S.E. from Stafford, gives name to Cannock Chase, which was formerly covered with oaks. Besides the parish church, a neat stone building of mixed styles, there are chapels for Wesleyan Methodists and Independents. There are also National schools. Edge-tools are manufactured. *Tutbury*, population of the parish 1798, about 10 miles E.S.E. from Uttoxeter, on the right bank of the Dove. Tutbury is described in Domesday-book, in which it is called Toteberie, as a borough with a market. The castle is also there mentioned. A Benedictine, or Clunian, monastery was founded here soon after the Conquest. Robert de Ferrars, earl of Derby, having joined the Earl of Leicester and the other insurgent barons in the war against Henry III., lost his castle of Tutbury, which was taken by Prince Edward; and, in consequence of his subsequent second rebellion, forfeited to the king, by whom it was bestowed on his son Edmund Crouchback. It was subsequently inherited by John of Gaunt, who rebuilt a great part of it, and lived here in great splendour. It was one of the places of confinement of Mary Queen of Scots. In the great civil war it was held by the Royalists, and was not taken till the spring of 1646, soon after which it was in great part demolished. The ruins of the castle are on the brow of the

hill on which the town stands, and are sufficient to show its former magnitude. The church, which is the nave of a much larger building, is a very interesting specimen of Norman ecclesiastical architecture. The Independents and Wesleyan and Primitive Methodists have chapels; and there are Free and Infant schools. Some cotton-spinning is carried on. Extensive glass-works give considerable employment. In 1831, about 100,000 small silver coins were found in the bed of the river Dove near Tutbury.

The following are some of the more important villages:—

Abbots Bromley, population 1563, about 13 miles E. by S. from Stafford, consists chiefly of one long straggling street, containing several neat houses. The parish church has been much modernised, but retains a Norman doorway. The Independents have a chapel, and there are National and Free schools. Three fairs are held annually for cattle. *Adridge*, population of the township 1178, about 4 miles N.E. from Walsall, has some well-built houses. The church, which has been recently repaired, has a good square tower. The Grammar school, founded in 1718, has an income from endowment of 130*l.* a year, and had 50 scholars in 1853, all free. There are also National and Free schools. *ALTONFIELD*. *Alton*, or *Alveton*, population of the township 1162, finely situated near the right bank of the Churnet, about 4 miles E. by S. from Cheadle, is a neat village, containing some good houses. The parish church, an ancient edifice of stone, was repaired and partly rebuilt in 1880. There are chapels for Wesleyan and Primitive Methodists, Independents, and Roman Catholics; also National schools. Alton Castle, a massive structure of gothic character, recently erected on the site of the former castle; St. John's Hospital; a mechanics institute; and an observatory, are among the objects requiring notice. Alton Towers, the magnificent seat of the Earl of Shrewsbury, about a mile from Alton, on the opposite side of the Churnet, has been considerably altered and added to during the last few years. A Roman Catholic chapel, monastery, and schools were erected under the direction of the late Mr. A. W. Pugin. *Amblecote*, population of the hamlet 1628, on the Worcestershire border, forms part of the parish of Old Swinford, the rest of which is in Worcestershire. Amblecote being in the iron and hardware district, its population is chiefly occupied in the various branches of the iron manufacture. *Aston*, population included in that of Stone parish, about 2 miles S.S.E. from Stone, on the right bank of the river Trent, has a neat district church, a Roman Catholic church, and a district school. Aston Hall is occupied by a community of the Roman Catholic Order of the Passionists, who also conduct a school for boys. *Audley*, population of the township 1080, about 5 miles N.W. from Newcastle-under-Lyme; it possesses an ancient church of decorated character, with a massive pinnacled tower; the chancel was rebuilt a few years back. The Wesleyan Methodists have a chapel and schools, and there are National schools. The Free Grammar school, founded in 1610, has an income from endowment of 190*l.* a year, and had 54 scholars in 1854. Coal and iron-stone are extensively worked in the neighbourhood. *Barlaston*, population 617, about 3 miles N. by W. from Stone, is situated on elevated ground, near the left bank of the river Trent, and on the line of the Grand Trunk Canal. The parish church is a modern brick edifice, except the tower, which is old, and constructed of stone. Near the church is Barlaston Hall, an elegant mansion. A school for boys and girls is supported by the Duke of Sutherland. *Barton-under-Needwood*, population of the township 1561, about 9 miles N.N.E. from Lichfield, has a chapel of ease, a stone edifice of Norman date, with a large square tower; chapels for Wesleyan and Primitive Methodists; and National and Free schools. *Biddulph*, population 2688, about 7 miles N. from Burslem, at the foot of the Mole Cop Hills, has an ancient parish church; a chapel of ease, in the early English style; chapels for Wesleyan and Primitive Methodists; and a Free school. In the vicinity are extensive collieries, quarries, a silk-mill, and a manufactory of spades and shovels. There are here the vestiges of a stone circle, called the Bridestones. *Blarwich*, population 4477, about 3 miles N.N.W. from Walsall, has a church, chapels for Wesleyan and Primitive Methodists, and Roman Catholics; and National schools. There are coal- and iron-mines, flour-mills, lime-works, and manufactures of awl-blades, bridle-bits, &c. *Darlaston*, population 10,590, about 2 miles S.W. from Walsall, has in its vicinity coal-pits and iron-mines, which, with stone-quarries and various branches of the hardware manufacture, employ a large proportion of the population. The parish church is a brick building of the 16th century. There are chapels for Wesleyan and Primitive Methodists and Independent, also National schools. A branch of the Birmingham Canal navigation passes near the village, and is carried over the Bescot Brook, at a height of 120 feet, by a handsome aqueduct bridge of two lofty arches. Over one part of the aqueduct is a viaduct for the Bentley-road. *Ditton*, population of the township 828, about 3 miles N.W. from Cheadle, has an ancient church, partly rebuilt in 1819, and a chapel for Wesleyan Methodists. The Free Grammar school, which has an income of about 260*l.* a year, had 84 scholars in 1854. *Drayton Bassett*, population 408, is about 9 miles S.E. from Lichfield. The parish church is a plain stone building with a square tower. There is a Free school. Drayton Manor, the seat of Sir Robert Peel, a mansion in the Elizabethan style, erected from designs by Sir Robert Smirke, is situated in an extensive and well-wooded park, about a mile north

from the village. *Ellastons*, population 1812, about 7 miles E. from Cheadle, has a handsome gothic church, situated on elevated ground, near the village; chapels for Wesleyan and Primitive Methodists, and National schools. *Etruria*, population 2306, is about 2 miles S.W. from Stoka. The church is a new stone building with a spire. The Wesleyan and New Connexion Methodists have chapels, and there are National and Infant schools. There are large gas-works, iron-works, and an extensive steam-engine factory. At Etruria is the celebrated porcelain manufactory founded by Josiah Wedgwood, who also built the village. *Fazeley*, population 1634, is situated on the river Tame, which is here crossed by a neat bridge. On the banks of the Fazeley Canal are extensive wharfs. Tape and oval laces are manufactured, and there is a mill for cotton spinning and doubling. The chapel of ease, a small neat building, was erected and endowed by the first Sir Robert Peel; the Wesleyan Methodists have a chapel, and there are National and Infant schools. Monthly fairs for sheep and cattle, and a yearly feast, are held. *Gnosall*, population 2678, about 7 miles W. by S. from Stafford, has a commodious church; a chapel for Wesleyan Methodists; and a Free school. Malting is carried on, and there are flour-mills. *Harborne*, population of the parish, exclusive of Smethwick township, 2350, about 3 miles S.W. from Birmingham, on a narrow outlying slip of the county, contains many respectable houses, the residences of Birmingham manufacturers. The church, which is of stone, is an ancient structure, but has been much altered. The Baptist and Wesleyan Methodists have places of worship. There are National and Infant schools, partly endowed; a Wesleyan school; and a library. In the vicinity are numerous market-gardens. *Handsworth*, population 7047, about 2 miles N.W. from Birmingham, has a parish church, which, except the tower, is modern. In the church are monuments to James Watt and Matthew Boulton, the eminent engineers and manufacturers of Soho. There are chapels for Wesleyan Methodists and Independents; also National and Infant schools. Iron- and coal-mines employ a considerable number of the inhabitants. *Kinfare*, or *Kinver*, population 2872, about 4 miles W. by S. from Stourbridge, has a church, partly of Norman date. The Wesleyan Methodists have a chapel. The Free Grammar school has an income from endowment of about 250*l.* a year, and had 86 scholars in 1854. Kinfare was at one time a borough and market-town; fairs are held for cattle, sheep, and pigs, in February, May, and December. Bar, rod, and sheet-iron are manufactured. *Kingsley*, population of the township 890, is about 3 miles N. from Cheadle. The church is an ancient gothic structure, with a tower. The Wesleyan and Primitive Methodists have chapels, and there are endowed National schools. Clockmaking employs some of the inhabitants. In the vicinity are flour-mills. *Leigh*, population of the township 965, about 5 miles W.N.W. from Uttoxeter, is situated in a rich grazing district, on the banks of the river Blythe. The church, a handsome cruciform edifice, with a battlemented tower rising from the intersection, was rebuilt, except the tower, in 1846. There is an endowed Free school. *Longdon*, population 1148, about 4 miles N.W. from Lichfield, is irregularly built and spread over a considerable space. The parish church is a handsome stone building of mixed Norman and pointed styles. The Wesleyan Methodists and Independents have chapels, and there are parochial and Infant schools. Shoemaking employs a considerable number of hands. Malting and brickmaking are carried on. Beaudesert, the seat of the Marquis of Anglesey, stands in a spacious park about a mile west from the village. *Madeley*, population 1423, about 5 miles W. by S. from Newcastle-under-Lyme; the parish church is of Norman character. The Wesleyan Methodists have a chapel, and there are endowed schools. Nail-making and machine-making are carried on. *Patttingham*, population 939, is about 6 miles W. from Wolverhampton. The chancel of the parish church is of early English character, other parts are of later date: a double piscina, sedilia, and ambry were lately discovered. There is a National school. In the vicinity are market-gardens. A cattle fair is held on the last Tuesday of April. *Rowley Regis*, population 14,249, about 8 miles W. from Birmingham, is dependent on the iron manufacture, which is carried on extensively in various departments. The British iron-works at Congreave employ numerous workmen. The old parish church is at Rowley village; the Wesleyan and Primitive Methodists and Baptists have places of worship; there are National schools, and the British Iron Company's schools at Reddal Hill. There are extensive coal- and iron-mines; and clay is found of a kind particularly suitable for the construction of furnaces. Chains, traces, gun-barrels, jews'-harps, gas-tubing, and agricultural implements are manufactured. *Rusall*, population 1946, about 2 miles N.N.E. from Walsall, has an old church, which has been much altered and modernised. There are National schools. Malting and brick-making are carried on. There are lime-works in the vicinity. *Sandon*, population 556, about 5 miles N.E. by N. from Stafford, has a church of early English character, standing on a rocky eminence, a short distance east from the village. Sandon Hall, the seat of the Earl of Harrowby, was burned down in June 1848. A monument to William Pitt stands on a hill in Sandon Park, and in another part of the park is a gothic temple in memory of the Right Hon. Spencer Percival. The park is open to the public. National schools are supported by the Earl of Harrowby. *Sedgley*, population 29,447, about 3 miles N.W. from Dudley, is situated in a hilly district which abounds in coal, ironstone, and lime. The manufacture of nails, locks,

fire-irons, chains, and iron safes, gives extensive employment. The church, erected by the late Earl of Dudley, is a handsome gothic structure. The east window is filled with stained glass representing the twelve apostles. The Wesleyan Methodists and Roman Catholics have chapels, and there are National and Infant schools. *Shelton*, one of the pottery towns, population of the township 14,796, is included in that of Hanley town given before. Shelton church is an elegant gothic structure, erected in 1834. The tower is 120 feet high. There are chapels for Primitive and New Connexion Methodists and Independents; National, British, Methodist New Connexion, and Infant schools; a School of Design; a subscription library; and a news-room. The town-hall and market-place are used jointly for Shelton and Hanley. The china and earthenware manufacture, chemical works, brewing, and the making of shoes and clogs, give extensive employment. The North Staffordshire Infirmary is situated here. *Shenstone*, population 2043, about 4 miles S. by W. from Lichfield, has many well-built houses. The church, which stands on the top of a hill, is an ancient cruciform structure, with a square tower. The Wesleyan Methodists have a chapel. Malting, boot- and shoe-making, and the manufacture of steam-engines and agricultural implements, give considerable employment. A cattle fair is held about the end of February. *Smethwick*, population of the chapelry 8379, about 4 miles W. from Birmingham, has very extensive glass-, iron-, and steel-works, smelting furnaces, chemical works, rolling-mills, &c.; wrought-iron boilers are manufactured. Messrs. Chance's glass-works, and Messrs. Fox, Henderson, and Co.'s engineering and iron-founding factories, are at Smethwick. There are also works for the manufacture of patent iron tubing, and patent enamelled hollow ware. Nail-making is carried on very extensively, the nailors chiefly working in their own houses. There are a chapel of ease, a chapel dedicated to the Holy Trinity, and chapels for Wesleyan Methodists, Independents, and Baptists. Near Smethwick there is over the New Birmingham and Dudley Canal an iron bridge, 264 feet long by 25 feet broad, and 68 feet high from its base, containing in all about 700 tons of iron. *Swinford Regis*, or *Kingswinford*, population 27,301, including the population of Briery Hill before noticed, about 9 miles S. by W. from Wolverhampton, is in a rich mining district. The former parish church, which is in the village of Kingswinford, was made a chapel of ease about 1830, when the new parish church was erected at Wordley; in 1843 it was constituted a separate parish church, and had a district assigned to it. There are National schools. *Tale-o'-th-Hill*, population of the township 1973, about 6 miles N. by W. from Newcastle-under-Lyme, is seated on a lofty hill, which affords an extensive prospect. The church, which was rebuilt in 1794, was enlarged about 1830, and the tower again rebuilt. The Wesleyan and Primitive Methodists have places of worship. There are National and Infant schools. In the neighbourhood are coal-mines and flour-mills. *Swinsterton*, population 946, about 4 miles W.N.W. from Stone, possesses an ancient parish church, a Roman Catholic chapel, and National schools. *Tettenhall*, or *Tattenhall*, population 3393, about 2 miles W.N.W. from Wolverhampton, contains many good houses, occupied chiefly by manufacturers and tradesmen of Wolverhampton. Locks, keys, and fire-irons are made here. Malting and brick-making are carried on. The church, which is now a royal free chapel, was anciently collegiate. It was enlarged in 1825, and re-pewed in 1841. There are endowed National and Infant schools. *Tipton*, or *Tibbington*, population 24,372, is about 2 miles N. by E. from Dudley, in the heart of the iron and coal district. It has risen into importance with the advance of these branches of the industry of Staffordshire. A considerable amount of heavy iron goods is manufactured for export. Railway iron-work, and the making of steam-engine boilers, employ several extensive establishments. There are several churches of the Establishment; chapels for Wesleyan, Primitive, and New Connexion Methodists, Independents, Baptists, and Unitarians; several National schools, and schools supported by Wesleyan, Primitive, and New Connexion Methodists. *Trentham*, population of the township 680, about 4 miles S.S.E. from Newcastle-under-Lyme, has a church, rebuilt in 1842 by the Duke of Sutherland. In the centre of the new burial ground, is a pyramidal mausoleum erected by the late duke for the family cemetery. Trentham Hall is a splendid mansion in the Italian style, considerably enlarged and improved under the direction of Sir Charles Barry, who has added a fine Belvedere tower 100 feet high. The pleasure grounds in the park are extensive, and beautifully laid out; the river Trent, which runs through the grounds, contributing greatly to the beauty of the scenery. The park is stocked with deer. There are schools supported by the Duke and Duchess of Sutherland. *Wednesfield*, population of the township 4858, about 2 miles N.E. from Wolverhampton, has a church of modern date, built of brick; two chapels for Wesleyan Methodists; a chapel for Independents; and National schools. There is here a large manufacture of keys, locks, hinges, traps, files, rasps, &c. Extensive collieries and iron-works are in operation. *Whittington*, population 809, about 3 miles E. by S. from Lichfield, has a square church of brick, with a stone tower, surmounted with a lofty spire. There is a Free school. Whittington Hall is a large ancient mansion, near the church. On the Heath, which is an unclosed sheep-walk upwards of 300 acres in extent, Lichfield races are held. *Willenhall*, population of the township 11,931, about 3 miles E. from Wolverhampton, has an ancient parish

church; two new district churches; chapels for Wesleyan and Primitive Methodists, and Baptists; National and British schools; and a school supported by Wesleyan Methodists. The iron manufacture in various branches is pursued here to a considerable extent: locks and padlocks of every variety are made; numerous iron-foundries are in operation. There are varnish-works and malt-kilns. Willenhall is lighted with gas. *Yaxall*, or *Yaxhall*, population 1496, about 7 miles N.N.E. from Lichfield, on the right bank of the river Swerborn, an affluent of the Trent, has an ancient gothic church; a Roman Catholic chapel; and National and Free schools. Cotton-spinning, brick-making, and malting are carried on.

Divisions for Ecclesiastical, Legal, and Parliamentary Purposes.—The county of Stafford is in the diocese of Lichfield, and constitutes the archdeaconry of Stafford. Staffordshire is in the Oxford circuit: the assizes and quarter sessions are held at Stafford, where is the county jail. County courts are held at Cheadle, Hanley, Leek, Lichfield, Newcastle, Rugeley, Stafford, Stone, Uttoxeter, Walsall, and Wolverhampton. The county lunatic asylum is at Stafford. The number of representatives returned to parliament by the county and places within it was before the Reform Act 10, namely, two knights of the shire, and two members each for the city of Lichfield and the boroughs of Newcastle-under-Lyme, Stafford, and Tamworth. By the Reform Act the county was formed into two divisions, and two members allotted to each. Wolverhampton, Stoke-upon-Trent, and Walsall were made parliamentary boroughs; the first and second to return two members each, Walsall to return one member. The whole number of representatives sent from the district was thus increased from 10 to 17. By the Poor-Law Commissioners the county is divided into 17 unions—Alstonfield, Burton-on-Trent, Cheadle, Leek, Lichfield, Newcastle-under-Lyme, Penkridge, Seisdon, Stafford, Stoke-upon-Trent, Stone, Tamworth, Uttoxeter, Walsall, West Bromwich, Wolstanton and Burslem, and Wolverhampton. These unions include 259 parishes and townships, and comprise an area of 743,278 acres, with a population in 1851 of 566,284.

History, Antiquities, &c.—In the earliest period of authentic history Staffordshire appears to have formed part of the territories of the Cornavii, or Carnabii. Under the Romans it was comprehended in the province of Flavia Cæsariensis. The ancient roads, Watling-street, Ryknield-street, and the Via Devana (Deva or Chester road) crossed this county. Watling-street entered it at Fazeley, near Tamworth, and ran west-north-west, a little to the south of Cannock and Penkridge into Shropshire. The turnpike-road from London to Shrewsbury falls in with Watling-street on Cannock Chase, and coincides with it through the remainder of its course in this county. The Roman towns of Etocetum and Pennocrucium were on this line of Watling-street: the first was at Wall, 2 miles S.S.W. from Lichfield; the second near Penkridge village. Ryknield-street entered the county across the Dove near Burton, and ran south-west by Burton and Alrewas to Etocetum, or Wall, where it crossed Watling-street, and turning more towards the south, ran by Sutton Park and Perry-barr Common into Warwickshire and Worcestershire. The Ad Trivonam (On-Trent) of Richard of Cirencester, may be fixed between Branston and Burton-upon-Trent. The Via Devana entered the county across the Trent near Ad Trivonam, and appears to have passed by Uttoxeter, and through the Pottery district into Cheshire. Chesterton, 2 miles N.W. from Newcastle, was probably a Roman station. There are traces of camps or other military works supposed to be Roman at Ashwood, near Kingswinford; at Oldbury, between Birmingham and Dudley; at Aldridge, between Sutton Coldfield and Walsall; and in Arley Wood, near Over Arley on the Severn. Roman antiquities have been discovered in various places.

There are some ancient camps, of which it is doubtful whether they belong to the British, Saxon, or Danish period. One of these, called Castle Old-Ford, or Old-Fort, near Stonall, about 4 miles S. from Lichfield, is very conspicuous. There are others in Beaudesert Park, near Rugeley; on Abbots Castle Hill, on the Shropshire border, between Wolverhampton and Bridgenorth; and at Barr Beacon, near Walsall. Tumuli are found in various parts of the county.

On the conquest of South Britain by the Saxons, the county was included in the kingdom of Mercia, or of the Middle Angles. When Wulfhere, king of Mercia, was converted to Christianity, the bishopric of Mercia (which had been previously founded under the rule of Penda and Oswio, the sons of Penda) was re-established, and fixed at Lichfield. There are the traces of an ancient camp or fort, called the Burgh, or Braff, near Maer. The Mercian kings appear often to have resided at Tamworth. In the division of the island between the Saxons and Danes, in the time of Alfred, Staffordshire was partly included in the Danelagh, or Danish territory, Watling-street being the boundary; but the whole was recovered by Alfred's successors. In the wars of Edward the Elder, son of Alfred, with the Danes (910), a battle was fought at Tettenhall Regis, near Wolverhampton, in which the Danes were beaten; and in the following year they sustained another great defeat at Wednesfield: two years after Ethelfleda, Lady of Mercia, sister of Edward, built forts at Tamworth and Stafford; and next year one at Eadesbyrig, which some suppose to be Wednesbury. Ethelfleda died at Tamworth in 920, at which town Edward assumed the direct government of Mercia. Under Edward

the Confessor there was an Earl of Staffordshire. There are in the county several camps which are doubtless of Saxon or Danish origin.

In the reign of Henry I. Staffordshire was ravaged by Robert de Belesme, who supported the claim of Robert of Normandy to the crown. In the reign of Edward II. the earls of Lancaster and Hereford, then in insurrection, were defeated by the king at Burton-upon-Trent. In the War of the Roses, the Yorkist Earl of Salisbury marching from the north towards London (1459) with 5000 men, was intercepted at Blore Heath, on the western side of the county, between Drayton (Salop) and Eccleshall, by 10,000 Lancastrians under Lord Audley. The good generalship of Salisbury secured the victory. Lord Audley was killed, with all his chief officers and a fourth part of his army. A stone pedestal, surmounted by an ancient wooden cross, marks the field of battle. Richard III. was with his army at Tamworth just before the battle of Bosworth Field.

The principal monuments of the middle ages are ecclesiastical. Lichfield Cathedral is the most important. At Croxden, about 5 miles S.E. from Cheadle, are remains of an abbey, founded in 1176 for Cistercian monks. The architecture is generally early English in style. The principal entrance and the west-end of the abbey are in good preservation.

Mary, queen of Scots, was imprisoned for some time, under the care of the Earl of Shrewsbury, at Tutbury Castle; also at Chartley. Holbeach House, where most of the Powder-Plot conspirators were taken or killed, is in Staffordshire, between Wolverhampton and Stourbridge.

In the great civil war the county generally embraced the side of the parliament, though several families sided with the Royalist party. Some Royalists, under the Earl of Chesterfield, garrisoned Lichfield Cathedral and close; but it was taken by the Parliamentarians, though with the loss of their general, Lord Brook, in March 1643. This post was retaken about a month after by Prince Rupert, who also took Burton: in the interval the Parliamentarians, under Sir William Brereton and Sir John Gell, had a severe but indecisive battle with the Royalists at Hopton Heath, near Stafford. The Parliamentarians occupied the towns of Stafford and Wolverhampton, and subsequently took Eccleshall Castle, and took and demolished Stafford Castle: they also besieged Tutbury Castle, but without success. Their horse had the advantage in a skirmish near Leek, which was one of their posts; and in the latter part of 1643 they gained the victory in two skirmishes with Colonel Hastings, the Royalist commander, in this county. In 1645 the king with his army marched through Staffordshire before the battle of Naseby, and was in it again after the battle. After the battle of Worcester (1651) Charles II. was at Boscobel House, in this county. In the rebellion of 1745 the Pretender's army was at Leek, while that of the Duke of Cumberland occupied Stone.

Religious Worship and Education.—According to the Returns of the Census in 1851 there were then in the county 863 places of worship, of which 377 belonged to five sections of Methodists, 317 to the Church of England, 63 to Independents, 35 to Baptists, 34 to Roman Catholics, 6 to Quakers, 6 to Unitarians, 5 to Plymouth Brethren, 5 to Mormons, and 4 to Presbyterians. The total number of sittings provided was 298,988. The number of day schools in the county was 1313, of which 440 were public schools, with 44,489 scholars, and 878 were private schools, with 21,698 scholars. Of Sunday schools there were 643, with 93,572 scholars. There were 29 literary and scientific institutions, with 3644 members, and upwards of 43,000 volumes in the libraries belonging to them.

Industry and Manufactures.—The southern part of Staffordshire is distinguished for its manufacturing industry in the production of iron and hardware (of which iron is the material); the north-west part of the county produces earthenware from the potteries in such quantity and excellence as to have gained the distinctive appellation of 'Staffordshire ware.' Both these manufactures are of comparatively modern date.

Savings Banks.—In 1853 the county possessed 23 savings banks, at Bilston, Brewwood, Burton-on-Trent, Cheadle, Eccleshall, Kingswinford, Leek, Lichfield, Newcastle-under-Lyme, Penkridge, Pirehill Meaford, Rugeley, Shelton, Shenston, Stafford, Tamworth, Trentham, Tunstall, Uttoxeter, Walsall, West Bromwich, Wolverhampton, and Yoxall and Barton. The amount owing to depositors, on November 20th, 1853, in 21 of these banks, for which returns were received, was 575,962*l.* 16*s.* 2*d.*

STAINDROP. [DUREHAM.]

STAINES, Middlesex, a market-town, and the seat of a Poor-Law Union, in the parish of Staines, is situated on the left bank of the river Thames, in 51° 26' N. lat., 0° 30' W. long., distant 17 miles W.S.W. from London by road, and 19 miles by the Windsor branch of the South-Western railway. The population of the town of Staines in 1851 was 2430. The living is a vicarage in the archdeaconry of Middlesex and diocese of London. Staines Poor-Law Union contains 13 parishes and townships, with an area of 24,881 acres, and a population in 1851 of 13,973.

The town of Staines consists of a principal street, extending about half a mile along the main road, and of some smaller streets branching from it. The town is lighted with gas and paved, and contains many well-built houses. A handsome granite bridge, of three arches, crosses the Thames at Staines; it was erected in 1832, at a cost of about

40,000*l.*, from a design by Rennie. The parish church is a modern building, with a square embattled tower. The Wesleyan Methodists, Independents, Baptists, and Quakers have places of worship, and there are National, British, and Infant schools; a school of industry, a literary and scientific institution, and a savings bank. The market is on Friday, and fairs are held on May 11th and September 19th. There are extensive mustard-mills, a brewery, and several flour-mills. Races are held annually on the meadows.

STALEBRIDGE. [DORSETSHIRE.]

STALEYBRIDGE, Lancashire, a market-town in the parish of Ashton-under-Line, is situated chiefly on the right bank of the river Tame, in 53° 30' N. lat., 2° 4' W. long., distant 8 miles E. by N. from Manchester, 185 miles N.W. by N. from London by road, and 192 miles by the London and North-Western railway via Trent Valley. The population of the town in 1851 was 20,760. The living is a perpetual curacy in the archdeaconry and diocese of Manchester. Staleybridge owes its importance chiefly to the cotton manufacture. Woollen-cloth is manufactured to some extent; there are also brass and iron foundries, machine-making factories, brickfields, collieries, stone-quarries, and corn-mills. The parochial chapel is an octagonal structure occupying an elevated site, and there are three district churches, chapels for Wesleyan, Primitive, New Connexion and Association Methodists, and for Independents, Baptists, and Roman Catholics; National, British, and Roman Catholic schools; a mechanics institute, and a savings bank. Saturday is the market-day; fairs are held on Easter Monday and November 5th. The cotton manufactures of the district are more particularly noticed in the article *ASHTON-UNDER-LINE*.

STALHAM. [NORFOLK.]

STAMFORD, or STANFORD, Lincolnshire, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, is situated on both sides of the river Welland (which here divides the counties of Lincoln and Northampton), in 52° 40' N. lat., 0° 28' W. long., distant 47 miles S. by E. from Lincoln, 89 miles N. by W. from London by road, and by the Great Northern and Leicester and Stamford railways. The population of the borough of Stamford (a portion of which, called Stamford Baron, is in Northamptonshire), was 8933 in 1851. The borough is governed by 6 aldermen and 18 councillors, of whom one is mayor; and returns two members to the Imperial Parliament. The livings are in the archdeaconry and diocese of Lincoln. Stamford Poor-Law Union contains 37 parishes and townships, with an area of 52,858 acres, and a population in 1851 of 19,755.

Stamford is an ancient town, but authentic history is silent respecting it till the troubled period succeeding the Roman dominion, when the Picts and Scots were defeated here by the Britons and their Saxon allies, in 449. In the reign of Edward the Elder in 923, the part of Stamford south of the Welland was fortified by the Saxons; and the Danes, who occupied the northern part of the town, submitted. The town was one of the five Danish burghs which connected their Northumbrian and East Anglian possessions. In Domesday-book, Stamford, there called Stanford, is styled a king's borough. In 1190 the Jews of Stamford were plundered, and many of them slain by those who had enlisted for the crusade. One of the crosses which marked the resting-place of Queen Eleanor's body, was erected at Stamford: it was demolished in the civil troubles of Charles I. Stamford returned members to parliament as early as the 23rd Edward I. Several parliaments and councils were held in the town in the middle ages. There were 16 parish churches in the town and suburbs, and there were priories for Carmelite, Franciscan, Dominican, and Augustine friars (two in or near the town), and Benedictine monks (at St. Leonard's, just out of the town to the east); also several 'halls' or monastic schools. On occasion of some discontent at Oxford, a number of the students retired here in 1333, and were not induced to return without great difficulty. The town was greatly benefited in its trade by the settlement here, in 1572, of some Flemish Protestant refugees, silk and serge weavers, who settled at Stamford by advice of Lord Treasurer Burghley, lord of the manor.

Over the river Welland are an ancient stone bridge of five arches, and a handsome new bridge of three arches, built of granite in the Norman style, by the Marquis of Exeter. The town is well supplied with water, and lighted with gas. Many new houses have been built of late years. All Saints church consists of a nave and two aisles, and a chancel with one aisle. It is chiefly of early English architecture; the tower, spire, and two porches are of perpendicular character. The other churches are generally perpendicular in style. Part of the nave of the conventual church of the Benedictine priory of St. Leonard's is still standing, and is used as a barn. The west gate of the Carmelite or White Friary is still entire, just outside the town on the north-east side. Near it are part of a wall and a postern or back gateway of the Gray or Franciscan Friary. The Wesleyan and Reform Methodists, Independents, Roman Catholics, and Mormons have places of worship. The Grammar school was founded about 1530 by William Radcliffe, an alderman of the borough. The school possesses an endowment of about 600*l.* a year, and had 37 scholars in 1854. The Blue-Coat school, established in 1704, has an income from endowment of about 200*l.* a year; it is conducted on the British school system: the number of scholars in 1852 was 150, of whom 60 receive clothing as well as instruction. There are several National,

Infant, and Free schools. The Stamford, Rutland, and General Infirmary, erected in 1826, in consequence of a bequest by Henry Frier, Esq., a surgeon in Stamford, and which has since received several valuable additional endowments, had an income in 1851, from all sources, of 1313*l.* 8*s.* The cost of the building, amounting to upwards of 8000*l.*, was defrayed chiefly by public subscription. In the town are numerous endowed hospitals, almshouses, and other charities, a literary and scientific institution, with a museum, lecture-room, library, &c., and a savings bank. There are three extensive breweries, and a manufactory of agricultural implements. Near the Grammar school is a Norman gateway, anciently belonging to Brasenose College, one of the monastic schools, and now forming an entrance into a garden. The markets are on Monday and Friday; that on Friday is a good corn-market; there are several cattle-markets in the course of the year, and seven yearly fairs. Fat stock markets are held once a fortnight. The Welland, or rather a lateral cut to the natural bed of the river, is navigable up to the town for boats and small barges. The public baths, established in 1722 by the medical practitioners of Stamford, were rebuilt in 1828 by the present proprietor, the Marquis of Exeter. Quarter sessions and a county court are held.

STAMFORD. [CONNECTICUT.]

STAMFORD BARON. [NORTHAMPTONSHIRE.]

STANDGROUND. [HUNTINGDONSHIRE.]

STANDISH. [LANCASHIRE.]

STANDON. [HERTFORDSHIRE.]

STANFORD RIVERS. [ESSEX.]

STANHOPE. [DURHAM, County of.]

STANLEY. [PERTSHIRE.]

STANMORE, GREAT. [MIDDLESEX.]

STANSTED MONTFICHET. [ESSEX.]

STAPENHILL. [DERBYSHIRE.]

STAPLEFORD. [NOTTINGHAMSHIRE.]

STAPLEHURST. [KENT.]

STARAJA-RUSSA. [NOVGOROD.]

STARCOSS. [DEVONSHIRE.]

STARGARD. [MECKLENBURG.]

STARCKENBURG. [HESSE DARMSTADT.]

STARODAB. [CZERNIGOF.]

STASZOW. [POLAND.]

STATEN ISLAND. [NEW YORK.]

STAVANGER. [CHRISTIANSAND.]

STAVELEY. [DERBYSHIRE.]

STAVOREN. [FRIESLAND.]

STAVROPOL. [SIMBIRSK.]

STEBBING. [ESSEX.]

STEELE, or STEYLE. [DÜSSELDORF.]

STEFANO D'AVKTO, SAN. [GENOA.]

STEINBACH. [FULDA.]

STEINFURT. [MÜNSTER.]

STELLENBOSCH. [CAPE OF GOOD HOPE.]

STENDAL. [MAGDEBURG.]

STEPNITZ, RIVER. [BRANDENBURG.]

STERNBERG. [MORAVIA.]

STETTIN, one of the three governments of the Prussian province of Pomerania, is bounded N. by the government of Stralsund and the Baltic; E. by the government of Cöslin; S. by Brandenburg; and W. by Mecklenburg. The area is about 5012 square miles. The population at the end of 1849 was 562,127. The surface is level. It belongs almost entirely to the basin of the Oder, which river falls into the Stettiner-Haff, a wide salt-lake that communicates with the Baltic by three narrow channels. The principal of these channels is the Swine, which runs between the island of Usedom and Wollin. The other channels are the Peene, west of Usedom, and the Divesow, east of Wollin Island. To the north of the island is the harbour of Swinemünde. Agriculture and the Baltic fishery afford occupation to the great mass of the inhabitants. There are few manufactures except in the towns. Railways connect Stettin, the capital of the government, with Berlin, Posen, Danzig, and Königsburg.

Stettin, or *Alt-Stettin*, the capital of the province of Pomerania, as well as of the government of Stettin, a flourishing commercial and strongly fortified town, is situated in 53° 26' N. lat., 14° 45' E. long., on an eminence on the left bank of the Oder, 78 miles by railway N.E. from Berlin, and has about 40,000 inhabitants. The Oder divides into four branches, the Parnitz, and the Great and the Little Regelitz, and the main stream. The principal and most strongly fortified part of the town is on the left bank of the Oder, and is connected by wooden bridges with the suburbs, some of which are included in the fortifications. The citadel is called Fort Prussia, besides which there are forts William and Leopold. The town has five principal gates and eight posterns. There are several squares. Of the public buildings, the most remarkable are—the palace, formerly the residence of the last Dukes of Pomerania, the government-house, the arsenal, the house of the provincial estates, with a considerable library, the great barracks, the three hospitals, and the theatre. There are five churches and a Roman Catholic chapel. Besides the gymnasium, to which an observatory is attached, there are a school for training teachers,

and a school of navigation. The manufactures are woollens, linen, cotton, leather, hats, stockings, ribands, sail-cloth, soap, and tobacco. Boats and ships are built, and ships' anchors for all the ships of the Prussian states are manufactured here. The trade of Stettin is very considerable, it is hampered however, as the commerce of all the Baltic ports is, by the Sound dues, which render the conveyance of goods more expensive, and the ships have not always return cargoes. Thus many goods which would naturally be exported from Stettin are sent to Hamburg. Another disadvantage is the difficult navigation of the Oder, ships drawing more than 7 feet water being obliged to stop at Swinemünde. Foreign goods and colonial produce for the supply of Berlin, Silesia, and the interior of Prussia are imported into Stettin. The number of ships that arrive here annually is above 1000. Foreign consuls reside in Stettin.

Among the other towns are ANKLAM: *Damm*, 4 miles by railway E. from Stettin, is a strongly-fortified town, with about 3000 inhabitants; *Demmin*, 72 miles N.W. from Stettin, at the junction of the Tollense and the Trebel with the Peene, is a manufacturing town of 7000 inhabitants, who carry on a considerable commerce in firewood, timber, corn, glass, malt, &c., by the Peene, which is navigable for small craft. Leather, linen, gloves, woollen-cloth, and tobacco are its chief industrial products; *Greiffenhagen*, S. of Stettin, on the right bank of the Oder, has a population of 6000, who manufacture broad-cloth, and trade in corn; *Stargard*, situated 21 miles by railway E.S.E. from Stettin, on the left bank of the navigable river Inna, a feeder of the Oder, has 11,500 inhabitants, including the suburbs. It is one of the best towns in Pomerania; is surrounded with a wall, and has three gates and three posterns. The chief manufactures are woollen-cloth, linen, hats, stockings, leather, soap, tobacco, pottery, beer, and spirits. There are in the town four churches, a gymnasium, and several schools and charitable institutions. Fairs are held annually for the sale of horses and cattle, wool, linen, &c. The town has a good export trade in corn and the other productions of the country. *Swinemünde*, a seaport town of about 5000 inhabitants, situated on the island of Usedom, at the entrance of the Swine Channel of the Oder into the Baltic, has sea baths, a custom-house, a handsome church, shipbuilding-yards, and a considerable trade. By means of extensive dams constructed in recent times, the harbour of Swinemünde, which is the outport of Stettin, has been made accessible to the largest ships. Steamers ply regularly to Stettin, the isle of Rugen, and other places along the coast: *Treptow*, situated on the left bank of the Rega, 57 miles N.N.E. from Stettin, has spirit distilleries, cloth factories, and 5500 inhabitants; *Alt-Treptow*, a walled town on the Tollense, has about 4000 inhabitants, who manufacture broadcloth, leather, and spirits.

STEBENVILLE. [OHIO.]

STEVENAGE. [HERTFORDSHIRE.]

STEVENTON. [BERKSHIRE.]

STEWARTON, Ayrshire, Scotland, a thriving manufacturing town, in the parish of Stewarton, is pleasantly situated on the right bank of the Annock Water, in 55° 40' N. lat., 4° 31' W. long., distant 6 miles N. by W. from Kilmarnock, and 18 miles S.S.W. from Glasgow. The population of the town in 1851 was 3184. The town is lighted with gas, and contains many well-built houses and good shops. Besides the parish church, there are places of worship for Free and United Presbyterians and for Independents. There are schools and libraries in connection with the parish, the Free and the United Presbyterian churches. Highland bonnets are extensively manufactured. There are mills for carding and spinning wool. The town has also long been celebrated for its manufacture of spindles employed in the spinning of cotton and worsted. Carpets are extensively manufactured, and linens and damasks are woven. Steel clock-work is manufactured and exported to a small extent. The market is held on Thursday. There are a town-house and a jail.

STEYER. [ENS.]

STEYERMARK, the German name for Styria.

STEYNING, Sussex, a market-town, and the seat of a Poor-Law Union, in the parish of Steyning, is situated near the right bank of the river Adur, in 50° 53' N. lat., 0° 19' W. long., distant 27 miles E. by N. from Chichester, and 50 miles S.S.W. from London. The population of the parish of Steyning in 1851 was 1464. The living is a vicarage in the archdeaconry and diocese of Chichester. Steyning Poor-Law Union contains 23 parishes and townships, with an area of 44,344 acres, and a population in 1851 of 16,867. The ancient road of Stane-street passed through the town, whence its name. Steyning is a borough by prescription, but was disfranchised by the Reform Act. The parish church, with the exception of the nave, is a modern building. The Wesleyan Methodists have a chapel. The Free Grammar school, founded in 1614, had 36 scholars in 1854. There are a National school and a mechanics institution. A parchment manufactory and two breweries afford some employment. The market is held once a fortnight, on Monday, for cattle and corn; a cattle fair is held on October 11th.

STIGLIANO. [BASILICATA.]

STILTON. [HUNTINGDONSHIRE.]

STIRLING, Stirlingshire, Scotland, a royal and parliamentary burgh and market-town, and the chief town of the county, is situated on an eminence near the right bank of the river Forth, in 56° 8' N. lat.,

4° 0' W. long., distant 29 miles N.E. from Glasgow, and 36 miles N.W. from Edinburgh by road and by the Edinburgh and Glasgow and Scottish Central railways. The population in 1851 was 12,837. The town is governed by a provost and 20 councillors, 4 of whom are bailies, and unites with Culross, Dunfermline, Inverkeithing, and Queensferry, in the return of one member to the Imperial Parliament.

A castle was early erected here, under the protection of which the town grew up; and from its commanding the passage of the Forth, soon rose into importance. Its earliest known charter as a royal burgh is dated 1119. In the 12th and 13th centuries Stirling castle was considered to be one of the four principal fortresses of the kingdom; and it is one of the four which are still upheld by virtue of the articles of the Union. It appears conspicuously in the history of the English wars, and was frequently the residence of the Scottish kings.

The town is irregularly laid out; a winding street, or road, not lined with houses throughout, leads to the bridge over the Forth, and by that towards Perth. The Castle Hill, a long and narrow ridge, is on the north-west side of the town, over which it rises gently, but presents a steep slope on the other sides, and is in some parts precipitous. The palace, built by James V., is now converted into a barrack; and the adjacent hall, built by James III. for the meeting of the Scottish parliament, is now a riding-school. Adjoining this is the chapel royal, built by James III., now employed as an armoury. The castle contains a depot of arms, and is occupied by a garrison. Several new and wide streets have been opened and others much improved of late years. The town is lighted with gas. The old church, a fine building chiefly of decorated architecture, stands near the castle. It was originally the conventual church of a Gray or Franciscan friary, founded by James IV. in 1494. The chancel was built by Cardinal Beaton. The building now forms two churches of the Establishment, called the East and West churches. There are another church of the establishment called the North church, two places of worship for the Free Church, two for the United Presbyterians, and one each for Baptists, Independents, Reformed Presbyterians, Scottish Episcopalians, and Roman Catholics, several schools, and a savings bank. South of the Gray Friars' church is Gowans's hospital, built in 1639; and north of it are the ruins of a curious old house of the earls of Mar, called Mar's Work. Another old house built by Sir William Alexander, earl of Stirling, is now used as a military hospital. The old bridge over the Forth is a structure of the 16th century; the new bridge is more convenient. The town-house is an old building with a spire; behind it is the jail. There are commodious corn and meat markets, and a handsome building, the Athenæum, devoted to literary purposes. There is also an extensive agricultural museum.

The chief manufactures are of tartan and tartan shawls, carpets, cotton goods, malt, and leather. There are dye-houses for yarns, rope-yards, and breweries. Considerable trade is carried on in corn, wood, coals, bricks, tiles, lime, and wool. There is constant communication by steamers with Newhaven, Leith, and the other places on the Forth. The Secession, now merged in the United Presbyterian Church, had its origin in Stirling in the year 1733, in consequence of proceedings taken by the Established Church against Ebenezer Erskine, one of the ministers of the West church, who opposed the arbitrary proceedings of the General Assembly. There are some important charitable institutions of ancient foundation in the town.

STIRLINGSHIRE, an inland county of Scotland, is bounded N. by Perthshire, N.E. by Clackmannanshire and a detached portion of Perthshire, E. and S.E. by Linlithgowshire, S. by Lanarkshire and Dumbartonshire, and S.W. and W. by Dumbartonshire, from which it is separated by Loch Lomond: it lies between 55° 53' and 56° 22' N. lat., 3° 38' and 4° 40' W. long. The form of the county is irregular: the greatest length is 45 miles; the greatest breadth about 18 miles. There are two insulated portions surrounded by the counties of Perth and Clackmannan. The area is 462 square miles, or 295,376 statute acres. The population in 1851 was 86,237. The county returns one member to the Imperial Parliament.

Surface, Geology.—The north-western extremity of the county is occupied by the mountain range which forms the western extremity of the Grampians, and separates Loch Lomond from Loch Chon and Loch Ard. Of this range the principal mountain is Ben Lomond, which rises to a height of 3197 feet above the level of the sea. This mountain is the best known of the mountains of Scotland, on account of its forming the southern extremity of the Highlands, and its situation near the banks of Loch Lomond. It is of easy ascent, and is covered with vegetation to the summit. At the foot of this mountain range, in Loch Lomond, are several islands, part of which are included in Stirlingshire. East of this district the face of the country becomes more level, and is occupied by rocks of the old red-sandstone group; but in the central parts of the shire it again rises into hills, which form the group of the CAMPSIE HILLS. These consist chiefly of large tabular masses of trap, the geological position and character of which vary considerably. The other hills of the group, the Gargunnoch, Fintry, and Kilsyth hills, are chiefly trap or whinstone; their slopes are broken with crags and glens. That part of the county which skirts the Lennox hills to the south and east, and is drained by the Kelvin, a feeder of the Clyde, and by the Carron and other tributaries of the Forth, belongs to the coal districts of Central Scotland, and

yields coal, ironstone, freestone, and limestone in considerable quantity. The carse, or dales, are generally occupied by the later formations, or by alluvium.

Hydrography and Communications.—The county belongs partly to the basin of the Forth and partly to that of the Clyde. The Duchray, one of the affluents which form the Forth, is for several miles the boundary of the county. The chief tributaries of the Forth in this county are the Bannockburn, the Carron, and the Avon. The Endrick and its feeder, the Blane, which drain the district between the Highlands and the Lennox Hills, and the Kelvin, which drains the southern part of the county, are affluents of the Clyde. The Endrick falls into Loch Lomond. In the parish of Fintry it falls over a rock 90 feet high, presenting, when the waters are swollen by a flood, a magnificent cascade: there is a second smaller fall lower down. The Forth and Clyde Canal has about 10 miles of its course in the county. The Edinburgh and Glasgow Union Canal joins the Forth and Clyde Canal at Port Downie, near Falkirk, about 4 miles from Grangemouth.

The Edinburgh and Glasgow railway passes through this county, in a course parallel to that of the Union and Forth and Clyde canals. The Scottish Central railway traverses the eastern part of the county. The Slamannan railway has also a part of its course in this county. The road from Edinburgh to Stirling, and thence to the north of Scotland, enters the county at Linlithgow, and runs by Falkirk, Bannockburn, and St. Ninians to Stirling. At Camelon, just beyond Falkirk, a road branches to Kilsyth, Kirkintilloch, and Glasgow. There is also a direct road from Stirling to Glasgow.

Soil, Agriculture, &c.—The hilly district of the centre, and the highland tract of the north-west, are in most places bleak and sterile; but the carse, or the valley of the Forth, from the neighbourhood of Falkirk to Stirling, consists of low and fertile alluvial lands. The eastern side of the county presents a finely-diversified appearance, and the view from Stirling Castle is of almost unequalled beauty. In the highland district only a very small proportion of the land is arable. Oats and barley, potatoes and turnips, are grown. The soil in the valley or Strath of Endrick is a rich brown loam. In the low ground which separates the Highlands from the Campsie Hills, and in the valleys of the Forth and of the Kelvin, the land is commonly divided into the carse, or valley, and the dryfield or upland slope between the valley and the moorland hills. Oats and hay form the principal crops; barley and potatoes are grown to a considerable extent; and turnips, beans, and wheat in smaller proportions. Dairy farms are numerous, the produce finding a ready market in Glasgow. The hills are occupied as sheep-walks. The black-faced sheep from Tweeddale are prevalent. The carse or valley of the Forth below Stirling, forming the eastern part of the county, is fertile, and, in an agricultural sense, is important. There is comparatively little waste land; the soil is wholly occupied in tillage or plantations; and the facility for obtaining manure has tended to the improvement of agriculture. Gardens and orchards are numerous and productive: the soil is particularly adapted to pear-trees. The horses reared are of a superior description. Leases are commonly for 19 years. Grain rents are usual in the carse of Stirling. The greatest fairs for cattle in Scotland are held near Falkirk in this county: they are known as Falkirk Trysts.

Divisions, Towns.—The county contains 23 entire parishes, and part of five others. The royal, municipal, and parliamentary burghs are FALKIRK and STIRLING; the less important towns are ALVA, BANNOCKBURN, DENNY, GRANGEMOUTH, KILSYTH, and LENNOXTOWN.

Alva, population 3058, situated at the foot of the Ochill Hills, about 6 miles E. from Stirling, near the rivet Devon, is a busy manufacturing place. Tartan shawls, blankets, plaidings, and chequered kerseymeres, are extensively made. The Established, Free, and United Presbyterian Churches have places of worship.

Denny, population 2446, about 9 miles S. by E. from Stirling, possesses paper-mills, charcoal grinding-mills, a dye-stuff mill, a saw-mill, and manufactures of husey-wolsey shawls and tartan-cloth. There are places of worship for Established, Free, and United Presbyterians.

Grangemouth, population included with Falkirk parish, of which it forms a part. The port of Grangemouth is situated about 3 miles N.E. from the town of Falkirk, at the junction of the Forth and Clyde Canal with the Carron, near the confluence of the Carron with the Forth. The Grange burn formerly joined the Carron at this spot, but has been made to join the Forth, a mile east from the town, in order to convert its former channel into wet docks. In the town are a modern church in the Norman style, and a Free church. The basin and harbour afford facilities for vessels of any size. Grangemouth has a custom-house; Alloa, Stirling, and Kincairdine are included in the port. The number of vessels registered as belonging to the port on December 31st, 1853, was 46 sailing-vessels of 8252 tons, and 7 steam-vessels of 823 tons burden. During 1853 there entered the port 817 sailing-vessels of 75,812 tons aggregate burden, and 79 steam-vessels of 19,654 tons; and there cleared 794 sailing-vessels of 75,853 tons, and 77 steam-vessels of 19,198 tons. The imports are—grain, timber, flax, manganese-ore, cheese, bark, manna, and Geneva, from Holland, Belgium, and Norway; and goods of all descriptions from London, Hull, and other British ports. The exports are—coals, pig and wrought iron, glass, bricks, cordage, linen-yarn, and cotton and woollen goods. Vessels are built, and sail-cloth and rope manufactured.

Kilsyth, population 3949, is in the parish of Kilsyth, 13 miles S. by W. from Stirling. Kilsyth is a burgh of barony; it has a baillie and four councillors elected annually. It is irregularly laid out; the houses are small: the streets are lighted with gas. The parish church is a modern building of considerable elegance. There are also a Free church, chapels for United Presbyterians and Independents, several schools, and a savings bank. The inhabitants are chiefly hand-loom weavers employed by the manufacturers of Glasgow. There are two factories, and a brick and tile work.

Lennoxton, population 3108, about 11 miles N. by E. from Glasgow, contains the parish church of Campsie, a chapel for United Presbyterians, and a handsome Roman Catholic chapel. The cotton manufacture is actively carried on. Lennox Castle is a spacious mansion of recent erection.

The following are some of the more important villages; the population is that of 1851:—

Balfroun, a manufacturing village, in the western part of the county, 18 miles N. from Glasgow: population of the parish, 1900. Balfroun is neatly built and clean, and the shops are lighted with gas from the cotton-works of Ballindalloch. There are here many hand-loom weavers. *Bridge of Allan*, a small village, 3 miles N. from Stirling, is much resorted to for its mineral springs. *Campsie*, population of the parish exclusive of Lennoxton, 3810, is situated in a valley watered by the streams of Glassert and Kelvin. It contains an alum and colour manufactory. In the vicinity are several print fields and cotton factories. *Carron*, a village in Larbert parish, about 2 miles N. from Falkirk. In the village are the Carron iron-works, among the most extensive in the kingdom. There are five blast or smelting furnaces, four cupola furnaces, and 20 air furnaces; besides mills for grinding fire-clay, boring cylinders, grinding and polishing the metal, &c. The articles manufactured are machinery, agricultural implements, cannon, carronades (which take their name from this place), &c. The Carron Company have about 20 vessels to export their goods to London and elsewhere, and bring back coal and lime. *Drymen*, about 22 miles N.W. from Glasgow: population of the parish, 1481. Many of the inhabitants are hand-loom weavers. *Kippen*, 11 miles W. from Stirling, population of the parish 1892, is celebrated for its distillery. Weaving is carried on. There are an Established and a Free church; an Endowed and a Parochial school. Several fairs are held. *Milngavie*, population about 1500, distant 7 miles N.W. from Glasgow, contains a chapel of ease, a United Presbyterian church, and a parochial school; a cotton-mill, two bleachfields, three printfields, a distillery, a paper-mill, and several corn-mills. *St. Ninians*, population about 1200, consists principally of one long street of old-fashioned houses. Some of these are very curious, and have not only the date of erection, but the implements or other emblems of the trade of the original occupier carved on stones on the front. There are in the village Established, Free, and United Presbyterian churches. The inhabitants manufacture nails, leather, and tartan and tartan shawls. *Strathblane*, population of the parish 1010, a small village 12 miles N. from Glasgow, contains a calico print-work and two bleachfields.

History, Antiquities, &c.—Stirlingshire was, at the most ancient historical period, included in the territory of the Damnonii. They were subdued by Agricola, A.D. 80, who formed a line of forts through their territory, reaching from the Forth to the Clyde: this line of forts, the Roman general Lollius Urbicus, in the reign of Antoninus Pius, about A.D. 140, connected by a continuous rampart [ANTONINUS WALL OR.] The remains of one of the forts may be seen at Castle-Cary, 6 miles W. from Falkirk, just where the rampart leaves the county. There are some other antiquities referrible perhaps to the Roman period, or to the periods immediately before it. Several of the primitive monuments, as earthen forts, cairns, and mounds or barrows, are found in Baldernock, Gargunnoch, Dumipace, and other parishes.

Cambuakenneth Abbey, one of the most celebrated in Scotland, was founded, in 1147, by David I., king of Scotland, on a small peninsula on the north side of the Forth, a little below Stirling. Of this edifice some ruined walls and the belfry tower still exist. In the invasion of Edward I. Stirling was abandoned by the Scots and occupied by the English (1296). Wallace defeated the English forces, in 1297, at the old bridge of Stirling, at that time a wooden structure. The following year Stirling Castle, which was garrisoned by the English, was besieged by the Scots, and forced by famine to surrender, in 1299. In 1303 Stirling Castle held out for three months against all the efforts of Edward I. in person. It was the last fortress that surrendered in Scotland. In 1314, Stirling Castle, which had been held by the English since 1303, surrendered after the battle of Bannockburn. In 1333 it came into the hands of Edward Balliol, but was retaken, in 1341, by the Scots. The castle was the scene of the assassination of the Earl of Douglas by James II., in 1451. It was the frequent residence of James V. James VI. was crowned at Stirling in 1567, at 13 months old; and during his childhood usually resided here, with his preceptor Buchanan, who wrote here his 'History of Scotland.' The earls of Angus and Mar, with others concerned in 'the raid of Ruthven,' took possession of Stirling in 1584, but were soon obliged to flee into England. Returning next year with a considerable force, they occupied the town, and prepared to invest the castle, where the king (James VI.) was, with a very inadequate force. An accommodation took place, and the judicial

sentence which had been passed against the fugitive lords was reversed. This transaction is commonly called 'the raid of Stirling.' On the introduction of the New Liturgy, in the reign of Charles I., in 1637, the privy council and the court of session were removed to Stirling; to which place also General Baillie, who commanded the Covenanters, fled after his disastrous defeat at Kilsyth by the Duke of Montrose. The Scotch army retired to Stirling after their defeat by Cromwell at Dunbar, in 1650. Monk, whom Cromwell left behind him, occupied the town soon after, and in a few days forced the castle to surrender.

Of the feudal period there are some remains in the county. Duntreath Castle, in Strathblane parish, is an extensive ruin. The remains of Colzium Castle crown an eminence near Kilsyth; and the castle of Almond is a massive ruin between Falkirk and Linlithgow. The ruins of Manuel Priory are near the castle of Almond.

Statistics: Religious Worship and Education.—According to the Returns of the Census in 1851, there were then in the county 99 places of worship, of which 31 belonged to the Established Church, 21 to the Free Church, 19 to the United Presbyterian Church, 7 to Methodists, 6 to Independents, 5 to Baptists, 4 to Roman Catholics, 2 to Reformed Presbyterians, and 2 to Episcopalians. The total number of sittings provided in 90 of these places of worship was 49,272. Of day schools there were 170, of which 103 were public schools, with 8432 scholars, and 67 private, with 2918 scholars. The number of Sabbath schools was 99, with 8122 scholars, and of evening schools for adults 17, with 415 scholars. There were four literary and scientific institutions with 787 members, and 2200 volumes in their libraries.

Savings Banks.—In 1853 the county possessed three savings banks, at Falkirk, Lennoxton, and Stirling. The amount owing to depositors on November 20th, 1853, was 31,102*l.* 8*s.* 3*d.*

STISTED. [ESSEX.]

STOCKBRIDGE, Hampshire, a market-town, and the seat of a Poor-Law Union, in the parish of Stockbridge, is situated on the banks of the river Anton or Test, in 51° 6' N. lat., 1° 29' W. long., distant 9 miles W.N.W. from Winchester, and 66 miles S.W. from London. The population of the borough and parish, which are co-extensive, was 1066 in 1851. The living is a perpetual curacy, in the archdeaconry and diocese of Winchester. Stockbridge Poor-Law Union contains 14 parishes and townships, with an area of 43,843 acres, and a population in 1851 of 7367. Stockbridge is a borough by prescription, and returned two members to Parliament till the passing of the Reform Act, when it was disfranchised. The town possesses a neat town-hall. The principal street contains seven bridges—over the river Anton at the west end, the Andover Canal about the middle of the town, and five small trout streams which cross the street at different parts. The parish church was erected in the reign of Stephen. There are a chapel for Independents, and a parochial school. Parchment is manufactured to some extent. The market is held on Thursday; and on July 10th is held one of the largest fairs in the county for lambs. Races are held in the neighbourhood.

STOCKHOLM, the capital of Sweden, is situated in 59° 20' N. lat., 18° E. long., on the channel by which the Mälar Lake discharges its waters into the Baltic, about 36 miles from the sea by the windings of the channel, but not more than 24 miles in a straight line. The channel is interspersed with numerous rocky islands.

The city of Stockholm is built partly on the continent and partly on nine islands formed by the above-mentioned channel: the islands are called holmen. The Staden Island, or Stockholm, occupies the centre of the town, and contains several fine public and private buildings. The royal palace, an edifice of great architectural merit, completed in 1753, stands on an eminence, and has attached to it a large garden. It contains a library and collections of paintings, coins, and antiquities. Near the palace is the colossal statue of Gustavus III., of bronze; and in its vicinity, along the eastern shore of the island, is the proper harbour of the town, in which the largest vessels find excellent anchorage. The Staden contains also the cathedral, or St. Nicolai church, in which the kings of Sweden are now crowned; and the Riddarhus, or hall of assembly of the nobles, in front of which is a statue of Gustavus Vasa, of bronze. From the Staden a stone bridge leads to the Riddarholmen, which is much smaller than Stockholm, but which contains the old palace and the old church of Riddarholmen, in which the kings and distinguished persons born in Sweden are buried, and about 5000 flags are hung up, the trophies of the Swedes in their numerous wars. In this church are the remains of Gustavus Adolphus. Riddarholmen Island contains several other public buildings.

Söder Malm, or the southern division of Stockholm, is built on the island of the same name, which is about 3 miles long and nearly 2 miles across in the widest part; it is joined to Stockholmen by a long bridge of boats, and provided with a large lock on account of the great rapidity with which Lake Mälar sometimes discharges its waters. In the Söder Malm is the great dépôt of iron. The most remarkable of the buildings are the town-hall, the Danviken, or Great Hospital, and the Maria Magdalene and the St. Catharine church. The island of Lang Holmen, which is farther west, and is united to the Söder Malm by a bridge, contains the houses of correction; and

on Räkning Holmen, which likewise is joined to Söder Malm by a bridge, there is a park.

The Norr Malm, or northern division of the town, is on a gentle slope, which gradually rises about 200 feet above the sea-level. It is much better built than the Söder Malm, and has several fine squares and streets. A well-built bridge connects it with Stockholmen. On the finest of the squares, called that of Gustavus Adolphus, is the bronze equestrian statue of that great king. Near the squares is the king's garden, which is used as a public promenade. Among the churches of this part of Stockholm, that of Adolphus Frederick is distinguished by its beauty. The observatory is well provided with astronomical instruments and a library; there is also a botanical garden. The island of Kungsholmen, which lies west of Norr Malm, is joined to it by two bridges. It contains the great iron-foundry established by an Englishman, Mr. Owen; a large hospital, the Bible printing-office, and the royal cannon-foundry of Marieberg. Contiguous to the Norr Malm on the east is Ladugords Gärdet, part of which has been built upon, whilst another part has been converted into a royal park, called Humblegard (Hop-garden), to which the public has access. The island of Blasii Holmen has been converted into a peninsula by filling up the narrow channel which divided it from the continent, and now constitutes a portion of Norr Malm. It contains some fine buildings. Kastellholmen, a very elevated island, is planted with fine trees; a castle is built here for the defence of the entrance of the harbour.

Stockholm is distinguished for the beauty of its environs. This arises in part from the diversified channels which separate the islands on which the city is built, and the picturesque variety of the channel banks. Country-houses are dispersed over the hills surrounding the town; but the chief place of holiday resort is the zoological garden, which lies eastward of the town. It occupies a peninsula two miles long and about one mile wide. Within the zoological garden is the royal country-seat of Johansdal, formerly called Rosendal, which is surrounded by a large park. The most distinguished of the royal country-houses lie to the west of the town, on islands in the Lake of Mälarn; they are Gripsholm, Drottningholm, and Swartåjö.

Stockholm is the seat of the government, and the place where the legislative bodies generally meet. It contains the offices of the branches of administration and the superior courts of justice. Besides the Royal Society of Sciences of Stockholm, which has greatly contributed to the advancement of natural philosophy, chemistry, and natural history, there are a royal academy of literature, history, and antiquities; the Swedish academy, whose object is to promote the cultivation of the native language; an academy of military sciences; an academy of liberal arts; a musical academy; an academy of agriculture, and numerous scientific, literary, and benevolent institutions. The institutions for education are also numerous.

The population of Stockholm in 1844 was 84,161; in 1850 it was 98,070. Stockholm is the most industrious and commercial town of Sweden. There are manufactures of cloth, cotton, calico, silk, ribands, sugar, tobacco, leather, cast-iron, and soap. Large quantities of foreign, and especially English, manufactures are annually imported. Nearly the whole of the superfluous produce of the countries north and west of Stockholm is brought here, to be exported to foreign countries. It is mostly shipped in Swedish vessels. The most important article of export is iron. Timber, boards, tar, pitch, copper, cobalt, ready-built vessels, steel, bricks, and a few manufactured articles are exported. An active commerce is carried on with England, the United States of North America, Denmark, France, Prussia, Portugal, the Netherlands, and Italy. The most important articles of import are sugar, coffee, woollen manufactured goods, cotton, silk, linens, china and crockery, cheese, hides and skins, tallow and candles, dyeing-woods, raisins, tea, butter, wool, and spirits.

STOCKPORT, Cheshire, an important manufacturing town, municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parish of Stockport, is situated near the point where the rivers Thame and Goyt, by their junction, form the Mersey, in 53° 25' N. lat., 2° 8' W. long., distant 88 miles N.E. from Chester, 176 miles N.W. from London by road, and 182½ miles by the North-Western railway via Trent Valley. The population of the borough in 1851 was 58,835. The borough is governed by 14 aldermen and 42 councillors, of whom one is mayor, and returns two members to the Imperial Parliament. The living is a rectory in the archdeaconry and diocese of Chester. Stockport Poor-Law Union contains 17 parishes and townships, with an area of 30,709 acres, and a population in 1851 of 90,174.

The town of Stockport is irregularly laid out. In the centre is a large open market-place. The new market-house has a handsome front, and contains a large hall, covered by a semicircular iron roof, with lights in the crown. The town is well paved, and is lighted with gas. The market-place and the parish church are on a tolerably extensive level on the summit of the hill on which the town is built. There are four bridges in or near the town, over the Mersey, and one over the Thame. The 'old bridge' over the Mersey, near the market-place, is of one lofty arch. Below the old bridge is a bridge of 11 arches, crossing not only the river, but its valley, at an elevation of 40 feet above the water. Vernon Bridge was built by subscription in 1829. The Manchester and Birmingham branch of the North-Western railway is carried over the valley of the Mersey by a magnificent viaduct.

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The parish church, except the chancel, which is of the decorated style, is modern, having been rebuilt early in the present century, in the perpendicular style of architecture. There are in the borough 7 other places of worship belonging to the Establishment, 15 belonging to five sections of Methodists, 5 to Independents, 3 to Baptists, and 1 each to Roman Catholics, Unitarians, and Mormons. The Grammar and Free schools, founded in 1487, are under the patronage of the Goldsmiths' Company of London; the number of scholars in 1854 was 38 in the Free school, and 100 in the Grammar school; the school possesses two exhibitions of 50*l.* each at Oxford or Cambridge, tenable for 3½ years. There are also National, British, and Infant schools; schools connected with the Wesleyan Methodists and the Roman Catholics; a mechanics institute; several news-rooms; an infirmary; and a savings bank.

Stockport is one of the principal seats of the cotton manufacture. There are about 100 firms in Stockport and Heaton Norris engaged in different branches of this manufacture; there are also three cotton-printing establishments, two bleaching establishments, and several dye-houses. Besides the cotton manufacture, which is the staple of the town, the manufacture of silk goods, thread, hats, brushes, spindles, and shuttles is carried on. There are extensive engine- and machine-factories, several iron- and brass-foundries, and breweries in the town; and brick-fields in the vicinity. A branch canal communicates with the Manchester and Ashton Canal. The market is on Friday, and is the most important in Cheshire for corn, oatmeal, and cheese. There are four yearly fairs, chiefly for cattle. Petty sessions and a county court are held in the town.

STOCKTON, distinguished as STOCKTON-UPON-TEES, Durham, a market-town, sea-port, municipal borough, and the seat of a Poor-Law Union, in the parish of Stockton-upon-Tees, is situated on the left bank of the river Tees, about four miles from its mouth, in 54° 34' N. lat., 1° 18' W. long., distant 20 miles S.E. by S. from Durham, 242 miles N. by E. from London by road, and 247½ miles by the Great Northern and Leeds Northern railways. The population of the borough in 1851 was 1867; that of the town of Stockton was 9808. The borough is governed by 6 aldermen and 18 councillors, of whom one is mayor. The living is a vicarage in the archdeaconry and diocese of Durham. Stockton Poor-Law Union contains 42 parishes and townships, with an area of 88,774 acres, and a population in 1851 of 44,433.

Stockton was at an early period the residence of the bishops of Durham, who had a moated manor-house here, which afterwards was called the castle. The castle was demolished in 1652. The traces of the moat and embankment still mark the site. The river Tees approaches Stockton in a northward direction, and then makes a sudden bend towards the east. The town is laid out with considerable regularity; the principal street is broad, and extends nearly a mile from south to north. The wharf is on the bank of the river, just above the bend, and runs parallel to the High-street. At the southern extremity of the High-street a road from it crosses the Tees into Yorkshire by a stone bridge of five arches. The houses are for the most part of brick. Besides the parish church, a spacious brick-building erected early in the last century, there is another, called Holy Trinity church, a neat gothic edifice with a square tower, surmounted with an octagonal spire. There are places of worship for Independents, Baptists, Methodists, Presbyterians, Quakers, Roman Catholics, and Unitarians; National, British, Infant, Wesleyan, and Roman Catholic schools; a school of Industry for girls; a Blue-Coat charity school; a mechanics institute; news-rooms; a dispensary, and a savings bank. The town-hall is a quadrangular building, surmounted by a clock-tower and spire. There are a custom-house, assembly-rooms, billiard-rooms, and a small theatre.

The principal manufacture of Stockton is that of linen and sail-cloth; ship-building, rope and sail-making, and yarn and worsted spinning are carried on; there are also iron- and brass-foundries, breweries, and several corn-mills. The navigation of the river Tees has been improved by a cut just below the town, whereby a considerable bend is avoided. The chief imports are timber, deals, masts, spars, staves, iron, hemp, flax, tallow, oak-bark, linseed, clover-seed, hides, &c., from foreign parts; and groceries, wine, spirits, and colonial produce brought coastwise. The exports to foreign parts are chiefly lead, and that in small quantities: the exports coastwise to London, Leith, Hull, Sunderland, &c., are chiefly of flour, butter, cheese, bacon, oak, timber, linen, linen and worsted yarn, lead, and especially coal. The number of vessels registered as belonging to the port of Stockton on December 31st 1853 was—157 sailing-vessels of 28,408 tons aggregate burden, and 26 steam-vessels of 608 tons aggregate burden. During 1853 there entered the port 1000 sailing-vessels of 98,274 tons, and 1 steam-vessel of 13 tons burden, and cleared 3161 sailing-vessels of 305,540 tons burden, and 18 steam-vessels of 1183 tons. By the Stockton and Darlington, the Stockton, Hartlepool, and Clarence, and the Leeds Northern railways, which have stations at Stockton, the town is placed in connection with the whole railway system of England and Scotland; there are also several branch and junction lines for local convenience, in conveying the produce of the numerous collieries. Markets are held on Wednesday and Saturday. Two yearly fairs are held, besides a cattle-fair, or great market, on the last Wednesday of every month. There are extensive coal-works and

some brick-yards near the town, and salmon and other fisheries in the Tees. A county court is held in the town.

STOCKTON. [CALIFORNIA.]

STOGUMBER. [SOMERSETSHIRE.]

STOKE BY NAYLAND. [SUFFOLK.]

STOKE DAMEREL. [PLYMOUTH.]

STOKE FERRY. [NORFOLK.]

STOKE POGES. [BUCKINGHAMSHIRE.]

STOKE, distinguished as STOKE-UPON-TRENT, Staffordshire, a market-town, parliamentary borough, and the seat of a Poor-Law Union, in the parish of Stoke, is situated in 53° 0' N. lat., 2° 10' W. long., distant 16 miles N. by W. from Stafford, 148 miles N.W. from London by road, and 146½ miles by the North Western and North Staffordshire railways. The population of Stoke parliamentary borough, which includes an extensive district, was 84,027 in 1851. The borough returns two members to the Imperial Parliament. The living is a rectory in the archdeaconry of Stafford and diocese of Lichfield. Stoke Poor-Law Union consists of the parish of Stoke, with an area of 10,490 acres, and a population in 1851 of 57,942.

In this district, the chief seat of the earthenware manufacture of England, familiarly designated "the Potteries," are the market-towns of Burslem, Hanley, Lane-End (with Longton), Stoke, and Tunstall Court. BURSLEM is described in a separate article. Lane-End, Longton, Hanley, and Tunstall are noticed under STAFFORDSHIRE. Stoke has many modern houses, built on a regular plan. The town-hall is a neat building, with an engine and lock-up-house beneath. The church is a modern gothic structure, with a tower 112 feet high. The Baptists and Roman Catholics have places of worship, and there are National schools and a Diocesan school. The earthenware manufactories of Stoke are among the most important in the district. There are numerous coal-works in the vicinity. The market is on Saturday, and is well supplied.

STOKECLIMSLAND. [CORNWALL.]

STOKESLEY, North Riding of Yorkshire, a market-town, and the seat of a Poor-Law Union, in the parish of Stokesley, is situated in the fertile district of Cleveland, in 54° 28' N. lat., 1° 11' W. long., distant 42 miles N. by W. from York, and 238 miles N.N.W. from London. The population of the parish of Stokesley in 1851 was 2446. The living is a rectory in the archdeaconry of Cleveland and diocese of York. Stokesley Poor-Law Union contains 28 parishes and townships, with an area of 60,374 acres, and a population in 1851 of 8666.

Stokesley is washed on the south by a remarkably fine trout stream, a branch of the river Leven. At a distance of from four to six miles, the Cleveland Hills rise in the form of a semicircular amphitheatre, of which Stokesley is the centre. The town consists chiefly of one street, with many well-built houses, and is lighted with gas. Besides the parish church, there are places of worship for Wesleyan, Primitive, and Calvinistic Methodists, and Independents. Preston Grammar school had 42 scholars in 1854. The National schools, called the schools of the Langbaugh West Society, are partly endowed. There are a dispensary, a mechanics institute, and a savings bank. An annual court-leet, a county court, and weekly petty sessions are held. The town has a considerable manufacture of linen. A good market is held on Saturday, and fairs three times in the year.

STOLPE. [CÖSLIN.]

STONE, Staffordshire, a market-town and the seat of a Poor-Law Union, in the parish of Stone, is situated on the left bank of the river Trent, in 52° 54' N. lat., 2° 8' W. long., distant 7 miles N. by E. from Stafford, 141 miles N.W. by W. from London by road, and 138 miles by the North-Western and North Staffordshire railways, via Trent Valley. The population of the town of Stone in 1851 was 3443. The living is a perpetual curacy in the archdeaconry of Stafford and diocese of Lichfield. Stone Poor-Law Union contains 10 parishes and townships, with an area of 68,524 acres, and a population in 1851 of 19,344.

The principal street of the town of Stone is a portion of the road from London to Liverpool. The river Trent is here crossed by a bridge. The town is lighted with gas and paved. The parish church contains a marble monument to the memory of Earl St. Vincent, with a bust of the earl by Chantrey. Christ church is a modern district church, erected in 1840. The Wesleyan Methodists, Independents, and Roman Catholics have places of worship. The Free Grammar school, founded in 1558, is free to six boys of the parish, and to 24 others on payment of a small fee. There are National and Infant schools, a mechanics institution, a literary society, and a savings bank. Shoemaking, tanning, malting, and brick-making are carried on. A county court is held. Tuesday is the market-day; a fair for cattle is held fortnightly; markets for cheese and bacon are held in April and November, and for cattle and sheep on August 5th. Some remains of an ancient Augustinian monastery are situated near the parish church.

STONE. [KENT.]

STONEHAVEN. [KINCARDINESHIRE.]

STONEHENGE. [WILTSHIRE.]

STONEHOUSE. [GLOUCESTERSHIRE; LANARKSHIRE; PLYMOUTH.]

STONEFYRD. [KILKENNY.]

STONEHURST. [LANCASHIRE.]

STORNOWAY. [ROSS-SHIRE.]

STORRINGTON. [SUSSEX.]

STOURBRIDGE, Worcestershire, a market-town, and the seat of a Poor-Law Union, in the parish of Old Swinford, is situated on the left bank of the river Stour, in 52° 27' N. lat., 2° 8' W. long., distant 23 miles N. by E. from Worcester, 122 miles N.W. by W. from London, and 125 miles by the North-Western and Oxford Worcester and Wolverhampton railways. The population of the town of Stourbridge in 1851 was 7847. The living is a perpetual curacy, in the archdeaconry and diocese of Worcester. Stourbridge Poor-Law Union contains 17 parishes and townships, with an area of 16,200 acres, and a population in 1851 of 57,850.

Stourbridge derives its name from its bridge over the Stour. The bridge is of stone, and forms at this place the communication between Worcestershire and Staffordshire. The town is rather irregularly built. The market-house is a spacious modern structure. Besides the church, which was built by subscription in 1742, there are places of worship for Independents, Wesleyan Methodists, Baptists, Unitarians, Quakers, and Roman Catholics. The Free Grammar school, founded by Edward VI. in 1551, is under the patronage of eight governors, and had an income in 1837 of 462*l.* a year from rent; the number of scholars in 1854 was 44. There are endowed National schools and an Infant school. The manufactures of Stourbridge consist chiefly of iron, glass, and fire-bricks. The bricks are made of the Stourbridge clay, which has long been celebrated for its excellence in resisting the action of fire; crucibles are also made of it.

STOURPORT. [WORCESTERSHIRE.]

STOW, a hundred in the county of Suffolk, which with several parishes in the adjoining hundred of Blackbourn, has been constituted a Poor-Law Union. Stow Union, the seat of which is at STOWMARKET, contains 34 parishes and townships, with an area of 55,342 acres, and a population in 1851 of 21,110.

STOW-ON-THE-WOLD, Gloucestershire, a market-town, and the seat of a Poor-Law Union, in the parish of Stow-on-the-Wold, is situated in 51° 56' N. lat., 1° 43' W. long., distant 26 miles E. by N. from Gloucester, and 82 miles W. by N. from London. The population of the parish in 1851 was 2250. The living is a rectory, in the archdeaconry of Gloucester and diocese of Gloucester and Bristol. Stow-on-the-Wold Poor-Law Union contains 28 parishes and townships, with an area of 41,131 acres, and a population in 1851 of 9982. The streets are irregularly arranged, and the houses, which are built of stone, are in general low. The parish church is a substantial structure, erected during the 14th and 15th centuries. In the town are a chapel for Baptists, a Free Grammar school, founded in 1609, which had 120 scholars in 1854, National and Infant schools, and a savings bank. Shoe-making affords considerable employment. The market is held on Thursday; there are fairs on May 12th and October 24th.

STOWE. [BUCKINGHAMSHIRE.]

STOWMARKET, Suffolk, a market-town, and the seat of the Stow Poor-Law Union, in the parish of Stowmarket, is situated on the river Gipping, in 52° 11' N. lat., 0° 59' E. long., distant 12 miles N.N.W. from Ipswich, 76 miles N.E. from London by road, and 80 miles by the Eastern Counties and Eastern Union railways. The population of the town of Stowmarket in 1851 was 8161. The living is a vicarage, in the archdeaconry of Suffolk and diocese of Norwich.

Stowmarket town contains some well-built houses, and is lighted with gas. The parish church is a handsome building, partly decorated and partly perpendicular in style; the tower is surmounted with a wooden spire, 120 feet high. The Baptists and Independents have places of worship, and there are National schools. There are an iron-foundry, and a small manufactory of rope, twines, and sacking. The Gipping has been made navigable up to the town, and timber, deal, coals, and slate, are brought up from Ipswich. The market, on Thursday, is well supplied with corn, cattle, and general merchandise; there are three yearly fairs.

STRABANE, County of Tyrone, Ireland, a market-town and the seat of a Poor-Law Union, is situated on the river Mourne, and on the Dublin and Londonderry road, in 54° 50' N. lat., 7° 28' W. long., distant 20 miles N.N.W. from Armagh, and 130 miles N.N.W. from Dublin by road. The population in 1851 was 5079, besides 628 inmates of the Union workhouse. Strabane Poor-Law Union comprises 24 electoral divisions, with an area of 134,341 acres, and a population in 1851 of 49,161. The town consists of an irregular group of streets and lanes, on the right bank of the river, and a suburb of a single winding street on the left bank. The more modern streets contain some handsome houses. Besides the parish church there are chapels for Roman Catholics, Presbyterians, and Methodists, several schools, a savings bank, a court-house, fever-hospital, dispensary, and bridewell. A canal, four miles long, between the Foyle and Strabane, facilitates its trade with Londonderry. The linen trade is carried on here. Strabane has an important salmon-fishery on the river Foyle. Quarter and petty sessions and a manor-court are held in the town. Fairs are held sixteen times in the year. Strabane returned two members to the Irish Parliament, but the corporation was dissolved by the Irish Municipal Reform Act.

STRADBALLY. [QUEEN'S COUNTY.]

STRALSUND, one of the three governments into which the Prussian province of Pomerania is divided, consists of what was formerly Swedish Pomerania, with the island of Rügen and some

other islands. It is bounded N. by the Baltic, E. and S. by the Peene, which separates it from the government of Stettin, and W. by Mecklenburg-Schwerin, from which it is divided by the navigable rivers Trebel and Reckenitz. The area is 1672 square miles, with a population of 187,058 at the end of 1849. The surface of the government is flat. The soil is a heavy loam and black mould of superior fertility. The products consist chiefly of wheat, rye, barley, peas, flax, and tobacco. The breed of horned cattle is not numerous, for want of sufficient pasture; sheep and hogs however are reared in great numbers, and there are immense flocks of geese. There are no manufactures of any importance except perhaps tobacco and spirits. The exports are flour, malt, and corn. The fisheries are very profitable.

Stralsund, the capital of the government, is situated in 54° 15' N. lat., 13° 8' E. long., in a sandy plain, bounded on one side by the Strait of Gellen (which separates the island of Rügen from the continent), and on the other sides by lakes and marshes, so that the town is connected with the continent only by bridges. The fortifications have been greatly strengthened in recent times. Stralsund is a gloomy place; the houses are built in the old style, the streets irregular, and the squares and market-places inconsiderable: it is however clean and well paved. The three principal churches are built in the gothic style, and contain many fine paintings. Among the other public buildings are the government-house, the town-hall (which contains the public library), the gymnasium (which has a library and cabinet of medals), the mint, the arsenal, and the water-works by which the city is supplied with good water. The manufactures consist of woollens, linen, sugar, starch, soap, candles, tobacco, leather, looking-glasses, household furniture, and playing-cards. There are brandy distilleries and oil-mills. The chief exports are wheat, malt, timber, wool, linen, &c. The harbour is spacious and safe, and deep enough for ships drawing 15 feet water. Stralsund was built about the year 1209, and was a member of the Hanseatic League. The town was unsuccessfully besieged by Wallenstein in 1628. In 1678 it was taken by the elector Frederick William of Brandenburg; in 1715 by Frederick William I., king of Prussia; and in 1807 by the French. By the treaty of Kiel in 1810 it was ceded with all Swedish Pomerania to Denmark, and by Denmark in 1815 to Prussia. The population of Stralsund is about 17,000.

The most important of the other towns of the government of Stralsund are—*Barth*, a small seaport town with about 5000 inhabitants, shipbuilding docks, and some trade in corn, wool, &c., is situated at the mouth of the river Barth, in an inlet of the Baltic, 10 miles N.W. from Stralsund. *Greifswalde*, 20 miles S. by E. from Stralsund, and about 2 miles from the mouth of the Ryek, which forms a good harbour for small vessels. This town is pretty well built, surrounded by promenades formed out of the old ramparts, and has a population of 12,000. It has a university, a botanical garden and observatory, a gymnasium, and a training-school. The industrial products are soap, leather, tobacco, oil, salt, &c. Ship-building and the coasting trade are actively carried on; steamers ply regularly in the open season to Sweden. *Wolgast*, a small seaport town at the mouth of the Peene, has shipbuilding yards, manufactures of soap and tobacco, and about 5000 inhabitants, who have some coasting trade. *Pudus*, on the south coast of the isle of Rügen, gives title to a prince, and is much resorted to in summer for its baths.

STRANGFORD. [DOWNSHIRE.]

STRANORLAR, County Donegal, Ireland, a market-town and the seat of a Poor-Law Union, is situated near the left bank of the river Finn, on the road from Londonderry to Donegal, in 54° 48' N. lat., 7° 46' W. long., distant by road 14 miles W. by S. from Lifford, and 144 miles N.N.W. from Dublin. The population in 1851 was 512. Stranorlar Poor-Law Union comprises 11 electoral divisions, with an area of 121,161 acres, and a population in 1851 of 21,970. The town contains a church, a Roman Catholic chapel, two Presbyterian meeting-houses, and a dispensary. There are several large bleaching-grounds near the town. Petty sessions are held monthly. Fairs are held six times a year.

STRANRAER. [WIGTONSHIRE.]

STRASBOURG, a town in France, capital of the department of Bas-Rhin, is situated on the Ill at a distance of about 2 miles from the left bank of the Rhine, 321 miles by railway E. from Paris, in 48° 34' 57" N. lat., 7° 44' 16" E. long., 473 feet above the level of the sea, and had 61,242 inhabitants in the commune in 1851, exclusive of the garrison and other sections of the floating population. A railroad 89 miles in length runs up the left bank of the Rhine from Strasbourg through Colmar and Mulhausen to Basle.

Strasbourg occupies the site of the Roman *Argentoratum*, which was in the territory of the Tribocci. It was near this town that Julian defeated the Allemans (A.D. 357). At a subsequent period it appears to have fallen into the hands of the Allemans, from whom it was taken by Clovis and the Franks. The Geographer of Ravenna calls it *Strasburgium*, which was subsequently modified into *Strasburg* and *Strassburg*. The Reformation was introduced in 1523, and the Protestants obtained possession of several of the churches. In 1681 Strasbourg was ceded with the rest of Alsace by Austria to Louis XIV., who so improved the defences as to render it one of the strongest fortresses in Europe.

The town stands in a flat situation, in form irregular; in circuit 5

or 6 miles. It is surrounded by a wall strengthened by bastions, ditches, and outworks, and has at its eastern extremity a citadel, with five bastions, constructed by Vauban, the outworks of which extend as far as the Rhine. This river is crossed by a bridge of boats to Kehl, a fortress in Baden, on the right bank, which is connected by a short branch with the railway from Basle to Frankfurt-am-Mayn. Strasbourg is entered by seven gates.

The river Ill flows through the town in a north-north-east direction. After it enters the city it divides into several branches, which reunite before it quits the place. The principal arm, which bears the name of the Bruche, is navigable, and receives on its right bank the Canal of the Rhine. The river can be made to inundate the neighbourhood, by means of a sluice at the point where it enters the town. There are about 50 bridges, some of stone, others of wood. Some of the branches of the Ill seem to have been ditches dug to encircle and defend the town before it had attained its present extent.

The city is irregularly built. The principal streets are wide enough and well laid out, and several of the squares are spacious and regular; but the greater number of the streets are narrow and crooked. The houses are all solidly built of stone, high, and, in many instances, surmounted by lofty roofs furnished with two or three tiers of windows. These picturesque high-roofed houses are gradually disappearing before modern improvements.

The principal public building is the cathedral of Notre-Dame, a Gothic edifice of singular beauty, which was founded in 1015 and not completed till 1439. The interior, consisting of a nave and aisles, transepts and choir, is 357 feet long and 79 feet high. The nave is 85 feet wide, and is separated from the aisles by nine massive pillars on each side. The choir has no aisles: it is 67 feet wide and lower than the nave. The interior is lighted through fine stained glass windows, one of which, over the great western door, is a magnificent rose window 48 feet in diameter. The stone pulpit, unequalled for the richness, variety, and elaborateness of its sculptured ornaments; an organ of admirable power and softness; and a remarkable astronomical clock; in the south transept are remarkable objects of the interior. The clock, which was made in 1571, after going for about 200 years went out of order and remained useless for nearly 50 years; it was repaired a few years ago by a watch-maker of the town, and still maintains its character as a most elaborately-finished, complicated and surprising piece of machinery. The most striking part of the cathedral is its western front, a masterpiece of enriched architecture. It is divided into three compartments by ornamented buttresses; and each compartment again into three portions by horizontal bands. The lower portions are occupied by three doorways, that in the centre being the most ornamented and the loftiest. In the second story the most striking feature is the enormous marygold window above mentioned; and three equestrian statues of Clovis, Dagobert, and Rudolph of Hapsburgh, in canopied openings in the buttresses. A fourth canopied opening is unoccupied. The third or upper portion has some beautiful windows. The northernmost of the three compartments is surmounted by a tower and spire. At each of the four corners of the tower is a spiral staircase inclosed in open work. The spire rises to the height of 466 feet above the pavement. It was originally designed to erect a similar spire over the south portal. The building was much injured during the first French revolution, but it has been since restored.

Of the other churches the most remarkable are those of St. Étienne (the oldest structure in Strasbourg), Sainte-Aurelie, St. Pierre-le-Vieux, St. Jean, St. Pierre-le-Jeune (the choir of which belongs to the Catholics, the nave to the Lutherans); the Temple Neuf (formerly a Dominican, now a Lutheran church); St. Louis; and St. Thomas, which belongs to the Lutherans and contains a mausoleum of Marshal de Saxe. The Temple Neuf has some lancet-shaped stained glass-windows of exquisite beauty. Among the other public buildings are—the ancient castle, with a terrace-walk on the Bruche; the episcopal palace; the office of the prefect; the town-hall; the custom-house; the court-house; the public granary; the theatre, which is adorned with an Ionic colonnade; the academy buildings, which contain collections of natural history and anatomy, and a medical library of 12,000 volumes; the college buildings; the episcopal seminary; the civil hospital; the orphan asylum; the corn-market, &c. The public library, consisting of 180,000 volumes, is kept in the building of which the Temple Neuf forms a part. Among the military structures the principal are—the arsenal, the artillery school, the cannon foundry, the Finkmatte and several other barracks, and the hospital. The vegetable market is adorned with a statue of Gutenberg; on an island in the Rhine, seen from the road to Kehl, is a monument in honour of Desaix; and on the Polygon, or artillery exercising ground, about a mile out of the town, is a monument to General Kleber. There are several public walks.

The trade of the town is very considerable: its manufactures include jewellery, metal buttons, starch, alum, oil of vitriol, white-lead, steel, cutlery, pins, combs, cast-iron goods, earthenware, porcelain, enamel, soap, oil from seeds, chicory, marocco and other leather, straw and other hats, woollen and cotton stuffs, cotton-yarn, hosiery, printed flannels, sail-cloth, oil-cloth, thread, carpeting, furs, paper-hangings, playing-cards, &c. There are bleach-grounds, dye-houses, rope-walks, tan-yards, breweries, printing-offices, plaster-kilns, tile-yards, an iron-

forge, a type-foundry, sugar-refineries, a snuff-manufactory, &c. There is a considerable trade carried on with other parts of France, and with Holland, Germany, Switzerland, and Italy, by means of the Rhine and the Ill and their connected navigation, and by railroads; much business is done also in corn, wine, tobacco, madder, hemp, hops, saffron, &c. Four important yearly fairs are held. Steamers ply on the Rhine between Strasbourg and Mayence.

Strasbourg gives title to a bishop, who is suffragan of the archbishop of Besançon, and whose diocese comprises the departments of Bas-Rhin and Haut-Rhin. It has a university-academy, which includes the same two departments in its limits. There are two seminaries for the Roman Catholic priesthood; a seminary of Lutheran theology; a college; schools of midwifery and pharmacy; a training school, a museum, an observatory, a botanic garden, where lectures are delivered; a society of agriculture, and public baths. Strasbourg is the seat of a Lutheran consistory, and of a consistorial synagogue.

STRATFORD. [ESSEX.]

STRATFORD, FENNY. [BUCKINGHAMSHIRE.]

STRATFORD, STONY, Buckinghamshire, a market-town, in the parish of Stony Stratford, is situated on the right bank of the river Ouse, which here separates the county from Northamptonshire, in 52° 3' N. lat., 0° 51' W. long., distant 7 miles N.E. from Buckingham, and 52 miles N.W. from London by road. The population was 1757 in 1851. The living is a perpetual curacy in the archdeaconry of Buckingham and diocese of Oxford. The town extends for about a mile along the line of the ancient Watling-street. St. Giles's, the parish church, was rebuilt in 1776; the church of St. Mary Magdalen was destroyed, except the tower, in 1742, in a fire which consumed a considerable part of the town. The Wesleyan Methodists, Independents, and Baptists have places of worship. A school for boys is partly supported by endowment. The only manufacture is that of lace. The market is held on Friday: fairs are held three times in the year.

STRATFORD-UPON-AVON, Warwickshire, a municipal borough, market-town, and the seat of a Poor-Law Union, in the parish of Stratford-upon-Avon, is situated on the right bank of the river Avon, in 52° 12' N. lat., 1° 43' W. long., 9 miles S.W. from Warwick, 96 miles N.W. from London by road, and 106 miles by the Great Western railway, and the Stratford branch of the Oxford Worcester and Wolverhampton railway. The population of the town in 1851 was 3372. The borough is governed by 4 aldermen and 12 councillors, one of whom is mayor. The living is a vicarage in the archdeaconry and diocese of Worcester. Stratford-upon-Avon Poor-Law Union contains 36 parishes and townships, with an area of 79,051 acres, and a population of 20,789 in 1851.

Stratford was a place of some consequence three centuries before the Conquest. The manor was included in the possessions of the bishopric of Worcester. The principal interest of the town is derived from its having been the birth-place of Shakspeare (1564), the place to which he retired in his maturer years, and where, in 1616, he died. In 1769 a festival termed 'the Jubilee' was celebrated at Stratford, in honour of Shakspeare, under the direction of Garrick; and a few years ago it was proposed to hold a triennial commemorative festival, but the series has not been kept up.

The town is approached from London by a long stone bridge of 14 pointed arches, erected in the reign of Henry VII. at the sole charge of Sir Hugh Clopton, lord mayor of London, and widened of late years. By another bridge just below, a railroad is carried across the river, and at the south end of the town is a wooden foot-bridge. The streets are irregularly laid out, but the principal ones are clean, well paved, and lighted with gas. The church is at the south-eastern corner of the town, near the bank of the river. It is a large and very handsome cruciform structure, having nave, chancel, aisles, and transept, with a fine tower and spire. The transept, tower, and some parts of the nave are good examples of early English. The upper part of the tower is of decorated character, with curious circular windows, having varied tracery. The chancel is a fine specimen of late perpendicular. In the interior, on the north wall of the chancel, is Shakspeare's monument. About 1840 the church was thoroughly repaired and restored, both externally and internally, at great expense and with much taste. There are several ancient sedilia with canopies in the interior, and two elegant modern carved stone pulpits. The remains of Shakspeare are buried in the chancel, on the north side. The monument against the wall is surmounted by a half-length effigy of Shakspeare, executed with some taste and skill. Stratford church was formerly collegiate.

Besides the parish church there is a chapel of ease, anciently the chapel belonging to the Guild of the Holy Cross. Some time after the dissolution of monastic institutions, the possessions of this fraternity were granted to the corporation of Stratford for specific purposes. The chapel is of late perpendicular character. Adjoining the chapel is the hall of the guild, an ancient building, which has undergone much alteration. The lower part is used for the business of the corporation, the upper part is occupied by the Grammar school. The Wesleyan and Primitive Methodists, Independents, Baptists, and Roman Catholics have places of worship. There are National and British schools. The Free Grammar school, founded in 1482 (and in which according to tradition Shakspeare was educated), has an income

from endowment of 545*l.*, and had 50 scholars in 1851. There are several town charities which are managed by 12 trustees; also a savings bank. A county court is held in the town. In the principal room of the town-hall are a portrait of Shakspeare by Benjamin Wilson, and one of Garrick by Gainsborough. A statue of Shakspeare stands in a niche on the northern front of the building. There is a theatre which stands within the precincts of Shakspeare's garden.

The occupations of the inhabitants of Stratford are chiefly agricultural, or dependent upon agriculture. The market, a considerable one for corn and cattle, is held on Friday. Eleven fairs are held in the year. The navigation of the Avon commences at Stratford. The Stratford-upon-Avon canal runs from the north side of the town to the Worcester and Birmingham Canal near Birmingham. The Stratford and Moreton goods railway extends from near the termination of the canal to near the town of Moreton-in-Marsh, Gloucestershire, 16 miles. Coal from the South Staffordshire coal-field is sent forward by it, and stone and agricultural produce are brought back. Part of the ancient house, in which Shakspeare is said to have been born, and which belonged to him at his death, is standing in Henley-street, on the north side of the town. A room in it, pointed out as the chamber of his birth, is covered with the names of visitors. This house and the adjoining tenements which originally formed part of it, were purchased a few years ago for the nation at a cost of about 4000*l.* Among the other note-worthy objects in Stratford and its vicinity are a curious old half-timber house in the High-street; the cottage of Anne Hathaway, Shakspeare's wife, in the adjoining parish of Shrottery; and Charlecote house, the seat of the Lucys, a few miles higher up the Avon.

STRATHAVEN. [LANARKSHIRE.]

STRATHFIELD SAYE. [HAMPSHIRE.]

STRATHMIGLO. [FIFESHIRE.]

STRATTON, Cornwall, a market-town and the seat of a Poor-Law Union, in the parish of Stratton, is situated near the shore of the Bristol Channel, in 50° 50' N. lat., 4° 30' W. long., distant 15 miles N.N.W. from Launceston, and 221 miles W.S.W. from London. The population of the parish of Stratton in 1851 was 1696, of which number the town contained about one-fourth. The living is a vicarage in the archdeaconry of Cornwall and diocese of Exeter. Stratton Poor-Law Union contains 11 parishes and townships, with an area of 54,406 acres, and a population in 1851 of 8580. Stratton is situated near the northern extremity of the county, on a rivulet which runs into the sea at Bude Haven. The harbour at Bude admits only small vessels.

[CORNWALL.]

STRAUBING, a town in Lower Bavaria, is situated in 48° 53' N. lat., 11° 35' E. long., on an eminence on the right bank of the Danube, 25 miles E. by S. from Ratisbon, and has about 9000 inhabitants. The town, which is well built, is divided into the upper and lower town, and is surrounded with walls, in which there are four principal gates. The moat is converted into gardens. The principal public buildings are the seven churches, the palace, the government-house, the gymnasium, and the town-house. There are four hospitals, a training-school, and an Ursuline convent. The handsomest part of the town is the great square, in which are the church of the Holy Trinity, the palace, the town-house, the government-house, and the church of St. James and St. Veit. This town has a good trade on the Danube, and great corn and cattle markets. The surrounding country is remarkably fertile.

STREATHAM. [SURREY.]

STRELITZ. [MECKLENBURG.]

STRETFORD. [LANCASHIRE.]

STRETTON, CHURCH. [CHURCH STRETTON.]

STRICHEN. [ABERDEENSHIRE.]

STROKESTOWN, Roscommon, Ireland, a market-town and the seat of a Poor-Law Union, is situated on the road from Dublin to Ballina, in 53° 47' N. lat., 8° 4' W. long., distant by road 12 miles N.N.E. from the town of Roscommon, and 90 miles N.W. by W. from Dublin. The population in 1851 was 1353. Strokestown Poor-Law Union comprises 20 electoral divisions, with an area of 90,036 acres, and a population in 1851 of 30,288. The parish church is a handsome octagonal structure with a tower and spire. There is a Roman Catholic chapel. The other public buildings are a court-house, a dispensary, a Union workhouse, and a bridewell. The market is held weekly on Friday. Fairs are held four times a year. Quarter and petty sessions are held in the town. Bawn House, the seat of Lord Hartland, is a massive edifice consisting of a centre with an Ionic portico and advancing wings. Near it are the ruins of an ancient church, now used as a family burial-place. The demesne contains an extensive deer-park.

STROMA, ISLAND. [CAITHNESS-SHIRE.]

STROMBOLI. [LIPARI ISLANDS.]

STROMNESS. [ORKNEY ISLANDS.]

STRONGOLL. [CALABRIA.]

STRONSA. [ORKNEY ISLANDS.]

STRÖMSTAD. [SWEDEN.]

STROOD. [KENT.]

STROUD, Gloucestershire, a market-town, parliamentary borough, and the seat of a Poor-Law Union, in the parish of Stroud, is situated in a picturesque valley at the junction of two of the streams which form the Stroud Water (sometimes called the Frome), in 51° 45'

N. lat., 2° 12' W. long., distant 9 miles S. by E. from Gloucester, 101 miles W. by N. from London by road and by the Great Western railway. The population of the parliamentary borough in 1851 was 36,535. The borough returns two members to the Imperial Parliament. The living is a perpetual curacy in the archdeaconry of Gloucester, and diocese of Gloucester and Bristol. Stroud Poor-Law Union contains 15 parishes and townships, with an area of 43,720 acres, and a population in 1851 of 37,386.

The borough of Stroud comprehends an important part of the west of England clothing district. The mills are situated on streams in deep ravines; the houses are built on the hill sides, in a scattered and irregular manner, and the valleys are studded with houses and thickly inhabited. The Stroud water has long been celebrated as being peculiarly adapted for use in the process of dyeing scarlet cloth. The town of Stroud is lighted with gas and paved, and contains many good houses. New subscription rooms have been recently erected. The parish church is a large building of various dates; it consists of a nave, chancel, and side aisles, with a tower and spire at the western end. There are also Trinity church, erected in 1837, chapels for Independents, Baptists, and Wesleyan and Primitive Methodists; National, British, and Infant schools; a dispensary, and a casualty hospital. The market is on Friday, and there are cattle-fairs on May 10th and August 21st. A county court is held.

STRYMON. [AMPHIPOLIS; MACEDONIA.]

STUBBEKIOBING. [FALSTER.]

STUHLWEISSENBERG. [HUNGARY.]

STURMINSTER, or STURMINSTER NEWTOWN CASTLE, Dorsetshire, a market-town and the seat of a Poor-Law Union, in the parish of Sturminster Newtown Castle, is situated in 50° 55' N. lat., 2° 18' W. long., distant 22 miles N.N.E. from Dorchester, and 109 miles W.S.W. from London. The population of the parish of Sturminster in 1851 was 1916, of which number the town contained about one-half. The living is a vicarage in the archdeaconry of Dorset and diocese of Salisbury. Sturminster Poor-Law Union contains 19 parishes and townships, with an area of 37,474 acres, and a population in 1851 of 10,382. Sturminster is situated in a fertile vale chiefly on the left bank of the river Stour; the two divisions of the town (Sturminster on the left, and Newtown Castle on the right bank) being connected by a causeway and a bridge of six arches. The market-house is a very ancient building; near it is the base of a cross, on four steps. The parish church is a handsome edifice, lately rebuilt, consisting of a chancel, nave, two aisles, and an embattled tower. The Wesleyan and Primitive Methodists have places of worship. There are National schools and a literary and scientific institution. The market for corn is held on Thursday. There are large markets for cattle on each alternate Thursday, and fairs on May 12th and October 24th.

STUTTGART, the capital of the kingdom of Würtemberg, is situated almost in the centre of the kingdom, within two miles of the left bank of the Neckar, in 48° 46' N. lat., 9° 10' E. long., 810 feet above the level of the sea, and has about 30,000 inhabitants. It lies at the bottom of a valley, surrounded on three sides by mountains and hills, which are covered with vineyards and gardens. The old part of the city is ill-built, the streets being narrow and irregular, and the houses, for the most part, of wood. The more modern parts have straight streets, intersecting each other at right angles, and contain many handsome buildings. The finest street is the Königs Strasse, which crosses the whole city and passes one end of the square, in which the old and new palaces and the theatre are situated. The new palace is a noble edifice, consisting of a centre and two wings; in front of it is a spacious parade. The gardens and grounds extend to the royal country-seat of Rosenstein, near Kannstadt. In the vicinity of the palace there are several public institutions. Among other buildings deserving notice are the gymnasium, the former military academy, the old palace, the opera-house, the foreign office, the royal mews, the palace of the estates of the kingdom, the new hospital; a colossal bronze statue of Schiller, designed by Thorwaldsen, has been erected in front of the Stiftskirche, which stands behind the old palace, and contains monuments of the dukes of Würtemberg; and the three barracks, which are among the most considerable buildings in the city. There are numerous public and private collections of works of art, and several libraries; the public royal library contains 200,000 volumes. The king's private library of 30,000 volumes contains valuable old works and manuscripts, and a great variety of modern publications. Stuttgart has a gymnasium, an academy of arts, a school of arts, a botanic garden, a veterinary school, a statistical society, a savings bank, and numerous useful and charitable institutions. The manufactures of Stuttgart comprise linen and woollen-cloths, silk, cotton, gloves, carpets, shawls, &c., articles in gold, silver, and bronze; mathematical, philosophical, optical, and musical instruments; cabinet furniture, lacerated ware, and carriages. The bark trade is extremely flourishing. The city is well situated for trade, the Neckar connecting it with the navigation of the Rhine. Railways unite it with Ulm, Augsburg, Munich, and Friedrichshafen, on the Lake of Constance; and a line running west-north-west from Stuttgart, joins the trunk-line of railway on the right bank of the Rhine at Bruchsal.

The name of Stuttgart first occurs in 1229. In 1286 it was besieged for seven weeks by the emperor Rudolph I. In 1320 the counts of

Württemberg fixed their residence here, and since 1482 it has been the capital of all the possessions of the house of Würtemberg.

STYRIA, a Crownland of Austria, formerly styled the Duchy of Styria, is situated between 45° 54' and 47° 50' N. lat., 13° 30' and 16° 25' E. long. It is bounded N. by the archduchy of Austria, W. by Illyria, S. by Illyria and Croatia, and E. by Croatia and Hungary. The northern and western part of the country is covered with high mountains, which are called by the general name of the Styrian Alps. One branch of these mountains separates the valley of the Enns from that of the Mur, runs south-east, as far as the Wild Alps, to the west of Semmering, where it joins the Noric Alps, and then proceeding in a south-easterly direction forms the boundary towards Austria below the Enns, extends into Hungary, and gradually declines to the plain of Oedenburg. The other branch divides the valley of the Mur from that of the Drave, and forms the frontier between Styria and Carinthia. To the south of the Mur the Bacher chain is the continuation of this branch. A third mountain chain runs from Loibl to the Save, and forms on that side the boundary towards Carinthia. None of the mountains rise to the line of perpetual snow; on the north-western frontier there are some glaciers, but still below the absolute snow-line. The highest mountains are the Grössenberg, 8381 feet; the Eisenhut, 7676 feet; the Grimming, 7540 feet; the Stangalpe, 7140 feet; the Hochschwab, 7154 feet; and the Bachstein, 7008 feet above the level of the sea. The southern and eastern part of the crownland contains few lofty mountains, but there are many of moderate elevation, and numerous gentle eminences, some of which are separated by extensive valleys. In conformity with the physical character of the country, it is popularly divided into Upper Styria, which comprises the smaller north-western portion, which is entirely mountainous, and Lower Styria, which is the south-eastern, and larger, lower, and level portion. The mountains of Styria are in many parts covered with valuable forests; and the whole country is well-wooded and celebrated for its romantic or beautiful scenery. The country has numerous rivers, all of which flow into the Danube, and for the most part by an east course. The principal rivers are the Mur, which rises in a lake, traverses the centre of the country for about 180 miles, and enters Hungary before its junction with the Drave; the Drave, the Enns, the Raab, and the Save, which touches the southern frontier, and receives the Sän and the Sotla. The Mur, Drave, Enns, and Save are navigable by boats. There are no large lakes, but many small ones. The country abounds in cold, warm, and hot mineral-springs. Like all countries that abound in limestone mountains, Styria has numerous caverns and grottoes.

The air in the mountains is cold; in the valleys the temperature is much milder. A great part of Upper Styria consists of limestone rocks and sterile mountains, but Lower Styria has many very fertile tracts. Among the animals are the common domestic animals, game, poultry, fish, and bees. The breeding of cattle is very general. The animals are small, they are driven in summer to the highest parts of the mountains, and brought back to the plains in autumn. Sheep are not numerous, and the horses are more fit for draught than for the saddle. The vegetable products are very diversified: wheat, rye, barley, and oats, though not abundant in Upper Styria, are of remarkably fine quality. In Lower Styria there are likewise maize, millet, and buckwheat, pulse, potatoes, and culinary vegetables, the poppy, sunflower, and rape-seed are grown for oil. A little hemp and some flax are raised; hops are cultivated with success. Wine and fruit are among the chief productions. Timber is a very important article. The principal kinds of timber are oak, beech, larch, pine, and fir; chestnut, walnut-tree, red yew, stone-pine, lime, white poplar, and willow are scattered over the whole country, but for the most part they grow in forests. Many of the inhabitants derive their entire means of subsistence from the forests. The timber is felled and exported in rafts down the rivers. Where there are no streams to float it the timber is conveyed down the sides of the mountains by means of semicircular troughs, which are composed of fir-trees with the bark off, and extend in some instances for many miles. Down these inclined planes the heavy logs descend with incredible velocity to the lake or stream which first receives them; they are then floated down to the lower country. Only the finest trunks are formed into rafts and transported to the Danube or into the Adriatic for ship-building. Sometimes the mountain streams are confined by sluice gates till sufficient water is collected to carry the wood down to a larger stream. By means of windlasses worked by the power of mountain torrents, the logs are conveyed up inclined planes from the valleys where this is necessary. A vast deal of the timber of these forests is used for fuel in the mines, and in the numerous smelting-works and furnaces, and other industrial establishments of the country; for this purpose a large proportion of it is converted into charcoal. The greatest wealth of Styria consists in its mines, which are confined to the smaller mountainous portion of the country. The most important minerals are iron, silver, copper, lead, alum, cobalt, sulphur, salt, marble, and coal.

The most important manufacture is iron. The iron-mines in the Erzberg, in the north of Styria, were well known to the Romans. This mountain does not contain the ore in veins or strata, but presents a solid mass of iron-ore, which has been wrought without interruption for eleven centuries. There are a few manufactories of linen, cotton,

woollens, and silk. There is a very brisk trade between Upper and Lower Styria; the latter supplies the former with corn, wine, and tobacco, and receives in return iron, timber, and salt. The exports to other countries are chiefly cattle, steel, iron, copper, and lead, to Austria, Hungary, and European Turkey; vast numbers of scythes and sickles, steel and some other iron-wares, to Italy, France, Poland, and Russia. Among the smaller articles of iron, several millions of Jews'-harpers are annually exported. The imports consist of fine cloths, linens, cottons, silks, and jewellery, and colonial produce. The transit trade between Italy and Germany, from Vienna to Trieste, is very important, and greatly facilitated by good roads, and by the Vienna-Trieste railway, which crosses the Semmering Mountain between Gloggnitz and Murzusschlag in this province, and passes through Bruck, Grätz, Mahrburg on the Drave, and Cilli.

The crownland is divided into three circles, which, with their subdivisions, area, and population, are as follows:—

Circles.	Area in Sq. Miles.	Arrondissements.	Population.
Bruck	3699	22	177,396
Grätz	2615	22	391,474
Mahrburg	2263	20	372,296
Total	8577	64	941,166

The inhabitants are mostly of German, partly of Wendish origin. They are all Catholics except about 5000, who are Lutherans, and 65 who are Calvinists. Education is widely diffused by means of the university of Grätz:—5 gymnasia in Grätz, Mahrburg, Cilli, Judenburg, and St. Lambrecht; 2 schools of art; 2 theological academies; and above 1250 common and adult schools.

Towns.—GRÄTZ, the capital of the whole crownland and of the circle of Grätz, forms the subject of a separate article. The other towns are mostly small; the more important are here given:—*Bruck*, a manufacturing town of 2500 inhabitants, is situated 33 miles N. by railway from Grätz, at the junction of the Murts with the Mur. Its position on a navigable river, and at the junction of several highways with the great road from Vienna to Italy, confers upon this town an important transit trade; besides which there is a great export of iron and iron implements manufactured in the furnaces and foundries of the town. *Judenburg*, higher up the Mur and on its right bank, has copper-works, a great manufacture of scythes, a printing-office, a gymnasium, and about 2000 inhabitants, exclusive of the military. In the mountains near it are mines of coal. *Leoben*, 9 miles W. from Bruck, on the left bank of the Mur, has a population of 2500, who trade in bar-iron, charcoal, and salt. There are numerous iron-mines and iron-works here; jet- and coal-mines are worked in the neighbourhood. The preliminaries of the treaty of Campo-Formio, between the French and the Austrians, were signed in this town in 1797. *Karstenfeld*, near the Hungarian frontier, has a custom-house, a large tobacco-factory, and about 4000 inhabitants. *Mahrburg*, 41 miles N.N.E. by railway from Cilli, stands on the left bank of the Drave, and has a population of 5000, who trade in wine, corn, leather, rosoglio, and fruits. It is defended by a castle, and has a gymnasium and an arsenal. *Cilli*, which is said to occupy the site of *Claudia Celeia*, a town in the south-east of Noricum, is situated on the Sän, 86 miles by railway S. from Grätz, and has a gymnasium, a training-school, and 2000 inhabitants, who trade in corn and wine. Coal-mines are worked near Cilli. *Bismers*, a village of about 1600 inhabitants, remarkable for its great iron-works and manufacture of steel, stands at the foot of the famous Erzberg, which is literally a mount of iron-ore about 3000 feet high and 5 miles in circuit.

SUABIA (Schwaben, the country of the *Suevi*), one of the ten circles into which Germany was divided previous to 1806, comprehended the south-western part of Germany, one of the most beautiful and fertile tracts of the whole empire, traversed by the Danube from the south-west to the north-east, and covered by the mountainous region of the Schwarzwald, or Black Forest, on the west, and by the Alps in the interior and on the south. It was situated between France, Bavaria, Switzerland, Franconia, and the circle of the Rhine, and had an area of 13,000 square miles, with 2,200,000 inhabitants. Its chief natural productions are corn, wine, and fruit, and in the mountainous parts minerals, and timber, which is floated down the Neckar and the Rhine to Holland. Christianity was introduced at the beginning of the 7th century by the Irish monk Columba. In the year 1030 Henry IV. gave the duchy of Suabia to Frederick of Hohenstauffen, the ancestor of the emperors of the house of Suabia. Under his successors the Suabians were the richest, the most civilised, and the most respected of all the nations of Germany. But when the Italian wars and the contest with the Guephs had broken the power of the house of Hohenstauffen, and it became extinct on the execution of Conrad in 1268, their vassals, cities, prelates, and counts made themselves independent. The country is now divided between Würtemberg, Bavaria, and Baden. The largest cities are Augsburg, Stuttgart, and Ulm. The Bavarian portion forms the circle of *Suabia*, which was formerly called Upper Danube. It has an area of 3675 square miles, and a population of 565,788. The chief town is Augsburg, which is

connected by railway and electro-telegraphic wires with all the principal towns of Germany.

SUAKIN, a seaport town, situated on an island near the west shore of the Red Sea, in 19° 4' N. lat., 37° 30' E. long. The island lies near the extremity of a narrow inlet, about 12 miles in length and 2 miles in width. The entrance of the bay is only about 60 fathoms wide, but it opens gradually to 2 miles. The town is separated from its suburb, called El Geyf, which stands on the mainland, by an arm of the sea about 500 yards wide. The harbour is formed by a projecting part of the continent to the east of the town. The arm of the sea on the west side affords no anchorage for ships of any size. The islands and all the surrounding country are sandy, and produce only a few shrubs or low acacias. The houses of the town have one or two stories, and are constructed of blocks of madreporas. The suburb El Geyf is larger than the town itself. Suakin has three mosques, and El Geyf one mosque. The water is bad. Burekhardt estimated the population of Suakin at about 8000, of whom 3000 live upon the island and the rest in El Geyf. Suakin is an important trading-place. It exports to Jidda, Hodeyda, and other Arabian ports commodities received from eastern and central Africa, such as slaves, gold, tobacco, incense, ostrich feathers, dhurrn, water-skins, leathern sacks, tanned hides, butter in a liquid state, doum mats, horses, and dromedaries. From Jidda and other Arabian ports are imported Indian and other tissues, as dresses and ornaments for women, household utensils, sugar, coffee, onions, dates, and much iron for lances and knives. Many of the African Mohammedans take Suakin on the pilgrimage to Mecca and Medina.

SUBIACO. [ROMA, COMARCA DL.]

SUBZULCOTE. [HINDUSTAN.]

SUDAN. [SOODAN.]

SUDBURY, Suffolk, a municipal borough, market-town, and the seat of a Poor-Law Union, is situated on the left bank of the river Stour, in 52° 2' N. lat., 0° 43' E. long., 16 miles S. from Bury St. Edmunds, 54 miles N.E. from London by road, and 68 miles by the Eastern Counties and Eastern Union railways. The population of the borough in 1851 was 6043. The borough is governed by four aldermen and 12 councillors, of whom one is mayor. Sudbury sent two members to Parliament until 1844, when it was disfranchised for bribery and corruption. The livings are in the archdeaconry of Sudbury and diocese of Ely. Sudbury Poor-Law Union contains 42 parishes and townships, with an area of 78,302 acres, and a population in 1851 of 30,814.

Sudbury is a borough by prescription. It was one of the first towns in which Edward III. settled the Flemings in order to instruct his subjects in the woollen manufacture. A church and priory, of which few vestiges remain, were erected here in 1272 for Dominican friars. The Knights Hospitallers had a house near the bridge, with the tolls of which it was endowed. Near the town was a Benedictine cell attached to Westminster Abbey. The three parish churches are chiefly of perpendicular character. All Saints church was, from the year 1150 to the Reformation, appropriated to St. Albans abbey. In the chancel of St. Gregory's church the body of Archbishop Theobald, who was beheaded in 1381 by Wat Tyler's mob, was interred; and the head, dried by art, is still preserved. The Independents, Baptists, and Quakers have places of worship. The Grammar school has an endowment of 90*l.* a year. There are Church of England, National, and British schools, and a savings bank.

The town is neat, clean, well-built, paved, and lighted. Ballingdon, in Essex, forms a suburb to Sudbury, with which it is united by a bridge over the Stour. The town-hall and the corn-exchange are modern buildings. The silk manufacture is the principal branch of industry in the town. The river navigation, which is not good, has been almost superseded by the railway. A corn-market is held on Thursday, and a general market on Saturday. Fairs are held in March and July. Quarter sessions and a county court are held.

SUDELEY. [GLOUCESTERSHIRE.]

SUDERMANIA. [SWEDEN.]

SUDETSCH or SUDETIC MOUNTAINS. [AUSTRIA; PRUSSIA.]

SUDSCHA. [KURSK.]

SUEZ, ISTHMUS OF, connects Africa with Asia, and separates the Mediterranean from the Red Sea. Its extent from north to south a little exceeds seventy-two miles. The most northern recess of the harbour of Suez, on the Red Sea, is hardly a mile south of 30° N. lat., and the village of Tyneh, on the Mediterranean, near the arm of the Nile, which in ancient times was called the Pelusiac, and which at present is blocked up with sand, is only about two miles north of 31° N. lat. There once existed a canal on the isthmus, and numerous traces of it still appear in several places; it united the Red Sea with the river Nile. This canal was commenced when Egypt was an independent kingdom, under Necho, about 2500 years ago, and was completed by Darius. (Herod. ii. 157.)

The whole tract, from Suez to Tyneh, is uninhabited. Drinkable water occurs only in one or two places. The surface, in general, consists of sandstone, which in many places, by disintegration, has been converted into sand. In some places occur considerable depressions, which are covered with salt swamps or salt lakes. A depression of a somewhat different kind extends across the isthmus from Suez to Tyneh, not in a straight line, but diverging first to the west, and after-

wards returning to the east, until it again reaches the straight line. In the southern part of this depression the canal of Necho had been made. Near 30° 10' N. lat. are several lakes called the Bitter Lakes, from the taste of their waters. Up to these lakes the direction of the depression is due north, or nearly so, but the lakes themselves turn to the north-west, and extend to 30° 30' N. lat. without interruption. Not far from the northern extremity of the Bitter Lakes are the ruins of a temple of Serapia. At a short distance to the north of these ruins is another depression, containing a small lake called Temsah, which is dry during the greater part of the year, but filled with water when the inundations of the Nile have attained their greatest height. From the Nile the water reaches this lake by a depression, in which the canal of Necho had originally been led. Northward of the Lake Temsah are some salt-marshes called Karsh, which occupy a space of a few miles in length from north to south. Between the salt-marshes and the Lake of Bellah is a similar stony country. The last-mentioned lake may be considered as the most southern branch of Lake Menzaleh, being united to it by low ground and marshes, which during the inundations of the Nile are covered with water. East of these lakes is a low stony tract, which, about 31° N. lat., joins the plain of Pelusium. The plain is a dead flat, with a sandy arid soil, in many parts covered with a thin layer of salt. When the water attains its greatest height in the Nile, the plain of Pelusium is almost entirely covered. At its eastern extremity is the small village of Tyneh, and about a mile to the south-west of it are a few ruins, which are supposed to be those of the ancient town of Pelusium. But no traces of the bed of that arm of the Nile, the Pelusiac, the name of which was derived from that town, can be discovered in any part of the plain. The country which extends to the west of the line described is covered with horizontal strata of sandstone, and presents few inequalities, except towards the south. The country which lies to the east of the line is stony as far south as the south end of the Lake of Bellah on the north, and as far north as the caravan-road from Cairo to Suez on the south, but that part of the country which intervenes between these two points is entirely covered with sand. A French engineer has recently obtained the authorisation of the Pasha of Egypt to cut a ship-canal, 92 miles in length, across the isthmus.

SUEZ, a town situated at the head of the westernmost of the two arms or "gulfs" in which the Red Sea terminates, is in 29° 57' 30" N. lat., 32° 31' 38" E. long., and 62½ geographical miles E. from Cairo. Suez is walled on three sides, being open to the sea on the north-east, where is the harbour and a good quay. Within the walls are many open places, and several khans built around large courts. The houses are in general poorly built. There is a bazaar, or street of shops, tolerably furnished with goods from Cairo. The inhabitants are about 1200 Moslems and 150 Christians of the Greek Church. The transit of the productions and merchandise of the east from the Red Sea to the Nile has always made this an important station, and caused the existence of a city in the vicinity, though Suez itself as a town cannot be traced to an earlier origin than the early part of the 16th century. The concourse of pilgrims who annually embark here for Mecca has also rendered necessary a town at this station. The circumstance of this port being the point of communication between Europe and India in connection with the Overland Mail, has given an impulse to the prosperity of Suez; but from the want of fresh water, and of every kind of verdure and cultivation, it can never become more than a place of passage, which both the traveller and inhabitant will quit as soon as possible.

SUFAID-KOH. [AFGHANISTAN.]

SUFFOLK, a maritime county on the east coast of England, lying between 51° 56' and 52° 37' N. lat., 0° 23' and 1° 46' E. long. It is bounded N. by Norfolk; E. by the German Ocean; S. by Essex; and W. by Cambridgeshire, from which it is separated by the river Lark, a feeder of the Great Ouse. The greatest length is from north-east to south-west, from Southtown, a suburb of Great Yarmouth, to near Haverhill, 68 miles; the greatest breadth, nearly at right angles to the length, is from the bank of the Little Ouse, in the north-west corner of the county, to Landguard Fort, opposite Harwich, 52 miles. The area of the county is 1454 square miles, or 947,681 statute acres: the population in 1841 was 315,073; in 1851 it was 337,215.

Surface; Coast-Line.—The surface of this county is gently undulating, except just along the north-western and some parts of the north-eastern border, where the land subsides into a marshy flat, scoured from overflow only by embanking the courses of the rivers. Some marshes also border the rivers in the south-east part, but none of these are of any extent. The highest ground in the county, as determined by the course of the waters, forms a ridge of crescent-like shape, extending through the centre of the county. It may be indicated by a line drawn from the neighbourhood of Lowestoft in the north-east, between Bungay and Halesworth, to the neighbourhood of Debenham; and thence to the western border of the county, passing between Stowmarket and Ixworth, between Bury and Lavenham, and between Newmarket and Clare. The waters which flow northward from this line fall into the Waveney or the Ouse; while those which flow southward join the Stour, the Orwell, the Deben, or other streams flowing into the German Ocean.

The coast has a tolerably regular outline, convex to the sea. The bays are shallow, and the headlands have little prominence. Hollesley

Bay, Aldeburgh, or Aldborough Bay, and Southwold, or Sole Bay, are the chief bays. The headlands are—the point on which Landguard Fort is placed, at the entrance of the estuary of the Orwell and the Stour, opposite Harwich; the point at Bowdsey; Orford Ness, near Orford; the point near the village of Thorpe; Easton Ness; and Lowestoft Ness, the most easterly point in Great Britain. The harbours are the estuaries of the rivers Stour and Orwell, Deben, Butley, or Alde, Blyth, and Yare, and the artificial cut through lake Lothing into the Waveney. The estuary of the Stour and the Orwell is for the most part lined with marshes.

The sea-shore from Landguard Fort is lined for about two miles with sand-hills, and thence for two miles, nearly to the estuary of the Deben, by low cliffs of crag upon blue-clay. Beyond the estuary of the Deben (which is skirted by a narrow line of marsh-land) cliffs of similar formation to those just mentioned recommence, and extend nearly three miles to the point at Bowdsey. The entire coast of the county is estimated at above fifty miles in extent, a great portion being low and marshy, and the remainder lined with cliffs of shingle or gravel, and red loam.

Geology, &c.—The greater part of the county is covered by diluvial beds. The exceptions are the crag and London clay district of the south-east, and the chalk district of the north-west. The crag and London clay district may be considered as bounded by a line drawn from Orford by Woodbridge and Ipswich to the banks of the Stour, between Sudbury and Nayland. The chalk is found to the north-west of a line drawn from Euston, near Thetford, to Bury St. Edmunds, and thence west by south to the border of the county. The crag formation consists chiefly of thin layers of quartzose-sand and comminuted shells, resting sometimes on chalk, sometimes on the London clay. It is divided into the red-crag and the coralline-crag. Lyell refers the crag formations to the Older Pliocene period. The thickness of the crag is not known: it has been penetrated 50 feet near Orford without reaching the bottom. The chalk of the north-western side of the county does not rise into high hills; the formation appears to extend under the diluvial beds which occupy the centre of the county.

Hydrography and Communications.—The Waveney and the Little Ouse, border rivers, which separate this county from Norfolk, and receive the drainage of the northern part, are described under NORFOLK; where also the navigable cut from the sea, through Lake Lothing, is described, though it belongs to Suffolk. The Suffolk tributaries of the Waveney are all small. In that part of the county which is adjacent to the lower part of the course of the Waveney are several small sheets of water, as Oulton Broad and Lake Lothing, Breydon Water, Fritton Decoy, and Flixton Decoy. Neither of these pieces of water has much breadth, except Breydon, and that, in its widest part, is not a mile across. The Lark, a tributary of the Greater Ouse, rises at Lawhall, 7 miles S. from Bury St. Edmunds, flows north to that town, and then flows north-west by Mildenhall, to the border of the county, which it skirts for a few miles, and then enters Cambridgeshire, where it joins the Greater Ouse. Its whole length is about thirty miles. It is navigable from Bury, and serves to convey produce from that town and neighbourhood to the river Ouse and the port of Lynn. Of the streams which drain the southern part of the county the Stour is the most important. It is described under ESSEX, which it divides from Suffolk. The Stour receives many tributaries, none of which are navigable.

The *Orwell*, or *Gipping*, as it is called in the upper part of its course, is formed by the junction of several streams, which unite just by Stowmarket, and flows south-east by Needham-Market to Ipswich. Below that town it expands into an estuary of considerable width, which unites at Harwich with the estuary of the Stour. It is the estuary alone which bears the name of Orwell. The course of this river to Ipswich is above 20 miles, for more than half of which (namely, from Stowmarket) it is navigable: the estuary is 10 or 12 miles long, and for the greater part of that distance more than half a mile wide at high-water. Sea-borne vessels of considerable burden get up to Ipswich. The *Deben* rises near Debenham, and flows about 20 miles in a winding course to Woodbridge, below which it becomes an estuary 9 or 10 miles long, and from a quarter to half a mile wide, navigable for sea-borne vessels of considerable burden. The *Alde* rises near the village of Brundish, and runs 11 miles south-east to its junction with the Ore, which rises near Framlingham, and has an eastward course of about 12 miles. From the junction the united stream, which is sometimes called Ore, sometimes Alde, flows about 15 miles into the sea. The course of this part of the river (which is, for the greater part of its length, an estuary) is remarkable: about eight miles below the junction of the Alde and the Ore, near the town of Aldeburgh, it approaches within 200 yards of the sea; and then turning suddenly, has the rest of its course nearly parallel to the shore, from which it is separated by a long, narrow, marshy peninsula. The principal feeder of the Alde is the *Butley*, a small river, the lower part of which becomes a tolerably wide estuary, opening into the estuary of the Alde just before it joins the sea. The Alde is navigable to Snape Bridge, near the head of the tideway. The part below the junction of the Butley is sometimes called Butley. The *Blyth* rises near Laxfield, and flows eastward 16 miles by the neighbourhood of Halesworth, near which it receives a small feeder, into

the sea near Southwold: it is navigable up to Halesworth, 8 or 9 miles. There are no canals within the county, but some of the smaller rivers have been made navigable.

The Norwich and Ipswich road enters the county at Stratford Bridge over the Stour, between Colchester and Ipswich, and runs to Ipswich, and thence northward by Stoke and Scole Bridge over the Waveney into the county of Norfolk. The Yarmouth road branches from the Norwich road at Ipswich, and runs through Woodbridge, Saxmundham, and Lowestoft. A second Yarmouth road branching from this at Blythburgh, between Saxmundham and Lowestoft, passes through Beccles, and rejoins the road just before entering Yarmouth. The Norwich and Newmarket road enters the county at Newmarket, runs eastward to Bury St. Edmunds, and then northward to Thetford in Norfolk. Another road to Norwich enters the county at Sudbury, and runs by Long Melford to Bury, and thence by Ixworth and Botesdale to the Norwich and Ipswich road at Scole. A road from Bury leads by Stowmarket and Needham-Market to Ipswich. The roads in all parts of the county are excellent.

The Eastern Counties and Eastern Union railway enters the county from Essex near Manningtree, and proceeds north by east to Ipswich, and thence north-west to Stowmarket, where it divides, one branch continuing north-west to Bury St. Edmunds, the other running north by east to Norwich, and quitting Suffolk near Diss. A short branch quits the main line at Bentley, and proceeds to Hadleigh. The Sudbury and the Newmarket branches of the Eastern Counties line just touch the border of the county; and the Norfolk line skirts the border for a short distance from Lakenheath and Brandon to Thetford. A short portion of the Lowestoft branch of the Norfolk line is within the county.

Climate, Soil, and Agriculture.—The climate is much drier than that of the more western counties of England; but also colder in spring, when the north-easterly winds prevail. The soil, although varying extremely, may be divided into three or four distinct kinds. A very rich loam, chiefly alluvial, is found in a small portion of the southern part of the county, between the Orwell and the Stour. The next class consists of heavier loams, varying in every degree, but in general resting on an impervious soil of marl or clay, and in most situations requiring the assistance of drains to carry off superfluous water. This soil is found in the whole of the centre of the county, from the Stour to the borders of Norfolk. Between the strong loam and the sea is a strip running from the north bank of the river Orwell to Yarmouth, diminishing in breadth as it stretches northward, and consisting chiefly of sand of various qualities, incumbent on a subsoil of crag, which is a loose rocky substance, composed of sand, gravel, and broken shells, partly consolidated into a kind of stone. Some of this sand is enriched by organic matter intimately mixed with it: this is excellent for roots, especially carrots, and bears very fine barley. In the portions which lie low, and which have at some time or other been covered with water, a very rich mud has been deposited, and has produced as rich a soil as may be desired. There is another tract of sand of a much inferior quality on the western extremity of the county, extending from Bury St. Edmunds to Thetford, with some better lands interspersed. The last class consists of the fen-lands, which, when properly drained, become valuable; but in their natural state, soaked in water, are of little value. The greater part of the land is under the plough. Improved systems of husbandry are generally introduced, and most of the usual crops are raised. There is no part of England where the implements of husbandry are more perfect than in Suffolk, or where new implements are tried with more readiness. This is owing in a great measure to the very excellent manufacturers of agricultural implements who live in the county. Of these manufacturers Messrs. Ransom of Ipswich, are the chief. The works of Messrs. Garrett, at Leiston, are of little less importance. Many farm-buildings of a superior class have been erected of late years.

Suffolk has but one breed of cattle which is peculiar to it. It is a polled breed, of which the cows are in great repute, and justly so. The oxen have not been much attended to, as most of the bull-calves are fattened for the butchers or sent toward Essex and London for that purpose. The Suffolk farm-horses are noted for their docility and steadiness. Suffolk pigs are perhaps, on the whole, the most profitable breed in England. They are well-shaped, short-legged, mostly white, with short upright ears, and the porkers of this breed are excellent. Suffolk has no indigenous breed of sheep; the South-down and a cross of this breed with the Leicester and Cotswold are very common.

Divisions, Towns, &c.—The county is divided into twenty hundreds, as follows, besides the liberty of the borough of Ipswich:—Blackbourn, Hartismere, Hoxne, and Wangford, north; Mutford and Lotheringland, north-east; Blything and Plomesgate, east; Colneis, Carlford, and Wilford, south-east; Samford, south; Babergh, south-west; Risbridge, west; Lackford, north-west; and Bosmere and Claydon, Cosford, Loes, Stow, Thedwestry, Thingos, and Thredling, central.

Suffolk contains the two county and borough towns of IPSWICH and BURY ST. EDMUNDS, the parliamentary borough of EYR, the parliamentary boroughs of ALDBOROUGH, or ALDEBURGH, DUNWICH, ORFORD, and SUDBURY, and the market-towns of BECCLES, BUNGAY, Clare, Debenham, Framlingham, Hadleigh, Halesworth, Lavenham, Lowestoft, Mildenhall, Newmarket, Saxmundham, SOUTH-

WOLD, STOWMARKET, Stradbroke, and WOODBRIDGE; with the ex-market-towns of BILDESTONE, Blythburgh, Botesdale, BRANDON, Haverhill (partly in Essex), Ixworth, Mendlesham, Needham-Market, Nayland, and Woolpit. The places printed in small capitals are described under their respective titles; of the rest we subjoin an account.

Clare, population of the parish 1769 in 1851, about 18 miles S.S.W. from Bury St. Edmunds, is situated on the left bank of the river Stour. The streets are wide, but the houses generally are of mean appearance. There is a corn-exchange of modern erection. The church, a fine large building, was recently repaired, and a new gallery added. There are places of worship for Baptists and Independents; also an Infant school. On the south side of the town are the vestiges of an old castle, and the remains of a priory of regular canons of St. Augustine. The market is on Monday for corn, and there are two small yearly fairs.

Haverhill, population of the parish 2535, of which number 257 were in Essex, is about 16 miles S.W. from Bury St. Edmunds. Haverhill consists chiefly of one street, wide, but lined with poor houses, along the road from Colchester to Cambridge. Besides the parish church, which is an ancient edifice, there are places of worship for Independents, Baptists, and Quakers, a National school, a Charity school, and a savings bank. Half a mile north-west of the town once stood a castle, of which there are now no remains. A weekly market and two annual fairs are held. A particular kind of stout twilled cotton, called drabbet, is made at Haverhill.

Saxmundham, population 1180 in 1851, is about 21 miles N.E. from Ipswich, on the road to Yarmouth. The town lies in a valley, through which, at the back of the houses, on the east side of the street, runs a small brook, a feeder of the Alde. The church is a neat building just out of the town. The Independents have a place of worship, and there are National schools. The market is on Thursday; there are two yearly fairs.

The following places had markets, which have been discontinued:—

Blythburgh, population 1118 (of whom 511 were in Blything Union workhouse) in 1851, is on the right bank of the Blyth, 30 miles N.E. from Ipswich. It was in the middle ages an important fishing and trading town. Sessions for the division were held here, and there was a jail, of which some portions remained till the middle of the last century. The church is of perpendicular character; the length of it is 127 feet, the width above 54 feet. Some portions of painted glass are in the windows. The Primitive Methodists have a chapel. There are remains of a priory for the canons of St. Augustine. *Botesdale*, population 626, is about 15 miles N.E. from Bury, on the road to Norwich by Scole. With the village of Rickingall Inferior it forms a street of more than a mile long. A market was formerly held at Botesdale on Thursday. There is a fair on Holy Thursday for cattle, pedlery, &c. The chapel at Botesdale has some good portions of perpendicular architecture. The Baptists and Wesleyan Methodists have chapels, and there is a National school. *Debenham*, population of the parish 1653 in 1851, is about 13 miles N. from Ipswich, on the river Deben, here a mere brook. From its situation on a declivity the town is clean, but the houses are generally poor. The church is a handsome edifice, and the market-house is a tolerably good building. There are a place of worship for Independents, National and Free schools, and a reading society. The market was held on Friday. There is one fair yearly. *Dunwich*, population 294, is on the coast, about 28 miles N.E. from Ipswich. Whilst East Anglia subsisted as a separate kingdom, Dunwich was a place of importance, and the seat of the first East Anglian bishopric, which was subsequently fixed at Norwich. In the civil war of John the townsmen adhered to the king, who had befriended the town, and granted it a charter of incorporation. They contributed several vessels and many men to the king's naval service in the French wars of Edward I. and III. In the war of the Roses they embraced the Yorkist party; and this, by inducing Henry VII. to incorporate the rival town of Southwold, contributed to the decay of the place. The chief cause of this decay however was the encroachment of the sea, which not only ruined the port, but washed away the greater part of the town. Besides the ruins of All Saints church (the only one remaining of seven churches which Dunwich once possessed), there are the remains of a Gray Friars house, and of the chapel of St. James's hospital. The present church was built in 1830. The village has a yearly fair. Some sprats and herrings are caught and cured here. The borough was disfranchised by the Reform Act. *Ixworth*, population 1189, is about 7 miles N.E. from Bury. There was anciently a priory for the regular canons of St. Augustine, founded about 1100. The parish church is a small ancient building. The Wesleyan Methodists and Baptists have chapels, and there are National and Infant schools. There are some remains of the priory, but the greater part of its site is now occupied by a modern mansion called Ixworth Abbey. *Mendlesham*, population 1442, is about 15 miles N. by W. from Ipswich. The village extends about three miles along the road. The market has long been given up. The church is a handsome building, and there are chapels for Wesleyan Methodists, Independents, and Baptists. A yearly fair is held on the 2nd and 3rd of October. An ancient silver crown of 60 ounces weight was found here near the close of the 17th century: it was supposed to have belonged to one of the East Anglian kings.

Nayland, 14 miles S.W. by W. from Ipswich, population 1153, occupies a low situation on the left bank of the Stour, over which there is a brick bridge, and is occasionally subject to inundation. The church is a handsome building, and there are a chapel for Independents, a National school, and a school supported by the Independents. There are some large flour-mills; a considerable quantity of corn and flour is sent down the river to be conveyed to London. There is a yearly fair. *Needham-Market*, population of the hamlet 1367, is about 9 miles N.W. by N. from Ipswich, on the road to Bury. The chapel is a mean building, with a wooden belfry; there are places of worship, with free schools attached, for Independents and Quakers. Theobald's Free Grammar school, founded in 1832, has an income from endowment of 57l. a year, and had 46 scholars in 1854. Some corn-mills are in the vicinity. *Orford*, population 1045, situated on the right bank of the Alde River, is 21 miles E. by N. from Ipswich. A royal castle was here in the time of Henry III., who granted a charter to the town. The town-hall is a small building. The chapel, when entire, was spacious; the nave alone is now used. The ruins of the chancel are of Norman architecture. The Independents and Primitive Methodists have places of worship. Of the castle only the keep remains: it is a polygon of 18 sides, with walls 90 feet high, and has 3 square towers in its circuit, which overtop the rest of the building. The architecture is Norman. It serves as a landmark for mariners. On the sea-shore, near Orford Ness, are two lighthouses. The market has been discontinued: a fair is held on June 24th. *Rendlesham*, population 359, is about 6 miles N.E. from Woodbridge. National schools are supported chiefly by subscription. Rendlesham House is a fine mansion a little way north from the village, said to be built on the site of a palace of Redwald, king of the East Angles. *Stradbroke*, population 1822, about 7 miles E. from Eye, has a fine church, with a square embattled tower; the nave is of considerable height, and the roof is groined; the altar window is of stained glass. The Baptists have a chapel, and there are free schools. There is a market on Tuesday for corn; a cattle fair is held on the third Monday in June; a statute fair for hiring servants on October 2nd. Petty sessions are held fortnightly. Linen-weaving, brewing, tin-plate working and gardening, are carried on. *Woolpit*, population 1071, is about 8 miles E. by S. from Bury, on the road to Stowmarket and Ipswich. The church is a handsome building, partly of decorated, partly of perpendicular character. The Primitive Methodists have a chapel, and there is a National school. The yearly cattle fair is one of the largest in the county. A very white brick, of remarkably good appearance, is made near the village.

The following are some of the more important villages, with the population of the respective parishes in 1851:—

Barton Mills, population 642, about 10 miles N.W. by W. from Bury St. Edmunds, on the left bank of the river Larke. The corn-mills established here employ a considerable number of persons. There are a small church, a chapel for Baptists, and National schools. *Benhall*, population 713, about 2 miles S.W. from Saxmundham. The church has been recently repaired, and a new chancel built. There are National and Infant schools. *East Bergholt*, population 1467, near the left bank of the Stour, about 7 miles S.S.E. from Hadleigh, has many good houses. The church is of perpendicular architecture. There are chapels for Wesleyan and Primitive Methodists; and National schools, partly endowed. A fair is held on the first Monday of July. *Barford*, population 1102, about 6 miles E. by S. from Sudbury, is pleasantly situated in a fertile valley. The church is a commodious structure, with a tower and spire. There are an Independent chapel; a Free Grammar school, founded in 1595, which has an income from endowment of about 45l. a year, and had 14 scholars in 1854; and National and Infant schools, partly endowed. *Bures*, population 1806, is about 7 miles S.S.E. from Sudbury, on the Stour, over which there is a bridge. The church is ancient. There are a chapel for Baptists, and National and Infant schools. Brick-making and malting are carried on, and there are flour-mills in the vicinity. A station of the Eastern Union railway is at Bures. *Burgh Castle*, population 344, about 4 miles W.S.W. from Yarmouth, has a small church, with a thatched roof and a round tower. There are National and Infant schools. The village is of considerable antiquity, and occupies a picturesque site. About half a mile south from the village are considerable remains of an ancient castle. *Coddensham*, population 1047, about 7 miles N. by W. from Ipswich, has an elegant gothic church, with a square tower. The Independents have a chapel, and there is a charity school. Shoe-making and lime-burning are the principal occupations. Petty sessions are held fortnightly. *Pressingfield*, population 1492, about 10 miles E.N.E. from Eye, is seated on an eminence; the village contains some good houses. The church, partly of Norman date, consists of nave, aisles, and chancel, with clerestory and a finely-carved oak roof. The Baptists have a large chapel, and there are National and Free schools. The former guild-hall is now a public-house. *Grundisburgh*, population 801, about 7 miles N.E. from Ipswich, has an ancient church, with a modern brick tower. There is a chapel for Baptists. Brick-making is carried on. In the vicinity is Grundisburgh Hall, a spacious mansion, standing in a well-wooded park. *Haughley*, population 971, about 3 miles N. by W. from Stowmarket, has a spacious old church, an Independent chapel, and a parochial school. Malting is carried on. There are some corn-mills. A fair for toys is held on August 25th. The remains

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of a castle cover a considerable area in the vicinity. *Hitcham*, population 1037, about 8 miles N. by W. from Hadleigh, has a commodious and handsome church, of Norman character, with a finely-carved roof; a chapel for Baptists, and a parochial school. *Holbrook*, population 857, about 7 miles S. from Ipswich, is situated on the right bank of the Holbrook, a small stream, which runs into the Stour at Holbrook Bay, about two miles from the village. The church is a large ancient structure. The Wesleyan Methodists have a chapel, and there are National schools. Malting is carried on. *Kelsale*, population 1157, about 2 miles N. from Saxmundham, has some well-built houses, surrounded with gardens. The church is situated on a hill, and is chiefly built of flint. There are an Endowed school for boys, and a Free school for girls. *Lakenheath*, population 1864, about 6 miles S.W. from Brandon, is situated on rising ground, in the midst of extensive warrens. The parish church is a commodious structure. The tower is surmounted with a leaden spire of considerable height. There are chapels for Wesleyan Methodists, Baptists, and the Countess of Huntingdon's Connexion. Goward's Charity school educates 32 boys. A fair for cattle and toys is held on the first Thursday after Midsummer Day. *Laxfield*, population 1147, is about 7 miles N. from Framlingham, near the source of the river Blyth. The church is a handsome edifice, with a pinnacled tower. The nave is of considerable height; there is a finely-ribbed roof, and the windows are filled with stained glass. There is a large antique font. The Baptists have a chapel, and there are National and Free schools. A small customary market for corn is held on Monday; fairs for cattle and sheep are held on May 12th and October 25th. *Leiston*, population 1580, about 4 miles N. by W. from Aldborough. The church, which is about a quarter of a mile W. from the village, consists of one aisle, with a thatched roof; the tower is of flint. The Wesleyan Methodists and Quakers have places of worship. The chief point of interest here is Messrs. Garrett's establishment for the manufacture of agricultural implements, which has been in operation for about three-quarters of a century, and is now one of the most important of its kind in the kingdom. There are some remains of Leiston Abbey. *Long Melford*, population 2587, on the left bank of a feeder of the Stour, about 3 miles N. from Sudbury, extends for about a mile along the road to Bury. The church is a handsome and commodious edifice, of perpendicular character. The Independents have a chapel; there are likewise National schools; two Free schools; and an almshouse or hospital for a warden, 12 poor men, and 2 poor women. Petty sessions are held fortnightly. A large cattle fair is held on the Thursday in Whitsun-week, and a pleasure fair on the two previous days. Melford has some old mansion-houses, among others, Melford Hall, an extensive Elizabethan structure, with four small round towers in front, standing in a spacious deer-park. *Melton*, population 1039, about 2 miles N. by E. from Woodbridge, on the right bank of the river Deben, has a parish church and National schools, and is the seat of the County Lunatic Asylum, which in 1851 contained 269 inmates. There are brick-works, an iron foundry, and corn-mills. *Mendham*, population 877, is pleasantly situated on the right bank of the Waveney, about 8 miles S.W. by S. from Bungay. The church is a massive structure, with a tower. The Wesleyan Methodists and Independents have places of worship. Near the church are some remains of a priory, founded in the reign of Stephen. *Metfield*, population 651, about 7 miles W. by N. from Halesworth, has an ancient church, with a tower; and a chapel for Primitive Methodists. Brick-making is carried on, and there are several corn-mills. *Old Newton*, population 792, about 3 miles N. by E. from Stowmarket, pleasantly situated on elevated ground, near the source of the Gipping, contains Dagworth-Hall, now a farm-house. The Wesleyan Methodists have a chapel, and there is a Parochial school. *Olney*, population 616, about 8 miles N. by E. from Ipswich, has a beautiful gothic church, with a tower; the windows are filled with stained glass. The Baptists have a chapel, and there are National schools. In the neighbourhood are corn-mills. *Oulton*, population 742, of whom 174 were in Mutford and Lothingland Union workhouse, is about 2 miles W. from Lowestoft. The population is chiefly agricultural, but an iron-foundry, a cement manufactory, and corn-mills, afford some employment. *Pakefield*, population 713, about 3 miles S.S.W. from Lowestoft. The coast being exposed and dangerous, the Humane Society of Lowestoft has a life-boat stationed at Pakefield. There is a lighthouse. The sea has gained considerably upon the land in this neighbourhood. In the village are National and Infant schools. *Pakenham*, population 1134, about 5 miles E.N.E. from Bury St. Edmunds, has a church, National schools, and some minor charities. The population is chiefly agricultural. *Peasenhall*, population 820, is about 7 miles S.S.W. from Halesworth. Besides the parish church, there is a small chapel for Dissenters. Glove-making and machine-making are carried on to a small extent, and there are corn-mills. *Redgrave*, population 1382, about 17 miles N.E. from Bury St. Edmunds, is pleasantly situated near the right bank of the Waveney. The church is a handsome building, and in the interior are some interesting monuments, including those of Sir Nicholas Bacon and his lady, and Judge Holt. There are National schools. An organ-building and pianoforte-making establishment gives some employment. Redgrave Hall, a spacious mansion, seated in an extensive park, well-wooded and stocked with deer, is about a mile south from the village. *Snape*, population 576, about

5 miles S. by E. from Saxmundham, has a small church, with a very ancient tower and a curiously-sculptured font. The Wesleyan Methodists have a chapel, and there are National schools. The site of Snape Abbey is now occupied by a farm-house. At Snape Bridge an annual horse fair is held on August 11th. On the river Alde are wharfs, where large quantities of barley and malt are shipped for London and other places. The *Southelmhams* are seven villages, situated near each other, varying in distance south-west from Bungay from 3 to 7 miles. The parish populations in 1851 were—All Saints, 232; St. Nicholas, 94; St. George, or St. Cross, or Sandcroft, 253; St. James, 269; St. Margaret, 182; St. Michael, 150; and St. Peter, 97. The bishops of Norwich had, in the 12th and 13th centuries, a palace and park at Southelmham. The villages are rural, and the inhabitants chiefly engaged in farming. All Saints' church is an ancient edifice, with a round tower. St. George's or Sandcroft church, a neat building, with a square tower, was enlarged in 1841. *Stoke-by-Nayland*, population 1406, about 6 miles S. by W. from Hadleigh, has a church, a chapel of ease, a Roman Catholic chapel, and National and Infant schools. The *Stonhams*—*Aspall Stonham*, population 814; *Earl Stonham*, 860; and *Parva* or *Little Stonham*, 402; are situated about 5 miles E.N.E. from Stowmarket. Aspall Stonham church is a good building, with a spire; there are a Free school and a National school. Earl Stonham has a fine church, with a tower; a small chapel for Dissenters, National schools, and some parochial charities. Stonham Parva has a gothic church, with chancel and square tower. The Baptists have a chapel, and there are National and Infant schools. *Sutton*, population 732, about 4 miles S.E. from Woodbridge, has an ancient church, built of stone and brick, and a small chapel for Baptists. There is a ferry across the Deben to Woodbridge. *Walsham-le-Willows*, population 1297, about 12 miles E.N.E. from Bury St. Edmunds, has a commodious and handsome church, with a tower; chapels for Wesleyan Methodists, Independents, and Baptists; and a Free school. Ropemaking, brewing, and malting are carried on. *Wickham Market*, population 1697, of whom 304 were in Plomesgate Union workhouse, about 5 miles N. by E. from Woodbridge, is situated on a hill commanding an extensive prospect. It possesses a church, which has been recently repaired; a chapel for Independents, enlarged in 1845; National and British schools; a literary and scientific institution, with museum and library; a horticultural society; a mutual benefit society; an odd fellows' lodge; and the public rooms, built in 1846. Brick-making is carried on. In the vicinity are numerous windmills. *Wingfield*, population 654, about 8 miles E. by N. from Eye, has a handsome church, with a clerestory of 24 windows; in the interior are several monuments of historical interest. There is a National school. A few traces remain of Wingfield Castle, a little way south from the village. *Yoxford*, population 1272, about 4 miles N. by E. from Saxmundham, is pleasantly situated, and has a well-built street of modern houses. There are National schools.

Divisions for Ecclesiastical and Legal Purposes.—Suffolk was formerly wholly included in the diocese of Norwich: the eastern part is still in that diocese, the western in the diocese of Ely. The county is divided into the archdeaconries of Suffolk and Sudbury. It is included in the Norfolk circuit. The assizes are held in the summer at Bury St. Edmunds, and in Lent at Ipswich. Quarter sessions for the respective divisions are held at Bury, Ipswich, Beccles, and Woodbridge. There are county jails and houses of correction at Bury and Ipswich; county houses of correction at Woodbridge and Beccles; and borough prisons at Ipswich, Bury, Eye, Sudbury, Aldeburgh, Southwold, and Orford. County courts are held at Beccles, Bury St. Edmunds, Eye, Framlingham, Halesworth, Harleston, Ipswich, Lowestoft, Mildenhall, Stowmarket, Thetford, and Woodbridge. By the Poor-Law Commissioners the county is divided into 17 unions, namely, Blything, Bosmere and Claydon, Bury St. Edmunds, Cosford, Hartismere, Hoxne, Ipswich, Mildenhall, Mutford and Lothingland, Plomesgate, Risbridge, Samford, Stow, Sudbury, Thingoe, Wangford, and Woodbridge. These unions comprise 514 parishes and townships, with an area of 928,819 acres, and a population in 1851 of 335,655. Before the Reform Act was passed Suffolk returned 16 members to Parliament: two for the county, and two each for Ipswich, Bury, Sudbury, Eye, Orford, Aldeburgh, and Dunwich. By the Reform Act the county was formed into two divisions, the Eastern and Western, each returning two members; Dunwich, Orford, and Aldeburgh were entirely disfranchised, and Eye was reduced to one member: Sudbury was disfranchised in 1844. Nine members are therefore now returned from Suffolk, being seven less than before the Reform Act.

History and Antiquities.—Suffolk appears to have been comprehended with Norfolk in the territories of the Simeni of Ptolemaus, called by others the Icenii. It was included in the Roman province of Flavia Caesariensis. There were several British or Roman towns in this county, as the *Sitomagus*, probably near Dunwich, *Cambretonium*, near Grundisburgh, and *Ad Ansam* of Antoninus, at Stratford. A road from Londinium (London) and Camalodunum (Colchester) entered the county at Stratford, between Colchester and Ipswich, and, leaving Ipswich on the right, ran in a northward direction to the Ipswich and Norwich road near Needham-Market; and then coincided with the present line of that road till it quits the county to enter Norfolk at Scole Inn. Another line, the 'Peddar-Way,' or 'Teddar-Way,' entering the county from Norfolk, across the Little Ouse near

Rushford, runs southward to the neighbourhood of Ixworth, where Roman remains have been discovered. The Ikenield-street crossed the county in a south-west direction from the Little Ouse to the neighbourhood of Newmarket. In the eastern part of Suffolk a road, known as Stone-street, entered the county across the estuary of the Waveney at Bungay, and ran by Halesworth to Dunwich. The south-western corner of the county was crossed by a road which formed part of a line from Camalodunum (Colchester) to Camboritum (Cambridge). There were other less important roads. Roman antiquities have been found at Blythburgh, on Bungay Common, at Bury, at Dunwich, at Eye, at Haughley, near Stowmarket, where a Norman castle was erected on the site of a Roman camp, at Ickworth, near Bury, at Ixning, or Exning, near Newmarket, at Stow Langtoft, where are the remains of a camp, at Felixstow, near the mouth of the Deben, at Wenham near Stratford, at Melford, and at other places.

In the Anglo-Saxon period Suffolk passed through similar changes to Norfolk. It was probably settled by a body of Angles independent of those who occupied Norfolk. The names of South Folk and North Folk describe the relative position of these two bodies. Suffolk was probably, from its proximity to the other Anglo-Saxon states, the more important division of the two. The battle in which Annas, or Anna, king of East Anglia, and his son Firminius, fell fighting against Penda, king of Mercia (A.D. 654), is supposed to have occurred at Bull Camp, or Bulchamp, near Blythburgh. Annas is said to have been buried at Blythburgh. St. Edmund, king of East Anglia, contemporary of Ethelred I., brother and predecessor of Alfred the Great, was taken by the Danes (870), and murdered at Hagilsdun, now Hoxne (on the bank of the Waveney, near Scole), and was first buried there; but his body was afterwards removed to Bury, which has obtained from him its distinctive title of Bury St. Edmunds. The Danes on several occasions plundered the town of Ipswich.

In the civil war of Stephen and Henry of Anjou, afterwards Henry II., Ipswich, which was held by Hugh Bigod for Henry, was taken by Stephen (1153). In 1173 a battle took place at Fornham St. Genevieve, between Bury and Mildenhall, when a body of Flemings, under the Earl of Leicester, in the interest of Prince Henry, against his father Henry II., were defeated by the king's army. In the civil war of John the county was reduced to subjection (1216) by William Fitzpiers, for Prince Louis of France, whom the barons had invited over to oppose John. In the insurrection of the populace in the time of Richard II. (1382), the people of Suffolk took arms, and murdered, at Bury, Sir John Cavendish, chief justice of England, and some of the monks of the abbey. In the disturbances caused by the attempt of Henry VIII. and his minister Wolsey to raise money by a royal decree (1525), the people of Suffolk rose in rebellion, but the dukes of Norfolk and Suffolk prevailed on them to disperse. A part of the inhabitants of Suffolk took part in Kett's rebellion (1549). On the death of Edward VI. and the proclamation of Lady Jane Grey as his successor, the Princess Mary, Edward's sister, who was at Kenninghall in Norfolk, removed to Framlingham Castle, where her partisans flocked to her. The Duke of Northumberland, Jane's father-in-law and general, advanced to Newmarket and from thence to Bury to oppose Mary, but retired next day to Cambridge; and the general feeling of the kingdom being in favour of Mary, she advanced from Framlingham to London, dismissing her Suffolk forces by the way.

In the middle ages Suffolk appears to have abounded with religious establishments. Tanner ('*Notitia Monastica*') enumerates 50 abbeys, priories, hospitals, or colleges. The interesting remains of Bury Abbey and the monastic ruins of Bungay are noticed in our accounts of those towns. There are remains of Butley Abbey, between Woodbridge and Orford; Sibton Abbey, near Yoxford; Herringfleet Augustinian Priory, near Lowestoft; Leiston Premonstratensian Abbey, near the coast, between Dunwich and Aldeburgh; and Mendham Cluniac Priory, on the Waveney. There are also monastic ruins at Eye, Dunwich, and Clare. Of castellated remains the most remarkable are Framlingham, Orford, Clare, Bungay, Mettingham, and Wingfield. Mettingham Castle is near Bungay; a considerable portion of the gate-tower and fragments of the walls are standing. Wingfield is near Eye: the south or entrance front is still entire; the west side has been made into a farm-house. Of old mansion-houses, with which the county abounds, Flixton Hall near Bungay; Giffard's Hall, at Stoke-by-Nayland, on the Stour; Helmingham Hall, near Debenham; Hengrave Hall, north-west of Bury; Kentwell Hall and Melford Hall, near Sudbury; and Parham Hall, near Framlingham, may be mentioned.

Few events connected with the great civil war of Charles I. occurred in this county. In the Dutch war of Charles II. two fierce engagements were fought on the coast. The first was fought 3rd June 1665 off Lowestoft. The English fleet consisted of 114 ships of war and a number of fire-ships and ketches, under the Duke of York (afterwards James II.), and the Dutch fleet, of above 100 ships of war, besides small vessels, under admirals Opdam, Cornelius van Tromp, and others. After a severe battle the Dutch were beaten with the loss of 18 men-of-war taken and 14 sunk or burned. The English lost one ship. The second battle was fought in Southwold Bay in 1672. A combined fleet, consisting, according to the lowest statement, of 65 English and 35 French men-of-war, under the Duke of York as

commander-in-chief, was lying in the bay in careless security, in spite of the warning of Lord Sandwich, who had pointed out the danger of their being surprised, when a Dutch fleet of 75, or, according to some accounts, of 91 men-of-war and a great number of smaller vessels, under De Ruyter as commander-in-chief, came unexpectedly on them on the 28th of May. A severe but indecisive action ensued. The English lost six ships of war, two burned, three sunk, and one taken. The Earl of Sandwich was killed, and a number of officers and 200 men were killed and wounded.

Statistics: Religious Worship and Education.—According to the Returns of the Census of 1851, it appears that there were then in the county 895 places of worship, of which 519 belonged to the Church of England, 163 to four sections of Methodists, 91 to Baptists, 90 to Independents, 8 to Quakers, 4 to Roman Catholics, 3 to Plymouth Brethren, 3 to Unitarians, 3 to Mormons, and 1 to Jews. The total number of sittings provided was 224,810. The number of Sunday schools in the county was 541, of which 375 belonged to the Church of England, 61 to Independents, 57 to three sections of Methodists, 41 to Baptists, 3 to Unitarians, and 1 to Roman Catholics. The aggregate number of scholars was 37,470. Of day schools there were 1070, of which 398 were public schools, with 27,387 scholars, and 672 were private schools, with 13,944 scholars. Of evening schools for adults there were 83, with 835 scholars. There were 15 literary and scientific institutions, with 1960 members, and libraries containing 19,355 volumes.

Savings Banks.—In 1853 the county possessed 13 savings banks, at Bungay, Bury St. Edmunds, Coddanham, Eye, Framlingham, Hadleigh, Halesworth, Haverhill, Ipswich (Cornhill), Ipswich (Quay parish), Lowestoft, Sudbury, and Woodbridge. The amount due to depositors on 20th November 1853 was 442,648*l.* 1*s.*

SUHL. [ERFURT.]

SUINDINUM. [MANE, LE.]

SUIPPES. [MABNE.]

SUKKUR. [HINDUSTAN.]

SULEIMANIYAH. [BAGHDAD.]

SULIMAN RANGE. [AFGHANISTAN.]

SULI, a mountainous district of Southern Albania, which extends in length about 30 miles from north to south, and about 20 miles in breadth, and is separated to the south-west from the coast of the Adriatic by a strip of lowland in which is Port Fanari, the ancient Elæa, at the mouth of the Acheron. On the south-east the highland of Suli is bounded by the plain of Arta, which extends to the gulf of the same name. Towards the north Suli borders on the district of Paramithia and on that of Janina towards the north-east. The river Glyky, the ancient Acheron, coming from the north, flows along a deep valley which intersects the highlands of Suli, and after being joined by several streams enters the Adriatic at Port Fanari. The district of Suli is part of the ancient Thesprotia, one of the three great divisions of Epirus. It contains eighteen villages or hamlets, of which ten or eleven are in the highlands, and the rest in the plain. The principal village, called Mega Suli, lies on a hill near the left bank of the Acheron. The whole population of Suli, at the time of the war with Ali Pasha, did not amount to more than 12,000, divided into about thirty tribes or clans, each consisting of several families related or allied to one another. The head of each clan was styled captain, and led his contingent in war, subject to a supreme commander, styled Polemarch, who was chosen by votes for the time.

In May, 1801, Ali Pasha began a war of extermination against Suli, and at last succeeded in conquering that stubborn population. Many of the Suliotes fell in the struggle, others were murdered by Ali's soldiers, many of the women threw themselves into the river rather than fall into the hands of the Turks; and the rest of the population, about 4000, contrived to reach Parga, whence they went to the Ionian Islands, then under the protection of Russia. [PARGA.] A few, trusting to the promises of Veli Pasha, Ali's son, remained in their desolate villages. In the war for the independence of Greece, a body of Suliotes fought at Missolongi against the Turks, and they were for a time in the pay of Lord Byron.

SULINA, RIVER. [BESSARABIA.]

SULLY. [LOIRET.]

SULMO'NA, or SOLMONA, an episcopal city in Italy, capoluogo of a second-class district, or sub-prefecture, in the Neapolitan province of Abruzzo Ultra II, is built in a deep valley drained by the Sagittario, an affluent of the Pescara, and shut in by the central ridge of the Apennines on the west, and the lofty group of Monte Majella on the east. This valley forms an important pass between the central and northern provinces of the kingdom, leading from the valley of the Pescara to that of the Sangro. The ancient *Sulmo*, Ovid's birth-place, was near the site of Sulmona; a few remains of a temple of Jupiter are visible at San Quirini, two miles from Sulmona. Sulmona is walled, and looks old and gloomy. It has about 8800 inhabitants, a college, a clerical seminary, some paper-mills, and manufactories of catgut, and sausages. The neighbourhood is fertile in wine, corn, and oil. The town has been long famous for its confectionary. The valley of Sulmona is intersected by several streams, and irrigated by artificial canals. Ovid, in his 'Tristia,' recalls to mind the copious and cool streams of his native country.

The town-hall and some of the churches of Sulmona are worthy of

notice for their architecture. Between the principal street and the public square runs an aqueduct, with pointed arches, erected in 1400. Near Sulmona is the splendid monastery of St. Peter Celestine, now suppressed. In the town above the barrack gate there is a piece of wretched sculpture, which the inhabitants are pleased to style a statue of Ovid, of whom they are very proud. Sulmo was one of the chief towns of the Peligni. Corfinium, another town of the Peligni, was in the same valley, a few miles north of Sulmo.

SULTANIYEH. [PERSIA.]

SUMATRA, a large island in the Indian Ocean, and the most western of the Sunda Islands. The equator traverses the island nearly in the middle. Sumatra extends full 6 degrees to the south of that line, and nearly as much to the north. The most western point, Acheen Head, is in 95° 20' E. long., and the most eastern part is in 108° E. long. The general direction of the island is nearly north-west and south-east, and its length rather exceeds 900 miles. The width south of 1° N. lat. is on an average 210 miles, but farther north not more than 140 miles. According to a rough estimate, its area may be about 160,000 square miles. The south-west side of Sumatra is bounded by the Indian Ocean; the northern part stretches into the Bay of Bengal; to the north-east it is divided from the Malay Peninsula by the Straits of Malacca. Between the southern extremity of these straits and the Island of Banca, it is washed by the Chinese Sea. It is divided from Banca by the Strait of Banca. The coast south of that strait is washed by the Java Sea, and its southern extremity is separated from Java by the Straits of Sunda.

Coast.—Sumatra terminates at the southern extremity on the Straits of Sunda in three promontories, including the bays of Lampong and Samangka; the latter is also called Keyser's Bay. The two bays lying between these capes contain several good and safe anchorages.

The south-western coast from Flat Point to Manna, a distance rather exceeding 150 miles, rises with a steep ascent and generally to a considerable elevation. The only practicable anchorages here are Croi and Cawoor, which are rather small. Along this part of the coast soundings are only found at a short distance from the shore. From Manna to Bencoolen, which are about 60 miles distant from each other, the cliffs descend to the shore with a gentle slope leaving a narrow beach. There are several tolerably good harbours, as at Manna and Poolo Bay. The coast is clear of rocks, and there are only a few shoals. The soundings are regular, and extend from 20 to 25 miles from the coast. From Bencoolen to Tapanooly Bay, a distance of about 450 miles, the coast-line is alternately low and high, but the cliffs are of moderate elevation, and not often steep. This part of the coast, especially from Indrapura to Tapanooly, is lined with a considerable number of islands and shoals. Though these islands and shoals render the navigation difficult, they protect the shipping against the tremendous surf to which the south-west coast of Sumatra is exposed, and make numerous good anchorages. Tapanooly harbour is so large and spacious, and possesses so many advantages, that it is considered as hardly surpassed by any harbour on the globe; many small islands are dispersed over it, and subdivide it into numerous smaller harbours or coves, where ships are sheltered from all winds. The coast continues to be lined with small rocky islands as far as Passage Island (2° 22' N. lat.), north-west of the mouth of Singhel River. But north of Tapanooly Bay the coast-line is low. There occur several good harbours, sheltered from all winds; and as the surf in these parts is less violent, they supply good anchorage.

Between 3° N. lat. and 3° S. lat., a chain of larger islands stretches parallel to the coast from north-west to south-east, at the distance of 60 or 70 miles. The sea between this chain of islands and Sumatra has soundings, but outside of the islands no soundings have been obtained. Between some of these islands there are safe channels. No coast perhaps is exposed to a more tremendous surf than the south-west coast of Sumatra, especially that portion of it which is south of the equator. This surf is very remarkable on account of its irregularities, for which no sufficient reason has been discovered. It seldom preserves the same degree of violence for two days together; often it rises like mountains in the morning and nearly subsides by night. Generally no landing can be effected in European boats, but only in catamarans. The north coast of Sumatra, between Acheen Head and Diamond Point, is called the coast of Pedir, and extends about 150 miles. The whole of this coast is high, and mostly steep, especially in the middle near Possangan Point. Most of the harbours are open roadsteads, but otherwise the anchorage is good. The north-eastern coast from Diamond Point to the mouth of the Rakan River, a distance of about 300 miles, is low, but well defined. North of Delli it is lined with sand-banks, and south of that place with mud-banks, which are traversed by a narrow channel, through which the rivers reach the sea. To the east of the mouth of Rakan River lies a headland, called Onjong Perbabeau, to the north-west of which a mud-bank extends about 11 or 12 miles. In this part the navigation of the Malacca Strait is very dangerous, as various sand-banks extend across it, with gaps and narrow channels of mud-soundings between them. Farther south is the Island (Pulo) of Rupa, extending about 25 miles in every direction. The Salat Rupa, or strait, which divides this island from the main body of Sumatra, admits only small vessels.

Between 1° 36' and 35' N. lat. there are three large islands, called Bacalisse, Padang, and Rankan, which are divided from Sumatra by Brewer's Strait, or Salat Panjang. This strait is from 1 to 5 miles wide, but navigable for large vessels. The coast-line of these islands and that of Sumatra in these parts is low and generally swampy. South of the southern extremity of Brewer's Strait, as far as the Strait of Banca, and along the western shores of this strait to Cape Lucepara, and thence to the eastern entrance of Sunda Strait, the coast-line is exceedingly low, and part of it is inundated at high-water. Shoals and mud banks of from 2 to 10 miles in width, extend along the coast.

Surface and Soil.—The north-eastern side of Sumatra is a low and level plain; the south-western is either mountainous or hilly, but our information respecting the interior is imperfect. The mountain region begins on the shores of the Straits of Sunda, with the elevated promontories of Tanjong Toca and Tanjong Kamantara. At a short distance from the first-named cape, and near the eastern shores of Lampong Bay, is the Raja Bassa Peak, which is about 1600 feet high. This mountain summit is connected with the extensive mountain masses which separate Lampong Bay from Samangka Bay, and on which the Keyzer's Peak probably rises to 5000 feet. Another range of mountains, which rises at the back of the flat tract between Tanjong China and Flat Point, runs north-west, and joins the great mass north of the innermost recess of Samangka Bay. The mountain region thus formed covers a tract about 100 miles in length by about 40 miles in width. In this part of the mountain region the country along the sea is a succession of high hills and narrow valleys, very little cultivated, and very thinly inhabited. It produces however much pepper. East of this range a much more elevated chain of mountains occurs at about 20 miles from the shores of the Indian Ocean. Some of the summits are visible from the sea. The space inclosed by the two parallel ridges is an elevated table-land, the surface of which is very broken and hilly; and it contains several large lakes, as those of Ranan and Lukitan. The level undulating country which surrounds these lakes is of great fertility, well cultivated, and comparatively well settled. It produces pepper, cotton, indigo, tobacco, sugar-cane, maize, rice, sweet potatoes, and several other roots; and also plantains and pine-apples. The numerous rivers which flow eastward constitute the principal branches of the two large rivers Tulan Booang and Palembang.

The central mountain region may be considered as extending from 4° 30' S. lat. to Tapanooly Bay, or 1° 40' N. lat. It contains the highest ranges in the whole system, and occupies a much larger tract in width than the other portions of the mountain region; but the mountains do not advance close to the shores of the Indian Ocean, being divided from it by a comparatively low tract, generally 20 miles in breadth, in some places less, and in others widening to 30 miles. This lower tract we are better acquainted with than any other portion of Sumatra, as several European settlements have existed here for two centuries. The surface of this tract is intersected and rendered uneven to a surprising degree by extensive swamps, which in many spots encompass islands and peninsulas of considerable size. The general level of the country rises very gradually to the base of the mountains, where the ascent is very abrupt and rather steep. The soil consists of a fine red vegetable clay, covered with a layer of black mould of no considerable depth. To the south of Bencoolen the country is almost an impervious forest. Springs are abundant, and the rivers are very numerous. The rivers are usually navigable for small craft from the point where they enter the low marshy ground to their mouth. But all the rivers have a bar across their embouchure, the effect of the surf which breaks along this coast-line.

There are only two seasons, the dry and wet, which are regulated by the monsoons. In most parts of India to the north of the equator the north-east monsoon prevails when the sun is in the southern hemisphere, and the south-western when the sun is in the northern hemisphere, but on this coast of Sumatra the monsoons are changed by the direction of the land, the north-eastern into a north-western, and the south-western into a south-eastern monsoon. The south-eastern monsoon begins about May and leaves off in September; the north-western monsoon begins in November and blows to the end of May. The south-eastern monsoon blows with great force and steadiness from the end of June to late in September; and during this period rain seldom falls, except in showers, and generally in the night. When the north-west monsoon is strongest, from November to January, the rain is abundant. The rains do not sensibly abate until March. Thunder and lightning are very frequent. The atmosphere is generally more cloudy than in Europe. The fog, which is observed to rise every morning among the distant hills, is dense to a surprising degree, and it seldom disperses till about three hours after sunrise. When the monsoons abate their strength sea and land breezes prevail. The sea-breeze sets in between nine and ten o'clock in the morning, subsequent to a calm, and declines with the setting sun; the land-breeze begins early in the night, and continues till eight or nine o'clock in the morning. The land-breezes are rather cool, a circumstance which influences the temperature of the night. The heat in the day-time is considerable, but rather less than might be expected near the equator. At Bencoolen the thermometer never rises above 86°, and even at Natal not above 88°: at sun-rise it is

usually as low as 70°, on account of the cool land-breeze which descends from the mountains, covered with clouds, and bathed in constant vapours or rain. The mean annual temperature is probably between 82° and 83°. As this region is traversed by the equator, the temperature is nearly equal all the year round.

Although the country is thinly inhabited and ill cultivated, except near the European settlements and a few ports which are visited by traders, it produces several articles of export, as pepper, camphor-burns, gold-dust, ivory, and benzoin. The productions include rice, maize, tobacco, cotton, indigo, sugar, coffee, and the most exquisite fruits in the Indian Archipelago, as the mangosteen, durian, jack-fruit, plantains, oranges, and others.

The mountain region which lies at the back of this low tract has only been partially explored by Europeans. It appears to be traversed by three, and in some parts by more than three, ranges, running parallel to the coast in the direction of the island from south-east to north-west. This region contains several volcanoes. The most southern of the volcanoes in Sumatra, Gunong Dempo, which is known, is near 3° 40' S. lat. Its three peaks rise to about 12,000 feet above the sea, and are always enveloped in smoke. A volcano of moderate elevation occurs about 80 miles east of Bencoolen, which made an eruption about a century ago, and emitted smoke for a long time. Near 1° 30' S. lat. is the volcano of Gunong Api, or Berapi, which rises to a great elevation. Mount Ophir, or Gunong Pasaman, which is near 5° N. lat., and 13,850 feet above the sea, has also the form of a volcano, but is not active. There are several other volcanoes in Sumatra. Near the lakes, as near that of Korinchi, or St. George's Lake, there are rice-fields. Indigo, cotton, and sugar-cane are also cultivated. The mountains which separate these cultivated tracts from the Indian Ocean attain a great elevation. The most remarkable of these countries inclosed within the mountain region is that of Menangkabau, which extends from 1° S. lat. to near the equator. It is a plain, extending about 50 miles in every direction, and surrounded by high mountains. The ranges which lie west of it, and separate it from the lower tract along the Indian Ocean, are only from 5500 to 6500 feet high, but those which lie south of it are much higher: one of the summits, the Bukit Talang, is 10,032 feet above the sea-level. The range which lies east of the plain contains no lofty summits. But on the north-east stands the mountain mass of the Kasumba, the highest mountain in Sumatra, which rises to about 15,000 feet above the sea-level, and west of it are the volcanoes of Berapi and Sinkalang. The surface of the plain is rather hilly and broken than undulating, and the lowest part of it is occupied by the Lake of Sincara, which is 1035 feet above the sea-level. The whole country is one continued scene of cultivation, interspersed with numerous towns and villages shaded by the cocoa-nut and fruit-trees. Sir Thomas Raffles estimates the population at about a million. Every kind of grain, fruit, or root cultivated in any part of Sumatra is grown here in abundance, and the people apply themselves also to manufactures. The waters which descend from the neighbouring mountains to the Lake of Sincara are carried off by a river called Ambalang, the most remote source of the river Indragiri, which falls into the China Sea between 0° and 30° S. lat. The plain of Menangkabau, not being greatly elevated above the level of the sea, does not materially differ in climate from the lower country along the shores of the Indian Ocean; but other parts are more elevated, and beyond the most western ridge the temperature is much lower.

The northern part of the mountain region, or that which extends from 1° N. lat. to the most northern extremity of the island, contains a low plain, which lies along the Indian Ocean, and may be about 10 or 12 miles in width, and rather a hilly tract, which lies at the back of the plain, and is about 25 miles across. The greater part of the plain is uncultivated, and very thinly inhabited. The mountain tract is traversed in the direction of the island by three or four ridges, which occupy only a small width and are separated by extensive plains. The central ridge seems to rise to the greatest height, and at its most northern extremity, south-east of the town of Acheen, is the Queen's Mountain, whose summit is at least 6900 feet above the sea-level. The most southern ridge terminates in Acheen Head, a bluff but not very lofty promontory. The ridges themselves are overgrown with forests, in which the camphor-tree is frequently met with south of 3° S. lat., and also the cassia-tree, and the tree from which benzoin is obtained. The whole country is cleared, and either planted with rice and maize, or used as pasture-grounds for buffaloes, cattle, and horses. Pepper plantations are numerous. The watershed in this region is generally formed by the eastern ridge of mountains, and consequently the rivers which drain the plains and longitudinal valleys have a longer course and are less rapid than farther south, and are used for inland navigation. One of the plains between the mountains is occupied by a large lake, the Laut Ayer Tawar Lake, which appears to be of great extent. In this region the dry season does not take place during the south-eastern but during the north-western monsoon.

The hilly tract which extends along the north coast of Sumatra, from the valley of Acheen and Queen's Mountain on the west to Diamond Point on the east, a distance of about 130 miles, may be considered as an appendage of the mountain-region. From the high coast which bounds the sea the country rises gradually to the south, until it attains an elevation of about 1000 feet above the sea. The

highest part of this tract is an abrupt conical peak, called Elephant Mountain. The climate of this country rather resembles that of Hindustan than that of the western coast. The monsoon blows from south-west from May to October; and during its strength, from May to September, the weather is very cloudy and much rain falls, but only in showers. The dry season takes place during the north-east monsoon, which regularly sets in towards the end of November, and blows steady to March. The climate of this tract is more healthy than that of the other parts of Sumatra. The soil is tolerably fertile, and produces abundance of rice, much of which is exported, cotton, and the finest tropical fruits, with several esculent vegetables. Cattle, horses, and goats are numerous. The principal commercial productions are betel-nuts and pepper. The country is well cultivated and populous.

The Great Plain, which extends over the eastern and probably the greater part of Sumatra, from Diamond Point to Tanjong Toca, presents some variety along the coast, but as far as the interior is known it has a nearly uniform character. The northern part of it, as far south as the mouth of the Rakan River, though low, is sufficiently elevated above the level of the sea to be out of the reach of its inundations at spring-tides. The rivers are short, but some of them have tolerably good harbours. The central portion of the plain, extending from Rakan River to Luoepera Point, is extremely low along the sea-coast, and a large portion of it is covered with water at spring-tides, and thus converted into a large swamp, which is thickly wooded. It is uncultivated, and nearly uninhabited, except by some straggling families on the banks of the rivers. At the back of it the country rises with a moderate elevation and stretches out into a level plain to the base of the mountain-region. It is traversed by several large rivers, which on entering the low part of the country expand to a great width. The country is tolerably well peopled. The southern part of the plain, or that which fronts the Java Sea between Luoepera Point and Tanjong Toca, is less known than any other part of Sumatra near the sea. Though low, it seems to be sufficiently elevated to be beyond the reach of the inundations at high tides. Towards the interior the land rises, but the rivers, and among them the large river Tulan Boang, run through a wide depression, which during the rainy season is entirely covered with water by the inundation of the rivers.

The distinction of dry and wet seasons can hardly be applied to this plain. Neither the north-east nor the south-west monsoon is felt in all its force. The prevailing winds from March to September are the land and sea breezes, which are usually steady in the night, but faint and frequently interrupted by long calms in the day. In the season of the south-west monsoon the Sumatras, as they are called, blow, especially in the first part of the night. They are sudden squalls, sometimes extremely severe, and are accompanied with tremendous thunder and lightning and heavy rain. The north-westers, which are less frequent, are likewise severe at the beginning, but they soon abate. The greatest quantity of rain falls in this season. The north-east monsoon is somewhat more regular, only interrupted by the land and sea breezes. Calms are less frequent than in the south-west monsoon, the breezes are steady, and the weather is much more settled. The heat in summer is great, and at that period the air is saturated with moisture. In the dry season, on the other hand, it is moderated by the steady breezes. The climate of this tract is considered unhealthy for Europeans.

The islands which lie near the north-eastern coast of Sumatra, within the Strait of Malacca, are uniformly low, and their soil appears to be chiefly composed of alluvium; but the south-western coast of the island, between 3° N. lat. and 3° S. lat., is fronted by a chain of islands distant from it a little more than a degree. The most northern is called by our navigators Hog Island, by the Malays Pulo Babi, and by the natives Si Malu. It is about 50 miles long and about 10 or 12 miles broad, high, hilly, and covered with trees. Pulo Nias, the largest island of this chain, extends nearly in a south-east direction about 70 miles, with an average width somewhat exceeding 18 miles. Many small islands line its shores, and the coast is generally steep. The land is usually high, well clothed with trees, and partly cultivated by the natives with rice. The inhabitants are very numerous. Pulo Nias produces rice, yams, and beans for exportation; also poultry, buffaloes, cattle, and goats in abundance. It has several good harbours. Pulo Batu, commonly called Pulo Mintao, extends north and south about 48 miles, and is about 16 miles wide. It is situated immediately south of the equator. Only the northern part of the island is inhabited. It produces sago, cocoa-nuts, hogs, poultry, and trepang. Dammar, cocoa-nuts, cocoa-nut oil, and trepang are exported to Padang. Si Beeroo, or North Porah, called Great Fortune by the Dutch, extends nearly north-west and south-east about 80 miles, with an average breadth of 12 miles. It is generally high land, covered with wood. Between this island and South Porah is Seafower's Channel, which is more than 8 miles wide. Si Porah, or South Porah, extends from north-west in a direction nearly south-east about 36 miles in length. There are three good harbours on the east side—Hurlock's Bay, Si Ooban Bay, and Si Labbah Bay. It is less elevated than Si Beeroo. Between this island and North Poggy is Nassau Strait, which is about 10 miles wide, and very safe. Then follow North and South Poggy islands. [NASSAU ISLANDS, vol. iii., col. 916.] At a great distance to the south is Engano Island, which has a triangular form, and is about 24 miles long and 18 miles broad in the widest part. It

is protected by a rocky shore. On the east side is an anchorage, but landing is very difficult. The inhabitants are much averse to intercourse with foreigners. They speak a language different from that of the other islands and of Sumatra. In the long and wide strait which separates the chain of islands just noticed from the main body of Sumatra, are the Baniah Islands, or Pulo Bania (that is, Many Islands). These islands produce chiefly trepang and edible birds'-nests.

According to Marsden, these islands, with the exception of Engano, whose inhabitants seem to belong to another race, are occupied by two nations, both of which belong to the race of the Malays, but considerably differ in stature and language. The inhabitants of the islands north of 1° S. lat. are called Maruwis. The nation inhabiting the islands south of 1° S. lat. are called Pagi, and are heathens.

Rivers.—The most important of the rivers which drain the south-west coast, which are navigated by small craft to some distance from their mouth, are from south to north as follows:—The Kataun (3° 20' S. lat.), the Ipoo (3° 5' S. lat.), the Indrapura (2° S. lat.), the Tabuyong (40' N. lat.), the Batang Tara (1° 25' N. lat.), and the Sinkel (2° 15' N. lat.). The last-mentioned river is much the largest on this coast, and its course considerably exceeds 100 miles. In the low country it is joined by the Sikeri, about 20 miles from its mouth. It is navigable for the greater part of its course for boats, and up to its confluence with the Sikeri the river is deep enough for vessels of considerable burden, but the bar at its mouth is dangerous.

The rivers which rise in the mountain region, and, traversing the eastern plain, fall into the Straits of Malacca and Banca, or into the China Sea, are larger and much better adapted for inland navigation. The most northern of them is the Delli River, which reaches the sea in 3° 46' S. lat. Its mouth is a quarter of a mile wide, and has two fathoms depth at its bar at low water, so as to admit vessels of moderate size. The Batu-Bhara River enters the sea in 3° 13' N. lat., and forms a small harbour at its mouth only accessible for small vessels. The Assahan River, which falls into the sea near 3° N. lat., forms at its mouth a harbour for small vessels.

The Rakan River is rather a wide estuary, which receives two considerable streams, than a river. These rivers at their confluence, which is more than 30 miles from the sea, are about a mile and a half wide. The river formed by their junction is about 2 miles wide, and continues so for several miles, when it enlarges to 4 miles, and where it reaches the sea it is 15 miles wide. At its mouth there are two low and woody islands, between which is the entrance to the river. The navigation of this river is dangerous, on account of the excessive rapidity of the tides and the very high bore thereby occasioned. The river is almost dry at low water of spring-tides.

The Siack River, which runs more than 200 miles measured along its course, rises in the mountain region, and probably on the northern declivity of Mount Kasumba, or in its neighbourhood. By this river the gold which is collected in the mountains of Menaugcabau is brought to the Strait of Malacca. The river at its mouth is only three-quarters of a mile wide, but it is very deep. The entrance of the river is further narrowed by a sandy spit, which is nearly dry at low water.

The Kampar falls into the Strait of Malacca at its most southern extremity, nearly opposite the Strait of Singapore. Its upper course lies within the mountain region. The harbour at the mouth of the river is not much visited by European vessels, on account of the velocity of the tides, which rise 15 feet, and run from 4 to 6 miles per hour. They produce a considerable bore. Coffee and other articles of trade are brought from this river to Singapore by the Malays in boats.

The river Indragiri, which falls into the Strait of Durian opposite the island of Lingin, rises in the centre of Menaugcabau, in the Lake of Sinkara, a little more than 1000 feet above the sea-level, and runs about 100 miles within the mountain region in a south-eastern direction. Its exit from that region is marked by a cataract near a place called Saluka. The mouth of the river is very wide, but subject to a very dangerous bore: it is rarely visited by European vessels, but the Malays bring from it great quantities of rice to Singapore. The whole course of the Indragiri probably is not less than 300 miles.

The Iambie River drains a great extent of country. One of its upper branches rises in St. George's Lake, in the country of the Korinchi. The several branches which flow from the mountains unite nearly midway between the mountains and the shore, about 100 miles from the mouth of the river. Below the town of Iambie the river divides into two arms, which unite about 30 miles from the sea, and inclose an island 30 miles long and 10 miles wide. Lower down the river divides again into two arms, which inclose a large delta. The western arm is called Qualla Nior and the eastern Qualla Sudda, and both of them divide again as they approach the sea. Only the most eastern and western arms are navigable for vessels of small burden, and even in these the navigation is intricate and dangerous, on account of the shoals and sand-banks.

The largest river of Sumatra is the Palembang, whose numerous upper branches originate in the mountain region between 2° 30' and 5° S. lat. The most southern of them brings down the waters of the large lake of Ranau. The best known of these rivers is that which rises in the district of Musi, immediately at the back of the range of hills visible from Bencoolen, and, on that account, has the name of

Ayer Mui in the early part of its course, but in the lower part is named the Tatong. The Mui River becomes navigable for boats before it leaves the mountain region at Muara Mulang, which is about 250 miles from the sea. Most of the southern districts of the mountain region send their goods to Palembang, and receive by this river those foreign articles which are consumed by the inhabitants. Most of the branches fall into the Tatong in the vicinity of the town of Palembang, where the river is above a mile wide. From Palembang downwards the river is called Palembang River. After the confluence of its numerous branches it turns northward, and begins to divide into several arms, reaching the sea with four mouths, which, with the intervening islands, occupy a space of more than 24 miles on the shores of the Strait of Banca. These arms are called from east to west Sulsee River, False River, Palembang River, and Salt River. The depth of these rivers varies between 3 and 10 fathoms; but in front of their mouths is an extensive bank of hard sand, with a thin superstratum of black mud, which is hardly covered at low water. The channels across this bank have only from 1½ to 2 fathoms at low water. At the full and change of the moon the tide rises from 7 to 8 feet.

The Tulan Booang, the most southern of the larger rivers of Sumatra, rises in the mountain region, but little is known of its course.

Climate.—The temperature of the coasts and lower parts of Sumatra is very agreeable. On the west coast, south of the equator, earthquakes are frequently felt; but in general they are slight. Water-spouts are very frequent along the western coast.

Productions.—Several varieties of rice are cultivated in the lowest plains and in the elevated valleys of the mountain range. Rice forms an important article of export from Acheen to Hindustan, and from the north-eastern coast to the British settlements on the Strait of Malacca. Some maize is grown. The most common esculent vegetables are—red and white yams, the St. Helena yam, sweet potatoes, common potatoes in the more elevated districts; bredy, a kind of spinach; lobuck, or the Spanish radish; the large purple brinjall, or egg-plant; many different sorts of beans, white and green peas, and onions. Chili, or capsicum, ginger, coriander, and cummin-seed are raised, especially on the western coast. Hemp is extensively cultivated, but only for smoking with tobacco. Tobacco is also grown, and is an article of export. Melons are raised on the plains. Sesamum is cultivated for its oil; and the Palma Christi, from which castor-oil is obtained, grows wild. The plantations of betel-vines are extensive. Indigo and cotton are raised for domestic use only.

Sumatra, like all the islands of the Indian Archipelago, is noted for the variety of its fruit-trees; the most important is the cocoa-nut tree. There are also plantations of plantains, banana, the bread-fruit tree, jack-tree, mangosteens, durians, mango, different kinds of orange- and lemon-trees, the pine-apple, the jambo, the guava, the papaya, the custard-apple, the pomegranate, and the tamarind.

Of the other plants and trees the most important is the pepper-vine, of which there are extensive gardens. The second as to importance is the areca-palm, which is grown most abundantly on the coast between Acheen Head and Diamond Point. On the eastern coast the plant from which gambier is obtained is largely cultivated. Sago is grown in several places on the eastern plain, but especially on the island of Rantau: large quantities go annually to Singapore. Clove- and nutmeg-trees were introduced by the English in 1798.

The tree from which the camphor-barus is obtained grows only in the northern districts, between 0° and 3° N. lat., north and south of the town of Baroos, from which the article has received its distinguishing name. In the same district are grown the tree from which benzoin is obtained, and those which yield cassia. In most places there are the dragon's-blood trees, and trees from which caoutchouc is obtained. Agila-wood is common. Extensive tracts of the eastern plain are covered with different kinds of canes, known by the general name of rattans, large quantities of which go to Europe and China. The forests cover about three-fourths of the island. The most useful trees are the poon, used for masts and spars; the marbau, used as beams for ships and houses; the iron-wood tree, the ebony-tree, and the rangi, which resembles mahogany.

The most useful of the domestic animals is the buffalo, which attains an extraordinary size, and is used for agricultural purposes and as an animal of burden. There are two kinds—white and black. The flesh is eaten, but that of the black kind is preferred. The milk is employed in making butter. Black cattle are not numerous, except on the coast of Pedir, where the plough is drawn by oxen. The horse is of a small breed, but well made and hardy. Sheep are few, and of a small size. Goats are numerous, but they are also small. The hog is of the Chinese breed.

Elephants are numerous, especially in the forests of the plain. The natives kill them with poison for the tusks and skin. The buffalo is found in a wild state. The rhinoceros is common, both that with a single horn and the double-horned species. Bears are numerous, and among them is the sun-bear. There are different kinds of deer, among which is the kanchil, called by Buffon 'chevrotin,' whose extreme length is only 16 inches, and the height 10 inches behind and 8 inches at the shoulders. The varieties of the monkey-tribe are innumerable, and among them the oran-utan is met with. There are sloths and

squirrels. The tiger is very large, and frequently destroys men and most animals. There are also tiger-cats, civet-cats, polecats, porcupines, hedgehogs, and pangolins, a species of *Manis*. Bats are very numerous. Alligators abound in most of the rivers. There are several species of lizards, of which the guana is eaten. Chameleons and flying lizards (*Draco volans*) are frequent. Snakes occur in great variety, among which is the boa. A few of them are poisonous. Oysters are frequently found adhering to the roots of the mangrove-trees with which the coast is lined. There is a great variety of shell-fish, particularly the gigantic keema, which is three feet in diameter, and more than two feet across.

No part of the ocean is so abundant in fish as the sea which surrounds the Indian Archipelago; but fish seem to be less plentiful on the western than on the eastern coast. The largest fishery is in Brewer's Strait opposite the town of Berkit Batu, where boats are engaged at all seasons in fishing the trubu, a fish about a cubit long; the roe is an article of trade, and the dried fish are sent into the interior of the island. In the Strait of Malacca is the dugong (*Halicora dugong*) and great numbers of sharks, the fins of which are exported to Singapore and China.

Besides the common fowl, which is as abundant as in most other countries, there is a much larger kind of domestic fowl in the Lampong country, where there is also that diminutive kind called the bantam. The wild fowl which is found in the woods differs little from the common sort, except in the uniformity of its brown colour. Among the wild birds the Sumatran pheasant is conspicuous for its beauty. Peacocks, eagles, and vultures are rare, but kites, crows, jackdaws, woodpeckers, and kingfishers are common. The hornbill is abundant. There are several species of storks, pigeons, and doves; and quails and partridges are common. The island swarms with insects. The variety of ants is astonishing. Bees are very abundant, but the honey is inferior to the English. The silk-worm is reared in a few places.

Sumatra was once noted for its gold, and a considerable quantity is still exported. The places in which it abounds are the mountains which surround the table-land of Menangcabau, but it is also found south and north of that country. Tin occurs in several places on the great plain, but is very little worked. Copper is found in the northern portions of the mountain region (between 2° and 3° N. lat.) to the south-east of Analaboo, where it occurs in great abundance in an extensive tract: it contains gold, but is not much worked. There is iron in the mountains of Menangcabau, where it is worked to a small extent. Sulphur is obtained from some of the volcanoes, and arsenic is found in several places. Saltpetre is found, and it is used by the natives for making gunpowder. Coal has been found in one or two places on the western coast. A little salt is made.

Inhabitants.—The interior of most of the larger islands of the Indian Archipelago is occupied by a race of negroes called Australian; but it does not appear that such a race is found in Sumatra. Marsden mentions two different races called Orang-Kuba and Orang-Gugu, who are dispersed in the woods. They live in the tract that separates the country of Labung from Palembang, speak a peculiar language, and eat whatever the woods afford. Another race called Orang-Abung is mentioned as inhabiting some mountainous tracts near Samangka Bay. If these small tribes are not the remnants of the aborigines of the island, the present inhabitants must be considered such. They all belong to the same race. Their languages may be considered as dialects of the same original language, though they have adopted different modes of writing them. There are however some differences in these points, which have led writers on this subject to divide them into five nations: the Atcheenese, the Battas, the Malays, the Sumatrans, and the Lampongs. The Atcheenese occupy the most northern part of the island, and differ considerably from the other nations, being in general rather taller, stouter, and of a darker complexion. [ATCHEEN.] The Battas occupy the sea-coast on the west side of the island from the river Sinkel to that of Tabuyong, and extend across the island to the east coast; they are rather below the stature of the Malays, and their complexions are fairer. [BATTA.] The Malays occupy, to the exclusion of all other nations, the whole of the great plain from the river Rakan on the north to that of Masuai on the south, and also the shores north of the Rakan River as far as Timian. The mountain table-land of Menangcabau was, according to the history of the Malays, the original seat of their nation, and from it they are supposed to have spread over the Indian Archipelago. The inhabitants of Menangcabau are still distinguished from all other nations of Sumatra by the advanced state of their agriculture, their manufactures, and civilisation; while the Malays, who inhabit the shores of the Strait of Malacca, appear to be a degenerated tribe, and are chiefly occupied in piracy. The Malays are Mohammedans, but not strict observers of the ceremonies of their faith. The name of Sumatrans comprehends all the tribes that inhabit the west coast, from the river Tabuyong (40° N. lat.) on the north, to the river Padang-Guchi (4° 40' S. lat.) on the south, and also occupy the mountain region south of Menangcabau as far as 5° S. lat. They are rather below the middle stature. Their limbs are generally slight, but well shaped, and particularly small at the wrists and ankles. Their eyes are uniformly dark and clear; the eyes of the southern women particularly bear a strong resemblance to those of the Chinese, being narrow and somewhat lower at the inner angles.

They speak several dialects, which contain a great number of Malay roots. The Lampongs occupy the most southern part of the island, both the mountain region south of the river Padang-Guchi and the plain south of the river Masusi. They have a strong resemblance to the Chinese, particularly in the roundness of the face and the form of the eyes; otherwise they do not differ in their persons from the Sumatrans. They are the fairest people in the island, and the women are the tallest and handomest. Their language differs considerably from that of the Sumatrans, and contains a great number of Javanese words. Nearly all the nations inhabiting Sumatra are on a level with respect to civilisation. The most advanced are those of Menanggaban and of Atcheen.

According to the history of the Malays, the whole island was once subject to the sovereign of Menanggaban, and this assertion is strongly supported by the veneration which is still shown by nearly all the inhabitants towards those who are connected with the reigning family of that country. Every village or town has its chief, who acknowledges only nominally one of the princes or sultans, of which there are several in the island, but he acts quite independently, and makes war on his neighbours as often as he pleases. The influence which for more than a century has been exercised by European settlers and governments has tended to diminish petty wars and promote peace among the natives.

The total population of Sumatra is estimated at between 3,000,000 and 4,000,000. The population of the Dutch settlements at the end of the year 1852 was as follows:—

Sumatra (west coast)	1,015,000
Bencoolen	110,000
Lampung	54,000
Palembang	305,000
Total	1,484,000

Political Divisions, Towns, and Places of Trade.—Sumatra is partly subject to native sovereigns and partly under the sway and influence of the Dutch. The independent states lie on the north-eastern coast, along the Straits of Durian and Malacca, from 2° S. lat. to the most northern extremity of the island, and extend along the south-western coast as far as 2° N. lat. The remainder of the south-western coast, with a considerable part of the mountain region, and the north-eastern coast as far north as 1° 30' S. lat., is either immediately subject to the Dutch or governed by princes dependent on them. The independent states are Atcheen [ATCHEEN], Siack, Indragiri, and Iambie on the coast, and that of the Battas in the interior.

1. The countries south of Diamond Point were formerly subject to the sultan of Atcheen, but are now governed by their own independent rajas, or sultans as they are called. On the coast along this district are the ports of Langkat, Balu China, Delli, Sardang, Batu-Bhara, and Assahan. The sultans of the four last places are nominally dependent on the king of Siack. It appears that the authority of these petty princes does not extend far from the sea, as the inland country is inhabited by the Battas, who however send the greater part of their produce to these ports in exchange for foreign goods. The commerce of this coast with Penang is very active, especially that of Balu China and Delli. These two places are only a few miles from each other, and each is built on the banks of a river, which is navigable for brigs to the town, and for large boats to a considerable distance from the sea. The advantages of this easy navigation have attracted the whole commerce of the country of the Battas to these two harbours. Traders from the interior (as Allas and Gacoa) and even from the banks of the Sinkel River and other places near the south-west coast, come over with various articles and carry back manufactured commodities. Batu-Bhara is the largest and most populous place on the north-east coast. The surrounding country produces only rattans, salt-fish, horses, and slaves, as articles of export. But Batu-Bhara is a free port, and mostly inhabited by merchants and shipowners. It is stated that 600 large trading boats belong to this port. These vessels are the carriers of this coast. They go in great numbers to Sardang, Delli, Batu-China, Langkat, and other pepper ports, and to Assahan, whence they bring large quantities of produce to Penang. Batu-Bhara is also a manufacturing place: large quantities of fine silk-cloth are made here, which is in great esteem in all the neighbouring countries, and largely exported. The last place on this coast is Assahan, which has a considerable amount of commerce. [ASSAHAN.]

2. Siack is the largest state on the north-east coast, extending from the vicinity of the Assahan (3° N. lat.) to the river Kampar (0°), and bounded S. by Indragiri, W. by Menanggaban, and N. by the Battas and Assahan. It is considered to extend even to 4° N. lat., but the chiefs of the tribes between Assahan and Delli are only nominally dependent on it, and even those south of 3° N. lat. are frequently at war with the king. The trading-places within this large tract are, from north to south, Bila, Panai; Tana-Putch, Kubu, and Rakan, on the Rakan River; Bukit-Batu on Brewer's Strait; Siack on Siack River, and Pulo-Lawang on the Kampar River. The town of Siack is situated on the right bank of the river of the same name, about 65 miles from its mouth. It sends many vessels to Malacca and Singapore with rattans, dammar, gambier, dye-wood, ebony, agila-wood, wax, ivory, silk, cloth, coffee, camphor, salt-fish, fish-roses, and

gold. The imports include salt, opium, cotton-cloth from the neighbouring countries, which is called coast cloth, chintzes from Surat and Europe, white cloth from Europe, raw silk and cotton, silk-stuffs, gum-lac, iron and steel in bars and tubs, Java tobacco, precious stones from Ceylon, gunpowder, and tin. Pulo-del-Lawang and other places on the Kampar River export a good deal of coffee to Singapore. The islands which lie on the east of Brewer's Strait belong to Siack. The largest of them, Rankan, is low and marshy: it produces a large quantity of raw sago, which is imported into Malacca and Singapore for the manufacture of pearl-sago.

3. Indragiri is a kingdom of small extent, comprehending only the countries on both sides of the river of that name, but extending to the base of the mountain region, where it borders on Menanggaban. It exports considerable quantities of rice to Singapore. Opposite the mouth of the river is the island of Lingin, and from that island northward to the capes of Burus and Romania and the port of Singapore, the sea is literally strewn with islands and innumerable rocks. Such a sea is favourable to piracy; and as this extremity of the China Sea is much navigated, partly on account of the rich countries in its vicinity (Java, Borneo, Sumatra), and partly as being the great thoroughfare of the commerce between eastern and western Asia, the pirate nation of the Illanos or Lanus, whose original country is the island of Magindanao [PHILIPPINES, vol. iv., col. 165], have pushed their settlements, which are found in all parts of the Indian Archipelago, as far as the shores of Indragiri. This is the most western settlement of these pirates.

4. Iambie is the most southern of the independent states of Sumatra. The boundary-line between it and the Dutch kingdom of Palembang begins on the shores of the sea near 2° S. lat., and extends south-west to the mountain region, where it terminates near 3° S. lat. The present capital, Tanapileh (Chosen Land), is situated a day's voyage above Old Iambie, which is 60 miles from the sea. The produce of the country is dragon's-blood, gambier, benzoin, and a variety of rattans, with some gold-dust.

5. The country of the Battas is separately described. [BATTAS, vol. i., col. 930.]

The Dutch possessions extend perhaps over half the area of the island. The southern portion of the plain is subject to them as far north as a line which begins near the mountains in the vicinity of 3° S. lat., and on the shores of the China Sea terminates near 2° S. lat. The greatest part of the mountain region south of 2° N. lat., though governed by their own chiefs, acknowledges the supreme authority of the Dutch government. The Dutch government have five regencies, or governments—Palembang, Lampung, Bencoolen, Padang, and Ayer Banghis. The first two are placed under the governor-general of Java, and the three last-mentioned regencies constitute the government of the west coast of Sumatra. Bencoolen is separately noticed. [BENC-COOLEN.]

The Regency of Palembang comprehends the kingdom of that name, and though the king keeps his title, the country is under the administration of the Dutch regent, but the power of the regent is very much circumscribed by that of the native chiefs. This extensive country is thinly inhabited. The town of Palembang however contains 25,000 inhabitants. The houses are of wood or bamboo, except the palace of the sultan and the principal mosque, which are of stone, and in the centre of the town. Though this place is about 70 miles from the mouth of the river, it carries on a considerable commerce, as the river is navigable for large vessels.

The Regency of Lampung comprehends that portion of the plain which lies south of the river Masusi, and that portion of the mountain region which surrounds the bays of Lampung and Samangka. It terminates on the west near Flat Point. The level part of the country is very thinly inhabited, and exports to Batavia only rice, pepper, and a little cotton. The only settlement of the Dutch, and the place where the regent resides, is Mangala, on the banks of the Tulan Booang.

The Regency of Padang comprehends the mountain region and the west coast between 1° 55' S. lat., and the equator. It therefore incloses the ancient kingdom of Menanggaban, whose population Raffles estimated at more than a million. In this regency there are numerous mines of gold, of which those situated in the district of Tiga Blas-Kotta are considered as very rich, more especially those of Songui Pago and Si-Payong. They lie to the east and south-east of Padang. The town of Padang, the residence of the governor of the west coast of Sumatra, and of the regent of Padang, is a small but well-built place. Ayer Adji is a small port.

The Regency of Ayer Banghis comprehends the mountain region and the west coast between the equator and 2° N. lat. Along the coast it extends somewhat farther north. In the southern districts of the mountain region there are several gold-mines, especially in those called Rawer, or Ran, and Mandilling. The two best harbours of Sumatra, the bays of Ayer Banghis and Tapanooly, are within these territories, and there is a good harbour also at Natal. Ayer Banghis is the seat of the resident. Natal is rather a populous trading town. On the Bay of Tapanooly are a few European commercial settlements.

Manufactures.—Nothing perhaps shows more clearly the advanced state of civilisation of the inhabitants of Sumatra than their manu-

facturing industry. The most important manufactures are those of iron and steel, which are carried to a considerable degree of perfection in Menangcabau, where iron has been worked from time immemorial. The kris (dagger) blades made here are famous all over the Indian Archipelago. Common implements of agriculture and several kinds of tools are made. Large quantities of fine silk-cloth are made at Batu-Bhara. Silk-cloth is made at Atcheen. Earthenware is made on an extensive scale at several places, especially at Menangcabau, whence Padang and Bencoolen are supplied with this article. The beautiful gold and silver filagree-work made in this island has long been admired, though it is executed with very coarse and imperfect tools.

History.—Marco Polo calls Sumatra Java Minor. The name of Sumatra occurs first in the travels of Nicolo di Conti, who visited it before 1449. The Malay name of the island is Pulo Percha. The Portuguese navigators reached the coast of Pedir in 1509, under Diego Lopez Siqueira. At this time it appears that the ancient kingdom of Menangcabau, which, according to the Malay history, extended over the whole island, had already been dismembered; but Atcheen was then governed by a powerful king, who prevented the Portuguese from gaining a footing in the island, and even tried to expel them from the town of Malacca. In 1575 a fleet of the Atcheenees destroyed the shipping of the Portuguese in the harbour of that town; and in 1582 another fleet tried to get possession of the town itself, though without success. From that time the kingdom of Atcheen began to be distracted by internal wars, and continual discord between the sovereigns and the hereditary chiefs, and fell by degrees into insignificance. The Dutch appeared first on the north coast towards the close of the 16th century, and the English early in the 17th. The pepper-trade was the great object of these two nations; the Dutch formed a settlement at Padang in 1649 or shortly before, and the English at Bencoolen in 1685. The Dutch also got a firm footing in the southern districts of the island. As allies of the sultan of Bantam, they erected a factory on the river Tulan Boeang, in the country of the Lampongs; and in 1664 extorted permission from the king of Palembang to establish one in the capital of that country. In 1811 the Dutch possessions, together with the island of Java, fell into the hands of the English. After the peace of Paris, in 1816, the Dutch colonies on the Indian Archipelago were restored to them. In 1824 the Dutch found it expedient to give up to the English the town of Malacca and some settlements in Hindustan in exchange for the British settlements on the west coast of Sumatra. A further accession of territory to the Dutch possessions took place in 1835, in consequence of a war with the Padries, a religious sect which began to appear in the country of Menangcabau about the beginning of this century. This sect aimed at the suppression of the practices of gambling, smoking opium, and drinking intoxicating liquors, on account of their effects, as they often led to the commission of murders, thefts, robbery, fraud, and tended to produce a depraved state of society. For about 15 or 16 years this doctrine was propagated only by conviction and persuasion, and the leader of the sect acquired many adherents; but about 1815 or 1816 a society was formed among the principal adherents of this new doctrine, for the purpose of compelling the other inhabitants to conform. The wars which arose devastated for many years the country of Menangcabau and some adjacent districts. Some of the small chieftains who inhabit the country between Padang and Menangcabau applied to the Dutch for protection, and the Dutch government took up their cause. The result was that the whole country of Menangcabau is now included in the Dutch possessions.

(Marsden; Crawford; Heyne; Anderson, *Account of a Mission to the East Coast of Sumatra*; Lady Raffles, *Memoirs of the Life and Public Services of the late Sir T. S. Raffles, &c.*; Moor, *Notices on the Indian Archipelago*, Singap., 1837; Anderson, *Acheen and the Ports on the North and East Coasts of Sumatra.*)

SUMBAWA, or SURUBAWA. [SUNDA ISLANDS.]

SUMMERHILL. [MEATH.]

SUMY. [CHABROFF.]

SUNDA ISLANDS is a term formerly used to designate the islands which inclose the Java Sea (which is also called the Sunda Sea, and is connected with the Indian Ocean by *Sunda Strait* between Java and Sumatra), namely, Java, Borneo, Sumatra, and Celebes. These four islands are still sometimes called the *Greater Sunda Islands*. The chain of islands which extends from the eastern extremity of Java to the coast of New Guinea, or Papua, are collectively named the *Lesser Sunda Islands*; so that under the term Sunda Islands the whole of the Indian Archipelago is comprehended, with the exception of the Moluccas, the Sooloo Archipelago, and the Philippines. The Greater Sunda Islands and their dependencies are noticed under separate heads. [BORNEO; CELEBES; JAVA; SUMATRA; BANCA; BILLITON; MADURA.]

The *Lesser Sunda Islands* are situated between 5° and 11° S. lat., 114° and 135° E. long. These islands were first visited by the Portuguese, who formed small settlements on some of them. The Dutch East India Company afterwards occupied them, in order to destroy the clove- and nutmeg-trees, and thus to secure to themselves a monopoly in the spice trade. The company accordingly prevented other Europeans from approaching these islands, and withheld all information respecting them; and it is only within the present century,

since the dissolution of the Dutch East India Company, that Europeans have become better acquainted with them.

The Lesser Sunda Islands consist of four large groups, which from west to east are called the Timor Islands, the Serawatte Islands, the Tenimber group, and the Aroo Islands. The term Lesser Sunda Islands is frequently applied to the Timor Islands alone.

The *Timor Group*, so called from the largest of the islands, extends from 114° to 127° 30' E. long., and comprehends the greater part of the islands and the larger islands of the whole chain. Between 114° and 119° E. long. it consists of three large islands, Bally, or BALI, LOMBOK, and Sumbawa, which lie west and east of one another. But between 119° and 127° E. long. the islands constitute a double row, of which the northern, lying between 8° and 9° S. lat., comprehends Comodo, Floris, Solor, Sebrao, Lomblen, Pantar, Ombay, and Wetter. The southern row forms a curve towards the south, advances nearly to 11° S. lat., and consists of the islands of Sumba, or Sandalwood, Savu, Rotti, Simao, and Timor. The straits which separate these islands from one another are often navigated by vessels bound to or from China, when they reach these seas in seasons during which the navigation through Sunda Strait is either dangerous or tedious.

The island of *Sumbawa*, or *Surubawa*, extends from west to east about 180 miles, its width varies between 50 and 20 miles; two large bays, Sallee and Bima bays, enter deeply into the island from the north. The average width may be 40 miles, which gives an area of 7200 miles. Along the southern shores of this large island extends a mountain range, which begins on the shores of the Strait of Allas (which separates Sumbawa from Lombok), and terminates on those of Sapy Strait. About the middle of this chain, and opposite the Bay of Sallee, which cuts it nearly in two, is a deep depression in the range, which is not much above the sea-level, and is covered with thick forests. The shores of this mountain tract are high and steep. The remainder of the island is generally hilly, but a few of the elevations rise considerably above the rest. The most remarkable of them is Tumbora Peak, a volcano, whose eruption in 1815 is one of the most terrible on record. Its elevation above the sea is between 8000 and 9000 feet. The low and level tracts occupy only a comparatively small part of the island, and they generally occur at the innermost recesses of the bays along the northern coast, and along the Strait of Sapy. The Strait of Allas presents a high and rocky coast, which however towards the north is lined by many low rocky islands. In soil this island seems to be much inferior to Lombok or Bali, but it does not differ in vegetable productions, except that in the forests, which cover a considerable part of its surface, there is a great number of teak-trees. The animals are also the same as in Bali, but buffaloes are far more numerous. The horses, or rather ponies, of this island, especially those of Bima, are the finest breed in the whole archipelago, and are extensively exported. Gold is collected in some of the small rivers. Pearls are found in Sallee Bay. Some intercourse exists between Bima and Java, and trading boats from Ceram and Celebes visit the port of Sumbawa. These seem to be the only places from which the produce of the island is exported.

To the east of Sumbawa is the *Strait of Sapy*, which on the other side is formed by the island of Comodo. The northern part of it is divided into two channels by the island of Gillibanta, which is of considerable size, and has a peak near the centre. Near the northern entrance of Sapy Strait is the island of Goonong Apee, which is very high, and formed of a large mountain with two summits, of which the south-eastern is called the Lawa Peak, and is a volcano. The island of Comodo consists of a high rocky mass covered with wood. On the east of it is the *Strait of Mangerye*, which is studded with numerous rocky islands.

East of this strait is the island of *Floris*, or Endé, which is about 200 miles long from east to west, and about 35 miles broad. The surface is hilly, particularly on the south side, where there are several high volcanoes. The principal town, Endé, on the south coast has an excellent harbour. Larantuka, on the east coast, is held by the Portuguese, who have converted many of the natives to the Catholic faith. The population of the south coast are called Rakka, and are said to be much addicted to cannibalism. [FLORIS.] The Dutch protection does not extend east of Floris; and the inhabitants of this island and the islands eastward of it are said to practise piracy. North of Floris, in 123° E. long., is *Comba* island, of conical shape and an active volcano.

East of the Strait of Floris are five islands of considerable extent: Sebrao, or Sabrao, and Solor, already mentioned; and Lomblen, Pantar, and Ombay, each comprehending an area of from 300 to 400 square miles. All of these are very high and bold, especially the three last mentioned. A peak on Lomblen is visible at the distance of 50 miles. On Pantar are three summits, the highest of which is an active volcano. The inhabitants of Sebrao are Christians, and connected with Larantuka. The chief town of the island is called *Adinara*, which is sometimes applied to the island itself. Solor is dependent on the Dutch of Coopang, and sends to that place large quantities of wax and fish-oil. The inhabitants of the coast are Mohammedans. The inhabitants of Lomblen, Pantar, and Ombay are numerous, and mostly if not entirely belong to the Haraforas race: they avoid communication with foreigners. These islands are very rarely visited by Europeans, and not frequently by Bugis, who obtain

from them large quantities of wax. The straits that divide the islands are said to be unsafe.

Sandalwood island, the native names for which are *Jindana* and *Sumba*, lies south of the Strait of Sapy and of the island of Flores. It extends from north-west to south-east about 100 miles, with an average width of 50 miles. This island forms a table-land of considerable elevation, most parts of the southern coast of which are visible at the distance of 30 miles. Its surface however is only undulating, except towards the west, where there is a peak, which can be seen at the distance of 60 miles. The inhabitants are Haraforas. The Dutch had succeeded in forming a commercial establishment there: they were however expelled, because they cut down some sandal-wood trees, as the inhabitants have the belief that for every tree of this kind which is cut down one of the natives loses his life. The Bugis of Endó in Flores obtain from the island large quantities of bees'-wax and birds'-nests. The coast is generally steep and without soundings. Anchorage is found only on the north-east coast in Padewahy, or Baring's Bay.

Between Sandalwood and Timor are the islands of *Sáwu* and *Rotti*. *Sáwu* is about 20 miles long, and on an average 10 miles wide. It is hilly throughout, and has a stony soil, but in good seasons it is tolerably fertile. The supply of water is very scanty. The cultivation of the ground is much neglected: it produces only small quantities of maize, millet, kaehang, and sweet potatoes, and sufficient cotton for home consumption. In dry seasons, when the crops fail, the inhabitants derive subsistence from the sugar of the lontar-trees, which they barter with the Bugis. The domestic animals are those of the other islands. The wild animals are hogs and deer. The inhabitants have frizzled hair, and resemble those of Timor.

Rotti extends from south-west to north-east about 60 miles, with an average width of 20 miles. The surface is a succession of low hills and narrow valleys; the soil is very stony but productive. The rivers are few and small. Rice in small quantity, with maize, millet, sweet potatoes, and kaehang are cultivated, but the crops are only equal to the consumption of the inhabitants. In dry seasons they depend on the sugar of the lontar-trees. Cotton is grown. The horses, or rather ponies, are better than those of Timor, but not equal to those of Sumbawa. The population is stated to exceed 50,000. The inhabitants, who resemble the Hindoos, have long lank hair, whilst nearly the whole of the inhabitants of the surrounding islands have frizzled hair. They are governed by chiefs, who acknowledge the supremacy of the Dutch. Some of the chiefs profess Christianity, but the majority are pagans. The exports consist of palm sugar, horses and buffaloes, and bees'-wax. The imports are cotton, muskets and ammunition, and manufactured goods.

The island of *Timor* is the largest of the Lesser Sunda Islands, being 300 miles long from south-west to north-east, and on an average 45 miles wide. A chain of mountains runs through the middle of the island, and some of the summits attain such an elevation that Flinders compares them with the mountains of Teneriffe. Though the greater part of the island consists of a succession of narrow valleys, and hills or mountains with steep sides, there are a few large plains, of which one of the largest is at the bottom of Coopang Bay, which is more than ten miles square. All the rivers are small, and descend so rapid a declivity, that none of them is navigable beyond the tidal point. The principal objects of agriculture are rice, maize, millet, pulse, sweet potatoes, and cotton. Maize is the principal article of food; and next to it the sugar of the lontar-palm. In some parts of the island a species of sago-palm is found, and used as food. Small quantities of sugar-cane are raised, but not for the purpose of making sugar. Oranges, jack-fruit, &c., abound. The domestic animals are horses, buffaloes, sheep, goats, dogs, and cats. The wild animals are buffaloes, deer, hogs, a species of large wild-cat, and monkeys. Gold is found in several of the rivers. Native copper also is said to abound in the Philaran Mountains, which are situated near the centre of the north-west side of the island. The natives are of a very dark colour, with frizzled bushy hair. They are below the middle size, and rather slight in figure. The chiefs in the southern coast acknowledge the authority of the Dutch. The eastern part of the north coast, as far west as Batoo-Gedé, is under the authority of the Portuguese.

Coopang is situated near the western extremity of the island, and is a large bay, about 12 miles wide at the mouth, and upwards of 20 miles deep. It is formed by the island of Semao on the south-west and a projecting point of Timor on the north, and has excellent anchorage. Fort Concordia, the principal settlement of the Dutch, is situated on the south side of the bay. The trade of this place is considerable, and is said to amount annually to rather more than 1,200,000 Spanish dollars. The principal articles of export are wax, sandal-wood, earth-oil, and cattle. The imports are cotton-cloth, chintees and handkerchiefs, China silks, China ware, China umbrellas, muskets, gunpowder, iron, coarse British cutlery, and lead. The Chinese and the Bugis visit this place.

The Portuguese have three settlements on the northern coast, Batoo-Gedé, Dilli, and Manatatoe. *Dilli* is the principal settlement. The harbour is open to all northerly winds, but is defended from the swell of the sea by a reef of rocks, which extends across it, leaving only a narrow passage at the north-west end, by which large ships enter the harbour. The town is rather populous, but meanly built, and the small houses of which it consists are scattered over a large

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tract. The commerce of this place seems not to be inferior to that of Coopang. The principal articles of export are slaves, wax, sandal-wood, benzoin, and ambergris, most of which are exported to Macao, except the slaves, which go to other islands of the Indian archipelago, especially to Celebes. The imports are the same as at Coopang, with rather a greater proportion of Chinese goods.

To the north of Timor is the island of *Wetter*, or *Wetta*, as it is written in Keppel's 'Indian Archipelago.' This island is about 65 miles long and 20 wide. It is a high rocky mass, but much less elevated than Timor. The Dutch had formerly a small establishment on the south coast. The bulk of the population are Haraforas, but on the coast there are some Malay settlers. Between *Wetta* and Timor are two small islands, *Babi* and *Cambing*.

The *Serawatti* group, situated between 9° and 6° S. lat., 127° and 131° E. long., consists of two rows of islands, which extend between Timor and *Wetter* on the west and Timorlaut on the east. The southern series consists, besides several smaller islands, of which the greater number are uninhabited, of seven islands, which, from west to east, are *Kisser*, *Lettu*, *Moa*, *Lakor*, *Locan*, *Sermatte* or *Serawatti*, and *Baber Babá*.

Kisser is about 18 miles in circumference, and the surface is hilly. In the valleys, which have a fertile soil, and on the sides of many of the hills, rice is grown, with the sugar-cane, yams, sweet potatoes, tobacco, cotton, and many culinary vegetables, scarcely an available spot being left uncultivated. It contains between 7000 and 8000 inhabitants, some of whom are descended from the Dutch. Two dialects are spoken, which differ much. The natives are of middle size, generally well made, in colour dark brown, hair straight or slightly curled. This island is well provided with buffaloes, cattle, pigs, sheep, and fowls. The island is the resort of traders from Celebes, Amboyna, and Banda, and therefore an emporium for foreign goods, to obtain which it is visited by the natives of the islands to the eastward. The coast of the island is steep and rocky, but there are many small inlets for boats.

Lettu, which lies farther east, and is larger than *Kisser*, is surrounded by reefs at the distance of about half a mile. The interior is mountainous, but surrounded by a lower tract, which at a short distance from the shores rises into hills, on which the villages are built. Its productions are similar to those of *Kisser*. *Moa* is perhaps twice as large as *Kisser*. It has good anchorage on the east side. The surface is level, except that there is a high mountain, called *Karban*, at its north-eastern end. This peak resembles that of Teneriffe, but is not so high. The greatest part of the island is used as pasture for buffaloes, cattle, sheep, goats, and pigs. *Lakor* consists of coral rocks, is low and level, and only covered with a thin layer of earth. It contains no large trees, except cocoa-nut palms, and nearly the whole island is covered with low bushes. There is no fresh-water; the inhabitants use rain-water, which is collected in tanks. Small quantities of maize, yams, and sweet potatoes are grown. Many hogs and sheep are kept, and also a few buffaloes. *Locan* is surrounded by submarine reefs, on which there are several small islands. It consists of an elevated mountain, and is inhabited only at the north-eastern base of the mountain, where there are extensive plantations of cocoa-nut and sago-trees. Goats and hogs are plentiful. But the most important productions are trepang and tortoise-shells. *Serawatti*, or *Sermatta*, is not visited by Europeans, because no anchorage is found near it. It consists of a mass of rocks, running east and west, and rising abruptly out of the sea. It produces rice, maize, yams, &c., which, with some domestic animals, are brought to *Locan* for coarse cloth and a few other articles. The most eastern of the southern row of the *Serawatti* Islands is *Baber*, or *Babá*. It is nearly 30 miles long, with an average width of 10 miles. The surface is mountainous. It has good anchorage at the western extremity, near the village of *Tepa*. All the villages are in the west and south-east districts. The articles of cultivation are maize, yams, and cocoa-nuts. The domestic animals found in the other islands are plentiful here; there are also wild hogs and goats, and many kinds of birds.

The northern series of the *Serawatti* Islands contains a few smaller islands, four larger ones, *Roma*, *Damma*, *Nila*, and *Seroa*. The three last mentioned contain active volcanoes, which constitute the connecting link between the volcanoes of the Sunda Islands and those of the Malaccas. *Roma* is about 24 miles in circumference, and has an anchorage on the south and another on the north-west coast. The surface is a succession of hills and valleys. The island is covered with trees, except on the south coast, which alone is inhabited and cultivated. The inhabitants have made some progress in civilisation. The articles of export are wax, sandal-wood, edible birds'-nests, and great quantities of tortoise-shell. *Damma* is mountainous, but not very high, except the Peak of *Damma*, near the north-east coast, which always emits smoke: at its base there are hot-springs. It is not very fertile, and the inhabitants live mainly on the produce of their cocoa-nut and sago plantations, cultivating only a little maize, yams, and sweet potatoes. Game, wild hogs, and many kinds of birds are very abundant. *Nila* is a round mass of rocks rising with a steep ascent from a deep sea. There is a volcano on the east side, and on the north side an anchorage for small vessels. Its productions for export are hogs, fowls, and cocoa-nuts, which are brought to *Banda* by the islanders themselves. *Seroa*, or *Serra*, is likewise a

mass of volcanic rocks: in 1698 there was a terrible eruption, in which a part of the mountain subsided, and a lake was formed filled with burning matter. The population is small. Among the inhabitants of these islands are several converts to Christianity.

The *Tenimber Islands* are situated between 6° 30' and 8° 20' S. lat., 181° and 182° 20' E. long., and consist of one large island, Timorlaut, and three of moderate size, Cerra, Larrat, and Vordate, and a great number of smaller islands. The channels between these islands contain many trepang-banks. *Timorlaut* extends nearly 90 miles from south to north, and is 40 miles wide in the broadest part. The surface is rather undulating than hilly, and it is surrounded either by reefs or by mud-banks, which extend to a considerable distance from the shores. The natives are very inhospitable to strangers. *Cerra*, which lies west of Timorlaut, is very populous. The inhabitants are the traders of this group of islands, and export their cattle and other domestic animals, and also tortoise-shell and trepang to Banda. *Larrat*, a considerable island, to the north of Timorlaut, resembles it in surface. *Vordate*, north-east of Larrat, contains lofty hills, and is described as very fertile, and rich in all the products of these islands, except cattle. It is very populous. Sago-trees and cocoa-nut trees are abundant.

The inhabitants of the Tenimber Islands, like the inhabitants of Rotti, might be taken for Europeans, if their complexion was lighter. Their dwellings are from 20 to 30 feet long, from 12 to 15 feet wide, and divided into several rooms. They have vessels, about 50 feet long and from 10 to 12 feet wide, which are constructed with great skill, though without any iron. They pay also great attention to the cultivation of the ground.

The most eastern group of the Lesser Sunda Islands are the *Arroo Islands*, which consist of one large island, called *Kobrore* (70 miles long and about 30 miles wide on an average), and two other considerable islands, *Tyanna* and *Mykor*, which lie west of Kobrore, and are divided from it by a narrow strait. To the north of Kobrore and Mykor are eight or ten islands of moderate size, of which *Wammer*, *Wokan*, and *Wadyier* are the most remarkable. All these islands are moderately elevated, and they have a slightly undulating surface. The channels which divide them from one another are narrow, and the tides in them are very irregular. Cultivation is limited to the planting of sago-trees and the raising of yams. Rice is imported from Banda. Of domestic animals there are only hogs, goats, and fowls. The bird of paradise is found only here and in New Guinea; the feathers are an article of export. The principal articles of export are trepang, mother-of-pearl shells and tortoise-shells. The imports are coarse cotton-cloth of different colours, coarse cutlery, copper-wire, coarse China goods, arrack, anis-spirits, gongs, very small red corals, and some other minor articles. Foreign vessels visiting the islands go to Dobo, a port on the island of Wammer. [ABROO ISLANDS.]

SUNDA STRAIT. [JAVA; SUNDA ISLANDS.]

SUNDERBUNDS. [HINDUSTAN.]

SUNDERLAND, Durham, a market-town, sea-port, municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parish of Sunderland, is situated on the banks of the river Wear, at its mouth, in 54° 55' N. lat., 1° 22' W. long., distant 13 miles N.E. from Durham, 268 miles N.N.W. from London by road, and 302 miles by the Great Northern and York Newcastle and Berwick railways. The population of the municipal borough of Sunderland in 1851 was 63,897; that of the parliamentary borough, which includes several adjoining townships, was 67,394. The borough is governed by 14 aldermen and 42 councillors, one of whom is mayor; and returns two members to the Imperial Parliament. The living is a rectory, with the perpetual curacy of St. John annexed, in the archdeaconry and diocese of Durham. Sunderland Poor-Law Union contains 11 parishes and townships, with an area of 11,944 acres, and a population in 1851 of 70,576.

Northern or Monk Wearmouth, on the left bank of the Wear, was a place of some note in the Anglo-Saxon period. A monastery was founded here in 674, but was destroyed by the Danes in the 9th century, and the site remained desolate till after the Norman conquest, when it was restored. The first notice of South or Bishop Wearmouth (part of which was in 1719 constituted the parish of Sunderland) is in a charter of Hugh Pudsey, bishop of Durham, towards the close of the 12th century, recognising a borough in the parish, and granting privileges to the burgesses similar to those of the burgesses of Newcastle. Towards the close of the reign of Elizabeth the shipping of coal began, and the town of Sunderland increased considerably.

The parish of Sunderland occupies the point of land at the south side of the mouth of the Wear, and, with the exception of the town-moor or common of 70 acres, is covered with houses. One street, broad and handsome, communicates with the High-street of Bishop Wearmouth, and is lined with good houses: the other streets are densely-peopled narrow lanes. The High-street of Wearmouth and that of Sunderland form one line extending above a mile in length from east-north-east to west-south-west. The principal streets in Sunderland and Bishop Wearmouth are lighted with gas and paved. An abundant supply of good water is furnished to the houses at a very moderate annual charge. In that part of the town called Bishop Wearmouth Pans, are glass-houses and iron-works for the manufacture of articles

required by the shipping. Monk Wearmouth Shore lies along the river, immediately opposite to Sunderland. The river is crossed by an iron bridge of one arch having a span of 236 feet, erected, near the close of the last century, at a cost of above 40,000*l.* The height above low water is 60 feet to the spring and 94 feet to the centre of the arch, so that ships of 300 tons pass under it very readily by lowering their top-gallant masts.

Above the bridge, on both sides of the river, are extensive staiths for shipping coals. A little way higher up are the bottle-works of Ayre's Quay. A wet-dock, containing an area of nearly eight acres, with a tidal basin attached to it of about one acre, is on the low ground between Monk Wearmouth Shore and the sea, near the entrance to the harbour. An opening has been made through the North Ric to communicate with the river. A branch railway from the dock joins the Brandling Junction railway, which is connected with the Newcastle and Carlisle railway: thus a communication is established between the Irish Sea and the German Ocean. A spacious wet-dock was opened in June 1850, on the right bank of the river between the town and the sea-shore. The works extend from the river to Hendon Bay. In the great dock the depth in the middle at high water of ordinary spring-tides is 24 feet, and at neap-tides 20 feet 6 inches. Besides the site recovered from the sea, now occupied by the dock, an area of upwards of 25 acres of land has in like manner been gained from the sea to the eastward of the dock.

Sunderland parish church is a spacious brick-building, erected in the earlier part of the last century. In April 1851 there were in the town 63 places of worship, of which 31 belonged to five sections of Methodists, 9 to the Established Church, 6 to Baptists, 5 to Presbyterians, 4 to Independents, 2 to Jews, and 1 each to Quakers, Roman Catholics, and Unitarians. The total number of sittings provided was 80,766. There were 49 Sunday schools, with 6559 scholars; and 129 day schools, with 7546 scholars. The town possesses several almshouses; an infirmary and dispensary; an eye infirmary; a lying-in hospital; and a variety of benevolent institutions. A savings bank is in Monk Wearmouth.

In the town are a custom-house, an excise-office, and an exchange: the exchange is a neat modern building, and comprises a merchants'-walk, commercial-room, news-room, auction-mart, and justice-room. A new Lyceum Hall contains a large hall 90 feet by 48 feet, to accommodate 1800 persons; and two smaller rooms for public meetings, with offices, committee-rooms, &c. There are a theatre and an assembly-room. On the town-moor of Sunderland are extensive barracks. The market-place is commodious, and there are water-works and gas-works on a large scale. In Bishop Wearmouth is an atheneum, containing a large hall, with lecture theatre, museum, and library.

The preservation and improvement of the port and harbour of Sunderland have been effected by commissioners appointed under successive acts of parliament. Ships drawing 18 feet of water can now enter and depart from the harbour with safety. The building of the south pier was commenced in 1728, and the pier was extended from time to time. The north pier was commenced in 1786. In the early part of the present century both piers were in part rebuilt. The length of the south pier is 650 yards; of the north pier 590 yards. A lighthouse, 78 feet in height, erected near the end of the north pier in 1802, was in 1841 removed bodily to the eastern extremity of the new pier, a distance of nearly 150 yards. The light was exhibited nightly during the operation of removal. The gross weight moved was 338 tons.

The principal manufactures of Sunderland are of bottle and flint glass, anchors, chain-cables, and other iron goods for ships, and cordage. Ship-building is very extensively carried on. There are also numerous boat-builders, chain-cable manufacturers, sail-cloth manufacturers, anchor- and ship-smiths, rope, sail, mast, block-, and pump-makers; besides ship-owners, brokers, and chandlers. The ropewalks, in some of which steam-machinery is employed, are on a very large scale. Brick-making, digging coal, and the quarrying of grindstones are carried on in the neighbourhood; and there are copperas-works, brass-foundries, potteries, hat-manufactories, lime-works, timber-yards, saw-mills, flour-mills, tan-yards, and breweries. The commerce of the town is however more important than its manufactures. Coal is very extensively shipped at Sunderland. The number of vessels registered as belonging to the port on December 31st, 1854, was—Sailing-vessels under 50 tons 97, tonnage 2955; above 50 tons 803, tonnage 205,527; and 41 steam-vessels, tonnage 2338. During 1854 there entered and cleared at the port—in the coasting trade, sailing-vessels, inwards, 1523, tonnage 124,265; outwards, 11,439, tonnage 1,465,088; steam-vessels, inwards, 7, tonnage 526; outwards, 142, tonnage 53,338. In the colonial trade the returns are as follows:—Inwards, 132 vessels of 32,898 tons; outwards, 205 vessels of 45,642 tons. In the foreign trade the numbers are:—Inwards, 615 British vessels of 105,876 tons, and 1063 foreign vessels of 103,114 tons; outwards, 985 British vessels of 190,589 tons, and 1378 foreign vessels of 139,300 tons.

The export of lime is another principal branch of trade; also the export of glass and grindstones. The imports are timber and iron from the Baltic; butter, cheese, and flax from Holland; and a variety of goods brought coastwise. A considerable fishery is carried on. Sunderland is much frequented for sea-bathing; and the usual accommodations are provided for visitors. The market is held on Saturday:

there is also a cattle-market, and there are two yearly fairs. A county court is held in the town.

SUNDGAU. [RHIN, HAUT.]

SUNDSWALL. [ANGERMANNLAND.]

SUPERIOR, LAKE. [CANADA.]

SUR. [TYRE.]

SURABAYA. [JAVA.]

SURAT, or, as the natives pronounce it, *Soorut* ('beauty'), a large city on the western coast of Hindustan, in the presidency of Bombay and province of Gujerat, stands on the left bank of the Tapy, in 21° 12' N. lat., 72° 50' E. long.: the river falls into the Gulf of Cambay, 20 miles W. from the city. Surat is about 177 miles by road N. from Bombay: it is situated in a fertile country, with woody hills, long sheltered lanes, and patches of dense jungle. The neighbourhood is a favourite hunting district, wild hogs and other game being abundant.

The city of Surat is in the form of a semicircle; the Tapy is the chord, near the centre of which is a citadel or small fortified castle, garrisoned by a few sepoy and European artillerymen. The city is surrounded by a wall about six miles in circuit, in good repair, with semicircular bastions, and with battlements. The streets are narrow, winding, and unpaved. The houses are generally high, and are mostly constructed of a framework of timber filled up with bricks or sun-dried mud: those occupied by some of the principal merchants are of stone, and are large and well built. There are several handsome mosques; a neat English church, which was consecrated by Bishop Heber in 1825; an English school and numerous Hindoo schools; the custom-house; and the mint. The residence of the nawáb is modern. The hospital for aged and diseased animals is an establishment founded and richly endowed by the Jains. A large and picturesque burial-ground outside the city contains numerous tombs of former servants of the East India Company.

The population of Surat was estimated, in 1796, when its prosperity had confessedly declined, at not less than 600,000. It is now very much reduced, the commerce of the city having been transferred to Bombay, and probably does not reach 150,000. It consists of Hindoos, who are mostly Jains; of Mohammedans, many of whom are Boras; of Parsees; and of Armenians, Jews, and various other races, besides Europeans. There are also great numbers of religious mendicants in the city and neighbourhood. Surat is the station of a British military force; it is also the seat of the supreme court of justice for the whole presidency of Bombay, of a circuit court, and of a board of customs with a collector. The English society is numerous, and of the best kind.

The Tapy at Surat is a wide river, but the navigation, owing to shifting sandbanks, is unsafe even for boats, and at the mouth of the river is a dangerous bar. The boats which navigate the river are generally of 30 and 40 tons, half-decked, carrying two masts and two large latteen sails. The river opposite the city is braekish: water for domestic purposes is raised by oxen from wells, and there are also large tanks to collect the rain.

The imports to Surat are chiefly from Arabia, Bombay, and Brasil, and consist of grain and other articles of food, piece-goods, raw materials to be worked up into manufactures, and bullion. The exports are mostly manufactures of Surat and the neighbouring districts, raw cotton, which is shipped in large quantities to Bombay, and a few other articles of native produce. The old manufactures of Surat are mostly superseded by those of Great Britain. The vessels are chiefly English, Arabian, and Portuguese.

Surat is mentioned in the ancient Sanscrit poem, 'The Rámáyana.' After the conquest of Hindustan by the Mohammedans, it was the chief port at which they embarked on their pilgrimage to Mecca. The Portuguese, after establishing themselves at Calicut, Goa, and Damau, began to trade with Surat about 1561. In 1603 Mr. Mildenhall, a London merchant, reached Agra, and in 1606 obtained an ample grant of commercial privileges by a firman from the emperor Jehanghir. In 1612 a factory was established at Surat by treaty with the governor of Ahmedabad, and confirmed by imperial firman in 1613. In 1615 Surat became the chief station of the East India Company on the west coast of India.

The chief seat of government under the East India Company was at Surat till 1686, when it was removed to Bombay. In 1800 the nawáb was compelled by the English to sign a treaty, by which he resigned the entire government to the East India Company, who, on their part, agreed to pay him and his heirs one lac of rupees annually, together with one-fifth of the surplus annual revenue, after deducting all charges. The forms of state authority are retained.

SURFLEET. [LINCOLNSHIRE.]

SURINAM. [GUYANA, Dutch.]

SURREY, an inland county of England, bounded N. by Middlesex, from which it is separated throughout by the river Thames, E. by Kent, S. by Sussex, W. by Hampshire, and N.W. by Berkshire. It lies between 51° 4' and 51° 30' N. lat., 0° 3' E. long. and 0° 51' W. long. The length from east to west, from the Kentish border near Westerham to the Hampshire border near Farnham, is 40 miles; the breadth from north to south, from the bank of the Thames at Blackfriars bridge, London, to near Crawley (in Sussex) is 27 miles. The area is 748 square miles, or 478,792 statute acres. The population in 1841 was 584,036, in 1851 it was 683,082.

Surface and Geological Character.—The part of the county which lies north of a line drawn from the Kentish border near Beckenham, leaving Croydon a little to the south, and passing by Carshalton, Epsom, Ashstead, and Leatherhead, and thence to the Hampshire border near Ash, leaving Guildford a little to the south, may be regarded as belonging, with some exceptions which we shall notice, to the London clay formation. The district occupied by this formation is comparatively low. It forms however the line of hills extending on the south side of London, from New Cross, near Deptford, by Nunhead, Denmark Hill, Herne Hill, Brixton Hill, Clapham Rise and Battersea Rise, Wimbledon Common, and Richmond Hill. It also forms the hills running southward along the Kentish border from New Cross by Forest Hill, Sydenham, Penge Common, and Norwood.

North of the hills which extend from New Cross to Battersea the London clay is covered by alluvium; and it is probable that the greater part of this flat was, antecedently to the Roman period, overflowed by the river at every high tide, and formed an extensive marsh, which was gained from the river by embankment. Along the bank of the river too, between Putney and Richmond, the London clay is covered by alluvium.

The range of high and mostly waste grounds, Esher Common, Cobham Common, St. George's Hill (between Cobham and Weybridge), Woking Heath, Pirbright Common, Romping Downs, and Ash Common, which occur in the north-west part of the county, and which extend with slight interruption from the neighbourhood of Kingston to the Hampshire border; the range of St. Ann's Hill (240 feet), Shrubs Hill, and the other hills west of Chertsey and Bagshot Heath, extending from near the Thames to the Berkshire border; and the high ground of Cobham Ridges between these two ranges, are all formed of the siliceous sand and sandstone belonging to the upper marine formation, which here covers the London clay. The highest elevation does not exceed 463 feet.

South of the boundary-line of the London clay the plastic clay crops out, and occupies a long narrow district extending across the county from the Kentish to the Hampshire border, bounded on the south by a line drawn near Addington, Banstead, Horsley, and Guildford, and thence to the Hampshire border. The breadth of the plastic clay district on the Kentish border is four or five miles, but it becomes narrower towards the west, and on the Hampshire border is probably not more than half a mile in breadth. The hills near Addington and Croydon, Banstead Downs (576 feet), and Epsom, Ashstead, and Leatherhead Commons are on the plastic clay, which here covers the chalk with a thin bed; the chalk is quarried beneath it on Banstead Downs. Beds of fine clay of the plastic clay formation are wrought near Ewell, and red clay near Guildford. South of the plastic clay the chalk range of the North Downs rises. These downs extend from Kent across the county into Hampshire, interrupted only by the depressions through which the rivers Mole and Wey pass, and by a depression near Farnham. The southern escarpment may be traced running just to the north of Titsey, Godstone, Gatton, Reigate, Dorking, Wotton, and Farnham. Guildford is in the line of the downs in the depression through which the Wey passes. The breadth of the chalk district is greater on the eastern side of the county, and the downs there attain their greatest elevation. Botley Hill (880 feet), above Titsey, is the highest point. The breadth of the chalk district here is about four miles. Box Hill, near Dorking, overlooks the depression through which the Mole passes, and is, from the picturesque scenery which it presents, a favourite place of resort for the inhabitants of the metropolis. Between Dorking and Guildford the range of the Downs gradually narrows; and between Guildford and Farnham it forms a remarkable narrow unbroken ridge, above six miles long and about half a mile broad, called the 'Hog's Back.' The downs rise again beyond Farnham, just on the border of Hampshire, into which they extend. The thickness of the chalk formation at Denbigh, north-west of Dorking, is 440 feet. The chalk is dug in different places, and is burnt for lime.

From beneath the south escarpment of the North Downs the chalk-marl and greensand formations crop out. They occupy the valley which extends at the foot of that escarpment all through the county, and east of Reigate is called Holmesdale; but as the formations extend southward from the chalk they rise into hills, among which are Leith Hill (993 feet, the highest point in the county, and indeed in this part of England), Holmbury and Coneyhurst Hills, and Hind Head Common, on the Hampshire border, 923 feet high. This range of hills presents a bold escarpment towards the valley on the south, and is broken by two considerable depressions, one near Reigate, by which the Mole passes through, and another between Hurtwood Common and Hascombe, through which a feeder of the Wey passes; and by some minor interruptions. Beds of chert occur in the chalk-marl near Reigate, and fire-stone is dug in the same formation at Merstham. The high grounds of these formations are almost entirely waste. On Hind Head Common occurs that remarkable hollow, the 'Devil's Punch-bowl,' round which the Portsmouth road winds for nearly a mile. The rest of the county, comprehending the whole of the southern border, except a very small part west of Haslemere, is occupied by the Weald clay and iron-sand formations. The latter only just appears at the south-eastern corner of the county. The Weald clay occupies the broad valley at the foot of the greensand

hills, and in some places forms the lower part of the south side of the hills.

Hydrography and Communications.—The county is included in the basin of the Thames, except three very small portions; two south of the greensand hills, which are drained by streams flowing into the Arun, and a third in the south-east corner of the county, which belongs to the basin of the Medway. The Thames, which forms the northern boundary, is navigable throughout for small craft, and up to London Bridge for sea-borne vessels. Those of its tributaries which belong to Surrey are the Bourn Brook, the Wey, the Mole, the Hog's Mill River, the stream which joins the Thames above Putney, and the Wandla. The *Bourn Brook* rises near Bagshot, and flows by Chobham and Addlestone into the Thames below Chertsey, sending off one branch into the Wey; it receives a stream from Virginia Water in Windsor Great Park: its whole length is about 14 miles.

The *Wey* rises near Alton in Hampshire, and flows north-east about 9 miles to the border of Surrey, which it enters not far from Farnham. Thence it flows by Farnham to Tilford, where it receives, on the right bank, a considerable stream from Woolmer Forest in Hampshire, and runs eastward to Godalming, where it becomes navigable. From Godalming it flows by Guildford and Woking into the Thames at Weybridge. The Wey has several tributaries in the county. The whole length of the Wey is about 41 miles, for about 18 miles of which it is navigable. The *Mole* rises in the northern part of the county of Sussex. It enters Surrey at Charlwood, passes Horley, Kennerley Bridge, Dorking, Leatherhead, and Cobham, and flows into the Thames at East Molesey, opposite Hampton Court. Its whole course is about 42 miles. It is not navigable in any part. The *Hog's Mill River* rises in a copious spring in the village of Ewell, and flows north-west 7 miles into the Thames at Kingston. It is not navigable, but turns several mills. The stream which joins the Thames near Putney rises at the foot of Banstead Downs near Cheam, and flows northward by Richmond Park, and Barnes, where it turns east and joins the Thames half a mile above Putney Bridge; its length is almost 10 miles: it is not navigable. The *Wandla* rises near Croydon, flows by Carshalton, Mitcham, and Wandsworth, into the Thames: its course is only 11 miles, and it is not navigable, but it works numerous mills.

The canals are the Grand Surrey Canal, the Wey and Arun Canal, and the Basingstoke Canal. The Grand Surrey Canal is cut from the Thames at Rotherhithe, about a mile and a half to the neighbourhood of Deptford, in Kent, and then turning west is carried two miles and a half farther to Camberwell. There is an extensive basin in the part of the canal near the Thames. The Wey and Arun Canal, sometimes called the Surrey and Sussex Canal, commences in the river Wey near Shalford, between Guildford and Godalming, and runs south by east (11 miles) into Sussex, where it joins the Arun navigation near Billingshurst. The Basingstoke Canal commences in the river Wey, about 3 miles above its junction with the Thames, and runs south-west nearly 12 miles to Frimley, near the border of the county; it then turns south and runs above three miles to near Aldershot, where it enters Hampshire.

The principal roads in the county are those which lead from the metropolis to the south-east, south, and south-west. The Dover road, as far as New Cross, near Deptford, is in this county. The Brighton road runs south from Southwark through Brixton, Croydon, and Merstham. Here it divides, one branch running through Reigate, the other running over Red Hill and through Horley. The two branches reunite near Horley, and run across Lowfield Heath to Cawley in Sussex. The most frequented Portsmouth road leaves the metropolis at Hyde Park Corner, and enters the county over Putney Bridge, but formerly the more frequented road was through Newington and Wandsworth. The two roads unite beyond Putney, and run south-west by Kingston, Guildford, and Mousehill. The Winchester and Southampton road branches from this to the right at Guildford, and runs west along the Hog's Back to Farnham. The Salisbury and Exeter road enters the county across the Thames at Staines, and runs just within the north-western border and parallel to it through Egham and Bagshot. There are numerous branch and cross roads.

The Greenwich railway, now leased to the South-Eastern Railway Company, runs south-east from London Bridge to Corbet's Lane, near New Cross, where it quits the county. The North Kent line also leaves the county at New Cross. The Brighton and South Coast railway runs parallel to the Greenwich line nearly to Corbet's Lane, where it turns south, and with the exception of the short distance from near Forest Hill to Penge, which is in Kent, it continues in a generally southward direction through this county, which it quits at Oakhead, a few miles north from Horsham. The Croydon and Epsom line is a branch of the Brighton and South Coast line, which it quits at Croydon, and runs south-west to Ewell and Epsom. The Crystal Palace railway runs between the London Bridge terminus and the grounds of the Crystal Palace at Penge. The South-Eastern railway is carried over the same rails as the Brighton line as far as Redhill, Reigate, where it turns eastward, and quits the county a few miles west of Godstone. The Dorking and Guildford branch quits the main line at Reigate, and runs westward past Dorking to Guildford, where it joins the Guildford and Reading railway. The main line of the London and South-Western railway runs from the Waterloo

Bridge terminus, past Kingston, below which a branch runs off to Hampton Court, and Weybridge, where there is a short branch to Chertsey, and quits the county near Farnborough. At Woking Heath, a branch runs off southward to Guildford and Godalming. On the Guildford and Reading branch, a short line branches south-west to Alton, quitting this county near Farnham. The Windsor branch quits the main-line near Battersea, and runs westward to Richmond, where it quits the county; the Brentford loop-line quits this branch at Barnes Common. A line to connect the West End of London with the Crystal Palace is in progress.

Climate, Soil, and Agriculture.—The climate of this county is favourable for corn and grass. Along the Thames and the other rivers of the county the air is soft and mild: where the ground rises into barren gravelly hills, or lies on the range of chalk which divides the county in a direction from north-east to south-west, from Croydon to Farnham, it is keener, and the winds are more boisterous. Generally along the sandy hills the climate is remarkably salubrious. The soil varies greatly in different districts. The richest is that which lies along the banks of the rivers, consisting chiefly of a deep alluvial loam. On this soil, in the neighbourhood of London, are some of those extremely productive and highly-cultivated market-gardens, which supply the metropolis with fruit and vegetables. The immense quantity of manure which is annually laid on the land so occupied, and the deep trenching and digging which are repeated at short intervals, have converted the whole surface, to the depth of three feet or more, into a rich black vegetable mould. On this soil are raised the best and earliest culinary vegetables, which so rapidly succeed each other that five or six different crops are sometimes gathered from the same ground in one year. There is another naturally rich black soil, which appears in small detached portions along the foot of the chalk hills, and produces fine crops of wheat. The next in fertility is a hazel loam, with a considerable portion of calcareous earth in its composition, which is found on the northern side of the hills about Cobham, Woking, and Horshill: the well-known hop-grounds in the neighbourhood of Farnham are mostly on a similar soil. The most extensive tract is that of the Weald clay, which is a soil with a smaller mixture of siliceous sand than most clays. This Weald extends into Sussex and Kent, and occupies most of the southern parts of the county. This soil can only be rendered productive by very complete draining, and by correcting the tenacity by chalk or gravel, where they can be found at hand, which however is seldom the case. The Weald is generally low and flat; where it rises into hills the soil is more fertile. In the northern portion of the county extending towards Hampshire is a large tract of sandy loam of various qualities, some of which remains in the state of heath and common. There are some sandy loams of a better quality between the barren soil known by the name of Bagshot sand and the chalk hills, as about Esher, Dorking, and Reigate: about Godalming it becomes of a very good quality, resting upon a sandstone. The poorer sands rest chiefly upon a yellow ferruginous gravel. The tops of the chalk hills are either covered with a short pasture, as downs, or where the soil is deeper over the chalk, it is mostly under the plough. Generally the most improved systems of husbandry, and the best implements, have been introduced; and the local peculiarities of cultivation are fast disappearing.

Surrey is a favourite county for the residence of men of fortune. It possesses many beautiful sites, and the views from some of the hills are very extensive, such as Richmond Hill, St. Ann's, Cooper's Hill, and Leith Hill. The villas within a short distance from London are very numerous, but few of them have more than a small quantity of pasture-land and pleasure-ground attached to them.

The Wealds of Surrey were, till within a comparatively modern date, one continued forest, and have been gradually cleared and cultivated. The management of underwood is well understood and attended to. In the heaths and poor sands furze is often abundant, and is sold for heating bakers' ovens, and for the use of brick-makers and lime-burners.

There is no peculiar breed of cattle in Surrey. There is not much good grazing-land, and the beasts that are fattened or kept for milch-cows are of all the breeds which are usually met with. Short-horn Alderney cows, and crosses between them, are very common in the pastures adjoining gentlemen's seats. Beasts of all breeds are fattened on the wash obtained from the distilleries near London. There was once a peculiar breed of heath sheep, which had a small fleece of fine wool, and very delicate flesh when fattened. The meat was well known by the name of Bagshot mutton. There is only a small remnant of this breed left. The farmers are partial to the South Down sheep. Several farmers about Ewell, Esher, and Walton, and towards Guildford, rear house-lambs of the Dorsetshire breed for the London market. The pigs are principally of the Berkshire breed.

Divisions, Towns, &c.—Surrey is divided into 14 hundreds, as follows:—Blackheath, south; Brixton, north-east; Coptorne, central; Effingham, central; Elmbridge, north; Farnham, south-west; Godalming, south-west; Godley, north-west; Kingston, north; Reigate, south; Tandridge, south-east; Wallington, east; Woking, west and central; Wotton, south.

The metropolitan boroughs of Southwark and Lambeth are included in Brixton hundred, and Guildford in Woking hundred.

Surrey comprehends the parliamentary boroughs of Southwark, Lambeth, Guildford, and Reigate; the now disfranchised boroughs of Haslemere, Blechingley, and Gatton; the market-towns of Chertsey, Croydon, Dorking, Epsom, Farnham, Godalming, and Kingston; the suburban villages of Rotherhithe, Bermondsey, Newington, Walworth, Camberwell, Peckham, Dulwich, Norwood, Brixton, Kennington, Clapham, Wandsworth, Putney, Battersea, Tooting, and Streatham; and the remoter, but extensive villages of Mortlake, Barnes, Kew, Richmond, Wimbledon, Merton, Mitcham, Ewell, Carshalton, Beddington, Leatherhead, Walton-on-Thames, Esher, and Egham. Southwark, Lambeth, and some other of the places which form part of London, are spoken of in our account of the metropolis; the places printed in small capitals are described under their respective titles; the remainder, with the other villages of importance, we notice here, with their respective populations in 1851:—

Gatton is 2 miles N.E. from Reigate. Some Roman antiquities have been found here. Gatton first sent members to parliament in 29 Henry VI., and returned two members down to the time of its disfranchisement by the Reform Act. The parish now contains only 37 houses and 172 inhabitants. Gatton House is a handsome residence in an extensive and beautiful park. Until the disfranchisement of the borough, the proprietor of Gatton House chose the members. Upper Gatton House is a noble building standing in a spacious park. Some quarries of stone are worked.

Haslemere, population of the parish 955, is 12 miles S. from Guildford, on the road to Chichester. A charter granted by Queen Elizabeth in the 38th year of her reign speaks of the antiquity and populousness of the town, but refers to its existing impoverishment from the extinction of its fair and market. The town occupies an elevated site, and is very clean; the streets are irregularly laid out, and only partially paved. The parochial chapel, on the north side of the town, is an ancient structure with a small square tower at the west end. The Independents have a meeting-house; there are a National school and a literary institution. The market on Tuesday is of little importance: cattle fairs are held on May 18th and September 26th. The principal trade is in wood-turning; there are three extensive paper-mills. Haslemere sent members to parliament until the disfranchisement of the borough by the Reform Act.

Ash, population 472, is on the border next Hampshire, about 7 miles N.E. from Farnham. About 2 miles W. from Ash, at Aldershot, in Hampshire, an encampment has been formed in the present year (1855) by the government, for the purpose of training the soldiers to the habits of camp life, and instructing them in the best modes of mitigating the hardships of a campaign. *Bagshot*, 9 miles S.W. from Egham, population of the parish of Windlesham, 1794, is on the Hampshire border. Bagshot Heath is now inclosed. The church was erected at the end of the 17th century. There is a National school. Bagshot Lodge is a royal hunting seat. In the vicinity are extensive nursery-grounds. *Barnes*, 7 miles W.S.W. from London by the South-Western railway, population 1879, is a suburban village on the right bank of the Thames, contains several good residences. Besides the parish church, which is ancient, but much altered, there are a chapel of ease at Castelnau, and a National school. It was in a room attached to the house of Jacob Tonson at Barnes that the celebrated Kit-Cat club held its meetings. Cowley the poet resided at Barnes Elms. *Battersea*, population of the parish 10,560, is a suburban village on the Thames nearly opposite Chelsea, with which it is connected by a wooden bridge. The parish church is a plain brick building erected in 1777: in it is a monument by Roubiliac to Bolingbroke, who was born and died at Battersea. There are in Battersea a preparatory training establishment of the National Society, which had 100 students in residence in July 1854. Much of the ground in Battersea is occupied as market-gardens. A new park is now being formed in Battersea Fields; and a suspension-bridge to connect it with the north side of the Thames is being constructed. *Beddington*, 2 miles W. from Croydon, population 522, has a very handsome church, partly of the decorated and partly of the perpendicular style of architecture, which has been recently restored. There is a National school. Beddington House is a noble Elizabethan mansion, partly rebuilt in 1709. The Wandle here turns some snuff- and flour-mills. *Bermondsey*, population of the entire parish 48,128, is a suburb of London and the seat of a Poor-Law Union. [LONDON.] It lies on the Thames, between Southwark and Rotherhithe. The old church is a building of little architectural pretension; there are three new churches, chapels for Independents, Wesleyan Methodists, Baptists, and Roman Catholics; National, British, Infant, and Roman Catholic schools, and a Roman Catholic convent. Near the waterside are wharfs, and the various trades connected with shipping are carried on. In the parish are numerous extensive tan-yards. *Brixton*, population 14,610, is a hamlet of Lambeth parish, and contains many genteel residences. There are a district church, St. Matthew's, at the foot of Brixton Hill; two other Episcopal places of worship, chapels for Independents and other Dissenters, and National, British, and Infant schools. On Brixton Hill is a handsome building for the St. Ann's Society schools. *Camberwell*, population 64,667, is an extensive parish, extending from the boundaries of Rotherhithe and Bermondsey on the north to Croydon on the south. It is the seat of a Poor-Law

Union. [LONDON.] The village of Camberwell consists of four principal thoroughfares meeting in an open green, and leading respectively to London by Walworth, to Deptford by Peckham, to Kennington and to Norwood by Denmark and Herne hills. These thoroughfares are lined with good houses; many new houses have been erected within the last few years. The parish church is a spacious and very handsome edifice in the decorated style, erected from the designs of Brandon and Wyatt in place of the old church, which was destroyed by fire in 1841. There are also St. George's church; Emmanuel church; Camden church; St. Paul's, Herne Hill, a small but graceful and well-finished church in the decorated style; a handsome new gothic chapel at Camberwell Green for Independents; several other places of worship for Dissenters; National, British, and Infant schools; a proprietary grammar school; and a literary and scientific institute. *Carshalton* is on the edge of Banstead Downs, 8 miles W. from Croydon, population 2411. The river Wandle flows through the village, expanding in the centre of it into a wide and ornamental sheet of water. Several corn, oil, snuff, drug, flock, and paper-mills are worked by the Wandle. There are also some print-works; brewing, leather-dressing, and coach-making are carried on. The church is ancient, but has been much altered. There are parish schools. A government preparatory school for officers of the Royal Artillery and Engineers was established here in 1848. *Cheam*, 2 miles E. from Epsom, population 1187, is on the line of the Epsom railway, and contains some good residences. The church was rebuilt in 1639; there are National schools. At Cheam was Nonsuch, the costly palace of Henry VIII.: only a few fragments of it remain. *Chobham*, 7 miles S.W. from Chertsey, population 2069, is pleasantly situated on the Bourn Brook, a feeder of the Wey. The church is an ancient edifice; a chapel of ease was erected in 1842 at the west end. The Baptists have two places of worship. At Chobham Park are the remains of an old mansion. In 1854 an experimental encampment was held on Chobham Common. *Clapham*, population 16,290, lies S.W. of Stockwell, on the road from London to Epsom. Clapham Common, an open space of about 200 acres, partly in this parish and partly in Battersea, is planted with trees, so as to present the appearance of a park, and is surrounded by handsome houses. At one corner of the common is the parish church, a plain brick building. There are also the district churches of St. Paul's, erected in 1814 on the site of the old parish church; St. James's, a gothic structure erected in 1829 in Clapham Park; and St. John's, a Grecian building erected in 1842 in the Clapham road. A very handsome Roman Catholic church, in the decorated style, has been lately erected in connection with a Redemptorist convent. There are also a handsome new Independent chapel, in the decorated style, with a lofty spire, and several other Dissenting places of worship; a Grammar school; Parochial, National, British, and Infant schools; a literary institute; a savings bank; and the British Orphan Asylum. *Cobham*, population 1691, is pleasantly situated on the right bank of the Mole, 6 miles W. by S. from Leatherhead. The church is ancient, chiefly of the decorated style. On the Mole are extensive mills for carding woollen rags. *Dulwich*, population 1632, lies in a hollow about 2 miles S. from the village of Camberwell, and contains a number of genteel residences. The most important building is the College of God's Gift, which was repaired and much improved in appearance a few years ago, under the superintendence of Sir C. Barry. The college was founded and endowed, and the building erected, by Edward Alleyn in 1614-19. It consists of a master and warden, who must be of the same name as the founder, four fellows, six poor brethren, six poor sisters; and of 12 poor boys, who are to be educated and maintained from the age of 6 to 12 years and then apprenticed. Behind the college is a picture-gallery, containing some fine paintings, chiefly by the old masters. It is open to the public without charge, by tickets, every day except Friday and Sunday. In the hamlet are a chapel of ease and a Wesleyan Methodist chapel. *Egham*, population 4482, is near the north-western boundary of the county, on the bank of the Thames. It is united to Staines by a handsome granite bridge. The village consists of a long street, which is lighted with gas and paved. The parish church is a modern brick building; there is a new district church at Virginia water. There are places of worship for Wesleyan Methodists and Independents; National schools; Strode's charity school; and a literary institution. Virginia water, Englefield Green, Cooper's Hill, and Runnymede, where Magna Charta was signed by King John, are in the parish. A fair is held on Englefield Green; Egham races are held annually on Runnymede. *Esher*, 4 miles S.W. from Kingston, population 1441, is pleasantly situated near the right bank of the Mole. At Esher is Claremont, the residence of the Princess Charlotte and the place where she died: it is now held in trust for Leopold, king of the Belgians, and is at present the residence of the widow and sons of Louis Philippe, the late king of the French. The mansion was erected by the celebrated Lord Clive. There is a new church at Esher, towards the erection of which the King of the Belgians subscribed 1000*l.* The Quakers have a meeting-house; and there is a National school. *Ewell*, 1½ mile N.E. from Epsom, population 2186, was once a market-town. A new church, in the early English style, was erected in 1848: the tower of the old church is left standing. There are National and Infant schools. Gunpowder-mills, potteries, and brick-works give some employment. *Frimley*, population of the

hamlet 1792, is on the Hampshire border, about 14 miles N.W. from Guildford. Besides the chapel there is a district church, erected in 1850, at *York Town*, a village on the Berkshire border, not far from the military college at Sandhurst. There are National schools. *Ham*, population with Hatch 1324, lies near the Thames, 2 miles N. from Kingston. Besides the church, which is a neat modern building, there are an Independent chapel, National and Infant schools, and a Cholera Orphan Asylum, established in 1849. *Ham House*, the property of the Earl of Dysart, is a large and handsome mansion facing the Thames, erected in the reign of James I. *Horley*, population 1415, is situated 5 miles S. from Reigate. The church is of the early English period; there are a Baptist chapel and National schools. *East Horsley*, population 247, and *West Horsley*, 719, are adjoining villages, pleasantly situated about midway between Guildford and Leatherhead. *East Horsley* church is a small one of Norman date; *West Horsley* church is also ancient; in it was interred the head of Sir Walter Raleigh, and the body of Carew Raleigh, the son of Sir Walter. There are Free schools at *East Horsley* and National schools at *West Horsley*. *Kennington*, population 43,109, adjoins Brixton on the north. It comprehends a tolerably extensive public park, recently formed, at the extremity of which is St. Mark's district church, erected a few years ago. There are three proprietary episcopal chapels besides St. Mark's church and *South Kennington* church; also some Dissenting chapels, a Roman Catholic convent, National and Infant schools, and a savings bank. The Licensed Victuallers' schools, for the maintenance and education of 200 children, are at *Kennington*; the building is very spacious and handsome. South of *Kennington*, on the Clapham road, is *Stockwell*, where are a district church and a chapel of ease. *Kew*, 6 miles W. from Hyde Park Corner, population 1009, is on the Thames opposite Brentford. The church, which stands on the centre of the green, was built in 1714, and enlarged in 1837. There is a Free school for girls. At *Kew* are the extensive public Botanic Gardens, at present the finest in the country; they are open daily to the public free of charge. *Leatherhead*, population 2041, on the right bank of the Mole, 4 miles S.W. from Epsom, was once a market-town. Besides the church, an ancient cruciform edifice, there are an Independent chapel and National schools. Brewing, malting, and tanning are carried on. The Mole is here crossed by a bridge of 14 arches. *Lingfield*, 6 miles S. by E. from Godstone, population 2141, is in an agricultural district. The church contains some interesting monuments. The Baptists have two places of worship. *Mertsham* is on the Brighton railway, 3 miles N.E. from Reigate, population 843. The church contains some curious monuments: there are National and Subscription schools. *Stone* is quarried to some extent. *Merton*, population 1870, on the river Wandle, 9 miles S.S.W. from London, is noticeable on account of its abbey, which possesses some historical interest. *Merton Abbey* was for regular canons of St. Augustine, and was a wealthy institution. Part of the outer walls, and the east window of the abbey-chapel, are still standing. *Merton* church is an ancient edifice, partly of Norman date. There is a chapel for Independents. Several manufacturing establishments are in the neighbourhood. *Mitcham*, 2 miles N. from Dorking, population 766, stands in a vale watered by the Mole, and long celebrated for its beauty. The church, of the early English style, has been recently enlarged. There are National schools. *Norbury Hall* is a fine mansion, standing in an extensive and picturesque park. *Mitcham*, population 4641, is about a mile S. from Tooting. Besides the church, which was erected in 1821, there are chapels for Wesleyan Methodists and Independents; National and Infant schools, and an establishment for the infant poor of St. George's-in-the-East. On the Wandle are numerous mills, calico- and silk-printing works, and shawl-printing works; and on the common and elsewhere are gelatine-, varnish-, and japan-works, felt-works, gas-works, and a blacking, vinegar, and lucifer-match manufactory. Brewing and malting are carried on. *Mortlake*, population 3110, consists of a street stretching along the Thames, 2 miles E. from Richmond. Besides the parish church, which was rebuilt in 1725, there are an Independent chapel, National and Infant schools, a savings bank, and almshouses erected by the Boot- and Shoe-Makers' Benevolent Institution. *New Cross* [GREENWICH]. *Norwood*, population 3977, is about a mile S. from Dulwich. St. Luke's district church is of Grecian architecture; All Saints' district church, on Beaulieu Hill, is a neat gothic edifice. At *Norwood* is a large public cemetery, with episcopal and dissenting chapels for performing the burial service. The Wesleyan Methodists, Independents, and Baptists have places of worship; there are National and British schools; a district school for the pauper children of Lambeth parish, and a very spacious and costly structure for the pauper children of the city of London; also several almshouses, a Roman Catholic convent, and a female school. The *Beulah Spa* is a public pleasure-ground prettily laid out, in which is a mineral spring. *Peckham*, population 19,444, is a large suburban village, in the parish of Camberwell. It contains numerous good residences, especially around the extensive common called *Peckham Rye*. Besides the district churches there are chapels for Wesleyan Methodists, Independents, Baptists, and Quakers; National, British, Birkbeck, and Infant schools; a savings bank; and the Licensed Victuallers' Asylum, which affords 103 separate dwellings for the pensioners; and at *Newhead* is an extensive cemetery, with an Episcopalian and a Dissenting chapel. *Page*, population 1160, is a hamlet of Battersea parish, lying

between *Norwood* and *Sydenham* (Kent), about 5 miles distant from the main part of the parish. The church is a handsome new building of the decorated style. There are National schools; the Surrey School of Industry; the almshouses of the Watermen's Company, a spacious and commodious pile containing 41 houses; and King William's Asylum, for 12 decayed widows of commanders in the merchant service, a handsome range of houses erected at the expense of the late Queen Adelaide. *Penge Park*, or *Penge Place*, is the spot on which the Crystal Palace is erected. The grounds of the palace have been laid out with great care under the direction of Sir Joseph Paxton. Several fine fountains are in operation, and the principal fountain is now (August 1855) nearly ready. About 50,000 persons visit the Crystal Palace weekly. *Putney*, population 5280, is on the Thames opposite to Fulham, with which it is connected by a wooden bridge. The church was partly rebuilt in 1836. There are Wesleyan and Independent chapels; National and Infant schools, and an Endowed school for watermen's children; also some almshouses. *Putney Heath* is a fine open area united with Wimbledon Common. *Red Hill* [REIGATE]. *Rotherhithe*, population 17,805, is a suburb of London containing many extensive trading establishments chiefly connected with the ship-building business. There are also iron-works, corn-mills, and extensive granaries and warehouses for goods. The Surrey Canal docks and warehouses are at *Rotherhithe*. The Thames Tunnel has its south entrance near *Rotherhithe* church. Besides the parish church there are four district churches or episcopal chapels; several places of worship for Dissenters; National, British, and Infant schools; and some Free schools. *Streatham*, population, including Upper Tooting, 6901, lies S. from Brixton. The principal street extends along the Brighton road, and in it and by the common are many handsome villas. The church was partly rebuilt in 1830; there is a district church. The Independents and Wesleyan Methodists have chapels, and there are National and Infant schools. *Sutton*, population 1387, is on the Dorking road, 5 miles W.S.W. from Croydon. The church is a plain building; there are National schools. In the vicinity are several good residences. *Tooting* lies S.W. from Clapham; it comprehends Upper and Lower Tooting. Upper Tooting is a hamlet of Streatham; Lower Tooting, or Tooting Graveney, is a separate parish, population 2122. The principal street of Upper Tooting lies along the Horsham road; Lower Tooting is partly to the left of the road. The parish church of Lower Tooting was rebuilt in 1833: there is a chapel of ease on Balham Hill, Upper Tooting; and there are some Dissenting places of worship, two National schools, and an Infant school. Extensive nursery-grounds are in the vicinity. *Walton-on-Thames*, population 2881, is on the right bank of the Thames, 5½ miles W. from Kingston. Near *Walton* is *Oatlands*, the residence of the late Duke of York; and at the foot of *Walton* bridge is an elegant Italian villa with a lofty campanile, erected from the designs of Barry. The church contains some curious monuments; there are also a chapel of ease, an Independent chapel, and National schools. A fair is held in Easter week. *Wandsworth*, population 9611, is on both sides of the river Wandle at its junction with the Thames, about 7 miles from the General Post-Office. *Wandsworth* is called in 'Domesday' *Wandesorde* and *Wendlesorde*. The main street is along the old Portsmouth road. There are manufactures of matting, bolting-cloths, wire-blinds, candles, lucifer-matches, and hats; a distillery, breweries, dye-houses, oil, corn-, and paper-mills, an iron-foundry, coal-wharfs, and calico print-works. *Wandsworth* has been divided into two parishes: the old parish church, All Saints, is a plain modern building; St. Ann's, the new church, is a Grecian edifice erected a few years back; there is a chapel of ease at *Summer's Town*. The Independents, Baptists, Quakers, and Roman Catholics have places of worship; there are National, British, and Infant schools; a school of industry, and a savings bank. The *Freemasons' Orphan* schools, a quaint red-brick edifice erected in 1852, is on *Wandsworth* Common. A county court and a police court are held in *Wandsworth*. On the common is the County Bridewell, a very extensive and costly structure; and at *Garrett* is the County Lunatic Asylum, a noble building, providing ample accommodation for 800 patients. A fair is held in *Whitson* week. *Weybridge*, population 1225, adjoins *Walton* on the south-west, at the confluence of the *Wey* with the *Thames*. The church, a very handsome edifice of the decorated style, was erected in 1846; in it are some interesting monuments removed from the old church. The Roman Catholics have a chapel, in which Louis Philippe, late king of the French, was buried. There is a National school. *Wimbledon*, population 2693, is 3 miles W. from *Wandsworth*. *Wimbledon* Park extends northward to the Portsmouth road, and comprehends an area of 1200 acres: part of it is occupied by handsome new villas. West of the park is *Wimbledon* Common, nearly as extensive, on which is an ancient circular entrenchment. *Wimbledon* church is a modern building. There are chapels for Independents and Wesleyan Methodists, and National and Infant schools. *Woking*, population 2837, on the left bank of the *Wey*, about 6 miles N. from *Guildford*, possesses an ancient church; it has also National schools. Paper-making, printing, brewing, and malting are carried on. A fair is held on *Whit-Tuesday*. *Sutton* House is a fine old mansion of the Tudor period. A portion of *Woking* Heath is occupied by an extensive metropolitan cemetery.

Divisions for Ecclesiastical, Legal, and Parliamentary Purposes.—The county is wholly in the diocese of Winchester, in which it consti-

tutes the archdeaconry of Surrey. By the Poor-Law Commissioners the county is divided into 21 Unions—Ash (a Gilbert's Incorporation), Bermondsey, Camberwell, Chertsey, Croydon, Dorking, Epsom, Farnham, St. George the Martyr, Goldstone, Guildford, Hambledon, Kingston, Lambeth, Newington (under a local act), St. Olave's, Reigate, Richmond, Rotherhithe, St. Saviour's, and Wandsworth and Clapham. These unions include 154 parishes and townships, with an area of 471,466 acres, and a population in 1851 of 679,003.

The county is in the Home Circuit, except that for criminal offences the parts of the county within 10 miles of St. Paul's cathedral are in the district of the Central Criminal Court. The spring assizes for the county are constantly held at Kingston; the summer assizes alternately at Guildford and Croydon. The Epiphany quarter sessions for the county are held at the sessions-house, Newington; the spring sessions at Reigate; the Midsummer sessions at Guildford; and the Michaelmas sessions at Kingston. County courts are held at Chertsey, Croydon, Dorking, Epsom, Farnham, Godalming, Guildford, Kingston, Lambeth, Reigate, and Southwark. There are county prisons at Newington (Horsemonger-lane), Kingston, Croydon, and on Wandsworth Common. There are, besides these, in the borough of Southwark, the Queen's Bench and the Borough Compter. At Garret, near Wandsworth, is the County Lunatic Asylum, a very extensive and handsome edifice.

Before the Reform Act 14 members were returned to the House of Commons from the county of Surrey—two for the county itself, and two each for the boroughs of Southwark, Guildford, Haslemere, Gatton, Blechingley, and Reigate. By the Reform Act, Haslemere, Gatton, and Blechingley were altogether disfranchised, and Reigate was reduced to one member; but the county was formed into two divisions, each returning two members, and the borough of Lambeth was created, which returns two members, so that the present number of members sent from Surrey is 11—two for each division of the county, two each for Southwark, Guildford, and Lambeth, and one for Reigate.

History and Antiquities.—At the earliest historical period this county seems to have been, for the most part, included in the territory of the Regni, a nation probably of the Belgic stock, who occupied also the adjacent county of Sussex. In his second expedition, Cæsar advanced westward from Cantium, or Kent, through this county to the Thames, which he crossed probably at a ford at Coway Stakes, near Walton-on-Thames, though some fix his passage at or near Kingston. Several ancient entrenchments are still existing in the county: on Bagshot Heath, about four miles beyond Egham, there is a very large one, in form approaching a parallelogram; on St. George's Hill, between Weybridge and Cobham, is another of irregular form, following the shape of the hill on which it stands; on Wimbledon Common is a third, of circular form; near Farnham, partly in this county and partly in Hampshire, is another, popularly called Cæsar's Camp, of irregular form, following the brow of the hill on which it stands.

Surrey was included in the Roman province of Britannia Prima. No Antonine station is ascertained to have been in it; though Londinium (London) and Pontes (Staines) were close on the border, in Middlesex; and Noviomagus, the capital of the Regni, was probably at Holmwood Hill, close on the eastern border, in Kent. It is probable that several Roman roads crossed this county: the most remarkable and best known is that which ran from Londinium. It appears to have run over Mickleham Downs to Dorking, and thence by Oakley, beyond which it is known as Stone-street Causeway, into Sussex. The Roman road from Londinium to Calleva and Sorbiodunum (Silchester and Old Sarum) crossed the north-western border beyond Staines. Traces of Roman buildings have been found in various places, as at Albury near Guildford, at Guildford, where some Roman bricks have been incorporated in the castle walls, at or near Kingston, and on Walton Heath, Walton-on-the-Hill, north-east of Dorking.

Surrey was probably, in the earlier period of the Heptarchy, a part of the kingdom of Wessex—not, as is commonly supposed, of Sussex. Wibbandune, where the battle which decided the war between Ethelbert of Kent and Cealwin of Wessex was fought, is generally supposed to have been Wimbledon in Surrey. In the later period of the Heptarchy the county appears to have constituted a detached principality governed by a sub-regulus or dependent king. In the middle part of the 7th century it was governed by Frithewald as sub-king, under the supremacy of Wulfhere of Mercia, who also conquered the Isle of Wight, and obtained the supremacy over Sussex. From this time Surrey appears to have depended on Wessex or Mercia, as the power of one or the other preponderated. The inhabitants submitted willingly to Egbert in 828. On the death of Egbert, in 837, his son Ethelwulf succeeded him as king of Wessex, and Athelstan, son of Ethelwulf, as sub-king of Kent. In the war of Ethelred, or Ethered I., with the Danes, the king and his brother Alfred were defeated at Mere-tune, probably Merton in Surrey, in 871, and Ethelred received a wound, of which he died soon after. In the struggle of Alfred with the Danish chieftain Hasting, the Danes were beaten by the king's army at Farnham in 894. Some of the Anglo-Saxon kings were consecrated at Kingston. In 1042 the Anglo-Danish king Hardicanute died through excessive drinking at Lambeth. A little before this time Alfred, son of Ethelred II., was seized at Guildford, his eyes put out, and his followers massacred.

In 1215 the Great Charter and the Charter of the Forests (Magnæ Charta and Charta de Foresta) were signed by John at Runnymede, a narrow slip of flat meadow-land on the bank of the Thames near Egham, on the border of this county: the Egham races are now run upon it. By Henry III., nearly the whole county was disafforested. Attempts, at a later period, to bring parts of the county into Windsor Forest proved unsuccessful.

In the civil war of John, Guildford and Farnham castles were taken by Louis of France and the insurgent barons. In the civil war of Henry III., a body of royal troops, retiring from Tonbridge to Bristol after the battle of Lewes (1264), took Blechingley Castle, and routed a body of Londoners at Croydon. In the rebellion of Sir Thomas Wyatt (1554), he took possession of Southwark, and, marching to Kingston, forced a passage over the Thames into Middlesex, though the bridge at Kingston had been broken down. In the civil war of Charles I. the county was devoted to the Parliamentary cause. After the battle of Edge Hill, and the advance of the Royalists towards London, part of the Earl of Essex's army was posted at Kingston (1642). Farnham Castle, which was held by the Royalists, was taken not long after by the Parliamentarians.

Surrey had at different periods before the Reformation about 80 religious houses of all kinds. Of these the most eminent were the abbey of Bermondsey (Clunian), Chertsey (Benedictine), Merton (for regular canons of St. Augustine), and Waverley (Cistercian); and the priories of St. Mary Overy, Southwark, and Newark, in the parish of Send, near Guildford, for regular canons of St. Augustine, and Shene, now Richmond, for Carthusians. The remains of Merton Abbey have been noticed. Of Bermondsey and Chertsey abbeyes, and of Shene Priory, scarcely a fragment is left. The priory church of St. Mary Overy, at the foot of London Bridge, now forms the parish church of the same name. The remains of Waverley Abbey, near Farnham, overgrown with ivy, extend in detached fragments over a surface of three or four acres; they comprehend some remains of the church, refectory, dormitory, and cloisters. There are some remains of the church of Newark Priory. Many of the parish churches in the county are of great antiquity. The early English style, which was in use in the reigns of Richard I., John, Henry III., and Edward I., is prevalent.

Statistics: Religious Worship and Education.—According to the Returns of the Census of 1851, it appears that there were then in the county 546 places of worship, of which 262 belonged to the Church of England, 84 to Independents, 73 to six sections of Methodists, 68 to Baptists, 14 to Roman Catholics, 11 to Quakers, and 4 to Mormons. The total number of sittings provided was 222,840. Of Sunday schools there were 363, of which 206 belonged to the Church of England, 61 to Independents, 60 to Methodists, and 25 to Baptists. The total number of Sunday scholars was 44,422. There were 1792 Day schools, of which 406 were public schools, with 54,219 scholars, and 1386 were private schools, with 30,994 scholars. Of evening schools for adults there were 49, with 1245 scholars. The number of literary and scientific institutions in the county was 25, with 3661 members and about 17,000 volumes in their libraries.

Savings Banks.—In 1853 the county possessed 20 savings banks, at Camberwell, Carshalton, Chertsey, Clapham, Croydon, Dorking, Epsom, Ewell, Farnham, Godalming, Guildford, Kennington, Kingston, Lambeth, Lambeth St. John, Reigate, Richmond, Rotherhithe, Southwark, and Wandsworth. The amount owing to depositors on November 20th 1853 was 904,992*l.* 17*s.* 8*d.*

SURY-LE-COMTAT. [LOIRE.]

SUSA. [SUSA.]

SUSA, the capital of the country called Susiana and Susis by the Greek geographers. Susiana comprised part of a mountain region between Babylonia and Persia, and it extended also to the coast of the Persian Gulf, east of the mouth of the Tigris. The *Choaspes*, now *Kerkhah*, flowed through Susiana from the mountains of the Uxii. [BAGHDAD.] Between Susiana and Persia there was a mountain tract, the passes of which were infested by robbers. The coast of Susiana was marshy, as it still is. Besides the Choaspes, there were the rivers *Coprates*, the *Bulans*, and the *Paritigris*, now the *Karwa*, which flowed from the mountains of the Uxii. The *Euleus* and the *Paritigris* are both represented by the modern Karun, which was called *Kulsus* above the junction of the Choaspes, *Paritigris* below that point. [BAGHDAD, PAHALIC; PERSIA.]

In proceeding from Diarful to Sus, and at the distance of 10 miles from Diarful, the great mound of Sus is seen. From the summit of the great mound Diarful is distinctly visible, bearing north 88° east. The Kerkhah River is one mile and a half west of the great mound of Sus. The *Abi-shapur*, a feeder of the Karun, rises about 10 miles north of Sus, and flows in a deep narrow channel past the so-called tomb of Daniel, and past the western face of the great mound. It is navigable from Sus to its junction with the Karun, and as its bed is deep and narrow, and nearly on a level with the surface of the plain, it is peculiarly suited for some kinds of navigation. The great mound is described by Major Rawlinson in vol. ix. of the 'London Geographical Journal,' as forming "the north-western extremity of a large irregular platform of mounds, which appear to have constituted the fort of the city, while the great tumulus represents the site of the inner citadel." The height of the lower platform is between 80 and

90 feet, and that of the great mound 165 feet. The platform itself is square, and measures about two miles and a half. The mound is 1100 yards round the base, and 850 yards round the summit. The slope is very steep. Major Rawlinson saw on the mound a slab with a cuneiform inscription of thirty-three lines, three Babylonian sepulchral urns imbedded in the soil, and in another place there was exposed to view, a few feet below the surface, a flooring of brickwork; "the summit of the mound was thickly strewn with broken pottery, glazed tiles, and kiln-dried bricks. Beyond the elevated platform extend the ruins of the city, probably six or seven miles in circumference: they present the same appearance of irregular mounds, covered with bricks and broken pottery, and here and there the fragment of a shaft is seen projecting through the soil."

SUSA, a province of Piedmont, is bounded N. and W. by the Alps, which separate it from Savoy and France, S. by the province of Pine-rola, and E. by that of Torino. The area is 539 square miles, and the population in 1848 was 81,834. A great part of the province of Susa lies on the slope of the great Alpine ridge, which here forms the groups of Mont Cenis and Mont Genève, the highest summits of which are more than 11,000 feet above the sea. The *Dora Ripuaria*, which crosses the province from east to west, rises on Mont Genève above the village of Cesanna, descends by Oulx and Exilles into the fine valley of Susa, passes by the town of Susa, and at Avigliana enters the plain of Turin, and joins the Po north of Turin, after a course of between sixty and seventy miles. The valley of Susa is fertile, and produces corn, wine, flax, hemp, and mulberries. The highlands produce abundance of chestnuts, and afford good summer pasture. The great road from Turin to Savoy and France over Mont Cenis ascends the valley of Susa as far as the town of Susa, and then turning off to the northward, climbs the side of the mountain till it reaches the elevated plain with the small lake of Mont Cenis, famous for its trout, where is the boundary between Piedmont and Savoy. From the town of Susa, following the ascent of the valley to the westward, is the village of Chiomonte or Chaumont, known for its wines, which are equal to those of Burgundy. Higher up is the village of Exilles, with its old fortress built on a rock above the Dora; and still higher is the village of Oulx, from which a carriage-road leads over Mont Genève to Briançon in Dauphiné. Below Susa is the village of Bussolino, on the high road to Turin, in the neighbourhood of which is a quarry of green marble. Lower down is the town of Avigliana, on the Susa-Turin railway, with 3000 inhabitants, in a very fruitful country, with two small lakes well stocked with fish. The province of Susa is included in the administrative division of Torino.

Susa, the capital of the province, which is connected with Turin by railway, occupies the site of the ancient Segusium or Segnaio, is a bishop's see, and has about 3300 inhabitants. North of the town is a triumphal arch of white marble raised in honour of Augustus, which is still in pretty good preservation. The fortress of La Brunetta, cut in the rock by Charles Emmanuel III. commanded the roads of Mont-Cenis and Mont-Genève. It was destroyed by the French in 1796. The town is old and ill-built. Several of the streets are lined with low arcades. It has a royal college, a provincial court, and some manufactures of leather, gloves, and thread.

SUSIANA. [SUSA.]

SUSQUEHANNA. [PENNSYLVANIA.]

SUSSEX is a maritime county in England, due south of Greenwich, the meridian of which passes very nearly through the centre of the county. It is bounded N.E. by Kent, W. by Hampshire, N. by Surrey, and S. and S.E. by the British Channel. It lies between 50° 43' and 51° 9' N. lat., 0° 49' E. and 0° 58' W. long. The extreme length, from Lady-Holt Park due east to the Kent Ditch, is 76 miles; the greatest breadth, from Beachy Head to Tunbridge Wells, 27 miles; and the average breadth a little less than 20 miles. The area is 1461 square miles, or 934,851 acres. The population in 1841 was 300,075; in 1851 it was 336,844.

Surface; Coast; Rivers.—The principal feature in the surface of Sussex is occasioned by the intervention of the high ridges of chalk hills generally known as the Downs. These hills rise from the marsh of Pevensey to the bold promontory of Beachy Head; they then trend westward as far as Shoreham, occupying a surface of about 26 miles in length, and about 6 miles in breadth, containing about 100,000 acres. This tract is denominated the South Downs. From Shoreham the Downs gradually recede from the coast and traverse the western part of the county, entering Hampshire between West Harting and Stanstead near Petersfield. Their extreme length in Sussex is 53 miles, their greatest breadth 7 miles, and mean breadth 4½ miles. The average height is about 500 feet above the level of the sea; but Ditchelling Beacon is 853 feet, Fittle Beacon 820 feet, Chanctonbury Ring 814 feet, and Beachy Head 564 feet above that level. The Downs have a rich covering of a short and delicate turf containing large portions of *Thymum serpyllum*, and occasional patches of the common furze, the *Ulex Europæus*, in patches of 30 or 40 acres. The district is in general without trees. The surface of the Downs is gracefully undulating; the northern escarpment is precipitous, whilst the southern declines gently, and westward of Brighton gradually blends with the low land of the coast.

The maritime district lies between the Downs and the sea, and extends from Brighton westward to Emsworth, a distance of 36

miles. At first it is narrowed to a point, but gradually extends to the breadth of a mile between Brighton and Shoreham; towards Arundel it widens to three miles; and finally, as it approaches Hampshire, it becomes in many places seven miles wide. This district is of remarkable fertility. Here, in Saxon times, many salt-pans for procuring salt from sea-water by evaporation existed.

The centre of the county is occupied by a woodland tract, denominated the Weald (Saxon, 'weald,' a forest); it extends from the Downs, to which it runs parallel, to the Surrey hills. The Weald was once an immense forest, inhabited only by hogs and deer, but has been gradually cleared and brought into cultivation. This district within the county now contains about 425,000 acres.

The Forest Ridge is that portion of the county which, gradually uniting with the Weald, forms the north-eastern division. It stretches from Fairlight Down on the south by Crowborough to St. Leonard's Forest, and thence westward, terminating in an angle formed by the sand-hills of Petworth on one side, and by Blackdown and Leith hills in Surrey on the other. In this district are two great forests, St. Leonard's Forest, containing 10,000 acres, and Ashdown Forest, containing about 18,000 acres. Pine, fir, beech, and birch all grow well, and portions of the two forests have been planted with success. The whole ridge is broken into hill and dale, and is very elevated. Crowborough Beacon, the highest and most central eminence, is 804 feet above the level of the sea. The marsh-land extends across the eastern division of the county from Eastbourne into Kent, with the exception of five miles taken up by the Forest Ridge of Fairlight and the Hastings hills. Marshy tracts also exist on the borders of all the rivers.

The coast at the extreme east of the county is formed of the low marsh-land, which is a continuation of the low land of Romney Marsh. At Pett the Forest Ridge breaks in for five miles, including Fairlight, Hastings, and Bexhill. The low marsh-land of Pevensey, forming Pevensey Bay, extends from Bexhill to the Downs, a short distance to the east of the well-known and bold promontory of Beachy Head. The high chalk cliffs of the Downs extend thence as far as Brighton, a distance of 19 or 20 miles coastwise, when the lowland of the maritime district intervenes and forms the coast line into Hampshire. Pevensey Bay and Seaford Bay form good roadsteads for vessels with north or east-winds, and Seaford Bay is much frequented by vessels for water. A lighthouse of the first class was erected in 1828 on the summit of the second cliff to the westward of Beachy Head, 235 feet above the level of the sea. The lowest part of the coast from Seaford to the Kentish boundary is protected by single round towers, called Martello towers. They commence near Hythe in Kent, and are continued, except where the coast is easy of defence, to Seaford, where the last tower is numbered 74. They are built on the beach, at intervals of about a quarter of a mile between each. The period of their erection was the time of the threatened invasion of England by Napoleon I. At the same time a portion of this low district, from Cliffe End, near Pett, in Sussex, to Shorecliffe, in Kent, a distance of 23 miles, was protected by a canal called the Royal Military Canal.

The principal rivers are the Ouse, the Rother, the Adur, the Arun, the Cuckmere, and the Lavant. The Ouse begins at Rylands, a few miles north of the village of Lindfield, at the junction of two streams, whence it flows near Lindfield, and, pursuing a tortuous course to the south-east, half encircles Sheffield park; then proceeding more directly south, the stream runs by Isfield, Barcombe, and Hamesey to the Lewes levels, which it enters to the north of the town. After separating the suburb of Cliffe from the town of Lewes, it proceeds through the levels, divides the South Downs, and discharges itself into the British Channel at Newhaven Harbour. The river is navigable for large barges as far as Lindfield. The Rother rises near Argus Hill, in the parish of Rotherfield, close under the Forest Ridge. Thence it runs to Mayfield, Etchingham, and Bodiham. It touches Kent at Wigsell, in the parish of Salehurst, and separates the two counties. It afterwards forms for some distance the boundary, and proceeding to Newenden and Witterham, receives in its course several small streams from the Weald of Kent, the arms of which, together with the Rother itself, inclose the river island of Oxney. After passing this island, it quits the border, and turns suddenly southward across the eastern extremity of the county, sending off a branch at Iden called the Kent Ditch, which parts the two counties, and empties itself into the sea in the parish of Broomhill, a mile and a half eastward of old Rye Harbour. Proceeding from this branch, the Rother flows to the south-east part of the town of Rye. Below the town of Rye the Rother receives the waters of the Brede, which rises in Ashburnham Wood. The united stream expands into an estuary, forms the harbour of Rye, and empties itself into the sea at the bight of the bay formed by Fairlight Head on the west and Dungeness on the east. The Rother is navigable as far as the point where it first touches the borders of Kent. The Adur has three sources, the streams from which unite near Ashurst. From Ashurst the river flows in a due southern direction, between Beeding and Bramber to Shoreham Harbour and the sea. [SHOREHAM.] The river is navigable for small craft from Moak Bridge in the parish of Shermanbury, to the mouth; and it is celebrated for its mullet, pike, and eels. The Arun rises in St. Leonard's Forest, and flows due south, receiving at Stopham the waters of a small river called the Western Rother. From Stopham the Arun runs

in a circuitous course, passes Hardham and Amberley, in which part the stream is celebrated for trout, through the marshes forming the rich vale of Arundel, and flowing through Arundel town enters the sea at Littlehampton. The channel is led in a southerly direction into the sea between two piers composed of piles with an extension of dicker-work. The larger vessels which enter usually remain near the river's mouth at Littlehampton, but a vessel of 13 feet draught can proceed to Arundel bridge, a distance of six miles. The lower part of the river is famous for its mullet. A canal, called the Arun and Wey Junction Canal, connecting the Arun with the Wey, completes an inland communication by water with London. The Arundel and Portsmouth Canal also enters the Arun at Ford, connecting it with Chichester Harbour; and a canal following the course of the Rother has made a navigable water-communication from Stopham bridge to Midhurst, with a branch to Haslingbourne, within half a mile of Petworth. The *Cuckmere* rises in the Forest Ridge near Heathfield Park, runs through Warbleton to Hellingley, Arlington, and Littleington, and empties itself into the sea at the opening in the South Downs, to the westward of Beachy Head, about 2 miles S.E. from Seaford. The channel is very narrow and crooked, but at high water it is navigable for small barges to Longbridge, about a mile above Alfriston. The *Lavant* has its source in Charlton Forest, and runs through Singleton, Binderton, and the Lavants, and, after circling the city of Chichester on all sides except the north, falls into the harbour of Chichester, and enters the sea at the extreme south-west corner of the county. The estuary at the mouth of the river is famous for its lobsters; and the rocks next Selsey Bill are celebrated for cockles. There are also two smaller rivers which discharge themselves into the sea, the Ashbourne at Pevensey, and the Asten near the spot where William the Conqueror landed. The Asten runs through the battle-field of Hastings. The *Medway* rises in the northern part of the county. It flows in an easterly direction through Forest-row, Hartfield, and Withyham. It reaches the county of Kent between Groombridge and Ashurst, forming the boundary between the two counties for about a mile, and then turns at Ashurst directly into Kent, at a spot about four miles from Tonbridge.

The road from London to Hastings enters the county at Frant, near Tonbridge, and runs through Robertsbridge and Battle; the road from London to Brighton enters the county in the parish of Ifield, and runs thence through Cuckfield; the road from London to Portsmouth traverses a small portion of the western division of the county near Petersfield; and the road from Dover to Portsmouth, which runs parallel with the sea-shore, enters Sussex near Rye, and proceeds to Winchelsea, Hastings, Brighton, Arundel, and Chichester, quitting the county for Hampshire near Havant. There are also many branch and cross roads.

The London Brighton and South Coast railway enters the county at Three Bridges, and proceeds across it in a generally southward direction to Brighton (20½ miles). The coast-line of this company runs at a little distance from the coast from the western extremity of the county almost to the eastern, from a few miles beyond Chichester on the west to Hastings on the east. From the Three Bridges station of the main line a short branch runs south-west to Horsham. From the Cuckfield station a branch runs south-east to Lewes, where it unites with the coast line. A short distance east from Lewes a branch is carried south to Newhaven Harbour. Several miles farther east a branch runs off north to Hailsham, and another south to Eastbourne. The Hastings branch of the South-Eastern railway enters the county at Tonbridge Wells, and runs south-east past Battle to Hastings. From Hastings a branch, connected with the Coast line of the Brighton and South Coast railway, runs north-east at a short distance from the coast to Rye, where it enters Kent.

Climate.—The climate of the southern part of the county, near the sea-coast, is mild, and not subject to many variations of temperature. The mean temperature of the year is 51·10° Fahr., or more than one degree above the mean temperature of London. Large towns have consequently sprung up, to which invalids and others repair for health and relaxation. The mean temperature of the three winter months at Hastings is 43°, whilst the mean temperature of winter in the adjoining southern counties is generally only 40·35°. The higher or northern part of the county, particularly the Forest Ridge, is of considerably lower temperature. In the Weald the climate is cold and damp.

Geology.—The greater portion of the southern part of the county is occupied by the chalk formation, which constitutes its most striking geological feature. The general dip or inclination of this, as indeed of all the strata in the county, is to the south-east, with occasional exceptions. The face of the chalk is marked with fissures or wells, and scooped into deep hollows, furrows, and basins, which are more or less filled with tertiary sand and gravel. In many places quarries have been opened and kilns erected for converting the chalk into lime for the use of the agriculturists, who annually consume large quantities. The Sussex chalk varies in colour from pure white to a bluish-gray; the harder varieties were in great request among the Normans for building. The walls of several old castles and religious houses were built with chalk faced with Caen stone or flints. The chalk is regularly stratified. The upper division contains horizontal layers of siliceous nodules with intersecting veins of tabular flint. Sulphuret

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of iron is found in irregular masses and in octahedral crystals. Chalk-marl constitutes the foundation of the chalk-hills; its outcrop connects the detached parts of the range, and composes a fertile tract of arable land, on which are some of the best farms in the county. Below the marl is a bed of fire-stone, which is obscurely traced in the eastern part of the county, but to the west forms a terrace of considerable breadth. The gault, the lowest division of the chalk formation, generally constitutes a valley within the central edge of the chalk, and may be traced with little interruption from Eastbourne westward along the whole county into Hampshire, forming a stiff soil, but very rich.

Next to the chalk, the most important formation is the Wealden. It joins the gault, and extends through the centre of the county. It is a series of clays and sands with subordinate beds of limestone-grit and shale; it forms an anticlinal axis of considerable elevation, the direction of which is nearly from east to west. This district is an irregular triangle, the base extending from near Pevensey to Seabrook in Kent, and the apex being situated near Harting Comb in the western part of Sussex. The Wealden clay is a tenacious clay of various shades of blue and brown, containing subordinate beds of limestone and sand with layers of septaria of argillaceous ironstone. This formation is celebrated chiefly for the Iguanodons, Hylosaurians, and other gigantic reptiles which have been found within it. The Sussex marble occurs in layers in different parts of the district. It is a limestone of bluish-gray mottled with green and ochraceous-yellow, and is composed of the remains of fresh-water univalves formed by a calcareous cement into a beautiful compact marble which bears a high polish. The central group of the Wealden is formed of alternating sands, sandstone, and shale, which have been denominated the Hastings beds. These beds form a line of irregular cliffs 30 or 40 miles in length, from 4 to 9 miles in width, and from 20 to upwards of 600 feet in height. Below this are the Tilgate beds, the lowest stratum of which contains large concretionary or lenticular masses of a compact calciferous grit or sandstone in three or four layers, each varying in thickness from two to three inches, which was formerly extensively quarried and used for paving and roofing. These beds extend from the western extremity of the Hastings sands at Loxwood to Hastings, and are separated from the next subdivision by blue clay and shale. This subdivision, called the Worth Sands, consists of a series of arenaceous strata, some of which form a fine soft building-stone extensively used. The last division of the Wealden is composed of the Ashburnham beds, which occur beneath the Worthstone; they are composed of alternations of sand, friable sandstone, shale, and clay; for the most part they are highly ferruginous, and inclose rich argillaceous iron-ore and large masses of lignite. It was in the Wealden strata, when wood was abundant and charcoal was employed in smelting iron, that the chief iron-works of Sussex were situated, the iron-ore being extracted from the ironstone of the argillaceous beds.

The plastic clay is the foundation of the flat maritime district south of the Downs, which extends from near Worthing to Bracklesham Bay, and thence into Hampshire, forming part of the Isle of Wight basin; and is seen elsewhere in insulated patches. The London clay, which in some localities includes beds of gray limestone and sandstone, is also found; the clay constitutes the flat maritime district of the south-west part of the county, and the limestone composes groups of rocks on the coast. The valleys of all the rivers, and the large levels of Lewes, Pevensey, and Brede, the soil of which is extremely fertile, being formed of alluvial deposits, furnish rich marsh pastures almost equal to Romney Marsh.

Agriculture.—The rich marsh-lands, of which there are about 30,000 acres in the county, make an excellent pasture-ground, on which many oxen and sheep are reared and fattened for market. There are also about 50,000 acres of down-land, which are left in down, and produce excellent pasture for the small sheep known as South Down sheep. After the hay is cut and carried in the marsh-land the pastures are usually occupied by cattle and sheep. Stall-feeding is also much and successfully practised in Sussex. The arable land on the Downs consists of thin light layers of earth, not exceeding eight inches in depth, intermixed with flint pebbles, and is very favourable for the growth of barley. In some of the hollows the soil is deeper and more loamy, and so dry as to allow of its being ploughed quite flat without any ridges or water-furrows. Along the slopes of some of the hills the soil is of a tough tenacious nature, being a mixture of chalk washed down from the hills by the rains and stiff clay, and is very difficult to cultivate. In the spring it is extremely heavy, and retains moisture for a long time; but when dried it becomes very hard. The rich arable land in the county is about 120,000 acres. Hops are cultivated to a considerable extent in the eastern part of the county: they have been introduced from Kent, and have gradually extended themselves westward. There are still many extensive woods in Sussex, amounting altogether to about 150,000 acres. The county is noted for its breed of oxen and of sheep. The Sussex ox bears a strong resemblance to the Devon, between which and the Hereford it holds an intermediate place, possessing the activity of the first and the strength of the second, with the propensity to fatten and the fine-grained flesh of both. The South Down sheep are among the best for all hill countries where the grass is short; and their kindly

properties have caused them to penetrate into almost all parts of the country. The number of these sheep on the Downs has been estimated at 300,000 in summer and 250,000 in winter. On the richer and wet land in West Sussex a heavier sort of sheep, a cross between the Somerset and the Down, is much more used than the pure Down. The breed of horses is not famous.

Divisions, Towns, &c.—Sussex has been for centuries divided into six Rapes, a term peculiar to the county, the derivation of which is not satisfactorily settled. Each rape contains several hundreds and other smaller divisions. The county has also been for many years subdivided for all civil purposes into two divisions, the Eastern and the Western; the Eastern comprising the rapes of Lewes, Pevensey, and Hastings; and the Western the rapes of Chichester, Arundel, and Bramber. The rapes are as follows:—

I. Lewes rape occupies the centre of the county, and includes the hundreds of Barcombe, Buttinghill, Dean, Fishergate, Holmstrow, Lewes borough, Poynings, Preston, Street, Swanborough, Whalesbone, and Younsmere.

II. Pevensey rape extends from the borders of Surrey and Kent on the north to the sea, and contains the hundreds of Alcieton, Bishopstone, Daneshill-Horsted, Dill, Eastbourne, East Grinstead borough, Flexborough, Hartfield, Lindfield-Burleigh-Arches, Longbridge, Loxfield Camden, Loxfield, Dorset, Lowey of Pevensey, Ringner, Rotherfield, Rushmonden, Shiplake, Totnoor, and Willingdon.

III. Hastings rape forms the eastern portion of the county; it includes the following hundreds:—Baldalow, Battle, Bexhill, Foxearle, Goldspur, Gostrow, Guestling, borough and cinque-port of Hastings, Hawkesborough, Henhurst, Netherfield, Ninfield, cinque-port of Rye, Showswell, Staple, and the town and parish of Winchelsea.

IV. Chichester rape is situated at the western side of the county, and consists of the hundreds of Aldwick, Bosham, Box and Stockbridge, city of Chichester, Dumpford, Easebourne, Manhood, borough of Midhurst, and Westbourne and Singleton.

V. Arundel rape forms the centre of the western division of the county, and includes the following hundreds:—Arundel borough, Avisford, Bury, Poling, Rotherbridge, and West Easewrith.

VI. Bramber rape is situated between the rapes of Arundel and Lewes. The hundreds are as follows:—Brightford, Burbeach, East Easewrith, Fishergate, Horsham borough, New Shoreham borough, Patching, Singlecross, Steyning, Tarring, Tipnoak, West Grinstead, and Windham and Ewhurst.

The parts of the county which have their particular liberties exempt from the jurisdiction of the county magistrates are—the city of Chichester, and the liberty of the cinque-ports, which is partly in this county and partly in Kent.

In the county of Sussex there is only one city, CHICHESTER; one cinque-port, HASTINGS; two ancient towns added to the cinque-ports, RYE and Winchelsea; two members of the cinque-ports, Pevensey and Seaford; the parliamentary boroughs of ARUNDEL, BEIGTON, HORSHAM, LEWES, MIDHURST, SHOREHAM, or New Shoreham; the ancient boroughs of Bramber, EAST GRINSTEAD, and STEYNING; the market-towns of BATTLE, CUCKFIELD, HAILSHAM, and PETWORTH, and the towns of BOGNOR, EASTBOURNE, MAYFIELD, NEWHAVEN, and WORTHING. Of the places printed in small capitals an account is given under their respective titles; the others are noticed here.

Winchelsea, population 778 in 1851, is near the eastern extremity of the county, about 2 miles S.W. from Rye. Old Winchelsea, before the reign of Henry III., was washed by the waters of the Channel on the south and east, and by the Rother on the north. It was of some importance in Saxon times, and was added to the cinque-ports before the reign of John. Early in the 13th century the old town began to suffer much from the influx of the sea. More than 300 houses were destroyed by the overflow of the sea in the year 1250. The sea continued its ravages; the site of the present town was purchased, and the "inhabitants of Old Winchelsea took to it by little and little and builded it." The new town was walled in, and in six or seven years it was "metely well finished." In 1287 the old town was entirely overwhelmed by the sea. The new town continued to increase and flourish. It soon became the place of import for French wines, for which massive crypts were built. In the time of Henry VI. Winchelsea was one of the principal ports of embarkation for the continent. The new town was pillaged and partially burnt by the French in 1360, and received much more serious injury from the Spaniards twenty years afterwards. The town was subsequently repaired. Henry VIII. raised for its defence the castle of Camber, the ruins of which are still standing. The sea began once more to desert the new town; the inlet and harbour became choked up with sand and beach, and although Queen Elizabeth, who visited it in one of her progresses in 1578, manifested her sense of its importance by calling it Little London, the trade was soon entirely lost, and Winchelsea fell into decay. It is now little more than a village; the houses round two sides of the principal square and one small square with a few houses alone remain. Winchelsea is a corporation by prescription. The corporation consists of a mayor and jurats, of whom there ought to be 12. This town returned two members to parliament from 42nd Edward III. till 1832; it has since been added to the electoral district of Rye. Three of the four ancient gateways are still standing, namely, the Landgate on the north-east, the Strandgate on the south, and Newgate to the south-

west, but in a very ruinous condition. Of the three churches, St. Giles, St. Leonard, and St. Thomas the Apostle, a portion of the last alone exists. It was a large cruciform structure, but the nave has long since disappeared; the north and south transepts are in ruins, and the chancel with two aisles is the only part used for public worship. In the church are three altar-monuments, of the time of Edward I., of secular warriors in mail armour, with their legs crossed. Besides the churches Winchelsea had a convent of Gray Friars, of whose edifice the choir with beautiful arches and fine gothic windows yet stands.

Pevensey, 5 miles S.W. from Hailsham, population 412 in 1851, which gave its name to the rape, and was once formidable for its castle and useful for its harbour, is now an insignificant village. In the reign of Edward the Confessor the port was ravaged by Earl Godwin and his son Harold in 1043, when many ships were taken. In the Bay of Pevensey, William the Conqueror landed with his army from Normandy prior to the decisive battle of Hastings. Pevensey is supposed to be the site of the ancient British city of Anderida. Many interesting vestiges of ancient fortifications have been laid open. The castle, though a mere ruin, is in several respects of much interest. The outer walls, which are the most ancient part of the fortifications, inclose a space of 7 acres, and are from 20 to 25 feet high. The moat on the south side is still wide and deep; on the other sides it has been filled up. Within the walls is another and much more modern fortification, approaching a pentagonal form, with five nearly circular towers, moated on the north and west. The walls are 9 feet thick, and the towers were two and three stories in height. The castle withstood the attacks of William Rufus's army for six days, protecting Odo, bishop of Bayeux, who ultimately yielded only for want of provisions; and it afterwards successfully resisted a siege conducted in person by King Stephen. It was again in 1265 fruitlessly assailed by Simon Montford, son of the renowned Earl of Leicester. When Sir John Pelham was in Yorkshire in 1339 assisting Henry, duke of Lancaster, to gain the crown, Pevensey Castle was bravely and successfully defended by Lady Jane Pelham, when attacked by large bodies of the yeomen of Kent, Surrey, and Sussex, who favoured the deposed king Richard. Pevensey is a member of the cinque-port of Hastings. It is a corporation by prescription. The inhabitants had formerly an hospital dedicated to St. John.

Seaford, population 997 in 1851, a small sea-port town, and a member attached to Hastings, one of the cinque-ports, is situated on the coast, between two ridges of the South Downs, 11 miles S.E. from Lewes. Till the great storm of 1570 it was the port where the river Ouse emptied itself into the sea. The Ouse now reaches the sea at NEWHAVEN. Seaford was a Roman station. In one of the marauding visitations from the French, once so common on the southern coast, the town was burned, and several religious edifices, with the original chancel of the church, were destroyed. The town was incorporated in the 35th Henry VIII., and still has its bailiff and jurats. There is a town-hall with a jail beneath; and quarter and petty sessions are held. The borough returned two members to parliament till disfranchised by the Reform Act.

Bramber, population 130, stands on the right bank of the Adur, about 4 miles N. by W. from New Shoreham. It was formerly a borough town of some importance. Though decayed it returned two members to parliament till 1795, when the franchise was extended to the entire rape of Bramber. The two members for Shoreham are now elected by the qualified voters of the rape of Bramber. The place is now a poor village. The church, an interesting Norman structure, has been recently repaired.

Hurst, or *Hurstpierpoint*, population of the parish 2119 in 1851, is a small market-town, 8 miles N. by W. from Brighton. The church is a handsome gothic building of recent erection. There are a Wesleyan Methodist and a Baptist chapel, and National schools. A short distance from the town is St. John's Middle Grammar school, which is in connection with Nicholas College at SHOREHAM, and had 147 scholars in 1854. The market is held on Tuesday, and a fair on May 1st.

Littlehampton, population of the town 2436, a seaport town and watering-place, 7 miles W. from Worthing, is a convenient port for a considerable district, and has a good trade. The place is much resorted to in summer for sea-bathing. The church was rebuilt in 1827. There are National schools. A market is held on Thursday.

Mayfield, population of the parish 3055 in 1851, is situated on high ground, 8 miles S. from Tonbridge Wells. The town was formerly remarkable for a palace of the archbishops of Canterbury, with whom Mayfield was a favourite residence. Provincial synods were held here in 1332 and 1362. Of the ancient palace the walls and three noble arches in the hall, and some portions of the chambers, are still standing. The church is a large building of the perpendicular style, with a lofty spire. The Wesleyan Methodists and Baptists have places of worship; and there is a National school. A market for corn is held on Monday; fairs for cattle and sheep are held on May 30th and November 18th.

The following are the principal villages: the populations are those of the respective parishes in 1851:—

Ashburnham, population 865, about 3 miles W. from Battle, has an old gothic church, in the vestry of which are preserved some relics of

Charles I. Ashburnham House, the seat of the Earl of Ashburnham, is a large modern edifice, containing a good collection of paintings, and standing in a fine park. *Bezhill*, population 2148, is on the coast, 6 miles W. from Hastings. The village is resorted to in summer as a quiet secluded watering-place. The church is partly of Norman date; the chancel is early English; and the windows of the nave are of perpendicular date. There is a National school. *Billinghurst*, population 1458, is 13 miles N. from Arundel. Some malting is carried on. *Boxgrove*, population 755, is a pleasantly-situated village 4 miles N.E. from Chichester. The church is a portion of the priory of Boxgrove, founded in the reign of Henry I. Goodwood, the magnificent seat of the Duke of Richmond, is chiefly in Boxgrove parish. The mansion, a very spacious and stately edifice, contains some fine pictures: the park is well-wooded and very picturesque. *Burwash*, population 2227, is 20 miles E.N.E. from Lewes. The church is partly in the early English style. There are chapels for Wesleyan Methodists and Independents, and National schools. Petty sessions are held here. *Buxted*, population 1694, is on the river Ouse, 12 miles N. by E. from Lewes. Besides the church, which is small but very ancient, there are a Dissenting chapel and National schools. A cattle-fair is held on July 31st. *Buxted Place*, the seat of the Earl of Liverpool, is a fine mansion, standing in a well-wooded park. *CHAILEY*, 7 miles N. by W. from Lewes, on the London road, the seat of a Poor-Law Union, is noticed in a separate article. *Findon*, population 559, is pleasantly situated 4 miles N. by W. from Worthing, and has in its vicinity several excellent residences. The church is Norman. There is a National school. A fair for lambs is held on July 12th, and one for sheep on September 14th. On Cisbury Hill are traces of a considerable encampment. *Fletching*, 10 miles N. from Lewes, population 2007. The church is a large ancient edifice. There are a chapel for Baptists, and a National school. *Sheffield Place*, the seat of Earl Sheffield, is a fine modern mansion, standing in a beautiful park. *Framfield*, 9 miles N.E. from Lewes, population 1385, has a fine old church and a National school. The archbishops of Canterbury formerly had a seat here. *Frant*, population of the parish, part of which is in Kent, 2447. The village is 2 miles S. from Tonbridge Wells, of which it is a sort of suburb. The church stands on a commanding site. There are National schools. On Saxonbury Hill are traces of an ancient encampment. *Heathfield*, 14 miles N.E. from Lewes, population 2208, has, besides the church, an independent chapel and a National school. In Heathfield park is a monument erected in honour of General Elliot, Lord Heathfield, the brave defender of Gibraltar. *Hellingly*, population 1761, is about 12 miles E. from Lewes. The village is united with that of *Horse Bridge*, also in Hellingly parish. Besides the church, there are places of worship for Wesleyan Methodists, Independents, and Baptists, and a National school. Fairs for cattle are held on May 9th and September 29th. *Henfield*, population 1664, is a good-sized village 5 miles N.E. from Steyning. The church is ancient. There are National schools. *Hurstmonceux*, 5 miles E. from Hailsham: population, 1292. The church, which is partly of the early English period, contains some interesting monuments. The Baptists have a chapel, and there are National schools. *Hurstmonceux Castle* is noticed at the end of the article. *Keymer*, population 1006, about 8 miles N. from Brighton, has an old church and National schools. There are brick- and tile-works, and potteries at St. John's Common. *Lindfield*, population 1814, is on the right bank of the Ouse, 3 miles E.N.E. from Cuckfield. It has a fine old church, and a school of industry founded by the late W. Allen. There are fairs for sheep on April 1st and May 12th, and for lambs on August 5th. *Maresfield*, 2 miles N. from Uckfield, population 1805, has an old church, a district chapel at Nutley, and a National school. There are very extensive nurseries and market-gardens. *Ore*, 2 miles N. by W. from Hastings, population 1745, has an old church and a National school. The village is a favourite resort of visitors to Hastings, on account of its picturesque scenery. *Pulborough*, population 1325, is on the left bank of the Arun, 8 miles N. from Arundel. The church, which stands on an eminence, is of early English date, and contains some interesting monuments. There is a Dissenting chapel. A customary market for corn is held on Friday; a fair is held on Easter Tuesday. *Ringmer*, 8 miles N.E. from Lewes, population 1374, has, besides the church, an independent chapel and a National school. In the parish is an artillery barrack. *Selsey*, population 984, situated on the head-land known as Selsey Bill, 9 miles S. from Chichester, is said to have once stood much farther inland, the shore having been much encroached upon by the sea. In Saxon times it was the seat of a bishopric, removed to Chichester about 1075: it is now a mere village. The church, which is ancient, is a portion of a larger edifice. Prawns and lobsters are extensively taken: they are chiefly sent to the London market. *Storrington*, 9 miles N.E. from Arundel: population, 1038. The church contains some monuments by Westmacott. There are National schools. A customary corn-market is held every alternate Tuesday; fairs for cattle and pedlery are held on May 13th and November 11th. *Parham House* stands in a richly-wooded park. *Wadhurst*, 6 miles S.E. from Tonbridge Wells, population 2302. The church is partly in the early English style, and contains some interesting monuments. There are Independent and Baptist chapels, and National schools. *Withyam*, 6 miles S.W. from Tonbridge Wells: population, 1692. The church was

rebuilt in the 17th century, but has a mortuary chapel of decorated character, repaired in 1844, in which are some old monuments of the Sackville family, and some by Flaxman and Chantrey. The Wesleyan Methodists and Baptists have places of worship, and there are National schools. *Worth*, 8 miles S. from Cuckfield, on the Brighton road, population 2475. The church is one of the few ecclesiastical edifices which retain portions of Anglo-Saxon architecture. The Wesleyan Methodists have a place of worship.

Sussex constitutes the diocese of Chichester. It is divided into the archdeaconries of Chichester and Lewes. By the Poor-Law Commissioners the county is divided into 25 Poor-Law Unions:—Arundel, Battle, Brighton, Chailey, Chichester City, Cuckfield, Eastbourne, East Grinstead, Hailsham, Hastings, Horsham, Lewes, Midhurst, Newhaven, Petworth, East Preston, Rye, Steyning, Sutton, Thakeham, Ticehurst, Uckfield, Westbourne, West Fife, and Weathampnett. These Unions comprise 321 parishes and townships, with an area of 946,299 acres, and a population in 1851 of 339,117. Sussex is in the Home circuit. The assizes are held at Lewes, where there is a house of correction: the county jail is at Horsham. Quarter sessions are held—for East Sussex at Lewes; for West Sussex, the Epiphany and Easter sessions at Petworth, the Trinity at Horsham, and the Michaelmas at Chichester. County courts are held at Arundel, Brighton, Chichester, Cuckfield, East Grinstead, Hastings, Horsham, Lewes, Midhurst, Petworth, and Worthing. East and West Sussex return two members each to Parliament; two members each are returned by the city of Chichester, the Cinque Port of Hastings and the boroughs of Brighton, New Shoreham, and Lewes; and one member each for the ancient town of Rye and the boroughs of Arundel, Horsham, and Midhurst. The total number now returned from the whole county is 18. Before the Reform Act it was 23.

History and Antiquities.—This county, like the adjoining county of Kent, comprehends that part of England which, from its proximity to the Continent, first attained notice; but its name is derived from the kingdom erected by Ella, after his successful expedition in 477, when he assumed the title of king of the South Saxons, and gave the title of South-sex to the district.

In the time of Cæsar the Belgæ were numerous in Sussex, and held the district with ample defences and fortifications. They had a regular chain of communications along the hills, from one end of the county to the other. The principal posts were at the extremity of some point nearly surrounded by water, and often defended on the land side by a vallum and trench. The towns of Arundel, Bramber, Lewes, and Seaford, were thus conveniently placed. They had stations also at Storrington, at Sullington, at Ditchling, at Lewes, at Cisbury above Worthing, and on almost all parts on or near the slopes of the Downs; in such places remains of ancient earthworks have been traced. A branch of the Ermine Street entered Sussex at Pulborough near Horsham, running to Chichester on the west, and another branch went through the eastern part of the county. Three large Roman stations were at Regnum, now Chichester; Mutuantonis, most probably Lewes; and Anderida. There were several smaller and intermediate stations. Ad-decimium is believed to have been at Bignor, where were discovered, in 1811, the foundations of a large villa, with several tessellated pavements, the crypto-porticus, or inclosed gallery for walking, a sudatory, and a bath. Earthworks, both British and Roman, occur in many places along the main lines of road. Anderida probably occupied the site of the modern Pevensey. In 477, Ella, a chieftain of repute among the old Saxons, landed at a place called Mercadesburne, supposed to be Chichester, and defeated the enfeebled Britons. In 485, the British kings and rulers, uniting their forces, collected a formidable army, which met the Saxons at a place named Mercadesburne. The victory was doubtful; and the Britons maintained themselves in Anderida, a fortress of considerable importance, till 491, when, having been reinforced from Germany, Ella defeated the Britons, and raised the fortress. He then proclaimed himself king of the South Saxons. For nearly two centuries from the abdication of Ceadwalla in 688 Sussex was under the rule of military despots, called 'eorls,' appointed by the kings of Wessex. In subsequent times Sussex was commonly the appanage of the eldest son or heir-apparent of the King of Wessex. In the latter half of the 9th century the Danes or Northmen made frequent predatory excursions into Sussex, as well as Kent. In 893 a Danish fleet of 330 sail assembled at Boulogne, and directed its course to the British shore. Two hundred and fifty vessels entered the Rother, up which river they towed their ships four miles. A vessel, supposed to be one of these Danish ships, was discovered in the year 1822 imbedded in 10 feet of mud and sand in a field at Northiam, a short distance from the present navigable river. In the beginning of the 10th century a body of the Danes who had settled in East Anglia and Northumberland fitted out a fleet, and after being repulsed in Devonshire, landed at Chichester, but were driven back to their ships with considerable loss. King Alfred made his residence in Sussex, and built several castles for the protection of the coast. When the Northmen renewed their ravages under Ethelred II., 980-991, Sussex was ravaged in the retreat from London of Colans, king of Norway, and Sweyn, king of Denmark; and again in 1009 and 1013, when Sweyn assumed the government.

In the time of Edward the Confessor, Sussex with Kent was included

in the earldom of the famous Godwin, who exercised within his earldom vice-regal power. On the assumption of the throne by Harold, Sussex became the scene of the memorable contest which gave the English crown to the Norman invader. On the 28th of September, 1066, the Normans landed near the mouth of the little river Asten. The decisive battle of Hastings was fought on the 14th of October following, on a heath then called Epiton or Hetheland, but which thenceforth assumed the name of Battle. In the troubles of the period of Henry III., on the 14th of May, 1264, was fought the battle of Lewes, between the assembled barons, headed by Simon de Montfort, earl of Leicester, and the king's troops, commanded by the king himself, assisted by his son Edward and his brother Richard. Jack Cade, whose insurrection in the reign of Henry VI. caused some trouble, extended his march into Sussex, and is reported to have been killed at Cade Street in Heathfield, where a stone monument has been raised to mark the spot. In the subsequent reigns till Henry VIII., the Sussex coast suffered from the incursions of the French. During the civil wars the castles of Amberley, Arundel, and Bodiham, and the city of Chichester, were taken by the parliamentary forces.

Of ancient castellated edifices not already described, the most remarkable are Amberley, Bodiham, and Herstmonceux, and the castellated mansions of Eridge, Knepp, and Scotney. The castle of Amberley is situated about four miles from Arundel. The bishops of Chichester had a residence here from the early Roman times, but the present castle was built by Bishop Rede, who was consecrated in 1369, and obtained a licence, in 1 Richard II., to fortify his castle. The ground-plan is nearly a parallelogram. The present dwelling-house consists of the state apartments, built in the upper court by Bishop Sherburn at the commencement of the 16th century: in one still called the queen's room there are some curious paintings, the side panels exhibiting a series of 10 female figures, and the ceiling having the portraits of six warriors carved in wood. The castle was dismantled in 1643, by the parliamentary forces. Bodiham Castle, built in 1386, by Sir Edward Dalyngrudge, is four miles from Robertsbridge, on the river Rother. The site forms a parallelogram or nearly a square, with four round towers at the angles and three square ones between them; the great gateway is flanked by two square towers, and the entrance is defended by a machicolation and portcullis. The interior was fitted up for a baronial residence. In the time of Charles I., the castle was dismantled by Waller. The castle of Herstmonceux was built in 1423 by Sir Roger Fiennes, treasurer of Henry VI.'s household. It stands on the borders of Pevensey Level, a few miles north of Pevensey Castle. It is one of the oldest brick buildings in England, built after the reintroduction of that material. The building is nearly a square, 214 feet from east to west, and 206 feet from north to south. It has an octagon tower at each corner, and another in the centre of the east and west sides. The Rev. Robert Hare, in 1777, sold the ancient tapestry and furniture, pulled down the roof, and wholly dismantled the castle, leaving the walls alone standing. Eridge Castle stands upon a bold eminence in the parish of Frant, on the borders of Kent. The castle has received extensive alterations. Knepp Castle, in the parish of Shipley near Horsham, is a castellated building in the gothic style, erected about the commencement of the present century by Sir Charles Burrell: of the old castle, at a distance of half a mile, only a single wall is standing. Scotney Castle is on the Kent Ditch, in the parish of Lamberhurst: the stream which divides the two counties runs through the centre of the castle. It was built about the time of Stephen. Of monastic remains the principal are, the mitred abbey of Battle [BATTLE], the abbey of Bayham and Robertsbridge, and the priory of St. Pancras at Lewes. The Knights Templars had a preceptory at Sedlescombe.

In 1851 the number of places of worship in the county was 617, of which 350 belonged to the Established Church. The total number of sittings provided was 160,988. Of day schools there were 1178, with 46,169 scholars; of Sunday schools, 363, with 29,570 scholars.

In 1853 the county possessed 14 savings banks, at Arundel, Battle, Brighton, Chichester, Cuckfield, East Grinstead, Hastings, Horsham, Lewes, Midhurst, Petworth, Rye, Uckfield, and Worthing. The amount owing to depositors on November 20th 1853 was 580,998*l.* 4*s.* 8*d.*

SUTHERLANDSHIRE, an extensive county in the north of Scotland, stretches from the Dornoch Frith and German Ocean, along which it has a sea-coast of about 24 miles, across the island to the Atlantic Ocean and the North Sea; having along the Atlantic from Inverkirkaig Bay to Cape Wrath a sea-coast of 62 miles, and along the North Sea from Cape Wrath eastward a sea-coast of 66 miles (in both cases excluding the bays and indentations from the calculation). The county lies between 57° 48' and 58° 38' N. lat., 3° 40' and 5° 20' W. long. Its area is 1886 square miles, or 1,207,188 statute acres. Its length varies from 42 to 60 miles, and its breadth from 42 to 54 miles. The population was 25,793 in 1851. The county returns one member to the Imperial Parliament.

Several small islands along the west and north coasts belong to the county: four of them are inhabited; the three largest are Oldany, Calva, and Handa. Handa is remarkable for the altitude and wild grandeur of its cliffs. Along the north coast, the lofty peaks of the Stack and Skerries islands, belonging to this county, are conspicuous

in clear weather at a distance of some miles from the coast. Island Hoan, the Rabbit Islands, Island Roan, and Holy Island, are near to the coast, and form, in some instances, natural breakwaters.

Surface, Coast-Line, Hydrography, and Communications.—Sutherland is a mountainous and pastoral district. The interior of the county consists of a succession of mountains, ranges of hills, and extensive moors, separated by straths and mountain glens, diverging from the principal valleys, which open towards the coasts. Among these mountain ranges, one of great altitude, which contains several of the highest mountains in Great Britain, separates the west and north coasts of the county from its southern shore and valleys, and runs in a line nearly parallel with the shores of the Atlantic and North Sea. Ben More of Assynt attains an elevation of 3231 feet. Ben Hoo (2859 feet), and Ben Spinnue (2565 feet), mark the prolongation of this range to the North Sea. The coast near this point trends almost due east from Cape Wrath, the north-west point of Scotland, a cliff 600 feet high, on which is a lighthouse with a revolving light. The same range stretches to near the Caithness boundary. In keeping with the bold character of this range are the magnitude of many lakes at the base of the mountains, the depth and abruptness of the openings and passes, the expansion of widely-spread mountain sides and considerable moors and bogs, and the variety of romantic valleys and rugged glens and hollows. Assynt and Edderachillis, on the west coast, are remarkable for the ruggedness and inequalities of the surface. Along the north coast the same description of country continues, in a more modified form. The sea-coasts present headlands, promontories, and numerous cliffs of the boldest description. In the central districts of the county are several extensive valleys, with numerous low hills clothed with rich pasturage, and comprising valuable tracts of arable land. With the exception of the Ord of Caithness, the sea-coast along the shore of the German Ocean is flat and sandy.

The county is abundantly watered by the Oykill, the Fleet, and their tributary streams; all of which have their source within the county. The salmon-fishings are valuable. Except the Frith of Dornoch and the short estuary of the Fleet, none of the rivers are navigable. The western district of Sutherland is remarkable for a great number of fresh-water lakes. Loch Shin forms the largest of a chain of lakes, which extends almost continuously from near the head of the Dornoch Frith on the east coast to Loch Laxford, a salt-water loch of the Atlantic on the west coast. Loch Assynt, which is surrounded by some of the highest and most picturesque mountains of the county, is the largest lake along the west coast; Loch Hope and Loch Eribol, and the Kyles of Tongue and Durness, are conspicuous on the north coast. At Scullomie, in the Kyle of Tongue, is a harbour, in which coasters may find refuge: it is always accessible. Since 1811 the whole circuit of Sutherlandshire has been provided with excellent and well-kept roads and numerous bridges, embankments, and mounds necessary to connect them.

Geology.—The rocks of the interior of the county and a considerable portion of the west coast are gneiss. Detached districts, chiefly in the parish of Rogart and on the confines of Caithness, exhibit great masses of granite, and the high hills of Loth are composed of porphyritic granite of different colours. Sienite and large rocks of granular marble abound on the north shore of Loch Shin. The parish of Assynt also contains extensive masses of white marble, and many of the high hills in that district are of quartz. Limestone is the prevailing rock in Durness, except the headland of the Parph, which terminates in Cape Wrath, and in which quartz, red-sandstone, and conglomerate prevail. Along the east coast the high hills of Golspie are of old conglomerate; the low parts of the east coast between Golspie and Helmsdale are of oolite sandstone, sandstone-flag, limestone, and coal. Veins of quartz, of calcareous spar, of tremolite, and of a rude kind of porphyry, occasionally occur.

Climate, Soil, Agriculture, &c.—Sutherland has a variable climate, but along the sheltered east coast it is mild and salubrious. The high parts of the interior and the west coast are subject to continued and heavy falls of rain. The arable land of Sutherland lies principally on the east coast; and there the most improved system of husbandry is acted upon. The Dunrobin breed of Highland cattle belong to this county. Cheviot sheep are the most important stock and the staple produce of the Sutherland high grounds. On the arable farms the grain raised is limited to barley, oats, and occasionally wheat and rye. Turnips are extensively raised, and chiefly consumed on the field by sheep during the winter season; potatoes form the chief article of food for the great bulk of the population. In most of the valleys, natural woods of birch, alder, and occasionally oak, adorn the steep sides and water edges. Several parts of the county have been celebrated for centuries as deer forests; and red-deer are still found in considerable numbers. Roe deer are common in the woods; and game of all kinds, being protected, is everywhere abundant.

Divisions, Towns, &c.—The county is divided into 13 parishes, 10 of which belong to the Duke of Sutherland, who has also considerable properties in the remaining three. The only town is *Dornoch*, a royal and parliamentary burgh and market-town, in the parish of Dornoch, about 200 miles N. by W. from Edinburgh. Dornoch was made a royal burgh by charter of Charles I. in 1628. The population was 599 in 1851. The town is governed by a provost and 13 councillors, of whom 4 are bailies, and unites with Cromarty, Dingwall, Kirkwall,

Tain, and Wick in returning a member to Parliament. It was anciently the seat of the bishops of Caithness, part of whose palace is now used for county purposes. The old cathedral of the diocese was at Dornoch. It was rebuilt in its present form, as the parish church, at the sole expense of the late Duchess-countess of Sutherland. This cathedral contains the remains of the Sutherland family from the 13th century. There is in the town a Free church. Fishing is carried on to a small extent. Six fairs are held in the course of the year.

The villages are mostly small. The following only need to be noticed; the populations are those of the parishes in 1851:—*Bonar*, population of the parish of Creech 2714, at the head of the estuary of the Oykill, about 12 miles W. from Dornoch; vessels of 60 tons burden find accommodation; meal, coals, and lime are imported, and timber, wool, corn, and salmon are exported. Bonar bridge is a fine iron structure of one arch, 150 feet in span, erected in 1818. Extensive cattle markets are held in July, August, and September. *Brora*, population of Clyne parish 1933, at the mouth of the Brora water, about 14 miles N.W. by N. from Dornoch, has a harbour, with a pier. A small coasting trade is carried on. There is a school of industry for females. A market is held in October for cattle, horses, &c. *Golspie*, population 1529, about 10 miles N. by E. from Dornoch, contains some good dwellings and shops; it is inhabited chiefly by agricultural labourers and fishermen. Golspie parish is united with Dornoch parish by a mound 2985 feet long, and a bridge constructed in 1816 across Loch Fleet. The inlet of Little Ferry, outside the mound, forms an excellent harbour. The parish church is situated near the village. There is a school for females, supported in part by the Society for Propagating Christian Knowledge in the Highlands. An annual fair is held in October for cattle and pedlery; and another of less importance in May. Dunrobin Castle, the seat of the Duke of Sutherland, is about two miles east-north-east from Golspie: it is surrounded with extensive and well-wooded grounds. *Helmsdale*, population of Loth parish 640, at the mouth of Helmsdale Water, about 24 miles N.E. from Dornoch, is the seat of a considerable herring fishery. There is a productive salmon-fishery in Helmsdale Water. The bridge is a handsome structure of two arches, each 70 feet span, erected in 1811. There is a Free church. Helmsdale Castle, an old square building, was formerly a hunting-seat of the Sutherland family. *Port Gower*, also in Loth parish, about 22 miles N.E. from Dornoch, is occupied by fishermen and small holders of land.

Antiquities.—The Northmen made early settlements along the coasts of Caithness. Upright stones, tumuli, and similar remains mark the period of their abode here. The foundations, and ruins of old towers and strongholds, are the chief vestiges of feudal times.

Industry.—The county has no manufactures; but the fisheries are prosecuted with vigour and success. Cod, ling, and herrings are taken in large numbers. Vast numbers of lobsters are sent to the London market.

Religious Worship and Education.—According to the Returns of the Census for 1851 there were 37 places of worship in the county, of which 16 belonged to the Established Church, and 21 to the Free Church. In 29 of these places of worship the total number of sittings provided was 11,616. Of day schools there were 78, of which 73 public schools had 4156 scholars, and 5 private schools had 69 scholars. Of Sabbath schools there were 26, with 1361 scholars. One literary institution, the Tongue Subscription Library, had 56 members, with 1304 volumes in the library.

SUTLEJ. [HINDUSTAN.]

SUTTERTON. [LINCOLNSHIRE.]

SUTTON. [CAMBRIDGESHIRE; NOTTINGHAMSHIRE.]

SUTTON, Sussex, a village and the seat of a Gilbert's Poor-Law Incorporation, in the parish of Sutton, is situated in 50° 56' N. lat., 0° 36' W. long., distant 5 miles S. by E. from Petworth, and 54 miles S.W. by S. from London. The population of the parish in 1851 was 389. The living is a rectory in the archdeaconry and diocese of Chichester. Sutton Poor-Law Incorporation comprises 16 parishes and townships, with an area of 26,189 acres, and a population in 1851 of 7052.

SUTTON COLDFIELD. [WARWICKSHIRE.]

SUTTON COURTNEY. [BERKSHIRE.]

SUTTON ST. MARY. [LINCOLNSHIRE.]

SUTTON VALENCE. [KENT.]

SUWALKY. [POLAND.]

SVEABORG, or SWEABORG. [HELSINGFORS.]

SVENDBORG. [DENMARK.]

SWAFFHAM, Norfolk, a market-town and the seat of a Poor-Law Union, in the parish of Swaffham, is situated in 52° 39' N. lat., 0° 43' E. long., distant 27 miles W. by N. from Norwich, 98 miles N.N.E. from London by road, and 113½ miles by the Eastern Counties and East Anglian railways. The population of the town in 1851 was 3858. The living is a vicarage in the archdeaconry of Norfolk and diocese of Norwich. Swaffham Poor-Law Union contains 33 parishes and townships, with an area of 81,200 acres, and a population in 1851 of 14,320. The town of Swaffham stands on the summit of a hill. The houses are generally well built, and the streets are lighted with gas. Swaffham contains an assembly-room, a theatre, and a house of correction. In the centre of the town is a spacious market-place. The parish church is a very fine cruciform structure; at the west end

is an embattled tower with pinnacles at the corners. There are chapels for Wesleyan Methodists, Baptists, and other Dissenters; also National and Infant schools, and a savings bank. Saturday is the market-day; there are three annual fairs. A considerable quantity of butter is brought to market. Quarter sessions and a county court are held in the town.

SWALWELL. [DURHAM, County of.]

SWAN RIVER. [WESTERN AUSTRALIA.]

SWANAGE. [DORSETSHIRE.]

SWANSCOMBE. [KENT.]

SWANSEA, Glamorganshire, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parish of Swansea, is situated on the right bank of the river Tawe, at its entrance into Swansea Bay, in 51° 37' N. lat., 3° 56' W. long., distant 43 miles W.N.W. from Cardiff, 206 miles W. by N. from London by road, and 216 miles by the Great Western and South Wales railway. The population of the borough of Swansea in 1851 was 31,461. The borough is governed by 6 aldermen and 18 councillors, one of whom is mayor; and, in conjunction with Neath, Loughor, Aberavon, and Kenfig, returns one member to the Imperial Parliament. Swansea Poor-Law Union contains 27 parishes and townships, with an area of 103,769 acres, and a population in 1851 of 46,907.

The Welsh name of Swansea is Aber-Tawe, from its position at the mouth of the river Tawe. The harbour may be described in general terms as a square basin, of the dimensions of nearly half a mile each way. It has received considerable improvements of late years. On the western pier there are a lighthouse and watchhouse. Communication between the two banks of the river is maintained by a ferry. On the north-east and north-west the bay is backed by lofty hills, and the beach consists of an extensive level of firm sand. Swansea is the port of a rich mineral district. The principal branches of industry are the smelting of copper-ore and the export of coal. Copper-ore is brought from Cornwall, Devonshire, parts of Wales, Ireland, Australia, and elsewhere. There are 17 smelting-works in the Swansea district, of which number eight are close to the town. Besides the works for smelting copper, there are iron-foundries, zinc-works, tin-plate works, yards for building and repairing ships, roperies, tanneries, breweries, and two potteries. The South Wales railway and the Vale of Neath and Taff Valley railways afford great facilities to the staple manufactures of Swansea. Several canals and tramroads communicate with the inland parts of the county. A canal about 17 miles in length runs along the valley of the Tawe into Brecknockshire; another connects the Neath River and Canal with Swansea Harbour; and a third communicates with collieries on the north-east of the town. On the western side of the harbour is a tramway, 7¼ miles long, which passes along the coast to Oystermouth and the Mumbles, the western head-land of the bay. At the Mumbles is a lighthouse. The trade of the town has increased very rapidly during the present century. Swansea is now a thriving place; the town is well paved and lighted with gas. The number and tonnage of vessels registered as belonging to the port of Swansea on the 31st of December 1854, were—Sailing-vessels, under 50 tons, 65, tonnage 1946; above 50 tons, 103, tonnage 14,799; steam-vessels, under 50 tons, 6, tonnage 141; above 50 tons, 4, tonnage 332. During 1854 the returns of vessels entered and cleared at the port were as follows:—Coasting trade, inwards, sailing-vessels, 3647, tonnage 246,260; steam-vessels, 301, tonnage 48,175; outwards, sailing-vessels, 6771, tonnage 428,866; steam-vessels, 261, tonnage 51,957. Colonial and foreign trade, inwards, sailing-vessels, 724, tonnage 93,677; steam-vessels, 2, tonnage 694; outwards, sailing-vessels, 887, tonnage 120,106; steam-vessels, 4, tonnage 1339. The corporation claims to be a corporation by prescription. The market-days are Wednesday and Saturday; fairs are held in May, July, August, and October. A county court is held in the town.

St. Mary's church is 72 feet by 54 feet, and has a lofty square tower. St. John's is a small edifice; it was formerly a chapel belonging to the Knights of Jerusalem. There is another church of recent erection. The Wesleyan Methodists have chapels, one of which, erected in 1846, is said to be the finest chapel in Wales belonging to that body. The Roman Catholics have a new gothic chapel, opened in 1847. The Unitarians have a chapel in the Tudor style, also opened in 1847. There are besides, places of worship for Welsh Baptists, Independents, Calvinistic Methodists, Quakers, and Jews. National and Infant schools for 800 children were opened in 1848. The Free Grammar school, founded in 1682, for which a handsome new school-house has just been erected, had 72 scholars in 1854. Swansea possesses a Normal college, supported on the voluntary principle, an asylum for the deaf and dumb, a literary and scientific society, a society for the acquirement of useful knowledge, a mechanics institute, a savings bank, and a dispensary. The principal public buildings are the town-hall, erected in 1827, the South Wales Royal Philocephical institution, the infirmary, the theatre, the house of correction, the assembly-rooms, and the spacious and handsome new guildhall and assize-courts. A market-place was opened in 1830, the cost of the construction being about 20,000*l.*; a new fish-market was opened in 1847. The only remains of the ancient castle are a massive square tower; the town-prison and the Union workhouse occupy a part of the site of the old castle.

SWEDEN, a country in Europe, which occupies the eastern and

larger portion of the Scandinavian peninsula, and is situated between 56° 20' and 69° N. lat., 11° and 24° E. long. About one-sixth of the country lies within the Polar Circle. On the east, to 66° N. lat., Sweden is bounded by the Baltic and the Gulf of Bothnia, at the head of which it is contiguous to Russia, the boundary running up the Tornea Elf, the Muonio, and the Kõngsämä, a feeder of the Muonio, to its source in the small Lake of Koltejaur, which is on the boundary of Norway. On the west Sweden is bounded by Norway, the boundary following for the most part the watershed of the mountain ranges between the two countries, the Bullaren Lake, the strait called Swinesund, the Kattagat, and the Skagerack. On the south, the Oresund, or Sound, separates Sweden from the Danish island of Zealand, and the western part of the Baltic from Germany.

The length of this country from south to north is somewhat more than 900 miles; its width, between 58° and 68° N. lat., varies from 150 to 200 miles, but south of 58° and north of 68° it is not so wide. Its area is 3868 Swedish square miles, equal to 169,380 English square miles. The population at the end of 1850 amounted to 3,482,541. The only foreign possession of Sweden is St. Bartholomew's Island, in the West Indies. [BARTHOLOMEW'S, ST.]

Coast.—The coast of Sweden is somewhat more than 1400 miles, exclusive of the deep inlets. The coast along the Skagerack, Kattagat, and Sound is near 300 miles: the remainder is washed by the Baltic. Along the Botten Viken, or the most northern part of the Gulf of Bothnia, the coast is low, and consists of sandy alluvial matter brought down by the numerous rivers which fall into this part of the Baltic. The islands which line this coast in all its extent are of the same character. The coast begins to rise as it approaches the Quarken, or strait which connects the Botten Viken with the Botten Hafvet, or Sea of Bothnia, and the islands which lie across the strait are rocky. South of the Quarken, as far as the town of Gefle (near 60° 40' N. lat.), the coast presents an alternation of low and moderately elevated shores. The islands which line this tract of coast are less numerous than farther north, but larger, and they resemble the neighbouring coast, many of them being low and sandy, while others are undulating, and contain low rocky hills. The semicircular projection of the Swedish coast between Gefle on the north (60° 40' N. lat.), and Bräviken Bay near Norrköping on the south (58° 35' N. lat.), has a rocky shore, indented by numerous inlets, which are generally small, with the exception of that which unites Lake Mälär with the sea. In consequence of these inlets, this coast consists of a succession of small peninsulas. Though extremely rocky, the coast in general is of moderate elevation: in a few places it may rise to 100 feet. The islands, which are very numerous along the whole coast, but especially to the south of the Alands Haf (the Sea of Aland), all consist of rocks, but the greater part of them are only a few feet above the sea. These rocky islands and islets are called 'akars,' and many of them are surrounded by sand-banks. South of the small bay of Bräviken, as far as the parallel of the northern extremity of the island of Oland (57° 22' N. lat.), the coast is partly rocky and somewhat elevated, and partly low and sandy. It is likewise intersected by many inlets, all of which run from east-south-east to west-north-west, so as to give to this part of the coast nearly the appearance of a saw. The rocky islands and cliffs which line it are still more numerous than farther north, and render the access to it very difficult. The coast of the Strait of Calmar (which divides the island of Oland from Sweden), is low, and runs in a less broken line. The islands in this strait are comparatively few; and south of Calmar they disappear almost entirely. The Strait of Calmar terminates on the south with Cape Tornhamnsudde or Torrumudde, a low rocky point east of Carlsrona, at which the coast, which up to this point extended nearly due north and south, suddenly turns to the west. This is the most broken rocky and elevated part of the coast of Sweden, and it extends to a few miles west of Carlsahamn. Nearly the whole of this coast consists of rocks, sometimes rising 50 feet high with a steep ascent: but between the projecting masses, and especially at the mouths of the small rivers, it sinks nearly to the level of the sea; and such places generally form good harbours and anchorages, being protected from the wind and sea by the numerous islands which line the coast. The largest of these islands are at a short distance from Cape Torrumudde, and form the harbour of Carlsrona. The rocky elevated coast terminates at the peninsula of Sölvetaborg; the shores of the peninsula of Scania, which forms the most southern part of Sweden, being low, sandy, and free from islands and rocks, but in a few places lined with sand-banks. Cape Kullen, which forms the northern entrance of the Sound on the east, is of moderate elevation, but north of it the coast sinks down nearly to the level of the sea, and continues so to Warberg, up to which place no islands or rocks occur. The coast rises a little north of Warberg, and the rocky islands reappear and increase in number as we proceed northward: it also gradually rises higher, though the elevation never exceeds 30 feet. The coast is very rocky, and intersected by several large inlets, especially north of Göteborg, where the arms of the sea run up to Uddevalla, and separate from the mainland two large islands, Työrn and Orust, which are rather hilly. The other islands are only rocky cliffs of small extent and moderate elevation; and as we approach the boundary of Norway several of them consist of sand and other alluvial matter.

Surface.—In that part of Sweden which lies north of 62° N. lat.,

the country rises continually from the Gulf of Bothnia to the boundary of Norway. South of that parallel the slopes extend in a different direction. Between 62° and 59° N. lat. the country slopes to the south, and attains its lowest level at the place where the three great lakes of Wener, Hjelmar, and Mälär nearly intersect the country; south of these lakes the country rises again, and from 58° to 57° 10' N. lat. it constitutes an elevated table-land bounded by slopes. This table-land is connected with the mountain region north of 62° N. lat. by a low narrow ridge, which runs nearly due north of it between 14° and 15° E. long. as far north as 60° N. lat., and afterwards declines to the north-west. This ridge constitutes the watershed between 58° and 62° N. lat.

The most elevated part of Sweden lies along the boundary-line of Norway, and is called the Kiölen Mountains, which range extends as far south as 64° N. lat. The mountainous country continues farther south to 61° N. lat., but this southern portion is a part of what is called Norska Fiellen. Both these ranges are noticed under NORSKA FIJELLEN.

1. The *Northern* part of the mountain region of Sweden, or that which extends from the banks of the rivers Muonio and Tornea to 64° N. lat., has a great uniformity of surface. The western districts, being occupied by the most elevated portion of the Kiölen range, contains very high mountains, and a considerable tract surrounding Mount Sulitelma is always covered with snow. The lowest parts of the highest portion of the range are probably 4000 feet above the sea-level. From these parts the country slopes towards the Gulf of Bothnia; but the descent is not regular, being more rapid near the range, and more gentle towards the sea. The whole distance between the crest of the range and the gulf is rather more than 200 miles. About 40 miles from the crest the whole region has descended to about 2000 feet. In this highest region all the mountains rise above the level on which trees grow; in the valleys some diminutive firs and pines are found, but the greater part of these valleys are filled with lakes or swamps. Below this mountain region extends the elevated region, in which the country descends from the general level of 2000 feet to that of 800 feet above the sea-level. The width of this tract is about 60 miles. Numerous branches of the Kiölen Mountains traverse this tract, and their summits are generally above the line of vegetation, being 3000 feet high; between them the valleys are several miles wide in many places, but nearly all of them are occupied by alpine lakes. These lakes are frequently of great extent, 30 or 40 miles long, and from 3 to 5 miles wide. One of them, the Horn Afvan, from which the Skelleftea Elf issues, occupies the whole width of this tract, and is more than 60 miles long, and in some places 10 miles wide. The inhabitants of this region live chiefly on the produce of their cattle, and on the fish caught in the lakes, among which are several kinds of salmon. The forests are useless, except for the local supply of firewood. The rivers do not admit either of navigation or the floating of wood. Nearer the sea is the lower region, the general level of which sinks from 800 to 300 feet. It is wider than the elevated region, measuring from east to west about 70 miles. The ridges which traverse the whole breadth of the elevated region extend to this region, and may even be said to cross it; but they sink into hills, being, with few exceptions, hardly more than 500 feet above the general level. They are generally wooded to their summits. These hills are not usually steep, and there are small level tracts between them which are dry; but only a small surface is cultivated, owing to the severity of the climate and the poverty of the soil. Potatoes and cabbages, with a little barley and rye, are grown. The inhabitants live mainly on the produce of their cattle. The lakes in this tract are few, and most of them hardly larger than ponds. The fir and pine cover the greater part of the country, and pitch and tar are made from them. The regions just described constitute the Läns of Pitea and Umea, which contain an area of above 62,000 square miles. Of this the lakes and swamps occupy about one-tenth; the cultivated tracts do not exceed 66 square miles; the meadows occupy about 390 square miles, and all the remainder is either covered with forests or a useless waste.

2. The *Central* portion of the mountain region, or that which lies between 64° and 62° N. lat., though in some respects it resembles the northern portion, is distinguished by some peculiar features. The average width of Sweden in this part does not exceed 170 miles. The highest part of this region, situated within the Kiölen Mountains, varies from 20 to 30 miles in breadth. Only a few summits are always covered with snow, among which the most elevated is the Sylfellen, which is 5860 feet above the sea-level. The rivers which originate in this region run only in ravines, and the whole tract is entirely uninhabited, and only visited in summer by a few Laplanders, who find pasture for their reindeer on the mountains. The country adjacent to this mountainous tract forms a kind of table-land, extending about 80 miles in every direction. In the lowest part of this table-land there is the Great Lake, or *Storsjön*, whose surface is 978 feet above the sea-level; it is 40 miles long from north to south, and in some parts 12 miles wide. The river which issues from the north-east side of the lake is the principal feeder of the Indals Elf. This table-land forms a basin, being inclosed by higher land. From the Kiölen range, west of the basin, a branch advances into the basin for a few miles, and then terminates abruptly with the high summit of Mount Areskatan

(4716 feet). The surface of the table-land, which may be called the table-land of Jemtland, is about 1000 feet above the sea. It is very much broken, and interspersed with steep rocks and swamps. Besides the Great Lake there are ten or twelve others, each of them from 10 to 15 miles long, and more than a mile wide. Agriculture is carried on to some extent; barley, rye, and oats are grown. Several kinds of vegetables, especially potatoes and peas, grow very well. The soil however is stony, and far from being fertile; and towards the end of August the crops are sometimes destroyed by frost. The pastures being extensive, cattle, sheep, and goats are rather numerous: there is also a due proportion of horses and hogs. South of the table-land of Jemtland are the upper valleys of the river Ljungan and Ljusnan: that of the latter is called the valley of Herjedalen. These two valleys are of considerable width, and though interspersed with hills, they contain level tracts which are cultivated. These valleys are higher, that of Herjedalen being from 1200 to 1800 feet above the sea.

From the high ground which forms the eastern border of the table-land of Jemtland, the country descends in a regular slope towards the sea. Rivers cross it in narrow valleys considerably below the general level, in which they frequently expand in long narrow lakes, and usually form rapids and cataracts. In this tract the valleys alone can be cultivated; but the higher grounds contain good pasture and support cattle of various kinds. The remainder of the region, extending about 40 miles east and west, and reaching to the shore of the Gulf of Bothnia, is almost entirely occupied with isolated hills or short ranges; they have generally steep declivities, and some of them rise nearly 1000 feet above the sea. Between them are valleys or level grounds of small extent, the lowest parts being occupied by a river, or by a small lake, on the banks of which there are meadows alternating with woods. The slopes of the hills, and generally their summits also, are clothed with trees. Barley is extensively cultivated. Potatoes and peas are grown to some extent. The number of domestic animals, black cattle and sheep, is great, and that of goats considerable, but horses and hogs are few in number. A considerable quantity of timber is exported.

3. The Southern part of the mountain region lies south of 62° N. lat. That part of this region which may properly be called mountainous, is not extensive. It forms an appendage of the Norraka Fiellen. From Mount Sylfellen eastward run three ridges inclosing the upper valleys of the rivers Ljungan and Ljusnan, and towards the south those which divide the Oster- and Westet-Dal, and the latter from the Klar, while the most western ridge separates the Klar from the Glommen. The ridge which separates the valley of the Westet-Dal from that of the Klar, preserves a considerable elevation south of 61° N. lat., running south-south-east until it has passed 60° N. lat., when it turns to the south. Near the mountain region its general elevation is more than 1500 feet above the sea; but south of 60° 30' N. lat. it is hardly more than 1000 feet. It sinks still lower south of that line, where, running from north to south, it forms the watershed between the rivers that fall into Lake Wener on the west, and those running to Lake Mälär to the east; and farther south separates the basins of the lakes Wener and Wetter. In these parts it is called the *Tifveden* range, and it attains only a height of from 500 to 700 feet above the sea-level, and from 300 to 400 feet above its base. It seldom exceeds 3 or 4 miles in width.

The country to the east of this ridge and of the mountain system of Mount Sylfellen, resembles in its great features the countries which lie farther north. The higher tract, whose general level is more than 800 feet above the sea, stretches from the mountains to the western extremity of Lake Siljan, a distance of about 40 miles. North of that lake it extends much farther to the east, and here it occupies from west to east about 80 miles, leaving between it and the sea a space not quite 40 miles wide. The surface is less broken than that of the regions farther north, consisting chiefly of long and gentle swells, the summits of which form levels of considerable extent. A few hills are dispersed over these summits, but their sides are not steep, and they do not rise more than 300 or 400 feet above their base. These hills are numerous in the vicinity of the mountains, especially on the west of Lake Siljan, but they become rarer in the country farther east. Agriculture is limited to a few valleys of moderate extent, and to the low grounds surrounding the lakes, where rye, barley, and especially oats, are cultivated, and some vegetables are grown. Cattle, sheep, and goats are reared. Nearly the whole tract is covered with forests, the produce of which finds a ready sale in the adjacent Region of the Mines.

Lake Siljan, which is situated near the southern border of this tract, is 25 miles long, 6 miles wide, and 555 feet above the sea-level. On the west and south it is surrounded by low hills, alternating with level plains. On the north and east the hills are much higher, but the declivities are usually gentle, and inclose narrow fertile valleys. In the district surrounding this beautiful lake agriculture is conducted on a larger scale than in the country to the east and north of it.

The eastern portion of this region, extending from the Gulf of Bothnia about 40 miles inland, is an inclined plane, which gradually rises from the sea to an elevation of 800 feet. The surface is interspersed with numerous hills of moderate elevation and with lakes. A plain of considerable width extends along the shores from 61° 40' N. lat. to the mouth of the Dal (60° 40'); this is the most northern

part of Sweden in which wheat is grown. Barley and potatoes are most extensively cultivated; rye, oats, and peas are also grown. Sheep and cattle are very numerous.

4. South of the region just described extends the *Region of the Mines*. It occupies the whole breadth of Sweden, from Norway to the Gulf of Bothnia, between Lake Siljan and Söderhamn on the north, and Lake Wener (59° N. lat.) on the south. The Tifveden ridge crosses it nearly in the middle at an elevation of about 1000 feet above the sea. West of the range the country slopes towards the south, and terminates on the banks of Lake Wener. Two-thirds of this slope are less than 300 feet above the sea. The country lying east of the Tifveden ridge slopes to the south in the southern and to the east in the northern districts. Its elevation above the sea is never less than 300 feet, except on the level plain along the Gulf of Bothnia from Söderhamn to the mouth of the Dal. West of the great southern bend of the Dal is a tract of considerable extent, which rises from 800 to 1000 feet above the sea. The surface of this region is exceedingly uneven, and it is covered with a succession of low unconnected hills, the slopes of which are very gentle, and generally covered with wood. The low grounds between the hills are generally occupied by countless lakes and marshes. In the country west of the Tifveden ridge the lakes lie from north to south. The largest among them are Legen, Lelanf, Glafs, Wermelen, Mellan, and Ofre, each of which is above 20 miles long, but they seldom exceed two miles in width. The lakes to the east of the Tifveden ridge have a more irregular form, and are not so large. South of the Dal are the lakes Wesman, Barken, and Amänningen, and north of it Runn and Siljan. Though the soil of this region consists chiefly of gravel and sand with a mixture of clay, nearly every spot that is of any value (there are not many such) is carefully cultivated for the supply of the miners; the greatest number and the richest of the iron-mines of Sweden being situated within this region. Oats, rye, some barley and wheat are the chief crops. Potatoes and peas are grown. In a few places there are good pastures; and cattle, sheep, horses, and hogs are numerous in the southern districts.

5. To the south-east of the Region of the Mines is the *Central Agricultural Region*, which comprehends the greatest extent of low country in Sweden. No part of this tract exceeds 300 feet above the sea-level. Its southern boundary is a higher tract, which is connected with the Tifveden ridge, north-west of the northern extremity of Lake Wetter, and extending from the ridge eastward, terminates on the north shores of the bay of Bräviken, on the coast of the Baltic. That portion of the region which is north of Lake Mälär is nearly a level plain. The country south of the lakes Mälär and Hielmar is more undulating, and in some places it is broken and interspersed with rocks. In these districts there are numerous lakes, which are not common in the country north of the lakes. The surface consists of sandy clay, which gives to the country a greater degree of fertility than is usual in Sweden. Above 900 square miles or more than one-seventh of the surface of this region is employed to produce food for man. Rye is the principal object of cultivation. Next to rye are barley and wheat; very little oats are grown, but potatoes and peas are largely cultivated. Cattle and sheep, horses and hogs, are numerous.

6. South of the central agricultural region is the *Plain of Linköping*, which is separated from the central region by a more elevated tract, which surrounds the northern extremity of the Lake Wetter, and extends eastward to the Bay of Bräviken, where it contracts to a narrow ridge called Kolmoren, which runs along the northern shore of the bay to its termination in the Baltic. The elevation of this tract is about 200 feet above the countries north and south of it. The greater portion of it is covered with woods of pine, fir, and birch.

The plain of Linköping, one of the most fertile tracts in Sweden, measures from the shores of the Baltic to the banks of Lake Wetter, above 60 miles. West of the town of Linköping, which is situated nearly in the centre of the plain, its average width is 30 miles, of which one-third is north of the Göta Canal and two-thirds south of it. The surface is generally level. From the Baltic the country rises gradually towards the west, so that Lake Roxen, which is nearly in the middle of the plain, is 106 feet above the sea-level, and on the banks of Lake Wetter the country is about 300 feet high. South of the efflux of the river Mottala there rises, on the shores of the lake, Mount Omberg (845 feet above the sea), and from this hill a ridge of elevated ground runs southward close to the borders of the lake, separating it from the plain. The soil of the plain is a mixture of clay and sand, and in some places of loam. In no other part of Sweden is wheat so extensively cultivated as in this plain, but rye and barley are grown to a still larger amount. Peas and potatoes are also much grown, and there is much meadow-ground. Domestic animals are numerous, with the exception of goats. There are however some extensive tracts partially covered with woods which supply fuel, and partly consisting of open pasture-ground.

7. To the south of the plain of Linköping rises the *Table-land of Småland*. This extensive region, with its declivities, occupies nearly the whole of the country south of 58° N. lat., leaving only comparatively narrow tracts of lower grounds along the sea, which bounds it on the east, south, and west. At the south-western extremity of it

region is the extensive level of Scania. The eastern border of the table-land itself is a little west of 16° E. long., and the southern border is a short distance south of 56° 30' N. lat. The western border runs parallel to the shores of the Cattogat, at the distance of about 15 miles. Along the outer borders the elevation of the table-land is between 300 and 400 feet above the sea-level. The most elevated portion of the table-land (which surrounds the southern side of Lake Wetter) is traversed by a ridge of higher ground, which may be considered as a continuation of the *Tyfveden* ridge. This last-mentioned ridge, which is between 500 and 600 feet high where it separates the basins of the lakes Wener and Wetter, continues southward along the western banks of Lake Wetter, preserving nearly the same elevation, but interrupted in some places by short depressions; but as it approaches the southern extremity of the lake it rises higher, and where it meets the table-land it has an elevation of more than 900 feet. Nearly 10 miles south of the lake there rises on this ridge a high hill, called *Tabery*, whose summit is 1100 feet above the surface, and has attracted the attention of geologists, as about three-fourths of it consists of pure ironstone. From this summit the ridge runs westward, and near the centre of the higher portion of the region it again rises to more than 1100 feet above the sea, and divides into two branches, of which one runs west and the other south-west: both of them terminate on the margin of this region. The general elevation of this ridge may be about 1000 feet above the sea, and less than 200 feet above the general level of the country. This is the highest ground in Sweden south of 60° 30' N. lat. The surface of the table-land varies greatly. There are many tracts of considerable extent, which are level plains: other districts have a broken surface. On the higher part of the table-land there are only a few lakes, but in its western district, and still more in its southern, they are very numerous. This unsheltered table-land suffers much from gales, and its climate is severe. What soil there is in this region is extremely infertile, being composed of disintegrated gneiss, on which rock the table-land rests. Tracts many miles in length and width are covered with sand, on which nothing grows but common heath, and some spots are quite destitute of vegetation. Where the soil is mixed with a little vegetable mould, the country is covered with stunted birch woods. The best tracts are those which surround the lakes. The principal grain raised on the higher part of the table-land is oats, and on the lower part barley. Some wheat and rye are grown in patches here and there. Potatoes are much cultivated on the higher part. The cattle, sheep, and hogs are rather of small size, and the wool of the sheep is very coarse. The grass-lands are bad. Out of the whole surface of this region, about 14,000 square miles, an aggregate of little more than 30 square miles produces corn and vegetables: about 130 square miles more consist of meadows and inclosed pastures.

8. *The Maritime Region of Småland*, or the eastern declivity of the table-land of that name, extends opposite the island of Oland, from south to north, but it advances northward within 5 or 6 miles of the Göta Canal. Its length rather exceeds 140 miles; the width varies from 15 to 25 miles. The southern districts, or about one-third, are slightly undulating, with extensive intervening flats. The soil is sandy. The greater part is covered with fir and birch woods, but there are few timber-trees. The northern districts present a succession of hills, valleys, and small plains. The hills are generally steep, and inclose narrow valleys, the lower parts of which are filled with lakes. The soil is rather better than in the southern district, and a comparatively larger portion of the surface is under the plough. Most of the valleys and hill slopes, though unfit for cultivation, produce abundance of grass. But the forests constitute the wealth of this tract: they contain pine, fir, birch, beech, and oak, and a considerable number are large trees. Timber, tar, and pitch are exported. Rye, potatoes, and barley are grown, and also a little oats and wheat. Domestic animals, with the exception of goats, are abundant. The meadows and pasture-grounds cover about 420 square miles: the area of the part under cultivation does not exceed 90 square miles.

9. *The Maritime Region of Blekinge* extends over the southern coast of Sweden from about 14° 30' to 16° E. long., somewhat more than 50 miles in length; its width may be estimated at 15 miles. The surface is the most broken portion of the Swedish coast. The rocky masses of the table-land of Småland, divided into small ridges by numerous watercourses, which run in deep and narrow valleys, advance within a short distance from the shore, where they terminate in hills from 200 to 300 feet high. The rivers are extremely rapid, and form many small and beautiful cataracts. The level grounds are much less extensive in this region than in any other part of Sweden, but they possess a considerable degree of fertility. Wheat is much grown, but the cultivation of rye is ten times more extensive. Barley and potatoes are also much cultivated. The meadows in the valleys, though not extensive, and the hill sides, yield abundance of grass. The hills in parts are covered with woods of stunted birch and fir—in parts they are utterly barren. The rearing of cattle and hogs constitutes one of the principal objects of domestic economy, and much cheese is made.

10. *The Plain of Scania* occupies all the peninsula which constitutes the most southern portion of Sweden, between the Sound on the

west and the Baltic on the south and east. A straight line drawn from the innermost recess of the Skelder Vick, a large and open bay of the Cattogat, on the west, to the peninsula of Sölvetaburg on the east, may be considered as marking its northern boundary. It extends from south to north about 55 miles; the width varies between 50 and 60 miles, being greater towards the north than along the southern coast. It is traversed in its length by a low broad swell of high ground, which begins at Cape Kullen, a moderately elevated headland at the northern opening of the Sound. From this point it extends in a south-east direction to the lakes called Ringsjön, where it enlarges to a great width, inclosing these lakes, and covering a space of considerable extent with numerous hills, most of which are covered with wood. From the banks of these lakes it declines a little more to the south, running towards the south-eastern portion of the plain, where it terminates about 12 miles from the sea in low hills. The tract of country between the termination of this swell and the south-eastern shores of Scania is a level, with numerous depressions, which are occupied by marshes and swamps. That portion of the region which is situated to the south-west of the swell contains a large level plain, which extends along the shores of the Sound, varying in width from 6 to 10 miles. The soil of this tract is of first-rate quality, consisting of a strong rich loam, which yields good crops of wheat. The country between this plain and the swell above mentioned is interspersed with small isolated hills. The soil of this tract is inferior to that of the plain. Rye and barley are extensively grown. The hills are covered with wood or with indifferent pastures. That portion of the plain which lies north-east of the swell contains also a considerable level round the town of Christianstad, which has a fertile soil, yielding wheat and rye; but it is not equal to that of the plain along the shores of the Sound. The remainder of the country resembles the hilly district west of the swell in surface, soil, and productions.

11. *The Maritime Region of Halland*, which extends along the eastern shores of the Cattogat, is the western declivity of the table-land of Småland. It extends from the Skelder Vik northward to the mouth of the Göta, about 112 miles, with a width of about 15 miles. The level portion of this region is separated from the plain of Scania by a tract of high land (400 to 500 feet above the sea and about 8 miles wide), which projects from the south-western corner of the table-land of Småland, and, running westward, terminates in the peninsula of Halland's Ås, between Skelder Vik on the south and the Bay of Laholm on the north, close to the sea. The soil of this high tract is sandy, partly covered with heath, partly wooded, and in some places swampy. Beech is abundant, and there are many large trees. To the north of it lies the most level portion of the region, which extends to the vicinity of Warberg. In these parts the table-land of Småland descends with a continuous declivity, which is only broken by the water-courses, nearly to the sea-level, leaving between its base and the shores a tract of undulating ground about 8 miles wide. The soil, though inferior, yields barley, rye, and potatoes. The slopes of the hills at the back of the undulating plain make good sheep-walks. The northern districts of this region, from Warberg to the mouth of the Göta Elf, have a much more broken surface. Rocky hills of moderate elevation extend from the table-land nearly to the sea, and between them are wide valleys sloping to the south-west, and partly filled with long lakes. Most of the hills are covered with stunted trees or with grass. Large numbers of sheep and cattle are kept, and also many horses, as the pasture-grounds are extensive. Only a small portion of this tract is under cultivation, and it produces chiefly rye and barley.

12. *The Southern Basin of Lake Wener* extends over the wide isthmus which separates the two lakes of Wener and Wetter, between 58° and 59° N. lat. On the west it borders on the Göta. The basin of Lake Wener is very limited on the east and west. On the east the *Tyfveden* ridge, running parallel to its eastern shore, is only about 8 or 9 miles distant. On the west the stony masses of the Rocky Region advance still nearer to the border of the lake. Towards the south the basin of the lake extends about 60 miles; to the north 120 miles, this part being included in the Region of the Mines. The southern basin of Lake Wener is more than 80 miles in length from south-west to north-east; the width decreases from 70 miles in the south to about 10 miles under 59° N. lat. The greater part of this region is an inclined plane, which descends northward towards the lake, with a gentle declivity, and on the east and south is surrounded by higher land. At its most northern boundary the *Tyfveden* ridge enters the region, and between the lakes Skagern and Uden it runs south-west. Here it is about 550 feet above the sea-level, 416 feet above Lake Wener, and 263 feet above Lake Wetter. Soon afterwards it turns to the south, and is interrupted by a deep depression, containing Lake Viken, which is only 296 feet above the sea-level, or 11 feet above Lake Wetter. South of Lake Viken the ridge gradually rises higher, and south of the middle of Lake Wetter it attains a general elevation of 800 feet, and soon joins the table-land of Småland. The northern edge of this table-land constitutes the southern boundary of the plain, which descends from it gradually and with a gentle declivity northward. On the plain there are a few isolated mountains of considerable height, consisting of sandstone, limestone, and alum-slate. The *Bilungen*, one of these heights, is nearly in the centre of this region, north-east of the Lake of Hornborga, and is above 10 miles long, with

an average width of 3 miles. It is 899 feet above the sea. The Kinne Kulle, another of these, stands on the banks of Lake Wener, and is 9 miles from south to north, and 5 miles wide. The highest part is 902 feet above the sea-level. The declivities of this mass, where they consist of limestone, are very fertile, well cultivated, and populous. Though the general slope of the plain is regular, its surface is often undulating. The soil is an alluvium, composed of sand and clay, and possesses a considerable degree of fertility. Some tracts, where the sand predominates, are covered with heaths. Rye, barley, and potatoes are extensively grown. The meadows and pasture-grounds are of little value except on the borders of the lakes.

13. The *Rocky Region* extends for about 90 miles in length, between the Göta on the east and the Skagerack on the west, as far as 59° N. lat. and the boundary-line of Norway. The width at the southern extremity hardly exceeds 10 miles, but it increases rapidly to the northward, so that at the northern boundary it is rather more than 55 miles. It may be divided into three districts, which extend longitudinally over the region—the rocky district, the middle or woody district, and the agricultural district. The rocky district lies along the shore of the Skagerack, and extends 10 or 12 miles inland; the southern part of the region, as far north as Trolhättan, is entirely occupied by it. The surface of this tract is covered with rocks, rising near the sea with a precipitous ascent from 100 to 300 feet, and then extending in some parts on a level, with very inconsiderable depressions or eminences, and in others with a hilly surface. Farther north, especially near the boundary of Norway, the rocky masses rise 400 or 500 feet, and on them there occur other masses, which are from 100 to 200 feet higher. The rocks are in general covered only with lichens; most of the narrow valleys between them are mere peat-mosses, or overgrown with juniper bushes. Fire-wood is scarce. The middle or wooded district begins in the parallel of the southern extremity of Lake Wener, where it is of inconsiderable width, but it grows wider as it proceeds farther north, where it is 25 miles across. The hills and rocks here have rounded tops and less precipitous slopes. The hills are generally covered by a layer of earth, on which grow birch, fir, and pine woods, and tolerable pastures. The depressions and valleys are rather wide, and contain many cultivated tracts and meadows. The eastern or agricultural district lies along the shore of Lake Wener, with a width of 6 or 8 miles. The surface of this tract towards the south is very even and slightly elevated above the level of the lake, and has a rich alluvial soil. Towards the north however the surface is undulating, and in some places hilly; but the soil is of good quality, being a mixture of clay and loam. In this district much rye and barley are cultivated, and a considerable proportion of wheat. Peas and potatoes are grown extensively.

The ratio of cultivated, meadow, and pasture land to the unimproved portion of the surface of Sweden is much greater in the southern provinces than in the northern. This difference is less the effect of the climate than of the soil. Though in the southern portion there are several extensive tracts which consist of bare rocks, they are small in proportion to tracts of the same kind in the north. The boulders, which are extremely numerous, diminish the extent and value of the cultivable tract. There hardly occur ten square miles, with the exception perhaps of the level plain of Scania, in which there are not erratic rocks in great numbers, and in some places they cover nearly half the surface. These rocks, as well as those 'in situ,' are of gneiss, and the soil derived from their disintegration is barren.

The lowering of the sea along the coast of Sweden is a fact that has been established by continued observations for a whole century. This decrease of water is greatest towards the northern extremity of the Gulf of Bothnia. It diminishes gradually to the southward, and its effect seems to disappear along the southern coast of Sweden; but it has been noticed in the Cattagat north of Cape Kullen, and still more north of the mouth of the Göta, where it is about as much as on the eastern coast, under the same parallel. The difficulty of explaining this phenomenon satisfactorily has suggested the notion that the whole Scandinavian peninsula is raised gradually higher by the force of some internal power.

Lakes; Rivers; Canals; Railways.—The number of lakes in Sweden is very great. It is estimated that they cover 21,946 square miles, or nearly one-eighth of the area of the kingdom.

The largest lake is the *Wener*, which is traversed by 59° N. lat. The surface is 144 feet above the sea-level. Two headlands projecting from the northern and southern shores divide it into two unequal parts, of which the western and smaller is named Lake Dalbo. Lake Dalbo extends from south to north about 55 miles, and from east to west 20 miles. The strait by which it is connected with Lake Wener is about 15 miles wide, but numerous small rocky islands lie across it, leaving only narrow passages, a circumstance which renders the navigation dangerous, on account of the gales, which are not unusual on the lakes. Lake Wener is 60 miles long from south to north, and 30 miles wide where broadest. A large part of the shore is lined with rocky islands; this is also the case with Lake Dalbo. The rivers which fall in from the south have not a long course, and do not bring much water; but the northern rivers flow from other lakes of considerable extent, and contain much more water.

The largest feeder of Lake Wener is the *Klar*, which rises in Lake Fämund, on the confines of Sweden and Norway, 2280 feet above the

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sea. The outfall of Lake Fämund is called the *Tryssild*, and runs southward. After a rapid course of more than 70 miles, it enters Sweden a little north of 61° N. lat., and takes the name of Klar. At this point it is probably not more than 600 feet above the sea-level. Its course in Sweden is generally south-east, and it runs more than 120 miles. In the upper part of its course in Sweden its current is comparatively gentle; but in the vicinity of 60° N. lat. it descends from a higher country to a lower, and falls more than 180 feet within a few miles, and is broken by rapids and cataracts. Below this place the river runs with less rapidity, but it cannot easily be navigated except in the last 20 miles of its course. Wood however is floated down from the upper country. Near its mouth it divides into two arms, which inclose a small island called Tingwalla, on which the town of Carlsad is built.

The waters of Lake Wener are carried to the Cattagat by the *Göta*, which runs more than 50 miles to the west of south. It has a great volume of water, and about 14 miles from its mouth divides into two arms, which inclose the large island of *Hisingen*. In its natural state the river was rendered unfit for navigation by several cataracts—one at Rännum, 12 feet high, two miles from the lake; another at Trolhättan, where the river descends by rapids 108 feet in 5 miles; and a third at Lilla Edet, where there is a cataract 10 feet high about 18 miles from the lake. But all these obstacles are now overcome by means of canals and locks. Small steamers and vessels of not more than 6 feet draught ply regularly from Göteborg (Gothenburg) to Lake Wener; thence the West Göta Canal, which traverses Lake Vicken, conveys them to the Wetter Lake; and by the East Göta Canal, which runs parallel to the Motala, traverses Lake Roxen, and thence runs eastward to the Bay of Släte Baken, below Söderköping, on the east coast of Sweden, the steam navigation is completed between the Cattagat and the Baltic. This important line of internal navigation (260 miles in length, including the lakes), was completed by the English engineer Telford. It shortens considerably the route from Göteborg to Stockholm, and frees the commerce of Sweden from the Sound dues. The navigation is closed from Christmas to May by ice.

A line of railway is now (August, 1855) in progress of construction from Stockholm to Göteborg, sweeping round the north shore of Lake Mälär, through Koping, Orebro, and down the isthmus between the Wener and Wetter lakes. Another railway has been spoken of from the head of the Kelder Wik, up the valley of the Ronne, and through Christianstad to the port of Ahus on the Baltic.

Lake Wetter, which occupies the centre of Southern Sweden, extends from south to north about 80 miles, and its width is about 10 miles. The surface is 288 feet above the sea, while at the distance of a few miles east and west the level country is several feet lower. It is surrounded by rocks and hills except on the north-east, where for nearly 20 miles it is contiguous to the plain of Linköping, and the shores rise only a few feet above its level. All the streams that flow into it are only torrents. The lake in one place is more than 70 fathoms deep. It is subject to heavy gales.

The river *Motala* issues from this lake on the north-east, and after having traversed the plain of Linköping and the lakes of Boren, Roxen, and Glan, carries its waters to the Bay of Bräviken, an inlet of the Baltic which runs up to the town of Nörköping, 24 miles inland. The whole course of the river, exclusive of the lakes, is only about 25 miles; and it descends 288 feet, or 11½ feet per mile. The channels by which the lakes are connected with one another are too rapid for navigation.

About 25 miles N.E. of Wetter Lake is *Lake Hielmar*, which is about 40 miles long and 2 miles wide at both extremities; but it enlarges in the middle to 12 miles. The surface is 78 feet above the sea-level. It communicates by a canal (and locks) with the river Arboga, which runs into Lake Mälär.

The *Mälär Lake* differs greatly from all the other lakes of Sweden. It consists of many small lakes, united by short channels, which inclose islands. The number of these small islands is in some places very great. Hardly a clear sheet of water of a mile square can be found. From what may be called the main body of the lake several narrow arms branch off to the south and north, and penetrate to a great distance inland. One of them, which extends northward, is more than 25 miles long. All these numerous arms and branches are navigable for boats. If we consider the town of Stockholm to be built at the eastern extremity of the lake, the length of the Mälär Lake exceeds 70 miles. It is nearly on a level with the Baltic.

The advantages of the navigation on Lake Mälär have been increased by the Södertelge and Strömholms canals. The Södertelge Canal is a cut about 2 miles long, which unites a southern arm of Lake Mälär with a deep inlet of the Baltic called the Järne Fiord. By means of this cut the steamers and other vessels that reach the Baltic by the Göta Canal ply to and from Stockholm without passing through the long channels that lead to that city. This canal is about 18 miles west-south-west of Stockholm. The Strömholms Canal joins the lake not far from its western extremity, and comes from the north. It leads to the interior of the Region of the Mines, and terminates in the Lake of Barken, which is 327 feet above the sea-level. Its length, including the lakes Barken and Amänningen, which together occupy more than 20 miles, exceeds 50 miles. It can only be navigated by vessels drawing 4 feet of water, and has 25 locks.

The only navigable rivers in Sweden are those which have been rendered so by art. The rivers south of 60° N. lat. have generally a short course, but north of 60° N. lat. there are several which run above 300 miles, descending from the higher portion of the Kiölen range, and falling into the Gulf of Bothnia. Nearly all of them run from north-west to south-east. The largest is the *Dal*, which is formed by the junction (near Falun) of the Öster-Dal, which traverses the Siljan Lake, and the Väster-Dal, or Fulu. Both of these head-streams run nearly south-east from their sources on the eastern slope of the mountains that inclose Lake Fämund. Near 60° 20' N. lat., 16° 20' E. long., the Dal turns east by north, and expands into a series of lakes for about 50 miles. At Elf Carby the Dal contracts and forms a magnificent cataract, below which it runs in a compact stream for about 6 miles nearly due north into the Gulf of Bothnia, a little south of Gefle.

Farther north is the *Liume*, whose most remote branches originate on the southern declivity of Mount Sylsellen. Its upper course is in the elevated valley of Herjedalen, and is very rapid. East of 15° E. long. it descends into the lower country, forming numerous small cataracts. In the lower country it often extends to the width of 2 or 3 miles, so as to resemble a lake. This river falls into the Gulf of Bothnia south of the town of Söderhamn, after having run about 250 miles. Farther north the Gulf of Bothnia receives the Liungan, the Indala, and the Angerman, which are described under ANGERMANLAND; farther north the Umea, the Skelleftea, the Pitea, the Lulea, the Calix, and the Tornea, all of which are noticed under BOTHNIA.

Climate.—The difference in the climate of various places in Sweden is chiefly to be attributed to the differences of latitude and elevation above the sea-level. The most northern point of the country lies 2½ degrees beyond the polar circle; the most southern is situated nearly 11 degrees to the south of it. A small portion of the country is so elevated that it is always covered with snow, and large tracts along the sea-coast are only a few feet above the sea. The elevation at which perpetual snow occurs is less as we proceed farther north. Near 60° N. lat. it is about 5600 feet, at 61° N. lat. 5400 feet, at 62° N. lat. 5100 feet, at 64° N. lat. 4650 feet, and at 71° N. lat. 2300 feet above the sea. The inclined plane in the most northern district of Sweden rises near the boundary of Norway to 2000 feet above the sea. The following table gives the mean temperatures of five places in Sweden, south of 60° N. lat., and of Edinburgh and London:—

	Lat. 57° 42' Lund, altitude 60 feet.	Lat. 56° 53' Wexiö, altitude 500 feet.	Lat. 57° 42' Göteborg, near the sea-level.	Lat. 53° 23' Carlstad, altitude 175 feet.	Lat. 59° 20' Stockholm, 125 feet.	Lat. 55° 58' Edinburgh, 60 feet.	Lat. 51° 31' London, altitude 120 feet.
Winter	29.54	28.23	31.51	27.11	25.82	38.27	38.22
Spring	41.78	41.53	43.74	40.40	38.20	44.95	48.34
Summer	62.07	63.45	62.13	61.16	60.45	57.32	61.74
Autumn	47.03	44.73	47.74	44.47	44.37	47.33	50.29
Annual Mean	45.10	44.56	46.34	43.28	42.18	46.97	50.05

On comparing the climate of Edinburgh and London with the climates of five towns in Sweden, it appears that the mean temperature of the summer is greater in three of the Swedish towns than at London, and in all five greater than at Edinburgh. It is remarkable that the mean temperature of the summer of Wexiö exceeds that of Edinburgh by more than 6 degrees, though Wexiö is 500 feet above the sea, and nearly a degree farther north than Edinburgh; but the difference of the mean temperature of winter is 10 degrees in favour of Edinburgh. The above table shows the result of several years' observations, and proves that the climate of Southern Sweden is not so cold as is commonly supposed. At times however the maximum cold in winter is extremely intense. On the 20th of January, 1814, the thermometer at Stockholm sunk to 26° 6' below zero, whilst at London and Edinburgh it never sinks to zero. On the 3rd of July, 1814, the thermometer at Stockholm rose to 96° 8' in the shade, a degree of heat never experienced in the British Islands; but such extremes of cold and heat never last more than a few days.

Of five places north of 60° N. lat. the mean temperatures, deduced from observations made during a series of years, are as follows:—

	Lat. 60° 39' Falun, altitude 400 feet.	Lat. 62° 38' Hernösand.	Lat. 63° 24' Östersund, altitude 1050 feet.	Lat. 63° 50' Umea.	Lat. 68° 30' Enontekis, altitude 1440 feet.
Winter . . .	22.04	17.35	15.17	13.41	1.49
Spring . . .	37.82	35.73	34.03	33.15	24.96
Summer . . .	58.33	56.06	56.11	57.48	64.61
Autumn . . .	41.51	38.41	37.91	37.67	27.07
Annual Mean .	39.92	36.36	35.80	35.42	27.04

The difference in the mean temperature of the summer in these five places lies within four degrees, though the most southern and the

most northern are nearly eight degrees of latitude distant from one another, and the most northern is more than 1000 feet more elevated above the sea-level. This fact is to be attributed to the long stay of the sun above the horizon in that season, which at Enontekis lasts more than three weeks. This circumstance enables the inhabitants of these northern countries to cultivate a few plants which require a sudden heat, as barley, which is sown and reaped within seven weeks. The winters however are extremely cold: north of 61° N. lat. quicksilver frequently freezes, a fact which indicates that the thermometer descends at least 40° below zero. Hot summer almost immediately follows cold winter, and the winter almost immediately follows summer, spring and autumn being extremely short. The annual quantity of rain is not known for the northern provinces, nor for the interior. In the low country bordering on the Baltic it amounts to between 21 and 22 inches; the snow is probably not included in this account.

At Enontekis only barley and turnips succeed, but only one crop out of three is worth the labour. Rye cannot be grown with advantage north of 66° N. lat., and so far also the cultivation of hemp extends. Oats do not ripen north of 64° N. lat., and up to this latitude wheat is cultivated in a few spots, but in general it cannot be grown north of 62° N. lat. Flax does not ripen to seed north of 63° N. lat. Tobacco rarely succeeds north of 61° N. lat. Potatoes are cultivated as far as 66° N. lat., but cabbages only to 64° N. lat. Hops grow as far as 62° N. lat. Cherry-trees are met with as far north as 63° N. lat., but other fruit-trees rarely beyond 60° N. lat. In the plain of Scania mulberry-trees, chestnut-trees, and walnut-trees are planted, and the fruit ripens. The pine, fir, and birch extend to the most northern parts of Sweden. Alders are found up to 63° N. lat., ash and willows to 62° N. lat., and elm, oak, and lime-trees to 61° N. lat. Beech grows in the forests up to 57° N. lat. Pine-trees cease to grow at an elevation of 3000 feet below the snow-line. Bears are not met with above 3000 feet, and at that height barley ceases to ripen. Firs are only found at 2600 feet under the snow-line, but full-grown birch within 1800 feet. In the lakes which occur at such an elevation only the *Salmo alpinus* is found. Some bushes and the dwarf-birch grow at 1200 feet below the snow-line, and so far the Arctic Bramble (*Rubus arcticus*) is found; but above them trees and bushes cease to grow, and the mountains are covered with brown plants and lichens.

Agriculture and Productions.—The climate and soil are less favourable to the growth of grain in Sweden than in most other parts of Europe. It is stated that in seven years one year occurs in which the crops entirely fail; that in three years the produce is indifferent, and in three rather plentiful. The principal objects of cultivation are wheat, rye, barley, oats, mixed grain, and peas. Since the introduction of the cultivation of the potatoe the produce is generally sufficient for home consumption. Other objects of cultivation are hemp, flax, tobacco, buckwheat, carawayseed, hops, and madder. Common kitchen vegetables are grown in the southern provinces of Sweden. Cherries, apples, and pears are abundant only in the southern districts; cranberries and other berries abound in the northern districts.

The forests are very large, covering about 48,000 square miles, or more than a fourth of the surface. But a great portion of the northern provinces (north of 64° N. lat.) is destitute of trees. The woods however contain a comparatively small number of timber-trees. In most parts only small trees occur, and at the distance of many feet from each other, the intervals being bare or covered with underwood. Accordingly the export of timber, though considerable, is not in proportion to the immense extent of the woods. But these forests supply charcoal and firewood, of which a great quantity is consumed, as Sweden has no coal. Tar and pitch are extracted from the roots of pine-trees, and are articles of export. Several kinds of coniferous trees and birch compose the greater part of these forests. There are small oak and beech forests in the southern districts. The immense tracts of country which are still uninhabitable, are generally used as pasture-ground; the domestic animals must be kept in stables from four to six or seven months, and their number is consequently limited by the extent of the meadows. Cattle and sheep are the most numerous, but the former are of small size, and the wool of the sheep is coarse. In the northern districts reindeer are kept by the Laplanders. Wild animals are very numerous, especially in the northern parts, but some of the larger size begin to be scarce, as bears and beavers. A few wild reindeer are still found in some places. Wolves, lynxes, gluttons, foxes, hares, squirrels, martens, and others are common. Lemmings sometimes come down in large numbers from the Kiölen Mountains, and lay waste the low country. Elk and deer are found in some of the forests. Among wild birds are eagles, capercaillies, and woodcocks. The seas of Sweden contain abundance of fish. It is stated that 88 different kinds of salt- and fresh-water fish are brought to the markets of Göteborg, among which turbot is common. There are also oysters and lobsters. The fishery in the Baltic gives subsistence to a great number of families. A smaller kind of herrings, called strömmings, is caught in the summer along the east coast. This fish is very numerous. Salmon is caught abundantly in almost all the rivers and lakes.

Sweden is rich in minerals. Gold is found on the table-land of Småland. Silver is worked at Sala, in Westera-Län, and at some

other places, and in Falu-Län; but the produce hardly pays the expenses. Copper is more abundant. The richest mines are those at Falun, in Falu-Län; next to them are those of Otvidaberg, in Linköping-Län. Other copper-mines are worked in Westerås, in Öresund near Mount Areskuta, and in Örebro, but their produce is small. Lead-mines also are worked in Westerås and in Falu. Iron-ore is found in nearly every district of Sweden, and there is no part where it is not worked more or less, with the exception of the plain of Scania, where it seems that no iron-ore exists. The richest iron-mines are worked in that part of Sweden which has been noticed under the name of the Region of the Mines. The mountains near Gellivare in Pitea-Län, are composed entirely of iron-ore, containing from 70 to 80 per cent. of metal; but they are far from the sea, in a country nearly uninhabited, and almost destitute of fuel. The best iron is obtained from the mines of Dannemora in Upsala-Län. Nearly the whole of the produce, amounting annually to more than 8000 tons, goes to England. But the largest quantities of iron are produced in Carlstad, Örebro, Gefle, Falu, and Westerås. In Örebro-Län are rich mines of cobalt; others are found in Calmar and Nyköping-Län, but their produce is not great. Other mineral products are alum and vitriol, which are found in small quantities; brown coal, which is worked near Cape Kullen in Scania; and marble.

Inhabitants.—The bulk of the population are Swedes, a nation of Teutonic origin. Besides the Swedes, there are Fins and Laplanders. The Fins are numerous on the banks of the Tornea Elf. The Laplanders were formerly in possession of all Låpland, but many Swedes and Fins have settled among them. They call themselves Sami, and their country Samilanda. Though their language proves that they are only a branch of the Finnish nations, they are distinguished from them by the form of their body and their mode of life. Their stature is short, varying in general between four and five feet. Their complexion is a dirty yellow; face generally broad, nose short; hair rather black; eyes brown, narrow, and lengthened; and mouth small. The greater number live on the produce of their herds of reindeer, which supply the Laplanders with food, dress, and articles of exchange. They live on the milk and flesh of the reindeer, convert their skins into dresses, and sell their smoked flesh, and especially their tongues, which are considered a great dainty. These animals are also used in drawing the sledges. The Laplanders live only in the country north of 64° N. lat.; in winter they come with their herds to the lower country near the Gulf of Bothnia, and in summer they migrate to the Kiölen Mountains.

At the end of 1750 the population of Sweden amounted to 1,785,727; in 1800 it reached 2,347,303; and at the end of 1850 it was 3,482,541, distributed as shown in the following table, which gives also the läns, or provinces, into which Sweden is divided:—

Läns.	Area in Square Miles.	Population, December 31, 1850.
Malmö	1,774	253,084
Christianstads	2,421	189,627
Halmstads	1,892	105,726
Carlskrona	1,180	107,827
Wexiö	3,771	136,623
Jönköpings	4,274	168,426
Calmar	4,240	202,178
Linköpings	4,236	222,484
Mariestads	3,301	199,897
Wenersborgs	5,015	216,136
Göteborgs	1,883	187,583
Wisby	1,222	44,572
Stockholms	2,899	114,848
Upsala	2,059	83,323
Westerås	2,650	96,601
Nyköpings	2,497	120,113
Örebro	3,250	137,660
Carlstads	6,916	221,885
Falu	12,209	151,497
Gefleborgs	7,529	120,158
Härnösands	9,461	99,558
Österrunds	19,058	82,271
Umeå	29,268	70,788
Piteå	32,893	85,751
Total	165,883	3,389,471

This area, increased by 3548 square miles of water not included in the läns, and the population column by 98,070, the number of the inhabitants of Stockholm, the capital of the kingdom, gives the total area 169,381 square miles, and the total population 3,482,541 as before stated.

Divisions and Towns.—Sweden is divided into three great sections, of which the most southern is called Götaland, or Göta-Rike, the central section more properly Sweden, or Swes-Rike, and the northern Norrland. The towns of Sweden are very small. There are only four or five towns whose population exceeds 10,000, and about a dozen are inhabited by more than 4000. Most of the smaller towns are inhabited by farmers, a few tradesmen, and mechanics.

1. *Götaland*, or *Göta-Rike*, comprehends nearly the whole country

south of 59° N. lat., and also that portion of the Region of the Mines whose drainage runs southward into Lake Wener. It was formerly divided into ten provinces, and now contains 13 läns. The island of Gothland constitutes part of it.

1. *Stane*, sometimes called *Scania*, or *Schonen*, extends over the Plain of Scania, and the high ground which lies north of it, comprehending also a small portion of the table-land of Småland. It is divided into two läns, Malmö-Län and Christianstads-Län.

a. Malmö-Län extends over the south-western and best cultivated portion: it contains three towns with more than 4000 inhabitants, Malmö with above 9000; LUND with about 5000; and *Ystad*, which is on the south coast, has a good harbour (with however a narrow entrance), and about 4500 inhabitants, who carry on a brisk trade. Steamboats plying to Stockholm, Lübeck, Kalmar, Stettin, Stralsund, and Copenhagen, put in at Ystad. LANDSKRONA, on the Sound, is a fortress, and has a good harbour. *Helsingborg* is situated at the narrowest part of the Sound, opposite Helsingör in Denmark, and has a harbour, and about 3000 inhabitants, who manufacture hats, ribands, and cast-iron pots. Steamers ply daily on the Sound between Helsingborg and the Danish coast. The small island of *Huseen*, in the Sound, on which are still some ruins of the observatory of Tycho Brahe, belongs to this läns. A statue of the great astronomer has been recently erected on the island by the Danes.

b. Christianstads-Län contains the eastern and northern and less fertile part of the plain of Scania, and a small portion of the table-land of Småland. The capital is CHRISTIANSTAD.

2. *Blekinge* contains the whole maritime region of Blekinge, with a narrow strip of the table-land of Småland. It forms—

c. Carlskrona-Län, which has for its capital CARLSKRONA, with above 12,000 inhabitants. The most commercial town is *Carlskrona*, with 4200 inhabitants, and a good harbour, from which steamers ply to Stockholm. Sail-cloth, starch, and tobacco are manufactured, and ships are built.

3. *Småland* comprehends nearly the whole of the table-land and maritime region of Småland. It is divided into three läns, Calmar, Wexiö, and Jönköping.

d. Calmar-Län comprehends all the maritime region and a small portion of the table-land. CALMAR, the chief town, is the subject of a separate article. *Westervik*, farther north, has a good harbour, and above 3000 inhabitants: it exports timber and the produce of the cobalt-works in its vicinity. Vessels also are built. The island of *Oland* is included in this läns, and has a population of about 35,000, who are engaged chiefly in agriculture and in fishing. The largest town is *Borgholm*, on the west side of the island: population 500. The island is famous for its breed of small ponies; it abounds in forests, in which are many deer, wild boars, and feathered game. It is composed of a mass of limestone covered with fertile soil. It is traversed by good roads, and contains some curious specimens of antique church architecture.

e. Wexiö-Län extends over the southern and lower portion of the table-land of Småland. It is a poor country, but it has some mines of iron. The capital, *Wexiö*, has 2000 inhabitants. Paper and hats are made.

f. Jönköping-Län extends over the northern and more elevated portion of the table-land: the soil is not much better than that of Wexiö-Län, but the iron-mines are more considerable, especially those at the *Taberg*. The capital, *Jönköping*, is built at the southern extremity of the Wetter Lake, and has above 4300 inhabitants, and a considerable commerce with the countries that surround the lake. There are an arsenal and a manufacture of arms. The gold-mine of Adelfors is within this läns.

4. *Halland* comprehends the maritime region of that name, and the western declivity of the table-land of Småland. It forms one läns.

g. Halmstads-Län has good forests and salmon-fisheries in the rivers. The capital, *Halmstad*, built at the mouth of the *Nissa* in the Kattegat, has 2000 inhabitants, who export timber, pitch, tar, and the produce of the mines of Jönköping-Län.

5. *Western Götaland* comprehends the north-western portion of the table-land of Småland, and its declivity in that direction to the banks of the Göta-Elf, and also the plain south of Lake Wener. The whole of Mariestad-Län, the largest part of Wenersborg-Län, and a small part of Göteborg-Län, are in this province.

A. Mariestad-Län comprehends the greater part of the plain south of Lake Wener, and is fertile, well cultivated, and populous. It has some iron-mines and alum-works at Mount Kinne-Kulle, and glass-works. The capital, *Mariestad*, is on the shore of Lake Wener, not far from the pine-clad Kinne-Kulle, and has 1573 inhabitants.

i. Wenersborg-Län extends over the western and smaller part of the plain south of Lake Wener, the north-western part of the table-land of Småland, and the eastern part of the valley of the Göta-Elf. It contains the province of Dalaland. The chief town, *Wenersborg*, is built near the efflux of the Göta-Elf from Lake Wener. The population is 2500, who carry on a good trade in deals, iron, and other products. Steamers that ply between Göteborg and Stockholm by the Göta Canal put in at Wenersborg.

6. *Bokusland* extends over the western and more sterile portion of the rocky region. It forms the greatest part of Göteborgs-Län.

k. Göteborg-Län comprehends Bohusland and a small portion of Western Götaland. The chief town is Göteborg, which is described under GOTHEMBOURG and is the most rising town in Sweden. *Marstrand*, built on a rocky island, about 20 miles N.W. from Göteborg, has a good harbour, and is much frequented for sea-bathing. *Vävealla*, built at the head of the Haftens-Fiord, has a good harbour, and 3500 inhabitants, who export timber and manufacture cables and sugar. *Strömstad*, near the boundary of Norway, has a harbour, and 1500 inhabitants, who are mostly occupied in fishing for lobsters and oysters, which abound along this coast.

7. *Dalaland* is the smallest province of Sweden, and forms the northern part of Wenersborg-Län. It comprehends the eastern and more fertile districts of the rocky region. In this province is the small town of *Amal*, on the south shore of Lake Wener, with 1500 inhabitants.

8. *Vernland* comprehends that part of the Region of the Mines whose drainage runs into Lake Wener, and extends northward to 61° N. lat. It is richer in iron-mines than any other province of Sweden. From Göteborg this iron is exported to all parts of the world. *Vernland* forms *Carlstads-Län*.

l. *Carlstads-Län* has for its capital a town of the same name, built on the small island of *Tingvalla*, at the mouth of the *Klar* in Lake Wener: it is the centre of a considerable commerce with all the mining districts of *Vernland*: the population exceeds 3000. *Christinehamn* is situated at the north-eastern angle of the Wener Lake, and exports iron and timber to Wenersborg and Göteborg: the population is about 1300.

9. *Eastern Götaland* lies between Lake Wetter and the Baltic, and contains the whole of the plain of *Linköping*, together with the higher grounds south and north of it. It forms

m. *Linköpings-Län*. The chief town, *Linköping*, is situated on the *Stanga*, in the centre of the province, about 2 miles S. from Lake *Roxen*: it is a pretty, well-built place, with a fine cathedral and a gymnasium, which has a library of 25,000 volumes, and fine collections of coins and natural history. It has some manufactures of stockings and tobacco: the population is about 3700. *Söderköping* is situated on the *Göta Canal*, about 2 miles from the place where it joins the Bay of *Släte-Baken*: it is a small place, with about 1000 inhabitants. The largest place is *NORRKÖPING*.

10. The island *Gothland* [GOTHLAND] forms

n. *Wisby-Län*.

II. *Sweden*, properly so-called, or *Swea-Rike*, comprehends the central provinces of the kingdom, which lie chiefly between 59° and 61° N. lat. It extends over the country surrounding the lakes *Mälär* and *Hielmar*, and over the basin of the *Dal*. It was formerly divided into five provinces, and contains six läns.

11. *Nerike*, the most south-western part of *Swea-Rike*, is composed of a portion of the region of mines, and of another belonging to the central agricultural region. It has mines of iron, copper, cobalt, alum, brimstone, and vitriol. It forms

o. *Orebro-Län*. The chief town, *Orebro*, is built near the western extremity of Lake *Hielmar*, and is one of the most commercial places in the interior of Sweden: the mining districts north of the town bring their produce to this town, and take in return corn, and manufactured articles and foreign goods, which are brought to *Orebro* by Lake *Mälär* and the *Arboga Canal*. The population exceeds 4000. *Woolen-stuffs*, *wax-cloth*, and *arms* are manufactured.

12. *Södermanland*, or *Sudermania*, comprehends the country between the *Kolmören* ridge on the south, and the lakes *Hielmar* and *Mälär* on the north; and contains the best part of the central agricultural region. It has some mines of iron, and marble of good quality is worked in the *Kolmören* range. The western part of this province forms *Nyköpings-Län*, and the eastern, which is much smaller, constitutes a part of *Stockholms-Län*.

p. *Nyköpings-Län* has for its chief town *Nyköping*, which is built at the innermost recess of a short inlet of the Baltic, forming a harbour, which admits small vessels. It has some manufactures of woollens, linen, silk, tobacco, stockings, pins, paper, and brass ware. Cannons are also cast. It exports iron, timber, and brass: the population is 3000. *Eskilstuna*, situated between lakes *Hielmar* and *Mälär*, is the most important manufacturing place in Sweden for iron. *Arms* and *cutlery* are made to some extent. There is also a copper-work. It is a thriving place, and contains above 2500 inhabitants.

13. *Upland* extends from the northern shores of Lake *Mälär* to the banks of the *Dal*, along the Baltic, and about 60 miles inland. It comprehends the largest portion of the central agricultural region, and has also considerable iron-mines, among which are those of the mines of *Danemora*. *Upland* is divided into two nearly equal parts, of which the western forms *Upsala-Län*, and the eastern belongs to *Stockholms-Län*.

q. *Stockholms-Län* comprehends the eastern half of *Upland*, and also the eastern districts of *Södermanland*. It is named from *Stockholm*, the capital of the kingdom. *Södertelje*, a small town with 1100 inhabitants, lies W.S.W. of *Stockholm*, on the *Södertelje Canal*: it has some commerce in provisions, and is famous for its biscuits. *Oregrund*, near the northern extremity of the län, has a good

harbour, in which the produce of the iron-mines of *Danemora* is shipped to England; the population is about 700.

r. *Upsala-Län* has for its chief town *UPSALA*.

14. *Vestmanland*, west of *Upland* and east of *Nerike*, contains a small part of the central agricultural region, and a larger part of the region of mines. At *Sala* there are the richest silver-mines in Sweden. There are also copper- and lead-mines, but the iron-mines are the most important. This province forms *Westerås-Län*.

s. *Westerås-Län* has obtained that name from its capital, *Westerås*, which is built on an arm of Lake *Mälär*, and carries on a considerable commerce in iron. It has a red brick gothic cathedral which dates from the 11th century, an old castle, 3500 inhabitants, and manufactories of tobacco and some dye-houses. *Sala*, N. of *Westerås*, has 3000 inhabitants; in its vicinity are the silver-mines. *Arboga*, on the river *Arboga*, which begins to be navigable for river-boats at that place, has some commerce in iron and grain, and 3000 inhabitants.

15. *Dalarna*, or *Dalecarlia*, lies entirely within the Region of the Mines, with the exception of the northern part, which belongs to the southern mountain region. [DALECARLIA.] It constitutes *Falu-Län*.

t. *Falu-Län* contains *FALUN* and *Hedemora*, a small town situated in a fertile district, with above 1000 inhabitants.

III. *Norrland* extends over the three mountain regions, with the exception of a part of the southern, which is included in *Dalecarlia*, and forms part of *Swea-Rike*. It is composed of eight provinces, which form five läns.

16. *Gestrikland* is situated within the region of the mines, of which it constitutes the most north-eastern portion.

17. *Helsingland*, N. of *Gestrikland*, is within the southern mountain region.

u. *Gefle-Län* is composed of *Gestrikland* and *Helsingland*, and has rich iron-mines which yield an annual produce of more than 9000 tons. A great deal of linen is manufactured. *Gefle*, the capital, is built on a small inlet of the Gulf of *Bothnia*, which forms a good harbour. It is one of the best-built towns of Sweden, and has 8200 inhabitants. The commerce is considerable. The exports consist of iron, timber, tar, flax, and linens; and the imports principally of corn and salt. Many vessels are built. *Söderhamn*, at the extremity of a narrow inlet of the Gulf of *Bothnia*, has 1629 inhabitants, and exports butter, flax, and linens.

18. *Medelpad*, and

19. *Angermanland*, form

v. *Hernösand-Län*, of which a description is given under *ANGERMANNLAND*.

20. *Herjedalen* consists only of the elevated and narrow valley of the upper course of the *Ljuanan Elf*, and extends to the declivity of *Mount Sylfiellen*. It forms part of *Oresunds-Län*.

21. *Jemtland* contains the table-land of *Jemtland*, the upper valley of the *Ljungan-Elf*, and a large mountain tract which contains the upper valleys of the *Indals* and the *Angerman*. There is a copper-mine at the base of the *Areskuta*.

w. *Ostersunds-Län*, consisting of the provinces of *Herjedalen* and *Jemtland*, has for its capital the town of *Ostersund*, a small place with 418 inhabitants, situated on the eastern shore of Lake *Störaion*.

22. *Westerbotten*, and

23. The *Lapmarks*, namely, *Asele*, *Umea*, *Pitea*, *Lulea*, and *Tornea* *Lapmark*, constitute the two läns of

x. *Umea* and

y. *Pitea*, which are noticed under *BOTENIA* and *LAPLAND*.

Manufactures.—The industrial products of Sweden comprise vast quantities of linen, which is manufactured in almost every house, woollen-cloth and other stuffs, refined sugar, tobacco, paper, leather, glass, some calicoes and other cotton goods, cotton twist, silks, china-ware, cast-iron, sail-cloth, soap, spirits, beer, &c. Ship-building is carried on to some extent in most of the harbours of the Baltic.

Internal Commerce.—The internal commerce in corn, salt, and manufactured goods, especially the linens of *Wenersborg-Län*, which are carried to the most remote parts of the country, is very considerable. This commerce is facilitated by the excellent roads, and in winter by the whole country being covered with snow for four or five months, which renders the conveyance of goods in sledges easy and expeditious. In summer a like advantage is derived from the navigation of the sea, which washes most of the provinces. The *Trolhättan Canal* is navigated by a great number of barges, which bring down to Göteborg, for export, large quantities of iron and steel, and timber in planks and boards; and they carry into the interior corn, whiskey, salt, herrings, sugar, butter, fish, wine, and some other articles. Large barges ply also on the other canals, conveying heavy goods of different descriptions, such as bar-iron, alum, corn, salt, herrings and strömings, whiskey, bricks, and tiles.

Navigation and Foreign Commerce.—The Swedes are much given to a sea-faring life. Their vessels visit most of the countries contiguous to the Atlantic, and they are also employed in the carrying-trade between other countries, especially in the Mediterranean and on the coasts of South America. The mercantile navy in 1852 numbered 1407 vessels (carrying together 86,757 lasts), exclusive of those carrying less than 10 lasts; and 61 steamers. The total number of foreign (including Norwegian) ships that entered Swedish ports in

1853 amounted to 7804, carrying 348,693 lasts; the departures numbered 6749 vessels, measuring 342,648 lasts. The imports were valued at 29,049,000 crowns; the exports at 27,658,000 crowns. The foreign trade extends to most countries in Europe and America. The chief imports are brought from the following countries, which are named in order of the values:—the Hanse Towns, Great Britain, Brazil, Norway, Russia, Denmark, United States, East Indies and Australia, Prussia, and the West Indies. The best customers for Swedish exports are Great Britain, Denmark, the Hanse Towns, France, Prussia, United States, Russia, and Portugal.

The Swedish navy in 1854 numbered 10 ships of the line, 8 frigates, 8 brigs, 6 schooners, 8 vessels armed with mortars, 22 transports, 256 gun-boats, and 12 steamers.

In the same year the army numbered an aggregate of 144,013 men, exclusive of officers, composed of the *Vasfrvade*, amounting to 7692 men, enrolled by voluntary enlistment for six years; the Gothland militia, 7621, who serve only in the island; the *Indelta* (a sort of militia, who receive, partly from the crown and partly from the landed proprietors, an annual payment in money or in kind, besides a house and some land), 33,405; and 95,295 men raised by conscription, every Swede between 20 and 25 years of age being bound to serve.

The principal articles of export from Sweden are iron and timber. Norway takes a considerable quantity of iron, and sends fish in return. Stockholm receives from Finland three fourths of the fire-wood which it consumes, the northern provinces not being able to supply the article either so cheap or so good. Finland also exports to Stockholm meat, butter, cheese, bacon, flour, hides, pitch, and tar. Other articles of export are copper, cobalt, alum, tar, pitch, hemp, oil, paper, tree-bark, tobacco and snuff, bricks, furs, some linens, vessels, and some minor articles. The chief articles of import are sugar, coffee, salt, fish, hides, cotton-twist, cotton in wool, woollen stuffs, linens, cottons, wine and brandy, wool, dye-stuffs, raisins, almonds, pepper, cinnamon, arrack and rum, butter, bacon, tobacco, soap, train-oil, ginger, lacquered ware, tea, tallow, potashes, and oil.

Education.—Sweden has two universities, Upsala and Lund. The average annual attendance at the former is about 1000 students; at the latter, between 400 and 500. There are besides, 12 gymnasia for higher instruction, preparatory to the universities; 41 lardoms skola, or grammar schools; and 40 apologist schools, where the common branches are taught, with, in some instances, French and German. For elementary education, the law of 1842 commanded the erection of a school in each commune or parish. Owing to the sparseness of the population this was found to be in many instances impracticable; in such cases however the communes are divided into districts, each of which is visited in turn by ambulatory schoolmasters. Schoolmasters are trained by government and paid by the communes in kind. In 1850 there were 2107 stationary and 1351 ambulatory schoolmasters. Of the masters, 218 were clergymen and 690 church clerks. In that year, 143,526 children were receiving instruction in the stationary schools, 126,178 in ambulatory schools, 128,996 were instructed at home, 6228 in the secondary schools above named, and 17,465 in private schools, making a total of 422,388 altogether under instruction. It is a general practice in Sweden for parents, especially those who live in the country, to instruct their children in the long winter evenings.

History.—The early history of Sweden is known chiefly from the Sagas, or chronicles, which present little more than a confused mass of fables and heroic legends. According to these, the first dynasty of kings was that of the Ynglings (so called from the third of their number, Freyer-Yngve, a grandson of Odin), who reigned from the arrival of Odin in the north, an event variously fixed at from B.C. 50 to A.D. 250, till about A.D. 630, when the last of these princes, Olaf Trastelia, was expelled by Ivar Vidfadme, a Danish king of the race of the Skjoldungs, another branch of the progeny of Odin. The thrones of Sweden and Denmark continued for some time united under the descendants of Ivar, till at the death (794) of the famous pirate-king Ragnar Lodbrok, who fell in an expedition against the English coasts, Sweden again became a separate kingdom under his second son, Biorn Ironside. Under Biorn II., grandson of Biorn Ironside, Christianity was first introduced in Scandinavia; but the mass of the people still adhered to paganism, and Erik, who reigned 993-1001, perished in a popular revolt provoked by his demolition of the heathen temples. His son Olaf however (1001-26) formally established the Christian faith. The male descendants of Biorn Ironside failing upon the death of King Edmund Slemme, who fell in battle against the Goths of Gothland, a fresh dynasty was founded (1056) by Stenkil, under whom the Swedes and Goths were for the first time united. On the death of Inge II., the Swedes conferred the royal dignity on a private individual named Sverker (1129-50); while to obviate the discontent of the Goths, who supported the claims of Erik, a descendant by females of the house of Stenkil, it was agreed that Erik should succeed Sverker, and that the representatives of the two families should in future reign alternately. The reign of St. Erik (1155-61) was signalled by the final conquest and conversion of the Fins, and by the compilation of an excellent code of laws; but after his death the strange arrangements above mentioned gave rise, as might have been foreseen, to endless dissensions and civil wars. The alternate succession was however adhered to through the reign of

Charles. With Erik Erikson (1222-50), surnamed *Læsepe*, or the *Stammerer*, expired the male line of St. Erik, as that of Sverker had done with John.

Waldemar, a minor of the Folkungar family, and a nephew of Erik Læsepe by the sister's side, was raised to the vacant throne by election of the states. Waldemar was dethroned (1276) by his brother Magnus Ladulæse, a wise and politic monarch; but the reign of his son Birger (1290-1319) was again a scene of fraternal discord, ending in his deposition in favour of his infant nephew Magnus Smek (1319-63), who also succeeded in right of his mother to the crown of Norway. The long reign of this weak and perfidious prince was a series of domestic treasuries and disastrous and civil wars. He was deposed by the Diet in 1343, and his son Erik XII. substituted; and, though restored on the death of Erik in 1359, he was soon finally displaced by his sister's son, Albert of Mecklenburg (1363-89). But the rule of Albert was as unpopular as that of his predecessor; and he was overthrown and made prisoner (1389) by Margaret, queen of Norway and Denmark.

This remarkable princess formed the three realms of Sweden, Denmark, and Norway, into a confederate monarchy by the Union of Calmar (1397), the three crowns being declared indissolubly united, though the internal administration of each kingdom continued independent and separate. Margaret was succeeded by her grand-nephew Erik of Pomerania (1413-39), but his tyranny irritated the Swedes, who expelled the Danes in 1433. For nearly a century the Danish kings struggled to effect the subjugation of Sweden. Finally, Christian II., aided by the powerful family of Trolle, defeated and slew Sten Sture II. at Bogesund, and massacred at Stockholm (1520) 94 prelates, senators, and nobles of the opposite party. The Swedes now flew to arms under Gustavus Erikson Vasa, the son of one of the victims; and the expulsion of the Danes (Christian being opportunely dethroned at the same time in Denmark) was followed by the unanimous proclamation of Gustavus as King of the Swedes and Goths. Thus ended the Union of Calmar.

The Lutheran doctrines were introduced in 1522 by Olaus Petri, and in 1528 the Confession of Augsburg was solemnly adopted as the standard of faith by the king and people at the diet of Westerås. Under Gustavus the country attained a degree of affluence and prosperity hitherto unknown, and was raised from the condition of a semi-barbarous and dependent territory to the rank of a considerable state. But Erik XIV. (1560-8), son and successor of the great Gustavus, was a gloomy and cruel tyrant. He became insane from remorse for the slaughter of the Sture family (1567), and was deposed in favour of his brother John III. (1568-92), who confined Erik in a dungeon, and at length (1577) put him to death. The rule of John was at first prosperous; but the attempts which he made to restore Catholicism gave rise to religious disputes which occupied a great part of his reign. John was succeeded by his son Sigismund (1592-1604), who had in 1587 been elected king of Poland in right of his mother: but his open profession of Catholicism speedily alienated the Swedes, a civil war commenced, which continued till 1604, the king being supported by Polish troops. At length the diet of Norrköping formally prohibited the obnoxious faith, and raised the duke of Sudermania to the throne as Charles IX. (1604-11) in the place of his nephew. From this revolution arose the Swedo-Polish war of succession, which continued almost without intermission for sixty years (1600-60). Charles IX. was succeeded by his son, the famous Gustavus Adolphus (1611-32). The first acts of his reign were directed to the improvements of his kingdom, in which he was aided by his illustrious minister Oxenstiern. By the peace of Stolbova (1617), concluded under the mediation of England, Russia ceded all her remaining territory on the Baltic; and the king, heading his army against the Poles, took Riga (1621), and subdued Livonia and Polish Prussia, which were ceded to Sweden (1629) by the truce of Altmark. His arms were now turned towards Germany, where the success of Austria in the Thirty Years' War seemed to threaten Protestantism with annihilation; and being chosen captain-general of the Protestant league, he landed in Pomerania June 1630: his campaigns and victories occupied him till his fall in the moment of triumph at the battle of Lützen (November 6, 1632).

Christina (1632-54), the daughter of Gustavus Adolphus, succeeded at the age of six years, under the guardianship of Oxenstiern, who administered the kingdom with consummate ability. A war with Denmark (1643-45) terminated to the advantage of Sweden by the peace of Bromsebro; and at the general peace of Westphalia (1648), Sweden received Pomerania, Rugen, Bremen, &c., with the annexed rights as a state of the empire: acquisitions which elevated her to the rank of a first-rate power. In 1654 Christina abdicated the crown in favour of her cousin, the Count Palatine of Deux-Ponts, retired to France, and afterwards to Rome, where she died a Roman Catholic in 1689. The new king, Charles Gustavus (1654-60), renewed the war with Poland, overran the country, and attacked Denmark, which had sided with Poland, obtaining by the peace of Roskilde, in 1658, the cession of Scania and the other Danish provinces beyond the Sound. In a subsequent attack on Denmark the Swedes were repulsed from Copenhagen by the assistance of the Prussians and the Dutch, and the disappointed ambition of the king is said to have hastened his death. During the minority of his son Charles XI. (1660-97), the long contest with Poland was concluded (1660) by the peace of Oliva; Livonia,

Eathonia, and Oesel were confirmed to Sweden, and the claim of the Polish kings to the Swedish crown was given up. In the war with Prussia and Denmark (1675-79), the Swedes were worsted, but at the peace of Fontainebleau (1679) they regained all that they had lost. This reign was also the epoch of the first struggle between the crown, supported by the burghers and peasants, and the power of the senate and nobles. In 1693 the king was formally declared absolute by an act of the diet. He died in 1697, leaving his dominions to his son, the famous Charles XII. (1697-1718), then only fifteen, in the highest state of prosperity and organisation; but the inexperience of the young king tempted the attacks of his neighbours, and a coalition was formed against him (1699) by Poland, Denmark, and Russia. Charles assumed the offensive, and leading his forces first against Denmark, in six weeks reduced the king to sue for peace: he next utterly routed the czar before Narva; then invading Poland he expelled the king, Frederick Augustus, elector of Saxony, and dictated the election of Stanislaus Lecziński (1704) in his room. But his invasion of Russia (1708-9) was fatal to his schemes of ambition, and in the course of a year or two all his conquests, in spite of the efforts of his generals, were lost as rapidly as they had been gained. In 1715, while he was endeavouring to re-establish his power both by arms and by the diplomacy of his minister Görz, he fell at the siege of Fredericshall in Norway, leaving his kingdom on the verge of ruin. His sister Ulrica-Eleonora (1718-20), after she had been compelled to renounce her hereditary right, resigned the crown in favour of her husband Frederick of Hesse-Cassel (1720-51). The treaty of Nystad with Russia (1721) at length gave peace to the exhausted kingdom; but Ingria, Livonia, Eathonia, Carelia, Oesel, &c., were ceded to the czar. For the next twenty years the court of Stockholm was a scene of foreign intrigue and corruption, in which the Hats, or French party, and the Caps, or Russian faction, alternately predominated. Agriculture and commerce nevertheless flourished. Linnæus and his disciples gave a new impulse to science, and legislation was improved by the publication of a new code (1734). The ascendancy of the Hats led to a war (1741) with Russia, in which the Swedes were everywhere defeated, and at the peace of Abo (1743), through British mediation, part of Finland was ceded to Russia.

The reign of Adolphus Frederick (1751-71) was peaceful in its foreign relations, with the exception of the share taken against Prussia, through the influence of the Hats, in the Seven Years' War. His son Gustavus III. (1771-92), in 1772, supported by the army and the body of the people, forcibly repealed the constitution of 1720, re-establishing the relative powers of the various branches of government nearly as before 1680: while the party names of Hats and Caps were for ever prohibited, the use of torture abolished, and the press declared free. In 1780 Sweden joined the Armed Neutrality of the northern powers against England, headed by the czarina; and in 1783 a commercial treaty was concluded with the United States of America. An alliance with the Porte (1787) led to a war the next year with Russia, and with Denmark as her ally: but the mutinous conduct of the Swedish officers, who refused to invade Russia without orders from the States, produced the Act of Safety (1789), which gave the king absolute power of war and peace, at the same time abolishing the senate, the last stronghold of aristocratic power. The peace of Werela (1790) was concluded on the basis of mutual restoration. In 1792 Gustavus was assassinated, and his successor, Gustavus IV. (1792-1809), formed an alliance in 1805 with Russia and England against Napoleon I.; but the French occupied Pomerania and Stralsund (1807); and Russia, after the conference of Tilsit, turned her arms against her late ally, and seized upon Finland, the impregnable fortress of Sveaborg being, it is said, betrayed by the governor. An auxiliary force of 11,000 English, under Sir John Moore, was dismissed without effecting anything: the Danes also declared war; and Tornea and the Aland Isles were taken by the Russians (1809). These multiplied misfortunes were ascribed to the incapacity of the king, who was considered to have shown symptoms of mental derangement; and he was deposed (March 1809) by a conspiracy of military officers, his uncle Charles XIII. (1809-18) being called to the throne to the exclusion of the son of Gustavus, who was declared incapable of ever inheriting. The peace of Fredericksham with Russia (1809) was dearly purchased by the cession of Finland, East Bothnia, and Aland (or nearly one fourth of the territory, with one-third of the population, of the kingdom): but France restored Pomerania (1810) on the adoption of the continental system prescribed by Napoleon I. In 1810, on the election of a Crown Prince, in consequence of the age of the king and the want of an heir, the choice of the states fell on Bernadotte, prince of Pontecorvo, the ablest of the marshals of Napoleon I. Bernadotte assumed the reins of government; but though compelled by France to declare war against England, he too clearly perceived the true interests of Sweden to enter on active hostilities; and, on the reverses of Napoleon I. in Russia, peace and alliance was concluded with England at Orebro, and with Russia at Abo. During the War of Liberation (1813) in Germany the Swedish troops were led by the crown-prince, and their services were rewarded (1814) by the acquisition of Norway, which Denmark was compelled to cede by the peace of Kiel, Sweden at the same time resigning to Prussia Pomerania and her remaining German possessions. The two crowns were declared indissolubly united, though each kingdom retained its separate constitution. On

the death of the king in 1818 the crown-prince mounted the throne as Charles XIV., and was crowned at Stockholm and Trondhjem; and his rule was marked by the uniform and increasing prosperity of the Scandinavian kingdoms. Notwithstanding the loss of Finland, the commerce of Sweden is now more than double what it was in 1800, and the opening of the Gotha Canal in 1832 greatly added to the facilities for internal water-communication. The present sovereign, Oscar I., succeeded his father in March 1844.

By the Swedish constitution of 1809 the crown is declared hereditary in the male line, and the king is required to profess the Lutheran religion, which is the established creed of the realm. The state-council consists of nine members, of whom six are appointed by the king, but three of these must be civil functionaries: the chancellor and the ministers of justice and foreign affairs are ex-officio members; and the four secretaries of state may be summoned to give advice on matters relating to their own departments. The king has a negative voice on the resolutions of the diet, and the right to introduce measures for their consideration: but he can neither control the freedom of their deliberations, nor (without their sanction) impose new taxes, contract loans, or alienate any part of the territory. The diet, or parliament of the kingdom, in which resides the supreme legislative power, consists, as of old, of the four orders of nobles, clergy, burghers, and peasants (landholders who are not noble). In the house of nobles, the head of each of the 2800 noble families has a seat by right, but seldom more than 400 to 500 attend. The ecclesiastical order (of which the archbishop of Upsala is always president) consists, besides the twelve bishops, of about sixty deputies from the various dioceses. The presidents of the burgher and peasant houses are named by the king, and a small property qualification is required for a deputy: the proper number of burgher representatives is 97; the peasant deputies should be 144, returned by different districts; but the full number rarely if ever make their appearance. The four orders sit and deliberate sometimes separately, and at other times altogether; and in ordinary cases the question is carried or lost by a simple majority. The diet meets at Stockholm every fifth year, and the session should close at the end of three months, unless prevented by press of business.

SWINDON, Wiltshire, a market-town, and, conjointly with High-worth, the seat of a Poor-Law Union, in the parish of Swindon, is situated on an eminence, in 51° 33' N. lat., 1° 45' W. long., distant 19 miles N.E. by N. from Devizes, 80 miles W. from London by road, and 77 miles by the Great Western railway. The population of the parish of Swindon in 1861 was 4876. The living is a rectory in the archdeaconry of Bristol and diocese of Gloucester and Bristol.

Swindon has been considerably increased since the establishment of the railway station here. The streets are lighted with gas. A new town has sprung up in connection with the locomotive engine-factory of the Great Western railway company. A new church, a parsonage, and several chapels have been erected. There are a handsome new gothic parish church; chapels for Wesleyan Methodists and Independents; National schools, partly endowed; and a savings bank. There is a new market-house of stone in the Doric style. The market is on Monday for corn and provisions, and for cattle every alternate Monday: there are five yearly fairs.

SWINFORD, county of Mayo, Ireland, a market-town and the seat of a Poor-Law Union, is seated on a feeder of the river Moy, in 53° 57' N. lat., 8° 54' W. long., distant by road 16 miles N.E. by E. from Castlebar, 181 miles W.N.W. from Dublin. The population in 1861 was 997. Swinford Poor-Law Union comprises 22 electoral divisions, with an area of 152,594 acres, and a population in 1861 of 46,922. The town contains a church, a Roman Catholic chapel, a court-house, market-house, dispensary, the Union workhouse, a constabulary barrack, and bridewell. Quarter and petty sessions are held. There are three annual fairs.

SWINEMÜNDE. [STETTIN.]

SWINESHEAD, or SWINSTEAD. [LINCOLNSHIRE.]

SWINFORD. [STAFFORDSHIRE.]

SWITZERLAND (Schweits, Suisse, Svizzera), a mountainous country in Europe, situated between 45° 48' and 47° 49' N. lat., 5° 55' and 10° 30' E. long., is bounded W. by France, between Basel on the Rhine and Geneva on the Rhône, the boundary being formed by one of the ridges of the Jura Mountains, and by the river Doubs, an affluent of the Rhône; S. by Savoy, Piedmont, and Austrian Italy, the boundary-line being formed generally by the Lake of Geneva, high ranges of the Alps, and a part of the crest of the main chain of that great mountain system; E. by the Tyrol and Bavaria, from which it is separated by lofty mountain ranges, and by the Rhine from Sargans to the Lake Constanz; and N. by the Lake of Constanz and the Rhine, which divide Switzerland from Würtemberg and Baden. The territory of the canton of Schaffhausen, and the territory of Eglisau, belonging to the canton of Zürich, however, lie on the Baden side of the Rhine. The town of Constanz and a small tract round it, on the south side of the Lake of Constanz, belong to Baden.

Switzerland extends a little more than 180 miles near 46° 30' N. lat., where its length from west to east is greatest, and about 180 miles at 9° E. long., where it is widest. The boundary however is most irregular: from the head of the Val Formazza in Piedmont to the Rhine below Eglisau the width is only 76 miles; and between the Val

Formazza and the Rhine near Sargans, on the Tyrolean border, the distance only just exceeds 60 miles. The area of Switzerland is 15,179 square miles; the population, according to the census of 1850, amounted to 2,392,740, of whom 971,809 were Catholics, 1,416,786 Protestants chiefly of the Calvinist faith, 3146 Jews, and 2198 were houseless or vagrants. The number of foreigners, including refugees, amounted to 71,570.

The surface of Switzerland presents a greater variety than most countries of Europe. Monte Rosa, on the southern boundary, attains an elevation of 15,226 feet above the sea-level; while the surface of the Rhine at Basel is only 800 feet, and that of the Lago Maggiore, on the southern boundary, only 678 feet above the sea. The greater part of the country is mountainous. The ranges of the Alps and their numerous offsets extend over the southern and south-eastern districts, and occupy about one-half of Switzerland. Along its western boundary run the ridges of the Jura Mountains. The country between these two mountain systems has towards the south the form of a plain, interspersed with isolated hills; and towards the north it is traversed by ridges or groups of hills of moderate elevation. Thus Switzerland is naturally divided into four regions: the Alps, the Plain, the Hilly Country, and the Jura Mountains.

I. The Region of the Alps, which is the most extensive, is divided from the Plain and Hilly Country by a line which begins on the north bank of the Lake of Geneva, at the town of Vevay, and running north by east passes over Mont Moleson, which may be considered as the most western summit connected with the Alps in these parts. It traverses the river Saane at Gruyère, north-east of Mont Moleson, and thence runs east by north to the western extremity of the Lake of Thun. From the northern shores of the Lake of Thun it runs again north by east to Mont Napf, which is on the boundary-line between the cantons of Bern and Luzern, near 47° N. lat., 8° E. long. From Mont Napf it runs due east to the northern extremity of the Lake of Luzern, and thence east by north crossing the Lake of Zug to Mont Hoch Ezel, which is near the most southern part of the Lake of Zürich. From this point it follows the depression which runs east by south from the Lake of Zürich through the valley of the Limmat, the Lake of Wallenstadt, and the low ground which extends from the eastern extremity of the last-mentioned lake to Sargans and the banks of the Rhine. The whole country south of this line is occupied by the mountain masses and chains of the Alps, and only a small portion of it is cultivable; a larger portion, which is on the upper declivities of the mountains, is available as pasture-ground.

The natural division of the Alps of Switzerland is formed by the immense mountain knot which is on the west of the mountain pass of the Saint Gothard, and surrounds the sources of the Rhône. A space exceeding 100 square miles rises above the snow-line, and is overtopped by numerous pointed summits, rising from 10,000 to 12,000 feet above the sea. The most remarkable of these summits are the Gallenstock, the Gletcherhorn, the Diechtenhorn, the Triftenstock, the Stüstenhorn, and the Spitaliberg. From this mountain knot a chain runs northward, and terminates at the narrow channel which connects the Lake of Uri with that of Luzern. This chain contains several lofty summits, among which is the Tölis, 11,406 feet high, and the Urner Rothstock, 10,065 feet high. The chain which extends southward from the mountain knot between Val Formazza on the west and Valle Maggia on the east does not contain any summit which rises above the snow-line, though several of them are between 6000 and 7000 feet high. From the western edge of the mountain knot issue two ranges, of which the northern, called the Bernese Alps, runs west by south; and the southern, called the Lepontian Alps, runs south-west. Two other ranges branch off from the east side of the mountain knot. The southern, which runs nearly east, is called the Rætian Alps, and near 9° 50' E. long. divides into two ranges, of which the northern is called the Septimer Alps and the southern the Bernina Alps. These two ranges however do not run east, but north-east, and extend beyond the boundary-line of Switzerland into Tyrol. The northern range, branching off from the mountain knot of the Saint Gothard on the east, is also comprehended under the general name of the Rætian Alps, but has lately received the name of the Dödi Range, from its highest summit. It runs north-east, and terminates near the banks of the Rhine between 46° 40' and 47° N. lat. These mountain regions and the valleys inclosed between them differ considerably in their productive powers.

The basin of the Upper Rhône, which constitutes the canton of Valais, is inclosed by the two most elevated and widest ranges of the Alps, the Lepontian and Pennine Alps on the south, and the Bernese Alps on the north. The southern range runs from the great mountain knot south-south-west as far as the mountain pass of the Simplon, a distance of about 30 miles, and so far it bears the name of the *Lepontian Alps*. Its mean elevation is about 7500 feet, but several summits attain 10,000 feet; the width does not exceed 10 miles. There are several glaciers, but none of them of great extent. Some of them descend to the vicinity of the Pass of the Simplon, over which the great road leads from the Valais to Italy.

This road, which not long ago was considered one of the most magnificent works of modern times, was made by the French government between 1800 and 1805. It connects the town of Briegg in Valais with Domo d'Ossola in Piedmont, and is about 33 miles long.

The width is about nine yards, and its rise and fall only about one inch and a quarter for every yard, so that it can easily be passed by carriages. It runs in most places between steep and nearly perpendicular rocks, and at six places tunnels 30 feet high, with openings at the side to admit light, have been made through the rock. In several other places the road traverses precipices of great depth by means of substantial bridges. The highest part of the road is 6576 feet above the sea-level: Briegg is 2334 feet, and Domo d'Ossola 1004 feet above the sea-level. The road is in parts exposed at certain seasons to the ravages of torrents and avalanches, and is frequently out of repair.

West of the Pass of the Simplon are the *Pennine Alps*, which rise much higher, and occupy a much greater surface. The highest part of this range extends from the Pass of the Simplon, nearly due south, about 20 miles, to the enormous mountain mass of Monte Rosa, where it turns west, and in that direction extends to the northern part of the mountain mass of Mont Blanc. [BLANC, MONT.] With the exception of two or three passes not much exceeding the elevation of 8000 feet above the sea-level, the general elevation approaches to the height of 10,000 feet above the sea; and the higher part of this range, with the exception of the passes, is covered with snow all the year round. This elevated mountain tract is of great extent. On its eastern edge are the summits of Mont Parabranc, Cima de Jazzi (13,840 feet high), and Monte Rosa (15,226 feet); and on its southern edge, Mont Cervin (14,764 feet), Mont Combin (14,126 feet), and Mont Velan (11,043 feet), and several other summits of equal elevation. Towards the east and south the mountains descend with a rapid declivity, and the valleys on that side in Piedmont are inhabited to the vicinity of the most elevated mass. But on the north the high masses extend many miles without falling below the snow-line, and are overtopped by many summits rising to the height of 12,000 feet above the sea. They terminate about 6 miles from the banks of the Rhône. A tract between the Simplon on the east and Mont Combin on the west, and measuring in that direction 30 miles, with an average breadth of 15 miles, is covered with snow, ice, and glaciers, with the exception of only two valleys, Seas and San Nicolai, which are inhabited, and, uniting about 5 miles from the banks of the Rhône, are called the Valley of Visp.

The *Valley of the Rhône* lies north of the mountain region which has just been described. [RHÔNE.] It is about 92 miles long. Its eastern portion, as far down as Briegg, varies between a quarter and half a mile in width. Below the confluence of the Rhône with the Visp the valley is from one to two miles wide, and in a few places the width is greater. Besides the valley of the Visp, the branches of which are inhabited to the distance of eighteen miles from the Rhône, several lateral valleys open into the valley of the Rhône, which are from a quarter to half a mile wide, and inhabited to the extent of six miles from the banks of the river. They occur in both the southern and northern mountain chains, and thus the inhabited portion of this part of the country occupies about twelve miles in width. But between Sion and Martigny the unbroken mountain masses approach the river, and the inhabited tract is not more than two or three miles wide. Below the great bend, the rocky masses of the Dent-de-Morcles on the east, and of the Dent-du-Midi on the west, approach so near to the river, that in several places there is hardly room enough for a road along the banks of the stream. About eight miles from its influx into the Lake of Geneva, the low ground along the banks of the river becomes two miles wide. It is a swampy tract, very little elevated above the level of the lake, which is about 1210 feet above the sea-level. The descent of the valley amounts to 3720 feet. Above Briegg corn remains in the fields till the beginning of October, and it is reaped west of Sion in the month of June. The climate in the higher parts is cold even in summer; whilst in the lower, at the same season, the thermometer frequently rises to 88° and 90°. Only the common grains and roots of northern Europe are cultivated above Briegg, and some fruit-trees do not grow; the lower districts produce maize; and the vine, almond, and fig-tree flourish.

On the northern side of the valley of the Rhône are the *Bernese Alps*, the most elevated edge of which is parallel to the course of the river. Their eastern extremity is formed by a ridge called the Grimsel, over which a mule-road leads from the valley of Hasli to that of the Rhône. The highest part of this road is 8300 feet above the level of the sea. To the west of the Grimsel and the valley of Hasli begins the largest continuous mass of ice and snow on the Alps. It extends on both sides of the highest edge of the range, and occupies from east to west, from the valley of Hasli to that of Kander, a space 30 miles long in a straight line, and from north to south a space of about 20 miles, constituting nearly the whole of the country between the lakes of Briens and Thun and the valley of the Rhône. Its area is about 600 square miles. The outer edges of this region only are indented by three short valleys, Lötsch, Grindelwald, and Lauterbrunnen, which are inhabited. The valleys of Grindelwald and Lauterbrunnen are annually visited by many foreigners, as they offer the most easy access to the glaciers. From this immense lake of ice rise numerous summits, chiefly in the form of pyramids: along the highest portion of the region, from east to west, are the Finsteraarhorn (14,107 feet), the Mönch (13,502 feet), the Jungfrau (13,621 feet), the Breithorn (12,462 feet), the Altals (12,172 feet), the Rinderhorn (11,633 feet), the Wildstrubel (10,980 feet), and between them several

others hardly inferior in elevation. To the north of this series are other summits, among which the highest are the Eiger (12,922 feet), the Schreckhorn (13,444 feet), the Wetterhorn (12,220 feet), the Blumlis Alp (12,145 feet), and the Dolderhorn (11,920 feet). The Faulhorn, not far from the Lake of Brienz, rises only to 8750 feet, but it is frequently ascended by travellers on account of the magnificent view which it offers of the numerous mountains and glaciers which lie to the south of it. At the western extremity of this region a road leads from the valley of the Kander to the valley of Lötsch in the Valais. It traverses the ridge called the Gemmi, and in its most elevated point rises 6446 feet above the sea. It is partly cut through rocks, and only practicable for beasts of burden.

The valley of the Kander separates this region from that which lies farther west, and in which the Alps rise above the snow-line only in a few places. The highest part of the mountains continues to run south-west, as far as the three-headed summit, called the Diablerets, or the Teufelshörner, which is nearly due north of the great bend of the Rhône and somewhat more than 12 miles from it. The passes over this chain vary between 3000 and 5000 feet in elevation, but some of the summits rise above the snow-line and attain more than 10,000 feet. The highest summits from east to west are the Gletscherhorn (10,393 feet), the Wildhorn (10,724 feet), the Arpelhorn (10,948 feet), and the Diablerets (10,447 feet). At the Diablerets the chain divides into two branches, one of which runs south-south-west and terminates on the banks of the Rhône, opposite the Dent-du-Midi, in high rocks; the other extends westward towards the eastern extremity of the Lake of Geneva, and in approaching the lake turns gradually to the north and terminates in Mont Moleson (6577 feet). In the first of these two chains is Mont Möveran (9882 feet) and the Dent-des-Morcles (9567 feet), and in the second Mont Oldenhorn (10,362 feet). Though these summits and a few others rise above the snow-line, they occur at considerable distances from one another, and the glaciers which surround them are of comparatively small extent.

The country which extends north of the Bernese range, between the Kander on the east and the Saane River on the west, and terminates in the parallel of the northern extremity of the Lake of Thun, is a mountainous country: but it does not appear that the summits which are always covered with snow are numerous; several summits attain an elevation of 8000 feet above the sea-level, and from 4000 to 5000 feet above their base. The form also of these mountains differs from that of the higher Alps, their summits not terminating in peaks or sharp ridges, but being rounded and rather flat at the top: the declivities are generally steep, though much less so than those of the higher mountains. In many places the higher parts of the ridges and groups are above the line of vegetation, but as the lower declivities are covered with fine grass, which supplies excellent pasture during the summer months, and with trees, this region contains a much greater portion of productive land than the other parts of the Alps, though the proportion which is cultivated is very small. It is eminently a country of pasture. The most continuous ridge of mountains in this part of the country is that which lies nearest to the preceding region, and extends to the west of the valley of the Kander, from the great range to the banks of the Lake of Thun, where it terminates in Mont Niesen (7824 feet). Among the isolated summits is the Stockhorn, which is west of the Lake of Thun, 7213 feet high.

The *Valley of Hasli*, at the most southern extremity of which the river Aar originates in the Aar Glacier, lies between the largest fields of ice and snow, and extends in the form of a semicircle more than 20 miles to the influx of the Aar into the Lake of Brienz. Though the valley in the upper parts is only between a quarter and half a mile wide, and in the lower between half a mile and a mile, several short valleys open into it from all sides, and the declivities of the mountains which inclose these lateral valleys, and those of the principal valley, contain rich pasture. The lower part of the valley is partly cultivated and partly meadow-ground. There are extensive plantations of walnut-trees. The low and level tract which lies between the lakes of Brienz and Thun, and is about four miles long and two miles wide, is fertile, well cultivated, and has extensive plantations of walnut-trees. The climate here is so temperate that the flowers blossom in the month of February. Along the northern banks of the Lake of Thun the mountains approach close to the water; but as they are not high, nor their sides precipitous, there is a considerable tract between them and the lake, which is used for the cultivation of grain, plantations of vines and trees, and as pasture-ground. There is a similar tract of greater extent on the south of the lake; and towards the western extremity of the lake the mountains disappear and the plain begins.

The country which extends north-east of the river Aar and the lakes of Brienz and Thun to the Lake of Luzern, is much less mountainous and broken than the region south of the Lake of Thun; the mean elevation of this region is about 2000 feet. The most elevated tract is north of the Lake of Brienz, where the Rothhorn attains 7536 feet above the sea, the Tannhorn 6962 feet, and the Hohgant 7352 feet. Among the numerous summits which are dispersed over the country north of them are Mount Pilatus, south-west of the town of Luzern, 6904 feet above the sea-level; and Mount Napf, which is the north-western point of this region, is only 5277 feet. The surface of this country is a succession of rapid acclivities and declivities, with

very small tracts of level ground between them. Nearly the whole of the country is pasture-ground, except the vicinity of the Lake of Luzern, where large tracts are planted with walnut- and chestnut-trees.

Along the eastern edge of the mountain knot, west of the pass of St.-Gothard, lies the valley of the Upper Reuss, the upper part of which, called the valley of Ursern, is extremely cold, being in its lowest part 4644 feet above the sea-level; the lowest part, or the valley of Uri, has a very temperate climate, being little elevated above the surface of the Lake of Luzern, or about 1500 feet above the sea. In the valley of Ursern the winter lasts eight months, and even during the remainder of the year a fire is constantly kept up. No grain is cultivated, but there are good pastures. The valley of Uri produces maize and other grain, and also peaches and chestnuts. The highest part of the mountain road of the St.-Gothard, which passes through this valley, is about 7100 feet above the sea.

The country between the valley of the Reuss and the Lake of Luzern on the west, that of Wallenstadt on the north, and the valley of the Upper Rhine on the east and south, is, probably the most broken portion of the mountain region of the Alps in Switzerland. The valleys are extremely narrow, and the declivity of the surrounding mountains is exceedingly broken, and so steep that large tracts on the mountains' sides are bare of trees and bushes, and only a very small surface is fit for pasture. The upper part of the mountains consists either of sharp narrow ridges or of isolated summits, which generally constitute large masses with a very uneven surface. The mountains, though connected with one another by ridges, are not disposed in regular ranges, but scattered over the surface in the greatest disorder, except along the valley of the Rhine, where they form a tolerably continuous range. This range, the most northern of the three ranges comprehended under the name of the Rhetian Alps, and now commonly called the range of the Dödi, is connected with the mountains which line the valley of the Aar on the east, and thence runs east-north-east over the Krispalt, the Oberalpenstock (10,873 feet), the Dödi (11,811 feet), the Kistenberg (11,068 feet), the Scheibe (10,000 feet), and the Graue Hörner (9338 feet), terminating near the Rhine, and on both sides of the deep and closed valley of the Tamina, in precipitous masses of rock. The glaciers on this chain are numerous, but with the exception of those which surround the Dödi and Kistenberg, they are not of great extent. In the country north of this range there is also a considerable number of single mountains, which rise above the snow-line, as the Windgellen (10,336 feet), the Scheerhorn (10,809 feet), the Clariden Alps (10,489 feet), the three mountains of Glärnisch, of which the most elevated, Hoch Glärnisch, rises to 9509 feet, the Käpfstock (8954 feet), and several others. But as these mountains are isolated, the glaciers are of small extent. The mountains are less elevated along the northern edge of this region; the Mürtchenstock, which runs along the southern banks of the Lake of Wallenstadt, attains an elevation of only 7750 feet above the sea-level. In proceeding north-west, the mountains decrease in elevation, and their declivities are much more gentle. But though the declivities of the mountains are generally accessible to cattle, and supply pasture-ground, few places are cultivated. There are however some large tracts which are planted with vines and other fruit-trees. The narrow valleys of this tract have a temperate climate.

The valley of the *Upper Rhine* extends along the Rhine from its source in Mount Badus to its influx into the Lake of Constance. It is about 90 miles long. The upper part of the valley runs from south-west to north-east, and is formed by a few basins from 3 to 4 miles long, from $1\frac{1}{2}$ to 2 miles wide, and separated from one another by mountains, which generally come close to the banks of the river. That portion of the valley which lies above Trons is not cultivated, partly on account of the steep declivity of the mountains, and partly owing to the rigour of the climate: the winter lasts from eight to nine months. At Trons agriculture begins, but it is on a very moderate scale, as a part of the basin is covered with swamps. Lower down are the basins of Ilanz and of Reichenau, and then follows the basin of Chur, where the lower portion of the valley begins, which runs nearly north and south. This lower valley is divided into two parts by two mountains, the Fächerberg on the east, and the Schollberg on the west, which come close up to the river north of Meyenfeld, near $47^{\circ} 5' N.$ lat. The southern district, called the Valley of Meyenfeld, descends gradually from about 1775 to 1600 feet. It is about 15 miles long, and varies in width from 2 to 3 miles: the whole of it is under cultivation, and it produces maize, wheat, and other grains; and near the base of the adjacent mountains there are vines and fruit-trees. The northern portion of the valley, called the Rheinthal, is about 30 miles long, and from 3 to 6 miles wide; but only the smaller part of it, which extends along the western banks of the river, belongs to Switzerland: the low country east of the river, which is much wider, belongs to Austria. It is one of the best cultivated tracts in Switzerland, and produces very large quantities of maize and other grains. The vine and fruit-trees are abundant. Great quantities of cider are made and exported. The descent of the valley is from 1600 to 1340 feet above the sea-level.

The principal range of the *Rhetian Alps* branches off to the east of the mountain-pass of St.-Gothard, south of Mount Badus, and runs eastward. A continuous range of mountains, of which however no

summit seems to rise above the snow-line, extends 20 miles, to Pis Valrhin, which attains an elevation of 10,960 feet, and is surrounded by extensive glaciers, which are the source of the Hinter-Rhein, the largest of the upper branches of the Rhine. Not far from it to the east is the Muschelhorn (10,234 feet); and between the roads leading over the St. Bernhardin and the Splügen is the Tambohorn (10,436 feet). The range continues eastward to the source of the Inn, where it turns to the north of north-east, in which direction it runs to the eastern frontier of Switzerland, and enters the Tyrol. This last portion of the range is very high, and the snow along the crest is almost continuous. Some of the glaciers are extensive, especially as we approach the eastern boundary of Switzerland: the glacier which surrounds Mount Fermund, or the Iron Mountain, is calculated to cover nearly 100 square miles. From this immense field of ice and snow that range of mountains branches off which is called *Rhätikon*, and which runs north-west by west until it terminates on the Rhine with the Füscherberg, north of Meyenfeld. The crest of this mountain-wall, which is about 10 miles wide and 30 miles long, is generally above the snow-line, and glaciers descend down its sides. The most elevated summit, the Scesa Plana, is 9818 feet above the sea-level. The Rhätikon divides Switzerland from the Tyrol.

The country between the ranges just described and the valley of the Upper Rhine extends more than 40 miles in length, and about 24 miles in width: it is filled with extensive mountain-masses, which are connected with the principal range by lower ridges. These lower ridges sometimes constitute ranges several miles long, rising above the snow-line, and covered with glaciers. Of their summits the Zaporthorn, north of Pis Valrhin, rises to 10,841 feet; and the Pis Beverina, on the west of the valley of the Hinter-Rhein, and south of Reichenau, to 8933 feet. The valleys which lie between these ranges and mountain-masses are very numerous, but they rarely exceed half a mile in width. The larger valleys are from west to east. Very little grain is cultivated in them, but potatoes and other vegetables are grown. Fruit-trees do not succeed, except in the lower parts. Most of them however have excellent pasture-grounds on the Alps, and the level tracts are converted into artificial meadows, which are irrigated. The valley of the Hinter-Rhein is the longest: the great roads between Coire, or Chur, and Italy pass through it. A road leads from Chur to the village of Splügen, where it divides. The western road passes over the Bernhardin and leads to Bellinzona, in the canton of Ticino: the highest point of this road is 6961 feet above the sea. The eastern road traverses the Splügen and leads to Chiavenna, in the valley of Bregaglia: the highest part is 6715 feet above the sea. Both roads are passable for carriages.

The southern chain of the Rhätian Alps, called the Bernina range, which name is derived from a mountain-pass crossed by the road from the valley of Engadin into Italy, runs parallel to the principal range from south-south-west to north-north-east; its southern extremity extends into Lombardy, and the northern into the Tyrol. It appears to be as high as the principal range, for a great part of the most elevated ridges are always covered with snow, and contain numerous glaciers. The most elevated summit is said to be that called Monte dell'Oro, which stands south of, and not far from, the boundary-line of Switzerland, within the Austrian dominions. Between the Bernina range and the principal range of the Rhätian Alps the beautiful pastoral valley of Engadin is inclosed. [ENGADIN.] On the southern declivity of the Bernina range only two valleys of some extent belong to Switzerland: the valley of Münster, which opens into the valley of the Adige at Glurns in the Tyrol; and the valley of Poschiamo, which is 15 miles long, and opens into the valley of the Adda at Tirano, in the province of Sondrio. The valley of Poschiamo is a rich pastoral district, and derives considerable advantage from the road over the Bernina Pass, which runs through it. Large droves of cattle go by this road from the valley of Engadin to Italy.

Numerous rivers rise on the southern declivities of the Rhätian Alps, between the great field of ice in which the Aar and Rhône originate, and flow southward: they all unite in the river Tesin, or Ticino. The country drained by these rivers is called Italian Switzerland, because the Italian language is spoken by the inhabitants. It is traversed by several mountain-ranges, which run southward and occupy the greater part of its area. Many parts of these ranges rise above the line of trees and shrubs, but none of the summits attain the snow-line. Between the ranges there are several valleys of considerable extent; the three largest are those of Misocco, Levantina, and Maggia. All of them are very fertile. In their upper parts, which are about 3000 feet above the sea-level, very little grain is cultivated, and the inhabitants live on the produce of their herds. In the middle parts of the valleys maize and other kinds of grain are grown, and vines and fruit-trees abound, especially the chestnut and walnut-tree. The lower parts, whose climate approaches that of Italy, have considerable plantations of fig-trees and mulberry-trees. A considerable quantity of silk is annually collected in these valleys and sent to the manufacturing districts: no other part of Switzerland contains such extensive forests and such fine trees. The great road which traverses the mountain-pass of Saint Gothard runs through the valley of Levantina, and that which crosses the St. Bernhardin through the valley of Misocco. As the southern declivity of the

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Alps is very steep, these valleys are subject to very extensive and destructive inundations during heavy rains.

The brooks and rivers which drain the valleys traverse the basins generally with a gentle current, but in the gorges they form nearly a continuous rapid, which is frequently interrupted by cataracts. It thus appears that the rivers of the mountain region are not navigable, with the exception of the Rhine, which is navigated by river-barges from the town of Reichenau. But even if their course were not interrupted by cataracts, these rivers could hardly be navigated, owing to the great changes in the volume of water, which occur very suddenly. It frequently happens that in a few hours a river rises several feet and inundates the low tracts contiguous to its banks, and in a few hours it subsides again. These changes sometimes follow very rapidly. Small lakes are very numerous. A few of them occur in the basins of the valleys, but the greater number lie in the mountains, being inclosed by high walls of rocks. Some of them are at such an elevation as to be covered with ice all the year round. Larger lakes do not occur within the mountain region, with the single exception of the Lake of Brienz, but several of considerable size are found along the outer edge of the region, so that the larger portion of the lake is inclosed by mountains, whilst the lower extremity is within the adjacent plain. Such are the lakes of Luzern and of Thun on the northern, and the Lake of Lugano and the Lago-Maggiore on the southern side of the Alps. All alpine lakes are deep; in some cases the depth is 100 fathoms. They contain few fish.

II. The Hilly Region extends over the north-eastern portion of Switzerland, and comprehends the country between the Lake of Constance, the Rhine, and the lower course of the Aar, between the mouth of that river and its confluence with the Reuss. The river Reuss and its tributary the Lörze, which issues from the Lake of Zug, separates the hilly region from the plain. The line dividing the hilly region from the Alps runs from the middle of the Lake of Zug to Mount Hoch-Esel, on the southern banks of the Lake of Zürich, and thence along the depression in which the lower course of the Linth and the Lake of Wallenstadt are situated, and which from that lake extends to the Rhine north of Sargans. This depression, which continues across the western district of the hilly region through the Lake of Zürich and the valley of the Limmat, terminates at the confluence of the last-mentioned river with the Aar. The length of this depression is nearly 70 miles, but half of this space is occupied by the lakes of Wallenstadt and of Zürich. The level tract which separates the two lakes, and that which lies between the Lake of Wallenstadt and the Rhine, are hardly more than 20 feet above the waters.

Part of the country inclosed by these boundaries is mountainous. This higher tract occupies the eastern portion of the hilly region. On the northern side of the low and narrow tract between Sargans and the Lake of Wallenstadt above noticed, the country rises with a steep ascent to an elevation of between 3000 and 4000 feet, which increases as we proceed westward, and on the northern shores of the Lake of Wallenstadt it attains an elevation of 7000 feet above the sea-level. This continuous range, which extends along the northern banks of the lake and descends towards it with a steep declivity, is called the Kurfirsten, and terminates on the west in the elevated summit of Mont Speer (6636 feet). It is about 4 miles wide. Its northern declivity is comparatively gentle. North of the eastern extremity of the Lake of Wallenstadt, a lower ridge, called the Graber Alpen, branches off towards the north and connects the Kurfirsten with the mountain group called the Alpstein, which from east to west extends about 10 miles, and whose lower offsets advance to the very shores of the Lake of Constance, so that in length it exceeds 15 miles. Towards its southern border are the highest summits, of which the Sántia, or Hoch-Sántia, attains an elevation of 8272 feet, and has a small glacier on the northern declivity of its summit. The Alte-Mann, which stands east of it, is only about 200 feet lower. North of these summits are several others, rising from 4000 to 6000 feet, but at the distance of 6 miles from the Lake of Constance they sink down to 4000 feet, and gradually decrease in height. This mountainous tract resembles very much the country north of the Dödi range, except that the valleys are somewhat wider; and as the mountains do not rise to such an elevation, and have less rapid slopes, the pasture-grounds on the upper declivities are more extensive. Very little grain is cultivated, but there are some fruit-trees and vines.

The remainder of this region can only be called hilly, and its surface is nothing but a succession of high swells with moderately gentle declivities and rounded or flat tops. These swells are sometimes several miles long. In several places round-topped summits rise upon their backs. None of these high hills exceed 4000 feet above the sea-level, though several rise 3000 feet above the sea, and about 1800 feet above their base. The highest summits are arranged in small chains, which in the western districts are between the river Thur and the Lake of Zürich. The most eastern is called the Altman chain, which divides the valleys of the Thur and the Toss, and terminates on the Rhine opposite Eglihan. The western, called the Albis chain, from its highest summit (2921 feet), runs between the lakes of Zürich and Zug, and terminates a short distance west of Zürich. The Albis commands an extensive view over all the adja-

countries and the snow-capped mountains of the Finsteraarhorn region. Between the lakes of Zug and Luzern stands the isolated summit of the Righi, which is much visited by travellers, and rises to 5916 feet. The district between the Lake of Constance and the Thur is comparatively level; the hills rise to a very moderate elevation, and their slopes are so gradual, as to admit of cultivation. This is considered to be the most fertile tract in all Switzerland. The lake-shore between Arbon and Stein on the Rhine presents a succession of cultivated fields, orchards, vineyards, and artificial meadows. Besides maize and all other sorts of grain cultivated north of the Alps, large quantities of hemp and flax are here grown. The soil of the remainder of this region is less fertile; the larger portion of the surface is used as pasture and meadow land. The country along the northern banks of the Lake of Zürich is very little inferior to the tract along the Lake of Constance. There are many small lakes in this hilly country, and they contain more fish than the alpine lakes. The largest lakes of these are those of Wallenstadt and Zürich. The *Lake of Wallenstadt*, the *Lacus Riparius* of the ancients, is 10 miles long and 2½ miles in width. It is in most places from 60 to 80 fathoms deep. Its northern shores are extremely steep, rocky, and high, and at the distance of barely a mile from them the Kurfirsten range rises from 4000 to 5000 feet above the sea-level; on the south the shores are also rocky and steep, but less elevated, and the Mörtschenstock range attains its highest elevation at the distance of 2 or 3 miles from the lake: at the two extremities it is bordered by low tracts. The surface is 1424 feet above the sea-level. The *Lake of Zürich* is about 24 miles long, 3 miles wide, and has the form of a section of a circle, the curvature being directed towards the south-south-west. It is divided by two projecting points into two sections, of which the eastern is called Ober-See: the surface is 1310 feet above the sea-level. Near its eastern extremity is a level tract of some extent, but, with this exception, the shores are surrounded by gently-sloping hills, covered with vineyards, orchards, and cultivated fields. In a few places it is stated to be 100 fathoms deep. The largest rivers of this region are the Thur and Limmat. The Thur rises in a valley which separates the Kurfirsten range from the Alpstein Mountains, and at first runs west, but turns gradually to the north. After a course of about 30 miles it makes a great bend to the east, and then flows westward to its confluence with the Rhine above Eglisau. Its whole course exceeds 65 miles. Nearly one-half of it lies in a narrow but rich pastoral valley, the Toggenburg [GALL, ST.], between mountains; and the remainder of the course between moderate and well-cultivated or wooded hills. The Thur is too rapid for navigation. The Limmat originates, under the name of the Linth, on the northern declivity of the Dödi, and traverses the mountain region of that name in a northern direction, and in a very narrow valley until it meets the Lake of Wallenstadt [GLARUS.] Formerly it did not fall into the lake. It is subject to a very sudden and great increase of water, and it frequently inundated the low tract between the lakes of Wallenstadt and Zürich, and destroyed the crops of that fertile district. In 1821 a canal was made, by which the waters of the Linth are carried to the Lake of Wallenstadt, and another canal in the middle of the low tract, which is wide and deep enough to receive all the water from the Lake of Wallenstadt, and to carry it to the Lake of Zürich. This canal is called the Linth Canal. The river issuing from the western extremity of the Lake of Zürich is called the Limmat. It runs about 18 miles in a west-north-west direction, until it falls into the Aar, a few miles below Baden, in the canton of Aargau. The Limmat is navigated, but it can only be ascended by empty boats, on account of the rapidity of the current.

III. The Plain of Switzerland extends in the direction of north-east from the banks of the Lake of Geneva to the lower course of the Reuss from Roth to its confluence with the Aar. Its western border joins the Jura Mountains. This plain is properly a large valley, surrounded by mountains, and extending south-west and north-east more than 100 miles in length, with a breadth varying from 20 to 30 miles.

On the southern and western border of the plain are four considerable lakes: the lakes of Geneva, Neuchâtel, Morat, and Bienne, which are at different elevations above the sea-level; the Lake of Geneva is 1228 feet above the sea, Morat is 1450 feet, Neuchâtel 1429 feet, and Bienne 1410 feet. A high swell, which is called *Mont Jorat*, extends westward from the Dent-de-Jaman, the most western summit of the Alps in this part of Switzerland, to the Lake of Geneva, between Montreux and Vevey. It proceeds westward along the lake and close to its banks to Ouchy, west of Lausanne. The rocky declivity with which it descends towards the lake is in many places between Vevey and Lausanne so steep, that the road between these two towns is cut in the rock. At Ouchy it recedes from the lake, and runs north-west towards the Jura Mountains; but it does not reach them, being divided from these mountains by a narrow depression. This depression is chiefly covered with swamps, from which a small river, called Nosen, runs northward and joins the Orbe, which falls into the Lake of Neuchâtel; whilst the Veiron, another small river originating in the same depression, flows southward to the Lake of Geneva. *Mont Jorat* descends gradually towards the north, and its long slopes extend to the distance of 10 miles from the Lake of Neuchâtel. Where it is crossed by the road leading from Lausanne

to Moudon, its upper crest is 3039 feet above the sea-level; but farther east, in the vicinity of the Alps, it rises to 3800 feet. The whole country between the lakes of Geneva and Neuchâtel, with the exception of the steep descent towards the Lake of Geneva, presents a succession of round-backed hills or short ranges, sloping very gradually on all sides, and interspersed with open valleys, which frequently enlarge to small plains. The eminences decrease in elevation as they approach the Lake of Neuchâtel, and the country on its banks can only be called undulating. There are few tracts which cannot be cultivated. The soil is rather fruitful; the whole country is covered either with corn-fields, on which maize, wheat, barley, &c., are grown, or with orchards or vineyards. The vineyards are very extensive on the Lake of Geneva, and yield some good wine. The plantations of chestnut-trees are extensive, and almond-trees and fig-trees abound.

Another swell of high ground traverses the plain in a different direction. It is connected with the Jorat Mountains south-east of Moudon, and extends thence in a north-east by east direction to the town of Freyburg. From Freyburg it passes south of the town of Bern, where it declines more to the east, terminating at Mont Napf, which stands on the north-western border of the mountain region. This swell rises about 1000 feet above its base, which may be 1500 feet above the sea-level. It contains a few summits: one of the highest of them is *Mont Bütschel*, south of the town of Bern, which rises to 3450 feet above the sea-level. On the spacious and level summit and the gentle declivities of this swell, pastures and cultivated fields succeed one another, with orchards and vineyards.

The remainder of the plain has generally an undulating surface, the eminences rarely rising into hills, and most of the slopes being gentle. There occur also some level tracts, the largest of which is the low country between the lakes of Neuchâtel, Morat, and Bienne, which, when the rains have been very abundant, is overflowed. Within this portion of the plain only a few isolated summits occur, which rise from 1000 to 2000 feet above their base. The highest of them is the *Büntiger*, north-east of Bern, which rises to 3438 feet. The soil is of moderate fertility; it is mostly under the plough, and produces all kinds of grain, as well as hemp and flax. Vineyards are not extensive, and the wine is not good; but other fruits, especially apples, pears, plums, walnuts, and cherries, are very abundant: from the cherries *kirschwasser* is made. At the north-eastern extremity of this country is the *Lindenberg*, a moderate swell, about 500 feet above its base, which is remarkable for the horizontal line in which its crest runs for 20 miles, between Roth and Lenzburg. Not an eminence is observed on it.

The principal river of this plain is the Aar, which receives the Saane, Thiele or Ziel, Emmen, and Reuss. None of these affluents of the Aar is navigable, except the Thiele, which is navigated by river-barges and steam-boats to the lakes of Bienne and Neuchâtel. The largest lakes are those of Geneva [LEMAN], Neuchâtel [NEUCHÂTEL], Morat [FREYBURG, vol. ii. col. 1095], and Bienne [BERN, vol. i. col. 1050]. These lakes abound in fish. In the north-eastern districts of the plain are several smaller lakes. The largest of them is that of Sempach, north-west of Luzern, which is about 5 miles long, but in no part more than a mile wide. It is 1695 feet above the sea-level, and 256 feet above the Lake of Luzern, which shows that the country has a considerable rise between the two lakes.

IV. The Region of the Jura Mountains occupies the west part of Switzerland, lying between the plain and France. This elevated region occupies about 150 miles in length, with a width of about 30 miles. It extends from the Rhône, where that river runs underground (Perte-du-Rhône), in a north-east direction, to the banks of the Aar and the Rhine. About half of this region lies within France. In Switzerland it extends over the western districts of the canton of Vaud, the whole area of that of Neuchâtel, the north-western districts of Bern, the greater parts of Solothurn and Basel, and a portion of Aargau. It rises from the Plain of Switzerland with a steep ascent to an elevation of 3000 feet, and at this elevation it is traversed in its length by many low chains, which divide the whole surface of the region into numerous longitudinal valleys. Many of these valleys are connected with one another by depressions, while others are entirely surrounded by hills, and the water which collects in them escapes by natural tunnels. On the low and narrow ridges which divide these valleys a few summits rise from 600 to 2000 feet above their base. The highest summits of the Jura Mountains are in France. Within Switzerland are *Mont Dole* (5515 feet) and *Mont Tendre* (5522 feet), which lie west and north-west of the Lake of Geneva, and *Mont Chasseron* (5223 feet), west of the Lake of Neuchâtel, and *Mont Chasseral* (5211 feet), north-west of the Lake of Bienne. *Mont Terrible*, which stands close to the great band of the Doubs and on the north-west edge of the Jura Mountains, attains only 2558 feet above the sea-level. But in the southern and central part of this region are several other summits which rise between 4000 and 5000 feet.

South of the Lake of Neuchâtel the Jura Mountains do not rise abruptly from the plain, but a lower range, a kind of terrace of small width, lies between them, which is called *La-Côte*, and in its southern parts is covered with vineyards, between Geneva and Morges. Farther north are plantations of mulberry-trees for the use of silk-worms. There are also numerous orchards, and in some parts the slopes are

wooded. In the mountain region itself there are two large and several smaller valleys. The two larger valleys are those of Joux and of Valorbe, and they may be considered as one valley 30 miles long and about 2 miles wide. This valley is divided into two valleys by the summit called Dent-de-Vaulion, which rises to 4831 feet above the sea-level. The valley of Joux, or that south of this summit, is 3375 feet above the level of the sea. It is drained by the river Orbe, which in approaching the Dent-de-Vaulion enters the Lake of Joux, which is 5 miles long and more than a mile wide. After leaving this lake the river forms a small lake, that of Brenet, on flowing from which it is precipitated into an opening at the foot of the Dent-de-Vaulion, from which it issues as a considerable stream on the north side of the mountain. Here begins the Valorbe, which extends to the town of Orbe, where the river leaves the mountains, at the foot of which it flows through the plain to its mouth, which is at the southern extremity of the Lake of Neuchâtel. In the valley of Joux, which is more than 700 feet higher than Valorbe, only barley and oats are grown, and there are no trees, except a forest of fir-trees, in the southern portion of the valley, which belongs to France. The greater part of the valley is used as pasture and meadow ground. The Valorbe contains fine forest-trees, and is generally well cultivated, except on the slopes of the surrounding mountains, which produce grass. All kinds of fruit-trees abound.

That portion of the region of the Jura which extends from the south of the Lake of Neuchâtel to the northern extremity of the Lake of Biemme, consists of numerous valleys divided from one another by low ridges. The waters from several of them have apparently no outlet. The whole region is destitute of trees, with the exception of the lower portion of the eastern slope, where there are extensive vineyards and orchards. Mulberry-trees are grown to feed silkworms. Here also, and in the valleys which open towards the lakes, every kind of grain is grown, and agriculture is carried to a high degree of perfection. But the mountain region itself, with its valleys and ridges, is in its natural state only covered with grass, and though the soil is dry, the pastures are rich and maintain large herds of cattle. The inhabitants of this district are noted for their great manufacturing industry. [NEUCHÂTEL; BERN.] In spite of many disadvantages, among which is the long winter that lasts seven months, these districts are among the most populous in Europe, though every article of food is very dear, owing to the difficulty of transporting it from the lower country. Within the mountain region nothing is cultivated except some barley and oats.

North of the lake of Biemme the steep declivity of the region of the Jura Mountains continues along the banks of the river Aar, and in the whole of its long extent from the Lake of Biemme to the confluence of the Aar with the Rhine, a distance of 60 miles, it is only once interrupted by a valley. Though less elevated than farther to the south, it rises more than 1000 feet above its base, and has some summits, of which the Weissenstein, north-west of Solothurn (4616 feet), is perhaps the highest. As far as this summit the valleys extend longitudinally in the direction of the whole system, and resemble in some degree those of the central district, but they are partly covered with wood. North of the Weissenstein however the slope of the country is to the north, and the numerous valleys with which it is furrowed are transverse valleys. These valleys sink much lower, and the ridges which separate them from one another are wider and have more the form of ranges than in the central district. They have the advantage of a more fruitful soil, and a much more moderate climate. A large portion of this country is well adapted for the rearing of cattle and for dairies; the lower declivities and the level grounds in the valleys and depressions produce all kinds of grain. The orchards also are very extensive. The valleys possess a considerable degree of fertility. Many of the mountains are covered with wood.

Climate.—The climate of Switzerland presents great differences, which are the effect of the greater or less elevation above the sea-level. Some regions of considerable extent, as about Monte Rosa and the Finsteraarhorn, rise above the line of perpetual congelation, and some of the inhabited valleys to 4000 feet above the level of the sea. About one-fourth of the area of Switzerland is useless to man by its too great elevation and the rigour of its climate.

The climate of the lower districts is more temperate than that of most countries of Germany, and the valleys south of the Alps approach very near in climate to that of Lombardy. The following table shows the mean temperature of the four seasons at Geneva, Zürich, Bern, and the Hospice of St. Gothard, as compared to that of Milan:—

	Geneva.	Zürich.	Bern.	St. Gothard.	Milan.
Winter . .	33·35°	30·34°	29·37°	17·94°	36·03°
Spring . .	50·17	47·25	45·88	27·48	54·88
Summer . .	68·10	64·15	58·78	45·71	73·10
Autumn . .	49·37	49·05	46·44	32·20	56·84
Mean Annual } Temperature }	49·50°	47·95°	45·12°	30·10°	55·18°

The mean temperature of London for the winter is 38·22°, for the spring 48·84°, for the summer 61·74°, for the autumn 50·29°; and for

the year 50·50°. Hence it appears that all these places, except Milan, have a lower annual temperature than London, and for Bern this difference amounts to more than five degrees. The mean annual temperature of the Hospice on the St. Gothard is lower than that of the North Cape in Norway by nearly two degrees, but the summer is nearly four degrees warmer: the other seasons are colder by some degrees than at the North Cape.

The greatest quantity of rain falls on the southern declivity, where it annually amounts to 57·83 inches, whilst on the western side it is only 47·17 inches, and on the northern not more than 36·13 inches. In some parts a great quantity of snow falls, especially on the Jura Mountains, where in parts it accumulates to a depth of 30 feet.

Divisions.—The Swiss confederation consists of 22 cantons, which, with the area, population, and representatives of each in the National Council, are as follows:—

Cantons.	Area in Square Miles.	Population in 1850.	Representatives.
Aargau . . .	501	199,852	10
Appenzell . . .	152	54,893	3
Basel . . .	184	77,583	3
Bern . . .	2,556	458,801	23
Freyburg . . .	503	99,891	5
St. Gall . . .	758	169,625	8
Geneva . . .	91	64,146	3
Glarus . . .	279	30,213	2
Grisons . . .	2,962	89,895	4
Luzern . . .	566	132,843	7
Neuchâtel . . .	250	70,753	4
Schaffhausen . . .	115	35,300	2
Schwyz . . .	338	44,168	2
Soleure . . .	254	69,674	3
Thurgau . . .	268	88,908	4
Ticino . . .	1,033	117,759	6
Unterwalden . . .	262	25,188	2
Uri . . .	420	14,505	1
Valais . . .	1,658	81,559	4
Vaud . . .	1,180	199,575	10
Zug . . .	85	17,461	1
Zürich . . .	684	250,698	18
Total . . .	15,179	2,392,740	120

About three-fourths of the Swiss speak dialects of the German, which is the language used by the authorities. French is the written as well as the spoken language of the educated classes of Geneva, Vaud, and Neuchâtel, and a part of Bern, Freyburg, and the Valais. The inhabitants of the canton Ticino, and of some valleys of the Grisons, on the south side of the Alps, speak a dialect of Italian; and one-half of the population of the Grisons speak the Romanunch and Ladin, which are peculiar dialects, apparently of old Italian origin.

With regard to religion, the majority of the population belong to the Calvinist or Helvetic Confession of Faith. There is however no obligatory uniformity among the Swiss congregations: there is no Swiss church, in the common sense of the word: in each of the Reformed cantons the ecclesiastical affairs are regulated by a synod. There are Roman Catholics in all the cantons, but these and all Dissenters or 'separatists' from Calvinism enjoy liberty of conscience and freedom of worship. But the religious houses of the Catholics have been suppressed since the revolution of 1847. The more exclusively Protestant cantons are Aargau, Appenzell, Bern, Basel, Geneva, Glarus, Graubünden, Neuchâtel, Schaffhausen, Thurgau, Vaud, and Zürich. But in Geneva the Catholics are fast approaching to an equality in numbers with the Protestants, having increased since 1837 from 17,000 to 29,764, while the latter had decreased from 41,666 to 34,212 in 1850. The Catholics have increased also in Zürich, Basel, Schaffhausen, Vaud, Neuchâtel, and Grisons. But Protestants have spread into the once exclusively Catholic cantons of Luzern, Zug, Schwyz, Uri, Unterwalden, the Valais, and Ticino, and the ratio of Catholics to the whole population of Switzerland remains nearly unaltered, being 40·6 per cent., while the Protestants make 59·4 per cent. The number of Jews in Switzerland is not stated. The number of foreigners resident in Switzerland is more than balanced by the number of Swiss resident in foreign countries. The sexes approach very nearly to equality on the whole population, the ratio being 102 females to 100 males.

Natural Productions.—These are wheat, buckwheat, maize, barley, rye, oats, potatoes, flax, and hemp; fruits including grapes, pears, apples, cherries, and plums; peas, beans, and other common vegetables; chestnuts, walnuts, filberts, &c. The localities of these products are mentioned in the preceding part of this article. The mulberry is grown in the Italian cantons for feeding silkworms. Two-thirds of Switzerland do not produce corn enough for the consumption: this is particularly the case in the central and eastern cantons which lie in the highlands of the Alps. The cantons which produce most corn are Soleure, Bern, Freyburg, Aargau, Schaffhausen, Luzern, and Vaud. There is nearly a million of head of horned-cattle in summer,

one-fourth of which consists of milch cows; and the produce of the dairy is reckoned annually between one and two millions sterling. The finest races of horned-cattle are those of the Emmenthal and Simmenthal, in the canton of Bern, of Gruyères in Freyburg, of Schwyz, of Zug, of the Frickthal in the canton of Aargau, and of Appenzell. The sheep are mostly of inferior breed, and the wool is short and coarse. Goats are very numerous in the highlands; pigs are plentiful and fine.

Kirschwasser is distilled from cherries, and is commonly used all over Switzerland. Walnut-oil is the common substitute for olive-oil north of the Alps.

The highlands of Switzerland abound with timber-trees, especially firs of various kinds, maple, beech, larch, birch, and oak-trees. There are certain forests on the declivities of the high Alps which protect the valleys beneath from the avalanches, and are therefore carefully preserved; but the rest, which for the most part are communal property, are subject to great waste, through injudicious cutting, the inroads of cattle, and especially of goats, and the ravages of storms. Most of the cottages and farm-houses are built of wood, and the same material is used for fuel, the annual consumption of which is enormous: a great quantity of timber is also exported to France and other countries. Coal-mines are worked in the cantons of Freyburg, Vaud, Basel, and Thurgau, but the coal is mostly of inferior quality. Turf is used in Aargau and other cantons.

The Alps and other Swiss mountains contain a rich and inexhaustible supply of summer pasture for the cattle and flocks of the greater part of Switzerland. A large proportion of land in the valleys and plains is kept as grass-fields, and mowed for winter fodder, an essential and rather dear article in a country so largely stocked with cattle. In the two cantons of Vaud and Neuchâtel the cultivation of the vine obtains the preference over the other branches of agriculture. In the mountain cantons the old grass-lands are never broken up.

Iron is found in the Jura; and there are furnaces and iron-works in the cantons of Vaud, Bern, Soleure, Basel, and Aargau, and likewise in the Grisons. In the Grisons there are mines of lead, zinc, and galena. Salt-springs abound in Switzerland, but they are generally neglected, except those of Bex in the canton of Vaud. Switzerland imports much salt from Germany and other countries. There are mineral springs at Baden and Schinznach in the Aargau, at St. Moriz, in the Grisons, and at several other places.

The lakes and rivers of Switzerland abound with fish, especially trout of various kinds. In the lakes of Geneva and Constance there are trout that weigh from 30 to 60 lbs. The salmon is found in the Rhine, the Aar, and the Lake of Zürich; tench, carp, perch, eels, and crabs are found in most Swiss waters.

The game consists chiefly of chamois, hares, marmots, and partridges. Bears and wolves are hunted in the Alps and the Jura. Birds of prey of large dimensions are common in the mountains.

Trade and Manufactures.—Switzerland has been, at least in part, a manufacturing country for centuries. In the canton of Zürich the manufacture of silks, florentines, gros-de-Naples, taffetas, serges, levantines, silk-handkerchiefs, and ribbons, give employment to several thousand hands. The cotton-manufactures and cotton-printing establishments of Zürich are also of great importance, and give employment to a large number of the population. Zürich and Winterthur and the villages along the banks of the Lake of Zürich are the principal seats of manufacturing industry. The cantons of St. Gall and Appenzell constitute another important manufacturing district, especially of cotton goods. Appenzell manufactures some very fine plain and embroidered muslins. St. Gall also manufactures muslins and prints in considerable quantities, leather, linen, glass, and goldsmith-ware.

The city of Basel, besides being a great centre of foreign and domestic trade, manufactures largely silk-ribands, silk-thread, taffetas, and satins. The export of ribands from Basel to the United States, Germany, Holland, Sweden, and other countries is very large. The other branches of manufacture at Basel are leather, paper, and tobacco. Geneva manufactures vast numbers of watches, also jewellery, and musical-boxes. The watches and musical-boxes are sold all over Europe, the Levant, America, and the north of Africa; the jewellery is sold mostly in Italy. The other branches of manufacture at Geneva are cabinet-work, saddlery, lithography and engraving, cutlery, fire-arms, enamels, &c.

The manufactures of the canton of Neuchâtel comprise the printing of cottons and watch-making for the export trade. The districts of Locle and La-Chaux-de-Fond, among the highlands of the Jura are the great centres of the watch-making trade. The watches are exported to the same countries as those made at Geneva. The canton of Thurgau has a considerable manufacture of cotton goods, several cotton-printing establishments, and some linen factories. The small canton of Glarus manufactures a considerable quantity of cotton-goods, prints, and muslins. Aargau manufactures cotton-cloth of all descriptions, white and coloured handkerchiefs, prints, stockings, and other hosiery, also silks, and ribands, and silks mixed with wool and cottons, linens, and cutlery.

The rest of the cantons of Switzerland cannot be considered as manufacturing countries, although most of them have some manufactures, but only to supply their own wants. Special manufactures are noticed in the articles on the several cantons. The trade of

Switzerland with foreign countries is founded upon the principle of reciprocal trade and free transit. It is greatly facilitated since the invention of railroads. These means of rapid transit connect Basel with all the chief towns of France and Germany. A good deal of Swiss produce is exported from Geneva.

In the interior of the country there are as yet but few railroads completed; but several lines are projected, among which is a great trunk line from Basel to Geneva, through Bern. This line curves round the north shore of the Lake of Geneva, from Geneva to Morges, whence a branch, now completed, continues along the lake eastward to Lausanne. The main line runs north-by-east from Morges to Yverdon (this section is completed), thence east-north-east along the east shores of the lakes of Neuchâtel and Morat to Bern; from Bern north-east down the lower part of the Emmenthal and across the Aar below Soleure to Olten; and from Olten north-west to Basel. From Olten a line was authorised in 1852, running south-south-east through Zoffingen to Luzern on the lake of that name, which is to be navigated by swift steamers; and from the Uri end of the lake a railroad is projected to run up the valley of the Renas nearly to the foot of the St. Gothard. From Olten a line has been projected by the Aar and the Limmat to Zurich, and thence to Rorschach on the Lake of Constance, whence steamers will communicate with the termini of the Wurtemberg and Bavarian railroads at Friedrichshafen and Lindau respectively on the east shore of this lake. A part of the line between Zurich and Baden in Aargau is already open. In connection with the Morges and Yverdon section steamers ply on the lakes of Neuchâtel and Bienna. The French and Sardinian governments have each contemplated making railroads to terminate at Geneva.

Army.—The federal army consists of the Bundesauszug, a regular force which comprises men from 20 to 34 years of age; the reserve, which includes all those that have served the full time in the Bundesauszug up to their 40th year; and the Landwehr, composed of all men able to bear arms, who are not enrolled in either of the preceding. In 1852 the federal army numbered 108,000 men—72,000 regulars and 36,000 reserve. In addition to this there are also corps of cavalry, artillery, and engineers. Foreign enlistment is generally prohibited, but the Swiss still volunteer to serve in foreign armies. Formerly they had about 15,000 men in the service of the kings of France, about half that number in the service of Holland, besides several regiments in Spain, in Piedmont, and at Naples. Those cantons from which the respective regiments were drawn received an annual subsidy from the state for whose service they were recruited. There is now (August 1855) a Swiss legion in the British service.

The estimated revenue for 1855 is stated at 16,065,000 francs; and the expenditure at 15,475,000 francs.

Education and Instruction.—Elementary instruction is generally diffused. Secondary instruction is given in gymnasia and grammar schools, which exist in most of the towns. Private schools are numerous, and some of them rather famous for combining industrial training with scientific instruction. For higher education Switzerland has the Universities of Bâle and Zurich, and the Academies of Bern, Geneva, and Lausanne, in which degrees in law, divinity, and arts are granted. There are public libraries at Zürich, Bern, Basel, Soleure, Luzern, St. Gall, Aarau, Lausanne, and Geneva. Above thirty newspapers and reviews, weekly, monthly, or quarterly, are published in Switzerland.

Savings banks and insurance societies are pretty numerous in Switzerland. Hospitals for the infirm poor exist in every town, and some of them are richly endowed. The indigent receive assistance from the funds of the commune to which they belong. It is therefore of great importance for every man to be inscribed as freeman of a commune. There are also numerous local charities and subscriptions for the poor; but there is a class of poor outcasts called 'heimathlosen,' or people without a domicile, who are rejected by all the cantons. They are people descended from individuals who lost their civil rights in their respective cantons, or from foreigners settled in Switzerland who did not purchase their citizenship. A few years ago several cantons offered to come to an arrangement for distributing these individuals among the cantons, and restoring them to society; but at the census of 1850 they still numbered 2198, as stated above.

History of Switzerland.—The greater part of modern Switzerland was known in Roman times by the name of the Country of the Helvetii, a warlike and powerful Celtic people, who, after emigrating from their country westward, were defeated with great slaughter near Bibracte, the modern Autun, by Julius Cæsar. (Cæsar, 'Bell. Gall.,' i.) The eastern part of Switzerland, or the present Grisons country, was called Rætia by the Romans, and was inhabited by a different race of men, who are said to have been descended from the Etruscans.

After the conquest of Gaul, the Romans sent colonies into the country of the Helvetians; and, with the exception of the insurrection (if it can be so called) in A.D. 69, when they were mercilessly treated by Cæcina, the lieutenant of Vitellius, as related by Tacitus ('Hist.,' i. 57, 58, 59), the Helvetians remained subject to Rome till the downfall of the empire. During this long period the Roman language, and Roman habits and manners, became prevalent throughout Helvetia,

though it is supposed that the more central valleys and alpine recesses may have retained a sort of rude independence.

At the breaking up of the Western empire, the Burgundians, a tribe from the shores of the Baltic, were the first to form a permanent settlement in Western Switzerland, between the Jura, the Lemman Lake, and the river Aar; and Gebena, or Geneva, became the occasional residence of their kings. Meantime the Alemanni, a wilder and more barbarous race than the Burgundians, occupied the banks of the Rhine as far as Eastern Helvetia. These were defeated by Clovis at Tolbiacum, near Cologne (A.D. 496), and the Franks became masters of the country of the Alemanni, including a great part of Helvetia. The mountainous district of Rhetia was seized upon by the Goths from Italy, under King Theodoric. The old natives of Helvetia themselves became by turns subjects or serfs of these various masters. Being no longer a nation, their very name became obliterated, and they were included in the general appellation of Romans, by which the northern conquerors designated the inhabitants of the countries once subject to Rome. About A.D. 534, the Franks, having overpowered the kingdom of the Burgundians, became masters of all Helvetia, and soon after, at the breaking up of the gothic kingdom of Italy, they occupied Rhetia also. The Burgundians however, on submitting to the Franks, made conditions for themselves, by which they remained as a distinct nation, retaining their laws, usages, and privileges. The king of the Franks assumed the additional title of King of Burgundy. Several governors, with the title of Duke or President, were appointed by the Merovingian kings of the Franks to govern the various divisions of Helvetia. That part of the country which belonged to the kingdom of Burgundy was called Transjurane Burgundy, the country between the Aar and the Rhine was called Alemannia, and Rhetia formed another distinct division. When the Frankish empire became divided into several kingdoms, Transjurane Burgundy formed part of the kingdom of Orleans, while the rest of Helvetia was attached to the kingdom of Austrasia or of Metz.

The Burgundian part of Helvetia became converted to Christianity soon after the establishment of the Burgundian kingdom, towards the end of the 5th century. The Alemanni of Eastern Helvetia remained much longer in the rude heathenism of their Teutonic ancestors. Towards the beginning of the 7th century, the Irish monk Columbanus, and his disciples, preached the Gospel to the Alemanni of Helvetia, and as they made progress among them they broke the images of their god Wodan, and built chapels in various parts of the country. This was the origin of the afterwards celebrated churches and abbeys of St-Gall, Disentis, Seckingen, Glarus or St-Hilarius, St Leodegav of Luzern, and the Münster of Zürich. The monks taught also the rude natives to cultivate the soil, to sow corn, to plant the vine, and other useful arts.

Under the successors of Charlemagne, the feudal system was established in Helvetia. The counts or governors however soon made themselves hereditary; they became suzerains of their respective districts, of which they were before only magistrates; they took possession of the crown lands, and received the fees of the crown tenants, who became vassals of the local lord. The abbeys and monasteries likewise had their own vassals, many of whom, being originally small proprietors of allodial property, preferred placing themselves under the protection of the church.

When the Frankish empire became divided among the successors of Louis le Debonnaire, in 840, German or Eastern Helvetia fell to the share of Louis of Bavaria, and continued afterwards attached to the duchy of Suabia. Burgundian Helvetia fell to the lot of Lotharius, who had the title of emperor and king of Italy.

The chief events in the history of Switzerland may be conveniently given in the form of a chronological table:—

889. Rudolf, count of Transjurane Burgundy, was proclaimed by the bishops and lay lords of his government, assembled at St-Maurice, in the Valais, King of Upper Burgundy. This new kingdom of Burgundy lasted till 1016, when Rudolf III, having no male issue, made over his kingdom to the emperor Henry II.

1097. Berthold of Zähringen, a great Suabian lord, is made by the emperor Henry IV., 'kastvogt,' or warden, of the town and district of Zürich, and afterwards his son Conrad of Zähringen is made landgraf of Burgundy.

1152. Frederick of Hohenstauffen appoints Berthold IV. of Zähringen imperial warden of the bishoprics of Lausanne, Geneva, and Sion.

1178. Berthold IV. of Zähringen builds Freyburg.

1191. Berthold V. incloses the town of Bern.

1218. Frederick II. gives imperial charters to the towns of Bern, Soleure, Basel, and Schaffhausen.

1264. Rudolf of Habsburg, by various inheritances, becomes one of the most powerful lords in Helvetia.

1273. Rudolf is elected emperor. He favours the independence of the towns.

1291. Death of Rudolf. His son Albert, desiring to annex the free towns and their territories to his patrimonial estates, attacks Bern and Zürich, but is repulsed.

1300. The three forest cantons, Schwyz, Uri, and Unterwalden, which had been for ages free communities under the protection of the empire, refuse to acknowledge Albert as their duke.

1307. Werner Stauffacher of Schwyz, Walter Furst of Uri, and

Arnold von Melchthal in Unterwalden, conspire to free their country from the tyranny of Gessler. William Tell kills Gessler.

1308. The insurrection of the Waldstätter, or Forest Cantons. Albert's officers are driven away, and their castles razed. Albert, whilst preparing to march against the Waldstätter, is murdered by his nephew, John of Habsburg.

1315. Leopold, son of Albert, defeated at Morgarten by the people of the Waldstätter, who begin to be called by the general name of the Schwyzers. Federal pact of Brunnen, among the three Waldstätter.

1332. Luzern joins the confederation of the Waldstätter as the fourth canton.

1351. Zürich and Glarus join the confederation, and the Zurichers defeat Duke Albert of Austria.

1352. Zug and Bern join the confederation as the seventh and eighth cantons. A federal Diet is appointed.

1386. Leopold II. of Austria marches an army against Luzern, and is defeated and killed at Sempach, on the 9th of July.

1388. The Austrians invade Glarus, and are defeated at Näfels.

1389. Truce of twenty years between Austria and the Swiss.

1415. The Swiss cantons invade the Aargau, which they divide among themselves. Origin of the subject bailiwicks.

1418-22. The people of the Waldstätter invade the Val Levantina and other valleys south of the Alps, which they constitute subject bailiwicks.

1422. The Valais becomes an independent state allied to the Swiss cantons.

1424. The Graubund ('Gray league') formed at Trons gives its name to the whole of Rhetia.

1436. Death of the last count of Toggenburg. Civil war between Zürich and the other cantons.

1444. Siege of Zürich by the confederates. A large force of mercenaries under the Dauphin attack Basel. Battle of St-Jacob. The Dauphin makes peace with the Swiss.

1446. Peace between Zürich and the other cantons.

1452. A fresh war between Austria and the cantons. Austria loses Rapperschwyl, Freyburg, and Thurgau. Duke Sigismund of Austria mortgages to Zürich the town of Winterthur, his last remaining possession in Helvetia.

1457. Mühlhausen, an imperial town of Alsace, forms an alliance with the Swiss.

1475. War between the Swiss cantons and Charles the Bold.

1476. (March). Defeat of the Burgundians at Granson. (June). Battle of Morat; total defeat of Charles.

1478. Battle of Giornico, in which the Swiss defeat the troops of Milan.

1481. Convention of Stans. Soleure and Freyburg admitted as cantons.

1495. The Swiss refuse to furnish the emperor Maximilian I. with a contingent of troops for his war against France.

1499. War between Maximilian and the Swiss. The Imperial troops being several times defeated, Maximilian makes peace. This was the last war which the Swiss had to sustain for their independence.

1501. Basel and Schaffhausen are received into the confederation.

1513. Appenzell is also admitted, and completes the number of thirteen cantons composing the Helvetic or Swiss confederation, which existed till the French revolutionary invasion of 1798. The 'socii,' or states associated to the confederation with vote in the diet, were the abbot of St-Gall, and the free cities of St-Gall, Mühlhausen, and Biel, or Bienna. The allies without vote were Geneva, Neufchâtel, the Valais, and the Grisons.

1523. Zürich adopts the doctrines of the Reformation.

1528-30. The towns of St-Gall, Bienna, and Mühlhausen, and the cantons of Basel and Schaffhausen proclaim the Reformation; Glarus and Appenzell remain divided between the two communions.

1531. War between the Roman Catholic and the Reformed cantons on the subject of the election of a new abbot of St-Gall. The troops of the Reformed cantons are defeated at Cappel with great loss. Peace of Bear.

1532. Helvetic confession of faith proclaimed by a synod held at Bern.

1535-36. Bern, as an ally of Geneva, makes war against the duke of Savoy, and takes the Pays-de-Vaud from the Duke of Savoy.

1538. Calvin and Farel expelled from Geneva.

1541. Calvin is recalled. The Reformation adopted at Geneva.

1603. The Duke of Savoy acknowledges the independence of Geneva.

1648. The emperor acknowledges, in the treaty of Westphalia, the Swiss Confederation as an independent state in Europe.

1653. Second war of religion in Switzerland. Battle of Willmergen; the Protestants defeated. Peace made.

1710. The district of Toggenburg revolts against the abbot of St-Gall, and is supported by the Reformed cantons.

1712. Third and last war of religion in Switzerland. The Bernese defeat the troops of Luzern and the Waldstätter at Willmergen. The Roman Catholic cantons sue for peace, which is concluded at Aarau, in August, 1712.

1793. The French invade the territory of the bishop of Basel, and annex it to their new republic.

1797. General Bonaparte seizes upon Valtellina, Chiavenna, and Bormio, which were subject to the Grisons, and annexes them to the Cisalpine republic. In the meantime another body of French troops occupies the free town of Bienne, an ally of the Swiss.

1798. Democratic revolution at Basel. Insurrection in the Aargau. Diet held at Aarau, the last of the old Confederation. The French general Ménard, with 15,000 men, enters the Pays-de-Vaud, and proclaims its independence. The French enter Bern, and spread over the greater part of Switzerland. The Forest cantons refuse to submit; the French attack them, and are repulsed at Rothenthurm by Aloys Roding. In September a large French force under Schauenburg invades the district of Nidwalden, or Lower Unterwalden, the inhabitants of which made a desperate resistance, and most of them were slain.

1799. The Austrians and Russians enter Switzerland, and drive the French from the central cantons. Massena defeats the Russians at Zürich in September. Suvarrow enters Switzerland from Italy by the St.-Gothard, but is obliged to retire into the Grisons.

1801. Peace of Luneville; the French evacuate Switzerland. A new federal constitution is proclaimed, but rejected.

1802. Bonaparte, first consul of France, offers his mediation to the Swiss. The Act of Mediation is framed and accepted, constituting Switzerland into nineteen cantons, upon an equal footing, under the protection of France. The Valais, Geneva, Neuchâtel, and other districts, are annexed to France.

1813. After the battle of Leipzig the allied troops pass through Switzerland on their way to France. The allied sovereigns refuse to recognise Napoleon's Act of Mediation.

1815. The allied powers at the Congress of Vienna acknowledge the independence of Switzerland within its former limits. New confederation of twenty-two sovereign cantons, represented in a Federal Diet, ordered to assemble at least once a year, by turns at Bern, Zürich, and Luzern, and to discuss all matters internal and external concerning the general interest of the confederation. The Diet was vested with power to declare war, make peace, and form alliances with foreign powers. No canton allowed to take up arms against another, but all serious differences between one canton and another must be referred to the Diet. Each canton had a single vote in the Diet, in which measures were carried by a simple majority. The executive council of the canton in which the Diet assembled in any year, and which was styled the Vorort, or directing canton, had to carry into execution the resolutions of the Diet, and otherwise to provide for the well-being of the confederation during the prorogation of the Diet.

1830-31. Most of the larger cantons, whose representation was based upon the principle of property, effect a change by which universal suffrage is established. The proposed change finds a strong opposition in Basel, in consequence of which the town separates itself from the country districts, which form themselves into a separate republic, or half canton. Neuchâtel, after some bloodshed, retains its old constitution under the king of Prussia, who is prince of Neuchâtel. Geneva retains its constitution with a small property qualification for electors. The Forest cantons retain their pure democratic form, with general assemblies of the whole male population.

1832. The Diet decides to revise the Federal Pact, and the Catholic cantons of Schwyz, Uri, and Unterwalden, from distrust of the influence of the radicals (whose object was to establish a closely united republic worked by a central government) form the League of Sarnen, which was subsequently joined by Luzern, Freyburg, Zug, and Valais.

1834-36. Polish and other political refugees endanger the neutrality and tranquillity of Switzerland, and are expelled.

1839. A new law comes into operation, to establish a system of education independent of the clergy. It is opposed at first by the Protestant pastors, who in Zürich put themselves at the head of the peasants, and effected a dissolution of the radical government. The Jesuits, who were the chief instructors in the canton of Luzern and some other Catholic cantons, become in consequence of this law, direct marks of radical antagonism.

1844. Aargau demands the expulsion of the Jesuits from Switzerland, and is supported in the Diet only by the half-vote of Bâle-Campagne.

1845. The radical party, in order to effect the expulsion of the Jesuits, organise bodies of armed men called the Free Corps, which, commanded by colonel Ochsenbein, invade Luzern and are defeated. The radical cantons refuse to dissolve the Free Corps.

1846. The League of Sarnen dissolved, and the *Sonderbund*, or separate League of the Seven Catholic Cantons, formed for mutual defence against the Free Corps.

1847. A resolution from Geneva (in which a revolution had taken place, giving the radical party the supremacy in that canton) is adopted by the Diet, which decrees (July 29) the illegality of the *Sonderbund*, and (Sept. 3) the expulsion of the Jesuits. The *Sonderbund* protests, and both parties are for war. The federal army under general Dufour defeats the forces of the *Sonderbund* at Freyburg (Nov. 18) and at Luzern (Nov. 24), whereupon the leagued cantons submit, and are made liable for all expenses of the war; the monasteries are suppressed, and the Jesuits expelled.

1848. (Sept. 12). Promulgation of a new constitution.

By this constitution the sovereign power is vested in the Federal Assembly, which consists of two chambers, the National Council and the Council of State, or Senate. The National Council consists of

members, elected by the cantons for three years, in the proportion of one member for every 20,000 inhabitants, the half-cantons returning one member at least; and when a canton has a surplus population amounting to 10,000, it is entitled to have an additional representative. The Council of State consists of 44 members, two representatives for each canton, the half-cantons returning only one each. The confederation, represented by the two councils, alone has the right to declare war and make peace, and to settle matters between the cantons and foreign governments. The federal assembly chooses, from among the citizens eligible to the national council, the Federal Council, which consists of seven members, and holds office for three years. The federal council is the ministry of the confederation; its members conduct the departments of politics, the interior, the military, finance, commerce and customs, public works, justice and police. The president and vice-president of the federation, and of the federal council, are named annually in a united sitting of the federal assembly, and may not be re-elected for the space of a year after their term of office expires. The Federal Tribunal, also appointed by the federal assembly for three years, consists of 11 members and 11 substitutes. This tribunal decides in civil matters between the cantons, between these and the confederation, between the cantons and private parties, and in suits arising about the reception of the Heimathlosen. For criminal business it is divided into sections. On the 23th of Nov., 1848, the city of Bern was chosen as the federal city by both chambers of the federal assembly.

(Francini, *Statistica della Svizzera*; Leresche, *Dictionnaire Geographique-Statistique de la Suisse*; Hoffmann, *Die Deutschland und seine Bewohner*; Berghaus, *Annalen der Erd-Völkerund Staatskunde*; London *Geographical Journal*, for 1854.)

SWORDS. [DUBLIN, County of.]

SYBARIS. [CALABRIA.]

SYDENHAM. [KENT.]

SYDLING, ST. NICHOLAS. [DORSETSHIRE.]

SYDNEY, New South Wales, the capital of the colony, a city and sea-port, in the county of Cumberland, is situated on the south shore of Port Jackson, an inlet on the east coast of Australia, in 33° 50' S. lat., 151° 10' E. long., distant about 13,000 miles from Great Britain by the Cape of Good Hope. The city is governed by 6 aldermen and 24 councillors, one of whom is mayor; and sends two members to the Provincial Parliament. The population in 1838 was about 20,000; in 1846 it was 38,358; in 1851 it was about 50,000.

The harbour of Port Jackson, entered by a narrow passage between the North and South Heads, two bold headlands in the precipitous coast-line, is completely protected from easterly winds and the swell of the Pacific by a third point called Middle Head, which stretches from the south shore just within the entrance. On south head there are a lighthouse and signal station; the light, which is 345 feet above the sea-level, is seen at 30 miles' distance. The harbour affords excellent anchorage in all parts for vessels of any burden. Within the entrance, which is less than a mile in breadth, the harbour suddenly expands to a width of 3 miles, and at 7 miles inland contracts to a width of a mile and a half. Here two ridges and an intervening level—bounded by Woolloomooloo Bay on the east, and Darling Harbour, a deep inlet, on the west, with Farm Cove and Sydney Cove part—form the site of the city. George-street, the chief business part of the town, is a fine thoroughfare nearly two miles long. The houses, many of which are small, are constructed of wood or brick, or of sandstone. There are several handsome streets, containing many good dwelling-houses and shops. The city is well paved, lighted with gas, and supplied with water by a tunneled aqueduct nearly 2½ miles long.

In the vicinity of Sydney are numerous suburbs. The ridge of the west promontory is occupied by Dawes's Battery. Macquarrie Fort stands at the point of the eastern promontory, on the summit of which is the government-house, a handsome edifice lately erected in the gothic style. A principal place of public resort is Hyde Park, an inclosed common on the south side of the town. The Botanic Gardens comprise a rich and well-arranged collection of shrubs and flowers. The cathedral church of St. James's, a plain brick building with a lofty spire, stands on the north side of Hyde Park. St. Philip's church, the oldest in the colony, was built in 1798. The Roman Catholic cathedral, an imposing gothic structure, stands near St. James's. There are several chapels for Scotch Presbyterians, Independents, Methodists, and Baptists. Sydney college in Hyde Park, and the Australian college, afford superior instruction in classics, mathematics, and English literature. There are also a normal institution, some free schools supported by government, a female school of industry, and a mechanics institute. The other public buildings are—the court-house, the council chambers, the new market-place, the custom-house, the colonial offices, the jail, the new military barracks, the convict barracks, the colonial hospital, the lunatic asylum, the asylum for the aged and infirm, the theatre, the museum, the Australian library, and the commissariat store, an extensive stone building, into which the largest vessels may discharge their cargoes. The manufactures of the city are coarse woollens, tallow, soap and candles, starch, tobacco and snuff, hats, and ropes. There are several breweries and distilleries, tanneries, coach-works, saw-mills, and flour-mills. The adjacent heights are occupied by a number of windmills, and at Canterbury, 4½ miles from the city, there is a large manufactory for

the refining of sugar. Sydney is the emporium of the coasting and foreign trade of the colony. Steamers ply between the city and various ports along the coast. Regular communication is kept up with Great Britain by the Australian mail steamers. The harbour for merchant vessels comprises the two inlets of Sydney Cove and Darling Harbour, which afford a convenient line of wharfage nearly two miles in length, and admit ships of the largest tonnage to the wharfs, where their cargoes are transferred into stores. At Cockatoo Island, a convict station at the mouth of the Paramatta River, a range of stone quays has been built by the prisoners, and excavations made for an extensive dry-dock. The principal export is wool. The produce of the gold-fields of New South Wales is shipped at Sydney. Oil and whalebone from the southern whale-fishery, and timber, are exported in considerable quantities. The imports are principally articles of British manufacture, grain and provisions, tea, coffee, and sugar.

The number and tonnage of vessels registered as belonging to the port of Sydney on December 31st 1854 were:—Sailing-vessels, under 50 tons, 161, tonnage 4107; above 50 tons, 180, tonnage 32,082; steam-vessels, under 50 tons, 8, tonnage 242; above 50 tons, 15, tonnage 2808.

Sydney is the seat of government, of the legislature, and of the supreme court of justice for the colony of New South Wales. The mean temperature of the city is 74° Fahr. in summer; 55° 5' in winter; 66° 8' for the whole year.

SYDNEY. [CAPE BRETON.]

SYENE. [EGYPT.]

SYLFIELLEN. [SWEDEN.]

SYMPHORIEN DE LAY, ST. [LOIRE.]

SYRA, or SYROS, one of the Cyclades Islands in the Ægean, lies south of Gyarus, and between Ceos and Tenos. Homer and other Greek poets describe the island as rich in pastures, wine, and corn. Homer ('Od.' xv., 402), says it contained two towns. There are still ruins of one of the ancient towns, and many valuable relics of antiquity have been discovered in this small island. The surface is hilly, the soil fertile, and the climate mild; trees never lose their verdure. The principal products are corn, wine, oil, cotton, and fruits. The inhabitants, who previous to the year 1821 amounted to about 5000, are Roman Catholics. In the revolutionary war with the Turks, Syra remained neutral, and the population then soon rose to about 40,000, Syra having become the central point of the commerce of Greece. After the pacification, the commerce of Syra declined. The chief town of the island Syra, or Asprana, built on the east coast round a conical hill above the harbour (which is good), is still an important position. Near it is the fountain celebrated of old, gushing in a limpid stream from the solid rock. Syra has wide, clean, well-built streets; it is the residence of a Catholic bishop, and has several Catholic churches, and a lazaretto. French steam-boats from Marseille to Constantinople put into Syra.

SYRACUSE (*Siracusa*), a town on the east coast of Sicily, 30 miles S.S.E. from Catania, and about the same distance N. by E. of Cape Passaro, the southern extremity of Sicily. Ancient Syracuse, in the time of its splendour, was the largest city in Sicily, and one of the largest in the ancient world: it was of a triangular form, and consisted of five towns, adjoining one another, but separated by walls: the oldest of these towns was Ortygia on the peninsula, originally an island of an oblong shape, about two miles in circumference, lying between the Great Harbour on the west, which is a splendid piece of water about five miles in circumference, and the Little Harbour, which was paved with marble flags, on the east. On the other side of the Little Harbour was the town of Acradina, which extended for about three miles to the eastward along the sea-coast, until it reached a bay, where was the port Troglus, outside of the city. The western part of Acradina, adjoining Ortygia, stood on low ground, on a level with the island; but the remaining and larger portion of it lay on a range of heights which stretch from the sea for several miles inland, and are divided from the lowland by a natural wall of rocks. North of Acradina, and inland, stood the town of Tyche, on the same range of heights as the upper part of Acradina, being divided from the latter only by a double wall and intermural road. Tyche extended inland to the northward for a length of above two miles, and at its western extremity was the Epipolæ, consisting of several commanding heights, which were inclosed and made into a vast fortress by Dionysius the elder. South-west of Tyche, in the lower ground at the foot of the heights, was Neapolis, or the New Town, which, at its southern end, adjoined the lower part of Acradina. The whole was surrounded by an external wall, the length of which was 180 stadia. Ortygia was the first part inhabited; but the population increasing, the island was joined to the mainland by a causeway across the narrow channel of the sea, and the neighbouring low grounds were built upon. Suburbs and gardens extended south of Neapolis to the mouth of the river Anapus, and beyond it, round the western shore of the Great Harbour to the steep peninsula of Plemmyrium, which faced Ortygia. After the Roman conquest, the population, having gradually decreased, became restricted to the original Ortygia and the lower part of Acradina, and all the upper city was already abandoned in the time of Augustus. The Saracens in the 9th century plundered and devastated Syracuse, which contained till

then about 100,000 inhabitants; and from that time Ortygia, or the island, has been the only part inhabited.

The greater part of the upper town of Acradina, especially near the sea, is now a naked dreary rock, the surface having been thoroughly cleared of the materials of the ancient city. No traces of antiquity, except some steps and a few courses of stones, not a vestige of a house, temple, or monument is to be seen on the extensive plain. The sea has undermined the shore, and the town-walls have fallen in and disappeared. Considerable remains of the external wall, built by Dionysius the elder, are seen farther north round Tyche and the Epipolæ. Not far from Scala Græca, at a place called Targetta, are the remains of a gate, whence a street can be traced across the site of Tyche to the ancient theatre at the other end near Neapolis. Traces of other streets are also seen, with foundations for walls cut in the rocks. The fields within and near the external walls of this part of the town are covered with immense heaps of stones thrown confusedly together. On the outside of the walls a green slope reaches from the foot of the rock to the plain, and is covered with old olive-trees.

Between the upper and the lower parts of the town, and near the borders of Tyche, Acradina, and Neapolis, is the ancient theatre, hewn out of the solid rock, now half-hidden with bushes. Not far from the theatre are the remains of an amphitheatre of the Roman period; and nearer to Ortygia are the remains of the palace of the 60 beds, said to have been built by Agathocles. Near it are vestiges of the wide street mentioned by Cicero, which may be traced from the isthmus of Ortygia, and across the site of the upper town, to a spot called Santa Bonaccia, on the edge of the Portus Troglus.

The Latomæ were originally quarries excavated in the rocks that divide the upper from the lower town, from whence the stone for the construction of the city was drawn. They are from 60 to 80 feet deep. Some of them afterwards served as prisons; and on the surrender of Nicias the whole of the Athenian prisoners were confined in them and mostly died. The largest of these Latomæ is annexed to the Capuchin convent. Another Latomia is near the ancient theatre. On one side of it, cut in the rock, is the remarkable excavation called the Ear of Dionysius.

The catacombs are vast excavations, of very remote antiquity, for the purpose of burying the dead; they form subterraneous streets of tombs cut out of the solid rock. They were converted by the early Christians into places of refuge from persecution. The entrance to them is under the small church of San Giovanni, in the lower part of Acradina. This church is one of the oldest Christian churches in Europa. The catacombs were filled with tombs of the dead of all ages and faiths—Greek, Roman, Christian, and Saracen.

The aqueduct was begun by Gelon and enlarged by Hiero. The stream is brought in subterraneous channels from Monte Crimiti, outside of the Epipolæ, until it enters the walls at the place where the fort of Labdalum stood. It then appears above ground, being received into an aqueduct upon arches and conveyed to some mills, after which the water falls down the steps of the great theatre at Neapolis.

Outside of the walls, and on the left bank of the Anapus, near the Great Harbour, are parts of the shafts of two fluted columns of the temple of Jupiter Olympicus, which was enriched by Gelon with the spoils of the Carthaginians. There are other ancient remains scattered here and there, but of no ascertained character.

The modern town of Siracusa is fortified, and has a regular garrison, but is commanded by the height of Acradina. It is a bishop's see; has 14,000 inhabitants, narrow streets, numerous churches and convents, and other public buildings, the most remarkable of which is the cathedral, once the identical temple of Minerva, which was plundered of its ornaments by Verres. Its exterior dimensions are 185 feet in length and 75 feet in width. There are also some remains of Diana's temple near St. Paul's church.

A bath, with a spiral staircase about 40 feet deep, is seen in the church of St. Philip; and there are also vestiges of the baths of Daphne, in which the emperor Constantine was murdered in 868.

The celebrated fountain of Arethusa is a large pool of water, supplied by a spring, and separated from the sea by a wall, in the Ortygia, near the Great Harbour; and about 80 yards from it rises from the bottom of the harbour a copious spring, called L'occhio della Zilica, which, according to the ancient poets, was the Alpheus of Elia.

There is a museum at Siracusa containing the statues of the Lando-lina Venus and Æsculapius, some sarcophagi, a handsome collection of vases, inscriptions, coins, &c., and a public library.

Siracusa enjoys a delightful climate in winter, but the alluvial plain on the west side of the harbour, through which flows the Anapus, exhales pestilential miasmata in the summer months. The country around is very fertile. On the left bank of the Anapus is the fountain of Cyane, now called the Pisma: it is a circular basin of the purest water, about 60 or 70 feet in diameter, and 26 feet deep. The people of Siracusa carry on some trade by sea, but the place is by no means thriving. Some salt, wine, oil, and fish are exported.

Syracuse was founded about B.C. 735 by Archias, a Corinthian, the head of a colony of Corinthians and Dorians, who settled in the island of Ortygia, having overpowered the native Siculi. This settlement,

which afterwards extended to the mainland, was the origin of the great city of Syracuse. The city seems to have had an aristocratic government at first, the descendants of the original settlers holding the chief power in their hands. But about B.C. 492 a revolution took place, by which the aristocracy was expelled, and a democratic government established. This government however did not last long, for Gelon, tyrant of Gela, having taken the part of the exiles, marched to Syracuse with an army, and the people willingly opened the gates to him, when he was acknowledged as sovereign of Syracuse, B.C. 485. The rule of Gelon was temperate, and his reign was prosperous for Syracuse. He enlarged and embellished the town. Gelon was succeeded by his brother Hiero, whose administration was tainted with suspicion and tyranny.

Hiero's brother Thrasybulus, whose accession took place in B.C. 467, was driven away for his tyranny by the people after one year's reign. An assembly was then convened, in which a new constitution was framed, the public offices being filled chiefly by the ancient citizens.

In the year B.C. 427 the people of Leontini, being hard pressed by the Syracusans, applied to Athens for assistance. An Athenian fleet, with troops, was sent to Sicily, but after several desultory actions peace was made between Syracuse and Leontini, and the Athenian expedition withdrew. In B.C. 416 a quarrel between the towns of Eggesta and Selinus brought in the Syracusans, who took the part of Selinus. The Eggestans and Leontinians applied to Athens for aid. The Athenians declared war, and a formidable armament sailed for Sicily, B.C. 415. The Athenian expedition of 136 triremes, with a considerable land force, under Nicias, Alcibiades, and Lamachus, after sailing round Sicily, in quest of auxiliaries against Syracuse in vain, seized Catana, where they passed the winter. Meantime Alcibiades had been recalled, and the supreme command remained with Nicias. The Syracusans sent envoys to Corinth to request assistance, and both Corinth and Sparta resolved to send succour to Syracuse under Gylippus, a celebrated Lacedæmonian captain.

In the spring of B.C. 414 Nicias, having embarked his troops at Catana, landed a party of them in the bay of Thapsus, north of Syracuse, which took possession of the heights of Epipolæ, and built there a fort which they called Labdalum. They then began to build a wall from Port Trogius to the Great Harbour, so as to inclose Syracuse on the land side, whilst their fleet blockaded it by sea. In the meantime Gylippus arriving, marched against Epipolæ, seized the fort Labdalum, and annoyed the Athenians in their encampment. The Syracusans attacked the Athenian fleet at the entrance of the Great Harbour; the fight was not decisive; but Gylippus with his land forces surprised the forts which the Athenians had raised on the peninsula of Plemmyrium. Another sea-fight took place, in which the Athenian galleys were worsted. Soon after Demosthenes and Eurymedon arrived from Athens with a new fleet of 73 galleys and about 8000 soldiers. Demosthenes attacked the heights of Epipolæ by night, but was repulsed with great loss. After several discordant councils among the Athenian generals, it was resolved to embark the soldiers secretly and sail away with the fleet. The Syracusans having heard of this, attacked the Athenian fleet in the Great Harbour, and defeated it. Eurymedon was killed, and 18 Athenian galleys were taken. The Syracusans then blocked up the entrance of the Great Harbour by means of galleys and other vessels, connecting them together with chains, and thus shut up the Athenians. Nicias then resolved to fight his way out with the fleet. The Athenian vessels were heavy, those of the Syracusans light: the former, in trying to break through the chain, got crowded in one mass and became unmanageable; the crews were exposed to showers of stones from the enemy, the Athenian fleet was driven against the shore, and the greater part of it was taken or sunk. At last the Athenians resolved to abandon their remaining vessels and stores, their sick and wounded, and commenced their disastrous retreat. Of 40,000 men who had been engaged in the expedition, all were killed or taken prisoners, and not one of 200 vessels returned to Athens.

Of the prisoners all the free-born Athenians and the Sicilians who were with them were confined in the quarries; the rest, servants, followers of the camp, &c., were sold as slaves. Nicias and Demosthenes were put to a cruel death. The prisoners in the quarries receiving but a small pittance of barley-bread and water, and having no shelter by day or night, diseases broke out among them. The bodies of the dead were left to putrefy among the living, and this created contagion, of which most of them perished. Thus ended this formidable expedition, the ill success of which broke down the power of Athens, and had a great influence on the result of the Peloponnesian war.

After the defeat of the Athenians, Diocles proposed a law for the establishment of a democratic constitution in Syracuse, and compiled a criminal code of a very severe kind. This democratic constitution lasted very few years, for in B.C. 406 Dionysius was elected commander, and soon became tyrant of Syracuse. During the reign of this able and unscrupulous man, Syracuse reached the highest point of power and prosperity. Dionysius carried on long wars with the Carthaginians, whom he defeated and deprived of all their possessions in Sicily, B.C. 397. But the Carthaginians returned the following year, and after various successes laid siege to Syracuse by land and sea. A pestilence however broke out in their camp, and Dionysius taking

advantage of the calamity, defeated the besieging forces and burnt great part of the fleet, whereupon the Carthaginians withdrew, but peace was not made till B.C. 392. Dionysius also conquered several of the Greek cities of southern Italy, and removed their inhabitants to Syracuse. For some years previous to his death, in B.C. 367, he was again engaged in wars with Carthage. He was succeeded by his son Dionysius the younger, who was expelled by Timoleon. Timoleon established a government of mixed democracy and aristocracy. After Timoleon's death, B.C. 337, there was a period of twenty years marked by no very important events, till B.C. 317, when Agathocles, originally a potter, became autocrat of Syracuse. Agathocles was defeated by the Carthaginians at the battle of Himera, and immediately after closely besieged in Syracuse, from which sailing forth with a small force he carried war into the enemy's country, landing in Africa (August 15, 310 B.C.). He quitted Africa, where he was constantly victorious over the Carthaginians, B.C. 307, and returned to Sicily, which he soon reduced to subjection. After the death of Agathocles, B.C. 289, Syracuse recovered its independence, but being distracted by factions, the people chose, B.C. 275, for their prætor, Hiero, who was a descendant of king Gelon, and after five years more he was made king. He died B.C. 216. His son Hieronymus rashly quarrelled with Rome, and although he was murdered shortly after, his false policy was persevered in, and a Roman army, under Marcellus, laid siege to Syracuse, and took it in B.C. 212. From that time Syracuse was merely a town of the Roman province of Sicily. After the downfall of the empire it was taken and plundered by the Saracens (May 21, A.D. 878). Many ancient monuments were still remaining in 1693, when they were destroyed by an earthquake.

(Thucydides, vi., vii.; Diodorus, xiii., xiv., xvi., xix.; Müller, *History of the Doric Race*; Burigny, *Histoire de Sicile*; Clinton, *Fasts Hellenici*.)

SYRACUSE, U. S. [NEW YORK.]

SYRIA (*Es Sham*), a country in Asia belonging to Turkey, is situated along the eastern shores of the Mediterranean, from 29° 45' to 37° 25' N. lat., 34° to 38° 45' E. long. The name Syria occurs in the Greek writers; the Asiatics call the country Beled-es-Sham, or 'country on the left.' The Mohammedans of Mecca direct their face to the rising sun when they pray, and then Syria, which they call Beled-el-Sham ('country on the left'), is to their left hand and Beled-el-Yemen, is on the right. The boundary of Syria towards the north is formed by the Amanus Mountains, which divide it from Asia Minor; towards the west by the Mediterranean Sea. The boundary between Syria and Egypt begins on the shores of the Mediterranean, south-west of the town of Gaza, and thence runs in an irregular line eastward across the desert, until it meets the Wady Arabah, which it crosses at the base of a high mountain, called Tor Hesma, about eight hours' journey from the head of the Gulf of Akabah. From this summit eastward Syria borders on the desert of Arabia, and in these parts the boundary is undefined, except by part of the Haj road from Damascus to Mecca. North of 32° 5' N. lat., Syria extends eastward to the desert, and includes the plain and mountain region of the Haouran, which extends to 37° E. long., and perhaps somewhat farther east. From the parallel of Damascus the boundary is considered to run north-east, passing about 20 miles east of Palmyra, and striking the Euphrates about 30 miles above Rakka. From this point the eastern boundary of Syria is formed by the Euphrates, which separates it from Mesopotamia. A rough estimate gives to Syria an area of about 70,000 square miles. The population is supposed to exceed a million and a half.

The situation of Syria is peculiar. It forms the greater part of an isthmus which separates a sea of water and a sea of sand. On the west extends the Mediterranean over more than 2000 miles. On the east is the desert of Syria and Arabia, which extends about 600 miles to the Persian Gulf and an inlet of the Indian Ocean. To the south of the isthmus lies the Red Sea, whose two great inlets, the gulfs of Suez and Akabah, penetrate deeply into the land.

The form of the surface is no less peculiar. The central part is furrowed by a longitudinal depression, or wide valley, which extends from the Gulf of Akabah, to the base of the Alma Dagh, where it terminates with the Lake of Bohhaire (36° 45' N. lat.). This long valley, which extends over more than seven degrees of latitude, is divided in the middle (between 33° 15' and 33° 25' N. lat.,) into two valleys by a high narrow ridge of mountains, the Jebel Arbel. The southern valley is traversed by the river Jordan on the greater part of its extent, and is in parts considerably below the surface of the sea. The northern valley is drained by the rivers Litany (Leontes) and Azy (Orontes). In its most elevated part, near the town of Bealbek, it attains an elevation at which in Europe corn can seldom be grown. The countries on each side of these valleys extend in some parts in elevated table-lands, in other places sink down into large plains, and again rise into mountains, the summits of some of which are always covered with snow. The changes which the surface and its productive powers undergo in Syria are almost innumerable.

Southern Syria extends from the southern boundary of the country to the Bahr-el-Huleh, or Lake Merom, the ancient Semechonitis (33° 10' N. lat.), and comprehends the southern valley, and the countries contiguous to it on the west and east.

1. The Southern Valley extends from the most northern point of the Gulf of Akabah to the Bahr-el-Huleh more than 250 miles in a

straight line, and is naturally divided into three sections by two deep depressions, which are occupied by two large lakes—the Dead Sea and the Lake of Gennesareth, now called Bahr Tabarieh, from the town of Tabarieh on its western shore, which occupies the site of the ancient Tiberias. The southern part of the valley, between the Gulf of Akabah and the Dead Sea, is called Wady-el-Arabah; the central portion, between the Dead Sea and the Bahr Tabarieh, El-Ghor; and the northern, or that part of it which extends from the Bahr Tabarieh to the Bahr Houleh, is called Wady Seisaban.

The Wady Arabah extends from south to north in a straight line for above 110 miles. Many were formerly inclined to think that, at some remote period, it had served as the channel by which the Dead Sea had discharged its waters into the Bahr Akabah, but if the physical condition of the region remains unaltered, this can never have been the case, as the level of the Dead Sea is considerably lower than that of the Red Sea. [DEAD SEA; RED SEA.] The watershed between the two seas occurs somewhat north of 30° N. lat., and is about 500 feet above the sea-level. On each side of the Wady-el-Arabah the mountains rise to a great elevation. Near the watershed those on the west attain 2000 feet; and those on the east rise to 3000 feet. In approaching the Dead Sea they increase in height, or perhaps it may be more correct to say that the level of the valley here sinks much lower. The distance between the two mountain masses varies considerably. Near the two extremities they are only 8 or 10 miles apart, but towards the middle the valley is 20 miles wide. The surface of the valley presents considerable varieties. South of the watershed it is generally level, but has a considerable slope from east to west, so that near the western mountains it is very little above the sea-level, whilst along the eastern it may be from 200 to 300 feet higher. About three miles from the Bahr Akabah the soil is strongly impregnated with salt, but farther north sand prevails, and is intermixed with pieces of granite, porphyry, and greenstone. After the rains the country produces some grasses, and supplies indifferent pasture for sheep, goats, and camels; but in several places low hills of moving sand occur, which are destitute of vegetation. North of the watershed there are some ridges of low hills running lengthwise through the valley, and dividing it into two valleys. In the western valley during the rains, there is a stream, called El-Jib, which at that season collects all the waters that descend from the eastern and western mountains, and carries them to the Dead Sea. A few acacia-trees, tamarisks, and a few mimosas and shrubs grow among these sand-hills. Water is found even in summer a few feet below the surface. In proceeding farther north, the Arabah does not appear to have any considerable descent towards the north, but it is longitudinally furrowed by a narrow valley, in the midst of which is the bed of the Jib. This narrow valley gradually sinks lower, so that at its northern termination it is 150 feet below the general level. Its width at the beginning is about one mile, but towards its termination hardly more than half a mile. The dry bed of the river, especially in the narrower part of the small valley, is overgrown with tamarisks, and in one or two places there are a few date-trees, but otherwise this tract is a desert. Near 31° N. lat. the general level of the Wady-el-Arabah descends abruptly about 150 feet, forming apparently a line of hills running east and west, and composed mostly of marl. All along the base of these hills there are springs of brackish water, which form a tract of marshy land towards the north. Between this salt-marsh and the Dead sea extends the most desolate portion of the Arabah. No trace of vegetation, no living creature is met with. At the base of the western mountains is a low ridge (called the mountains of Udum), in general about 150 feet high, which runs for about 10 miles parallel to the Wady Arabah and the southern portion of the Dead Sea, and which is one mass of solid rock-salt, covered with layers of soft limestone and marl, through which the salt often breaks out, and appears on the sides in precipices 40 or 50 feet high, and several hundred feet long. From the base of this chain of rocks, which is called Udum, there break out several rills of transparent water, which run to the Dead Sea, but the water is as salt as the saltiest brine. The tract between them, the bed of the Jib and the Dead Sea, is a perfect level, and extremely barren; but that on the east of the Jib is traversed by some rivulets descending from the eastern mountains, which have fresh water, and impart to the soil a considerable degree of fertility, so that there are some tracts which are cultivated. That part of the Arabah which lies north of 31° N. lat. is called El-Ghor, the lowest part of which is occupied by the Dead Sea. The region round this sea is intensely hot and very unhealthy in summer, where also it is barren and desolate in the extreme. In winter and early spring the shores of the Dead Sea present in parts considerable verdure. The Dead Sea and its shores are noticed in a separate article. [DEAD SEA.]

That portion of the *Ghor* which lies between the Dead Sea and the Lake of Tabarieh extends about 65 miles in a straight line. This valley is below the level of the Red Sea. The width of the valley is about 6 miles; but towards the Dead Sea it grows much wider. It is traversed by the river Jordan, the course of which is traced in the article PALESTINE (vol. iii., col. 51.) The mountains which inclose the valley on the east are steep and high: they are also high and steep on the western side for nearly half the length of the valley, beginning from the south; but farther north they sometimes sink

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down to low hills, and continue so for several miles. The river flows in a bottom about half a mile wide, and at least 40 feet below the general level of the Ghor. This bottom is overgrown with high trees, and exhibits a luxuriant vegetation of plants and grasses, which present a striking contrast with the sandy and bare slopes which border it on both sides. In winter, the river inundates the bottom, but never rises to the upper plain. In the well-watered parts of the upper plain, there is a luxuriant growth of herbage and wild grass, but the greater part of the ground is a parched desert. The most important articles of cultivation are wheat, barley, and dhurra. On the banks of the river there are willows, poplars, and tamarisks, and on the higher ground plantations of vines, pomegranates, &c. South of the ruined village of Richa (Jericho), and as far as the Dead Sea, the valley is nearly level, and the soil consists of clay impregnated with salt.

The Bahr Tabarieh, anciently called the Sea of Tiberias and of Gennesareth, is noticed under PALESTINE. It is surrounded with steep and lofty mountains, except on the south, and along the western shore, from the town of Tabarieh northward, where an undulating plain, with a width of a mile or more, intervenes between the mountains and the lake. A considerable portion of this plain is cultivated by means of irrigation, and produces wheat, barley, dhurra, tobacco, grapes, melons, and several kinds of vegetables. The heat in summer is excessive. Melons ripen four weeks sooner than at Damascus. Dates are also grown here. The water of the lake is slightly brackish, and some of the rivulets which descend from the western mountains are salt. There are also hot-springs.

The Wady Seisaban extends from the Bahr Tabarieh to the Bahr Houleh, about 15 miles in a straight line. About one-half of its extent is below the sea-level, as the bridge called Beni-Yakoub is 350 feet above the sea, whilst the Lake of Tabarieh is 572 feet below it. The higher grounds of the valley of the Jordan, which is here about two miles wide, are partly cultivated; and on the greater part of the cultivated tracts different kinds of vegetables are grown, especially cucumbers and gourds, which ripen three weeks sooner than at Damascus, where the produce finds a ready sale. There are many sakkum-bushes, and the thorny rhamnus (*Spina Christi*), in the lower part of the valley. The Bahr Houleh, the Merom of the Old Testament, is not large, and its extent varies according to the seasons. The low country which surrounds it to some extent is only inhabited on the eastern border, where the banks are overgrown with reeds and papyrus plants. The western and south-western banks are covered with a saline crust.

2. The Desert called El-Tyh-Beni-Israël (the Wandering of the Children of Israel) belongs partly to Syria and partly to Egypt, as the boundary-line between these two countries lies across it. It extends on the west of the Wady Arabah, and reaches southward to the Jebel-el-Tyh (29° 10' N. lat.), which is connected with the extensive mountain-masses of Mount Sinaï. On the north the Tyh extends to the elevated table-land of Judæa. The Tyh is a desert and elevated table-land between 1000 and 2000 feet high. Along its eastern border its surface is much furrowed by deep watercourses, or wadis; in some parts lower depressions occur. In such places verdure is found in winter, and trees all the year round. Some of the deep valleys are of considerable extent, and are visited by the Beduins in winter with their herds, and in summer for the purpose of collecting gum-arabic, which is carried to Cairo. The higher parts of the table-land have a hard gravelly soil without vegetation; and in many places there are low irregular ridges of limestone hills.

3. The Table-land of Judæa joins the Tyh on the north, and extends from the parallel of the southern extremity of the Dead Sea to 32° 30' N. lat., having on the east the Dead Sea and the Ghor, and on the west the Plain of Falastin. The dividing-line between the last-mentioned plain and the table-land is near 35° E. long. The elevation of this table-land diminishes as we proceed farther north. North of 31° N. lat., the desert of the Tyh passes insensibly into a fertile country. The table-land there extends into an undulating plain, occasionally interrupted by low ridges of hills, which in summer are barren, but a part of the year are covered with grass and rich pasture. The lower parts preserve their verdure all the year round. The plain is furrowed by valleys, which sink considerably below the general level, and are full of corn-fields, and vineyards and orchards that produce excellent grapes and figs. Corn-fields are also numerous on the higher grounds, but they are interrupted by large tracts of naked limestone rocks. This description applies to the interior of the table-land, as far north as Jerusalem, except that cultivation, and especially the plantations of olives, fig-trees, vines, pistachio-trees, apricots, pomegranates, oranges, and lemon-trees increase as we proceed farther north. The plains between the limestone rocks are covered with grass, which supplies pasture to sheep and goats, and herds of cattle, horses, asses, and camels. The mountains which form the eastern border of the table-land however, and extend along the Dead Sea, are a picture of desolation; they consist of yellow rocks without the least traces of vegetation. These mountains are distinguished from all other ranges of Syria by their summits, which do not present rounded masses, but rise in the form of pointed peaks and sharp edges, like the summits of the Alps. The barrenness which characterizes this tract extends over the whole table-land in

parallel of Jerusalem; for in this part even the mountains that form the western border of the table-land are comparatively barren, but farther south they are fertile.

North of the parallel of Jerusalem the unevenness of the table-land is much greater, and the hills frequently rise to the height of mountains. Such are the mountains of Ephraim (north of 32° N. lat.), which are covered with woods and bushes. The depressions between the hills are of considerable extent. The slopes of the surrounding hills are gentle, and generally susceptible of cultivation, which is effected by making terraces on their declivities. At a few places there are valleys, some between the hills, and others formed by the action of the rivers in the more level country. The country is much less naked than it is farther south; at several places forests consisting of high trees occur, and large tracts are covered with bushes. Cultivation is attended to in some degree, but large tracts lie waste. Fruit-trees are very common, and olive- and fig-trees in some places cover several square miles in extent.

There are two rainy seasons on the table-land. The early rainy season sets in about the beginning of November, and lasts till the beginning of January. The late rainy season sets in at the beginning of April and somewhat later. The winter is rather cold, and frost in January and even February is not rare. Snow falls also, and sometimes very heavily. The summers are very hot. The thermometer sometimes rises to more than 100°, when the dry south-east and east winds, which blow from the Arabian and Syrian desert, have continued for several days.

4. On the west of the table-land of Judæa is the Plain of Falastin, as the ancient country of the Philistines is still called by the Beduins. It extends from the Tyh, to the base of Mount Carmel, 150 miles, but the width varies greatly. It is widest on the south, where it is more than 60 miles across, or rather 120 miles, as it extends to the Isthmus of Suez and to the delta of the Nile. In the parallel of Gaza it is about 25 miles wide or somewhat more, but to the northward it grows gradually narrower, and near Mount Carmel it is only a few miles wide. The most southern portion of the plain, between the delta of the Nile and the town of Gaza is a scorched sandy desert, and the sand blown from it into the sea is the principal reason why all the harbours of the Syrian coast as far north as Cape Carmel are choked up, and admit only small vessels. On the sea-coast the desert terminates near Gaza; but at the foot of the table-land of Judæa it extends about 10 miles farther north. The fertile portion of the plain of Falastin consists of a tract extending along the sea, with an average width of 5 or 6 miles, as far north as 31° 40' N. lat., where it widens so as to reach the table-land of Judæa. A tract with a sandy barren soil, and an entirely level surface, extends along the sea; but farther inland the country is undulating, or interspersed with low hills, between which there often occur cultivable spots which contain plantations of fruit-trees. The most fertile part of the plain extends on both sides of 32° N. lat., and is known by the name of the Plain of Ramleh, or Rama. The soil, consisting of a reddish sand intermixed with gravel, has a considerable degree of fertility where it can be irrigated, and produces good crops of grain, figs, olives, pomegranates, oranges, and lemons; the water-melons of this tract are of superior quality. There are many date-trees, sycamores, prickly pears, and aloes. The surface is interspersed with numerous small isolated hills; only a comparatively small portion is under cultivation, for want of water. The most northern part of the plain, or the narrow tract between the base of Mount Carmel and the Mediterranean, has a still better soil, and, where cultivated, produces wheat, barley, and cotton; but a great part of it has been converted into a swamp by the rivulets descending from Mount Carmel, and not finding their way into the sea owing to a series of sand-hills which have been thrown up along the shore by the south-west winds, which prevent their discharge. These swamps make rich pasturage for cattle.

5. Mount Carmel is noticed in a separate article. [CARMEL.]

6. Between Mount Carmel and the north-east corner of the table-land of Judæa, which comes close up to the Lake of Tabarieh, extends the plain of Ebn Omer, the ancient plain of Esdraelon. At its eastern extremity, near the mountains on the banks of the Lake of Tabarieh, it is only from 5 to 6 miles wide; and in the middle of it rises a round isolated summit, Jebel Tor, or Tabor. Farther west the plain widens, and between Nazara (Nazareth) and Jenin it is nearly 15 miles wide. Its extent from east to west probably does not exceed 15 miles. At the foot of Jebel Tor the surface is 466 feet above the sea; but it lowers rapidly to the westward, so that the greater part of it has a very moderate elevation above the sea-level. The Nahr-el-Mekana (the ancient Kishon), which traverses the plain, inundates the adjacent country after the heavy rains, and converts it into a swamp; but the swamp supplies good pasture for cattle, which in this plain are of a larger size than in any other part of Syria. Though the soil is of considerable fertility, only a small portion of this tract is inhabited. Corn and cotton are grown. Near the base of the hills and mountains surrounding the plain there are forests of evergreen oak, and in these parts there are also plantations of fruit-trees.

7. To the north of the plain of Ebn Omer extends the hilly region of Galilee, which is the most fertile part of southern Syria. The surface presents great varieties. The hills rise with gentle acclivities, and subside into plains several miles in extent, or are separated by

wide valleys. The highest hills lie west and north-west of Nazara, which attain an elevation of from 1700 to 1800 feet above the sea. The town of Nazara is in a flat valley on the declivity of a hill, 876 feet above the sea-level. The whole region seems to be fit for cultivation, and a considerable portion of it is cultivated, though there are extensive tracts, especially in the smaller valleys, which are covered with forest-trees. Corn and cotton are extensively grown, and form considerable articles of internal commerce. The olive- and fig-trees cover considerable tracts. Date-trees do not succeed.

The country west of the southern valley, between Safed and Sur, is thus described by Dr. Robinson: After having crossed three valleys, a wide plain is entered by a considerable ascent. Volcanic rocks are dispersed over it, and they increase in number towards the north-west, until they cover the whole surface of the ground. In the midst of this plain is a depression, which seems to have been the crater of a volcano; the lowest part of it is occupied by a lake. The whole tract is entirely barren. From this high ground a descent leads into another basin-like plain of smaller extent, which is cultivated and surrounded by bushy hills, and separated by a valley from a high undulating table-land, the soil of which is fertile and cultivated, and which is inclosed by swelling hills covered with shrubs and trees. So far the country is drained by water running to the Bahr-el-Houleh. A higher ground, interspersed with hills, but otherwise presenting an almost level tract on the top, forms the watershed between the Bahr-el-Houleh and the Mediterranean. This tract is covered with dwarf oaks. The remainder of the country presents a succession of wooded hills and valleys, of which the cultivated portion is small, the whole being employed as pasture for cattle, which are so numerous, that butter is here used instead of oil, which is the case in no other part of Palestine. The hills are much more thickly wooded than in any other part of southern Syria west of the Great Valley, and fire-wood is a considerable article of export from Sur, to which it is brought from this country. In approaching Sur, an extensive undulating and well-cultivated region is passed, which is 1200 to 1500 feet above the sea-level. The slope from this high ground to the Mediterranean presents numerous ridges and valleys opening towards the sea, in which there are woods of prickly oak, maple, arbutus, and sumach, and extensive plantations of tobacco.

8. Along the Mediterranean extends the Plain of Akka, which begins on the south at the base of Mount Carmel, and extends northward to Ras-el-Abiad, a distance of more than 20 miles. Between Mount Carmel and the town of Akka (Acre) it may be four or five miles wide, but farther north it rarely exceeds two miles in width. The southern and wider portion has a sandy soil in the vicinity of the sea, but farther east it is tolerably fertile and moderately cultivated. In the northern district there are some stony tracts, though in general it is stated that the country possesses a considerable degree of fertility, but nearly the whole is uncultivated.

9. We pass to the east of the Southern valley. The most southern part of Syria is occupied by the extensive table-land of Petraea, which contains the mountain regions of Shera and Belka, which inclose the Wady Arabah, the Dead Sea, and the Ghor on the east, and also an extensive plain lying east of these regions, and continuing in that direction to the desert of Arabia. The Syrian Hadji road runs along the eastern declivity of the mountain regions of Belka and Shera, having on the east a continuous chain of hills called El-Zoble: thus the road traverses a long valley, in which, wherever there is water, wheat and durras are cultivated, and extensive plantations of vines are found. The El-Zoble range terminates on the south at the source of the river Modjeb, and farther south the Hadji road lies within the plain; but durras and barley are grown only at a few places, though in several other places, especially at Maan, there are large plantations of pomegranates, apricots, and peaches; with the exception of these isolated spots along the road, the plain is only used as pasture-ground by the Beduins.

The mountain region of Shera extends from Jebel Hesma to the river Modjeb, from 29° 40' to 31° 30' N. lat., between the Hadji road on the east and the Wady-el-Arabah on the west, and occupies about 20 miles in width. When seen from the Wady-el-Arabah it has the appearance of a high range, at least 1000 feet higher than the mountains which inclose the Wady on the west, or about 3000 feet above the level of the valley: but when seen from the east, or the great plain, the mountains appear only as hills a few hundred feet elevated above the level of the plain, which shows that the great plain of Petraea is also at a considerable height above the sea. The mountain region of Shera comprehends three districts, of which the southern properly is called Shera, that in the centre Jebel, and the northern Kerek. The southern part of this region consists of high ridges running generally from south-east to north-west, and separating deep and in some instances wide, depressions from one another. The largest of these depressions is that called El-El-Hoyyer, which is upwards of 12 miles across at its eastern extremity, but it is narrower towards the west. The surface is rocky and uneven, and it is intersected by numerous glens and by three or four valleys, watered by rivulets, which unite and flow into the Arabah. This basin is noted for its excellent pasture. Villages are rather numerous in these depressions, and are mostly inhabited by Beduin tribes, who have applied themselves to agriculture. They cultivate wheat, barley, and durras, and

their orchards contain apples, apricots, figs, pomegranates, olive- and peach-trees, and numerous vines. Dried figs and grapes constitute the principal articles of export, together with soda. The rivers which traverse this region generally contain water even during the summer, but it is only in winter that the water reaches the valley of the Arabah. The climate of this mountain region is extremely agreeable. The air is pure; and though the heat is very great in summer, and increased by the reflection of the sun's rays from the rocky sides of the mountains, yet the temperature never becomes suffocating, owing to the refreshing breeze which generally prevails. The winter is very cold, deep snow falls, and the frost sometimes continues to the middle of March. This part of Syria would be much better cultivated and more populous if the inhabitants were not exposed to frequent incursions of the Beduins of the eastern plain.

The mountain region of the Belka, the ancient Bashan, still abounding in pastures and woodlands, extends from the river Modjeb on the south to that of Zerka on the north, or from 31° 30' to 32° 20' N. lat. Its width between the Dead Sea and the Ghor on the west, and the Hadji road on the east, rather exceeds 40 miles. The eastern district, or that contiguous to the Hadji road, is little elevated above the road, and constitutes a barren sandy or rocky plain, most parts of which are interspersed with numerous low and isolated hills. Towards the north the plain has a chalky or clayey soil, and is covered with a rich verdure in winter. The western districts consist of a succession of ridges and deep valleys opening into the Dead Sea or the Ghor. The ridges occupy a much larger space than the valleys, and are generally level on the top. In a few places however high hills rise above them. The upper part of the ridges is bare of trees, and generally covered with flints. The narrow valleys between them are always wooded at the bottom, and sometimes on their declivities.

The northern district, or the country north of 32° N. lat., is an extensive mountain mass, whose highest part is in the middle of the tract, and is called *Jebel Jelaad* (Gilead). This higher ridge extends about ten miles from east to west, and near its most elevated summit, *Jebel Oba*, is what is called the tomb of the prophet *Hosea*, which is a place of pilgrimage for Turks and Christians. This mountainous country is almost entirely covered with high trees; oak, wild pistachio-trees, and many others not known in Europe. In scenery it resembles a European country. It has numerous springs and small rivers; some of the rivers run underground, as the mountains consist of limestone. On the southern declivity of this tract, and in the vicinity of the town of *Szalt*, are the only tracts in the Belka which are under regular cultivation, though some other places are occasionally sown with *dhurra* by the wandering Beduins. The numerous and extensive ruins show that cultivation was formerly carried on here to a great extent, and probably has been discontinued on account of the frequent incursions of the nomadic tribes who live to the east. At present the Belka is considered the best pasture-ground in Southern Syria; and the most powerful tribes of the Beduins are frequently at war with one another for the possession of this region. Wheat, barley, and *dhurra* are cultivated. The vineyards are extensive near *Szalt*. *Sumach* and *soda* are collected. The climate of the Belka is as pleasant as that of the *Shera*, and the winters are as cold.

10. The *Haouran* is to the east of the *Ghor*. Along the valley it extends from 32° 21' to 32° 45' N. lat., but where it borders on the Syrian desert, which lies between it and the valley of the *Euphrates*, it advances as far north as 33° N. lat. It consists of two mountain-regions, the *Jebel Ajelun* on the west, and the *Jebel Haouran* on the east, and a plain which lies between the mountain-regions.

The *Jebel Ajelun* extends about 80 miles south and north, and about as many east and west. It is the most mountainous district of Southern Syria, and the best cultivated to the east of the southern valley. The highest part of the mountains is towards the south, north of the river *Zerka* (the ancient *Jabbok*), where the mountains of *Moerad* and of *Jebel Ajelun* rise much above the *Jebel Jelaad* of the *Belka*. The whole surface is a succession of mountain masses and valleys, and the valleys are rather large: the region is abundantly watered by streams, which either originate in this region or traverse it in its width, flowing from the plain of *Haouran* to the *Jordan*. Wheat and barley are extensively cultivated in all the lower grounds, and in some places on terraces made on the declivity of the mountains. There are numerous plantations of olives and vines. The orchards contain pomegranates, figs, lemons, oranges, and other fruit-trees. Every kind of vegetable is grown. The climate of the valleys is very hot in summer. The thermometer rises to 100° in the shade. The sides of the mountains are chiefly covered with wood, consisting of oak, wild pistachio, walnut-trees, and several kinds not found in Europe.

The Plain of the *Haouran*, which extends east of the *Jebel Ajelun*, is a level, the northern part of which is frequently interrupted by isolated hills, which however are less numerous towards the south, and at last disappear entirely. These southern districts have a very sandy soil, and are almost uninhabited. But the northern districts have a soil consisting of a fine black earth, which possesses a considerable degree of fertility, but is very little cultivated. A village is built at the foot or on the declivity of almost every hill, but very few of them are inhabited. It frequently happens that these habitations are taken possession of by some wandering peasant for a short time.

The *Haouran* peasants do not fix themselves in one place: they wander from one village to another, and they find commodious dwellings in the ancient deserted houses. They are chiefly induced to change by the exactions of the Beduin tribes, who are considered the true proprietors of the plain. During the winter the plain produces excellent pasture for the herds of the Beduins. There are no trees. The cold in December and January is severe.

The *Jebel Haouran* is much less extensive than the *Jebel Ajelun*. It extends from 32° 25' to 33° N. lat., but no part probably is more than 12 miles across. It is surrounded by plains, which are lower than the base on which the mountains rise; though the cold of the winter proves that they are at a considerable elevation above the sea. The mountain region is covered with several ridges running in different directions. The highest part of the mountain-system is near 32° 40' N. lat., where the *Kelab Haouran*, a summit in the form of a cone, rises considerably above the lower ridge on which it stands. It is wooded on the north and west, but bare on the east and south; and this observation applies to the whole mountain-region. In its present state only the northern and western base of this region are inhabited and cultivated, and cotton and tobacco are extensively grown. Wheat, barley, *dhurra*, and beans are cultivated. The wood with which the mountains are clothed is only stunted oak. In the mountains there are extensive pasture-grounds, even where there are no trees, and a great number of uninhabited villages and towns occur, the houses of which are generally in a tolerable state of preservation. East of the *Jebel Haouran* is the Syrian desert.

Central Syria extends from 33° 10' to 34° 40' N. lat. Within its limits are *Libanus* and *Antilibanus*, and the southern and highest portion of the northern valley. To the east of the *Antilibanus* is the elevated plain of *Damascus*.

1. *Mount Libanus*, called by the natives *Jebel Libnan*, constitutes a continuous range of mountains, which begins a little south of 33° 20' N. lat., and, running to the east of north, terminates near 34° 40' N. lat., with a ridge of hills called *Jebel Shara*. The northern portion of the range is called *Jurd* (that is *Jebel*) *Baalbec*, and the southern *Jebel Sunin*. As the higher part of the range is destitute of trees, it is considered that its average elevation above the sea must be at least 8000 feet. The highest part of it occurs between 34° 10' and 34° 15' N. lat., and is called *Jebel Makmel*. It rises to more than 12,000 feet above the sea-level, and is covered with snow all the year round. The highest part of the range, which passes over the range to the east and north of the *Jebel Makmel*, is 7590 feet above the sea. This range of mountains, with its declivities extending eastward and westward, varies between 12 and 18 miles in width in a straight line, of which extent less than one-fourth lies on the east side of the highest crest, so that on this side the declivity is much steeper than on the west, where its offsets generally approach the shores of the Mediterranean and in a few places, as north of *Beyrut* and at *Ras-el-Shakka*, come close to the water's edge. On both sides of the range a terrace occurs somewhat about the middle of its height, which divides the Upper and Lower *Libanus*. The Upper *Libanus* usually presents only steep declivities, either entirely bare, or clothed with a scanty vegetation, but a few spots have a fine growth of grass, and in summer they are used as pasture-ground by the mountaineer Arabs who visit this place. The level ground which separates the Upper *Libanus* from the Lower is also generally without trees, but always covered with shrubs and grass. It contains small groves of cedars, not far from the northern base of *Jebel Makmel*, more than 6000 feet above the sea-level.

The Lower *Libanus*, to the west of the range, is one of the most interesting countries in Asia. That part of it which extends from *Beyrut* (33° 50' N. lat.) to *Tarabloc* (34° 25' N. lat.) is called *Kesrawan*, the most southern part of which is entirely in possession of the *Maronites*. The *Kesrawan* is very well watered. The water-courses however lie in very narrow and deep valleys, the sides of which rise with a steep ascent several hundred feet above the narrow level at the bottom. As these water-courses are very numerous, the ridges between the valleys are very narrow, and there is no level on their tops. The valleys, even where widest, never exceed a mile in breadth; but every cultivable spot is turned to account. The inhabitants build terraces on the declivities of the mountains to obtain a space of level ground, and to prevent the earth from being swept down by the winter rains, and at the same time to retain the water requisite for the irrigation of their crops. On these terraces and in the level spots of the valleys there are orchards, mulberry-plantations, vineyards, and fields of *dhurra* and other grain. The silk which is collected in these places is not inferior to any in Europe, and constitutes the principal article of commerce. The lower ranges and hills, with which the offsets of the *Libanus* terminate, are covered with plantations of olive-trees, but the narrow plain along the shores of the sea is generally not cultivated, except at the very base of the hills. There are however some small groves of date-trees. The higher parts of the ridges which separate the valleys are generally wooded with fir-trees.

The eastern declivity of *Mount Libanus* differs greatly from the western. It is furrowed by ravines, in which the water descends only during the rains. This part of the Lower *Libanus* is covered with

low oak-trees. On the narrow level plain which divides the Lower Libanus from the higher part of the range are some cultivated spots; other spots are planted with walnut-trees. Higher up the mountain is very steep, and vegetation scanty.

2. The Northern Valley, as far as it is included within Central Syria, extends along the eastern base of Mount Libanus in all its extent, or about 90 miles in length. South of Baalbec it is only from 2 to 8 miles wide. At Baalbec it is about 5 miles wide, and in the parallel of the northern extremity of the Antilibanus (near $34^{\circ} 25'$ N. lat.) more than 10 miles. It is naturally divided into two sections, as the waters of the southern districts run off to the south by the river Litany (the ancient Leontes), and the northern portion is drained by the Asy, or Orontes. The two river-basins however are not contiguous, for near 34° N. lat., and chiefly north of that parallel, is a tract about 12 miles in length, the waters of which do not reach either of these rivers, but are lost in the plain. This tract is the most elevated part of the valley; the town of Baalbec, which is built towards the southern border of it, is 3808 feet above the sea-level. The southern part of the valley (called the Bekaa) is watered by the Litany River, which rises about 5 miles south-west of Baalbec, in a small lake. The river has water all the year round, being supplied by several copious rivulets which descend from the western declivity of the Antilibanus. Where the valley terminates on the south, near the castle of Kalaat-el-Shkif, the river turns west, and reaches the Mediterranean a few miles north of Sur (Tyrus). The Bekaa is well watered and famous for its fertility; not more than a sixth part of it is cultivated; the greater portion serves only as pasture-ground for the Beduins and Turkmans, who pass the winter here, and ascend in summer to the upper declivities of the Antilibanus. The northern and wider portion of the valley is called Belad Baalbec. The soil of this tract is not much inferior to that of the Bekaa, but the proportion of cultivated land to that which is only used as pasture, or not used at all, is still less than in the last-mentioned district. Only a few villages occur in the middle of the valley, which, as well as the Bekaa, is destitute of trees; but there are numerous villages at the base of the mountains whence small rivulets descend and supply the means of irrigating the corn-fields and orchards.

3. The Antilibanus, which stands to the east of the valley just noticed, extends much farther to the south than the Libanus. It is divided into two portions by a long and narrow depression which occurs near $33^{\circ} 40'$ N. lat., and is called El-Bogaz (the Gorge). That portion of the range which lies north of the Bogaz, descends towards Belad Baalbec and the Bekaa with a very steep declivity, which is barren and destitute of wood except at a few places where rivulets descend in narrow glens: these glens are overgrown with trees. This part of the range has no great elevation. The highest point of the road which crosses the Bogaz from Beirut is only 3148 feet above the sea-level, and less than 1500 feet above the adjacent plain of the Bekaa. It does not appear that any part of the Northern Antilibanus exceeds 6000 feet in elevation.

The Southern Antilibanus attains a much greater elevation. At the distance of about 12 miles south of the Bogaz an extensive mountain mass, called Jebel-es-Sheik, is always covered with snow. This mountain-mass and its declivities cover a space of 20 miles from east to west. From the western declivity branches off a narrow ridge, which, towards the north, is called Jebel Arbel; but its southern prolongation, called Jebel Safed, terminates on the south with the elevated mountains which lie to the north of the town of Safed: its length is about 35 miles. South of the summit of the Jebel-es-Sheik lies an extensive mountain-tract, extending about 15 miles east and west, and as much to the south. It is mostly covered with thick wood, and only used as pasture-ground. From this mountain region a ridge runs southward, which is called Jebel Heiah, and which terminates with a hill, called Tel-el-Faras, in the elevated plain of Jolan, about 5 miles south of 33° N. lat. The two ridges of the Jebel Safed and of the Jebel Heiah inclose that part of the valley of the river Jordan which lies north of the Lake of Tabarieh, and is called Wady Seissaban. The road leading from Jerusalem to Damascus crosses the Jebel Heiah about 12 miles north of the Tel-el-Faras, and at this place it is perhaps not more than 500 feet above its base: but the plain on which it stands is from 3000 to 3100 feet above the sea-level. The mountains are covered with forests of small oak.

4. The Plains of Damascus lie on the eastern side of the Antilibanus, and extend as far south as the Haouran. They form an intermediate terrace between the mountain region and the low Syrian desert, which is farther east. At their southern extremity these plains extend to a distance of 70 miles from the range; but farther north their width is less. In the parallel of Damascus they are only 30 miles wide. North of Damascus the boundary diverges towards the east; but in these parts it cannot exactly be determined, as the desert sometimes approaches near the caravan road leading from Damascus to Aleppo, but generally remains at a considerable distance from it. It appears that many cultivable though uncultivated tracts occur as far east as Tadmor [PALMYRA], which is about 75 miles from the range of the Antilibanus.

The lowest part of these plains is about 12 or 15 miles east of Damascus, where an extensive lake, or rather swamp, occurs, called Bahr-el-Merdj, in which several rivers are lost that descend from the

eastern declivity of the Antilibanus, and from the Jebel Haouran, from north, west, and south. The most remarkable of these rivers is the Barrada, which brings down the waters collected on the eastern declivity of the Antilibanus between $33^{\circ} 15'$ and $33^{\circ} 50'$ N. lat. These waters unite at some distance from the foot of the range, in a wide depression of the plains, called El-Gutha, in which the town of Damascus is built, and which is the most productive spot in Syria, if not on the globe. Gardens and orchards, yielding all the fruits and vegetables of the most favoured parts of southern Europe, surround Damascus to the distance of several miles, the area which they cover being estimated at 130 or 150 square miles. The cultivated fields surrounding this forest of fruit-trees extend to a farther distance of some miles. The astonishing fertility of this tract is produced by the abundance of water, as the country is traversed by seven branches of the river Barrada, which always yield a copious supply of water for irrigation. As the town of Damascus is 2337 feet above the level of the sea, the climate is far from being so temperate in winter as is commonly supposed.

The most western portion of the plain between the southern extremity of the Jebel Heiah and the Jebel Ajelun, and from the Lake of Tabarieh eastward to the Hadji road, is called the Plain of Jalon. The ascent from the Lake of Tabarieh is very steep and long. The surface is uneven and undulating, and there are a few isolated hills. Several considerable tracts have their surface formed of rocks, which are commonly covered with a thin layer of earth, on which grass springs up after the rains, but which are quite bare at other times. Other districts have a fine soil, either black, gray, or red, and some produce rich crops. The greater part of them however is uncultivated and overgrown with a wild herb, on which cows and camels feed.

The plains extending east of the Hadji road, south of El-Gutha, are rather hilly in the northern districts, short and low ridges running in different directions. These parts contain several stony tracts, and others which might be cultivated, if water was abundant. The greater part is at present only used as pasture-ground. The southern districts, or those which approach the northern extremity of the Jebel Haouran, contain two extensive rocky regions, called Es-Szaffa, on the east, and El-Ledja, on the west, which are divided from one another by a wide valley called El-Lowa. The Lowa is traversed by the river Lowa, which originates in the Jebel Haouran and falls into the Bahr-el-Merdj. On its banks is a plain of considerable extent, which is covered with the most luxuriant herbage, and was formerly well cultivated, as is proved by the ruins of numerous villages and towns in the valley. But at present it serves only as pasture-ground for the Beduins, who occasionally cultivate some spots with dhurra.

That part of the Plains of Damascus which lies north of the Gutha is traversed by the road from Damascus to Aleppo. The road passes over two low ridges, which appear to be connected with the Antilibanus. The country through which it passes is in a few places covered with sand, but in general it has a rich cultivable soil, free from stones and sand, though, like all the plains of Damascus, it is destitute of trees and even of shrubs. Villages and cultivated tracts occur only at great distances.

Northern Syria, which lies north of $34^{\circ} 40'$ N. lat., differs in physical constitution from the more southern parts. A high mountain range runs along the Mediterranean. At the back of this is the northern portion of the Northern Valley, which is divided by a hilly tract, extending from south to north, from the Eastern Plains.

1. The Mountain Region of Northern Syria is divided into two portions by the lower course of the river Asy. The southern part, which comprehends about two-thirds of the whole, is known by the name of Jebel-el-Anzeyry, and the northern by that of Jebel Ahmar.

The Jebel-el-Anzeyry is divided from Libanus by a gap or depression, called El-Junie, which is about ten miles across nearly a dead level, swampy, and only used as pasture-ground by the Turkmans and Kurds. The Jebel-el-Anzeyry occupies with its branches the whole tract between the Mediterranean and the Northern Valley, and is in width about twenty miles or somewhat more, except towards the southern extremity where one of its offsets, Jebel Erbayn, branches off eastward, and terminates on the banks of the river Asy, near the town of Hamah. In this part the Jebel-el-Anzeyry is about forty-five miles wide. The highest part of the range lies in general close to the valley of the Asy, so that the space between it and the sea is filled up by numerous offsets, which sink down to low hills and inclose valleys of moderate extent. The principal chain terminates east of the town of Antakia, in the great bend of the Asy. Where it terminates it is connected with another chain of mountains, which rises a few miles north of the town of Latakia, and runs so close to the shores of the sea, that no road can be made along its western base. The declivities towards the sea are extremely precipitous and barren. It is the Mons Cassius of the ancients, and is now called Jebel Akrah. It attains an elevation of 5818 feet above the sea. The Jebel-el-Anzeyry nowhere exceeds 6000 feet above the sea-level. Its eastern declivity is generally very steep, and only covered with shrubs and low trees, but the western declivity is clothed with fine trees, and the wide valleys which lie between its offsets are cultivated or laid out in orchards and plantations of mulberry-trees.

Jebel Ahmar, or the northern portion of the mountain region, begins

on the Mediterranean, occupying the space between Ras-el-Khansir on the north, and Jebel Musa, the Mons Pierius of the ancients on the south. Near Ras-el-Khansir the summit called Jebel Keserik attains 5550 feet above the sea-level. From this summit the range runs north-east, but by degrees turns more to the north, so as to inclose the Gulf of Scanderoon on the east with a curved line. It joins the Alma Dagh about 10 miles north of 37° N. lat. Near 36° 30' N. the road between Scanderoon and Antakia traverses it, and the most elevated pass is 4063 feet above the sea-level. This range never exceeds five miles in width. The mountains generally descend towards the Gulf of Scanderoon with a gentle declivity, and approach near its shores, except towards the north, where a level tract about two miles wide intervenes, which gradually increases to the breadth of seven miles. This wider part is fertile and cultivated, and it is diversified with orange and lemon groves. The remainder is almost entirely uncultivated, but full of ruins.

2. The northern portion of the Northern Valley begins at the termination of Mount Libanus (34° 40' N. lat.) and Mount Antilibanus (34° 20' N. lat.). North of these places a level country extends across the whole breadth of Syria, from the Mediterranean to the Euphrates. It is quite destitute of trees; and though a great part of it is fit for cultivation, the extent of the cultivated tracts is small, which is mainly owing to the want of water.

The Jebel-el-Anzeyry begins in 34° 40' N. lat., and on the plain extending east of the river Azy a ridge of hills called Jebel-el-Aala rises near 35° N. lat. This last-mentioned ridge runs from south-east to north-west, and thus approaches the Jebel Erbayn, or eastern offset of the Jebel-el-Anzeyry, south of the town of Hamah, near 35° 5' N. lat. From this point the river Azy runs for 12 miles in a narrow valley, which is inclosed by rugged mountains, but it widens in some parts, and in one of these plains the town of Hamah is built. At the northern extremity of this valley the eastern ridge sinks down to the level of the plain, but two or three miles farther north it rises again under the name of Jebel Shaehabon, and here begins that fine valley which is called El-Ghab, and which is about thirty-five miles in length; its width is about five miles, but it grows narrower towards the north. The river flows near the base of the Jebel-el-Anzeyry, where it forms numerous marshes. In winter it inundates the level ground, through which it flows and leaves many small lakes. The valley is watered also by numerous rivulets. The villages are pretty numerous, and mostly built at the base of the mountains: they are surrounded by fields on which dhurra and wheat are grown. The remainder is used as pasture-ground for cattle and buffaloes. Large herds of buffaloes are kept in the swampy part of the valley. The wider valley of the Ghab terminates at Jebel Shogher, and hence the Azy runs northward in a narrow valley, which contains very little land fit for agriculture; but the sides of the mountains are covered with plantations of fruit-trees: those of mulberry-trees and olive-trees are very extensive.

Where the Azy emerges from this valley, and, turning north-west and west, flows along the base of the Jebel-el-Anzeyry, an extensive plain opens to the north, the ancient plain of Antiochia, now called El-Umk, which stretches to the base of the Alma Dagh. It is about 35 miles long, with an average width of 15 miles. Towards the middle of the plain is a deep depression, which receives all the rivers that descend from the mountains surrounding it on the east, north, and west, and form an extensive lake, called El-Bohhaire, the ancient Lake of Antiochia. It is about 12 miles long and 6 miles wide, and noted for its eels, which form an article of commerce. The country surrounding the lake rises in very gentle slopes towards the base of the Alma Dagh. The northern part of the valley is cultivated, and produces wheat, barley, and several kinds of pulse. The Lake of Bohhaire discharges its waters into the Azy by the Kara-su, which runs through the southern and lower part of the plain, which for the greater part of the year is nearly a swamp. No part of it is cultivated, and it is only used as pasture-ground.

The Umk constitutes the most northern portion of the Northern Valley, which is connected with the Mediterranean by the valley in which the Azy reaches the sea by a west-south-west course. This last-mentioned valley is nearly 30 miles long, and from 4 to 6 miles wide between the Jebel-el-Anzeyry and the Jebel-el-Ahmar. The river runs near the base of the Jebel-el-Anzeyry, and on its northern banks is an undulating country, generally well cultivated. Much tobacco is grown, and the plantations of mulberry-trees are extensive: other fruit-trees also abound. The Azy, from its source, about 12 miles north-east of Baalbec, to its mouth runs above 200 miles. After having entered the plain north of the mountain ranges, it falls into a lake called Bahr-el-Kades, which is about 6 miles long and 2 miles wide. The river is not navigated, but it is said that it could be easily rendered navigable for barges to a distance of 27 miles above Antakia. Its mouth is obstructed by a bar, over which there is from three and a half to nine feet of water in winter.

3. The Hilly Region, which extends to the east of the valley of the Azy and of the El-Umk, from the town of Hamah to the base of the Alma Dagh, may occupy about 10 miles in width, south of 36° 10' N. lat., but where it is contiguous to the El-Umk it is more than twice as wide. The southern portion has somewhat the form of a range, the limestone rocks rising to a considerable elevation, and inclosing valleys; but many of these hills are only covered with bushes, and

the arable grounds are not extensive. Barley and dhurra are grown. Vines are much cultivated, and grapes and debs are sent to Aleppo. The northern portion of the Hilly Region is an undulating country on a large scale. The limestone soil absorbs all moisture, and there are no watercourses. The country however is rather fertile, and yields good crops of wheat and other grain, and cotton of excellent quality. On the hills there are plantations of fig-trees and olive-trees.

4. The Eastern Plains occupy about two-thirds of the surface of Northern Syria, and extend from the Hilly Region to the banks of the Euphrates. They are divided into two parts by a ridge of low hills, the western part of which is called Jebel-el-Sis and the eastern Jebel-el-Has. This ridge is near 35° 50' N. lat., and appears to extend from the hills north-west of Hamah to the vicinity of the Euphrates. The southern part of the plain contains in the west large tracts of good soil, which cannot be cultivated for want of water; towards the east it gradually passes into a desert, which is divided from the Euphrates by a wooded tract several miles wide, and called El-Zawl, or Gharabat.

The northern part of the plain is of a different description. It is traversed by three rivers, two of which rise on the southern declivity of Alma Dagh, and run southward. The river *Sajur* drains the north-eastern portion of the plain. It rises north of the town of Aintab, brings down a great volume of water from the mountains, and falls into the Euphrates about 20 miles below Bir, after a course of about 80 miles. The *Kowak*, or *Kott*, also called the River of Aleppo, rises in one of the great offsets of the Alma Dagh, and runs with numerous windings through the plain southward, until, in approaching the Jebel-el-Has, it is lost in swampy ground, called El-Matkh. The third river, called *Zehab*, or *Duhab*, rises in a ridge of hills which run west and east, and terminate on the banks of the Euphrates south of the mouth of the Sajur. These hills compel the last-mentioned river to join the Euphrates. The *Zehab* runs southward, and after a course of about 40 miles falls into a salt lake called El-Sabkh, which is surrounded by low rocky hills. The lake is about 6 miles long and 2 miles wide. After the rains it inundates the narrow strip of land which in summer lies between its banks and the rocks; and when the water has been evaporated by the heat of the summer this narrow strip is covered with pure salt, in some places two inches thick. This salt is collected in the month of August, and extensively used over a great part of Syria. The surface of the plain is far from being level. Short ridges of low hills occur at several places, especially near Aleppo, the plain of that town being inclosed by such ridges on three sides. When the plain extends in a level, or in slight undulations, as is mostly the case, isolated hills, called 'tells,' which some consider to be artificial, are frequent. In their neighbourhood there are wells and villages. East and south of Aleppo the soil of the plain is very stony. West and south-west of Aleppo the soil is better, especially in the neighbourhood of the hilly range, where it yields abundant crops of wheat and other grain. To the north-west and north of Aleppo the soil is indeed stony, but the earth is deeper, and cultivation is rather extensive. The best part of the plain appears to be that which is contiguous to the road leading from Aleppo to Aintab. These plains are about 1000 feet above the sea-level, except near the Euphrates. Between Aleppo and Aintab the surface of the *Kowak*, at Toybeak, is 1263 feet above the Mediterranean; and that of the *Sajur*, farther east, 1363 feet. The Euphrates, below Bir, is only 628 feet above that sea.

In the plains the winter lasts from the 12th of December to the 20th of January. There is generally some slight frost; snow seldom rests more than one day on the ground. In February the vegetation is vigorous, and the trees are in blossom; but the spring soon passes, and at the end of May nearly all the smaller plants are dried up. From that time rarely a cloud passes over the clear sky, and the heat is very great. West winds are cool, east winds suffocating. The first rains occur about the middle of September, and are followed by settled and pleasant weather, which lasts from twenty to thirty days; but towards the end of November the later and more heavy rains set in, and continue to the beginning of the winter.

5. The Alma Dagh constitutes a portion of that extensive mountain range which the ancient geographers called Taurus. The Alma Dagh is the ancient Amanus. It lies along the boundary of Syria and Anatolia, and its crest is considered as the boundary between these two countries. The range occupies in width about 30 miles, of which the larger portion belongs to Anatolia. The mountains are very precipitous, and can only be traversed by beasts of burden in a few places. The most frequented road runs from Aleppo due north to Aintab, and thence over the Alma Dagh to Kaisariyeh and Angora. There are some mountain roads farther west, which are noticed in the article AMANUS. These mountains are well wooded. Many thousand acres are covered with large cedars, and in other places there are firs and juniper trees.

Products.—Most of these have been already incidentally mentioned. They comprise wheat, barley, dhurra, spelt, some rice, lentiles and other pulse, artichokes, melons, cucumbers, capsicum, potatoes. Among other products are—cotton, hemp, silk, madder, indigo, sesamum, castor-oil, tobacco, &c. Of fruits there are figs, olives, mulberries, grapes, almonds, apricots, peaches, pomegranates, oranges, lemons, dates, &c. Vineyards are numerous in the mountainous

districts and on the table-land of Judæa. The wine of the Libanus is of excellent quality. Zakkum and storax are grown in gardens. The most remarkable trees that are partly cultivated and partly grow wild are—sycamore, carobs, Indian fig, mulberry, and pistachio-trees. The mountain forests, where there are any, consist of cedars, firs, and pines. On the table-lands grow dwarf-oaks, which produce the best galls known; there are also the aserol, the walnut, the arbutus, the laurel, the terebinth, and several kinds of junipers. A good deal of scammony and sumach is gathered about Mount Libanus.

The domestic animals comprise horses, cattle, asses, sheep, and goats. Few horses are kept by the agricultural population; but the wandering tribes, the Arabs, the Turkmans, and Kurds, pay great attention to the breed of horses. The Arabian horses are noted for beauty and speed. The number of cattle is comparatively small, and, except in a few places, of small size. The asses and mules are of a large breed, and they serve as substitutes for horses in the transport of goods. Sheep and goats are very numerous. In Northern Syria that species is kept which has the large broad tail. Camels are found everywhere, even on Mount Libanus. Buffaloes are only found on the sea-coast between Beyrut and Tarablous, and in the Wady Ghab. Those which are kept on the sea-coast are large, and not inferior to those of Egypt.

Among wild animals, jackals, foxes, and hyenas are frequent in some parts of the desert mountains. There are bears on Mount Libanus and Antilibanus. Wolves are only found in the forests of Alma Dagh. Wild boars are very numerous in many parts. Deer are met with on the Alma Dagh and near Mount Tor, and in the desert parts are several kinds of antelope. In the mountains of the Belka the bouquetin (*Capra ibex*) is said to be very numerous. Hares and porcupines abound, and the *Dipus jerboa* is common in the southern deserts. There are several varieties of eagles. Partridges and pigeons abound in many parts, especially on Mount Libanus. In the mountains east of the Southern Valley there are immense numbers of a bird called katta, which is considered to be the Tetrao Alkatta. Several kinds of fish and shell-fish are found in the Mediterranean, but not in large quantity; but a considerable fishery is carried on in an inland lake of the Ghab, where a fish, called black fish (*Macropteronotus niger*), is so abundant, that annually, between October and January, a great quantity is taken, cured, and sent to remote places. This fish is from five to eight feet long. Fish are also very abundant in the Bohhaire Lake. The tortoise occurs frequently on the table-land of Judæa, and turtles in the Barrada. None of the snakes are considered to be poisonous. Bees are very abundant on Mount Libanus, whence wax and honey are exported. The rearing of silk-worms is carried on to a great extent on the mountainous tracts near the coast, and silk constitutes the most important article of export from Syria. The locusts frequently lay waste the fields; the Arabs eat them, and salt them for food. There are no metals found in Syria except iron, which is worked in the Kesrawan in Mar Hanna, south-east of Beyrut, where also coal has been discovered. Burckhardt found iron and quicksilver at the western base of Jebel-es-Sheik. Salt is got from the lake called El-Sabkh, and also from the sea-water of the Mediterranean. In the Tyh-Beni-Israeli, and at the southern extremity of the Dead Sea, there are mountains almost entirely composed of rock-salt. Bitumen, or asphaltum, is collected on the west shores of the Dead Sea. Tacitus ('Hist., v. 6) speaks of asphaltum being collected on the Dead Sea. It constitutes an article of export. In the northern Ghor pieces of native sulphur are found at a small depth beneath the surface.

Inhabitants.—The population of Syria consists of agricultural and nomadic tribes. Nearly all the Fellahs, as the agricultural population of Syria is called, belong to one race, resembling in the structure of their body the Beduin Arabs, and speaking also the Arabic language. The Fellahs are divided, according to their religion, into Christians, Jews, and Mohammedans. The Jews are numerous in Southern Syria, west of the southern valley, but they are rarely found east of that valley, or in the other parts of the province. They are most numerous in the vicinity of the five holy cities—Jerusalem, Tabarieh, Safed, Nablous, and Khalil (Hebron). The Christians are found everywhere. Even in the Haouran the Christians constitute one-fourth of the agricultural population. They are either of the Greek Church or Roman Catholics. Among the Roman Catholics are included all religious denominations who acknowledge the authority of the Holy See:—the Latins, who use the Roman liturgy, and have a patriarch at Jerusalem, and numerous convents there and in different parts of the Holy Land; the Melchites, or United Greeks, who have a patriarch at Damascus, and eight suffragan bishops; the Maronites, who are Catholics, live exclusively on the western declivity of Mount Libanus, in the Kesrawan, and are a very industrious people; the United Armenians, who have a patriarch at Bezumma in the Libanus, and a bishop in Aleppo; and the Syrians, or United Chaldeans, who have a patriarch at Aleppo. The Maronites, who number about 140,000, have a patriarch at Kanobin, in the Kesrawan, and seven suffragan bishops.

There are also three religious sects in Syria which are neither Christians nor Mohammedans—the Druses, Anseyries or Ansairians, and the Imanlies. The most powerful of them are the Druses, who number about 80,000; they pay tribute to the Turkish pashas, but otherwise are independent, and their chief may be considered as the

master of a great part of Mount Libanus, with the adjacent districts of the Bekaa. The Anseyries, or Ansairians, inhabit the mountain region which has received its name from them, and which lies between the lower course of the Azy and the Mediterranean. They are likewise an industrious people. The Imanlies are few in number, and inhabit some villages in the mountains of the Anseyry. They are considered to be a remnant of the Assassins and Ismaelitea.

The nomadic tribes consist of Arabs, who are dispersed over the country as far north as 36° N. lat., and Turkmans and Kurds. The Arabs, with the exception of the Anneze tribe, do not live exclusively on the produce of their herds and flocks. They also cultivate small spots of ground, but they change their abode according to the season and the growth of pasture, taking to the mountains in summer and to the plains in winter and spring. There are some Metualis Mohammedans of the sect of Ali in the southern parts of the Libanus and about Bealbec. They are a settled people, and number about 30,000. They oblige the settled agricultural portion of the population to pay them a tribute for not laying waste their fields and carrying off their cattle. But even on the table-land of Judæa the peasants are generally tributary to the Arab emira. There is probably no part of Syria in which this state of things does not exist, except in the country of the Druses and Maronites, and in the immediate neighbourhood of some great towns.

The Anneze is the only tribe of Beduins in Syria who never cultivate the ground, but who live exclusively on the produce of their herds of camels, sheep, and goats. They wander about in the Syrian and Arabian deserts, and pass the winter there, which lasts from the beginning of October to the end of April, when the rains cause grass and herbs to spring up in many parts of the deserts, on which their flocks feed; but they enter the limits of Syria at the beginning of May, and remain there till after September. At this time they approach the caravan road leading from Aleppo to Damascus, and the Hadji road leading from Damascus to Mecca. They come to these places for a two-fold purpose, water and pasture for the summer, and to exchange their cattle for corn as winter provision. If they are at peace with the pasha of Damascus they encamp quietly among the villages near the springs or wells.

The most powerful of the other Arab tribes are the El Howeytat and the Beni Neym, who live in the mountain region of El-Shera and in the adjacent plain; the Beni Szakher, who are in possession of the rich pasture-grounds in the Belka, and likewise visit the plain of Haouran; the Adouan, who are found in the Jebel Ajelun; and the Fehily and Serdie, who move about in the plain of Haouran and the mountains in their vicinity. All these tribes are only nominally dependent on the Turkish governor, and though they pay a small tribute, they levy much larger sums on the agricultural inhabitants of these countries.

The Turkmans and the Kurds are in almost exclusive possession of the elevated range of the Alma Dagh and the tracts at its base. The eastern districts of these mountains are occupied by the Kurds, and the western by the Turkmans. They descend from the mountains in winter, and spread over the plains to a considerable distance south of Aleppo. Some small tribes of both nations have settled on the northern districts of Mount Libanus.

The Turkmans are of the same stock from which the Turks are sprung. In the level parts of their country they cultivate wheat, barley, and several kinds of pulse. The cultivation is not carried on by the Turkmans themselves, but by Fellahs. The Turkmans remain with their herds in the Umk from the end of September to the middle of April, when they go to the mountains. They have horses, camels, sheep, and goats, and a few cattle. Their women, who have complexions as fair as any European women, are very industrious. They make tent-coverings of goats'-hair, and woollen carpets. They have also made great progress in the art of dyeing; they use indigo and cochineal, which they purchase at Aleppo. The brilliant green which they give to the wool is produced from herbs gathered in the mountains in summer. The Kurds who inhabit Syria are originally from Kurdistan. They possess the western portion of the Alma-Dagh, from which they descend in summer to the plains east of Aleppo. Most of these Kurds live in villages, and are occupied in agriculture and the rearing of cattle; but there is still a considerable number of families that change their abode according to the seasons, in order to procure pasture for their cattle.

Divisions and Towns.—Syria is divided into four eyalets, two of which, Akka and Tarablous, extend over the countries on the shores of the Mediterranean as far north as 35° 55' N. lat.; the third, Aleppo, occupies the most northern part, from the Mediterranean to the banks of the river Euphrates, and as far south as 35° 45' N. lat.; and the fourth, Damascus, the interior of the country south of 35° 45' N. lat.

1. The *Eyalet of Akka*, better known in Europe by the name of St-Jean-d'Acre, to which the eyalet of Gaza was added at the beginning of this century, occupies the whole coast from the boundary-line of Egypt to the Bay of Junie or Kesrawan (33° 55' N. lat.), and extends over the plain of Falastin, Mount Carmel, the plain of Ibn Omer, the hilly region of Galilee, the plain of Akka, and the Bekaa and Belad Bealbec. The most remarkable places from south to north are—Gaza [GAZA]. Jaffa, or Joppa [JAFFA]. Ramleh, or Ramah,

E.S.E. of Jaffa, lies in a fertile and well-cultivated plain; it has 15,000 inhabitants, who derive some advantages from the road from Joppa to Jerusalem, which passes through this town. *Kaisariyeh* [CAESAREA]. *Tantura* has a harbour for small boats, and carries on some commerce with Egypt, from which it receives rice and linens. It exports cattle and fruits. *Khaisfa* [CARMEL]. *Akka* [ACRE]. *Sur* is built on an isthmus about 400 feet wide, which is supposed to have been formed by the embankment that Alexander the Great made for the purpose of taking the ancient Tyre. The harbour has been filled up with sand, and the roadstead is unsafe, but it is better than that of either Akka or Saïda. The population amounts to 3000 individuals, most of whom gain their livelihood by fishing and agriculture. It exports tobacco, wax, and fire-wood. [TYRUS.] *Saida* [SIDON]. *Beirut* [BEIRUT]. *Junch* is a small town in the Kesrawan with a landing-place for small boats. It carries on some commerce with the island of Cyprus. In the interior are the following towns:—*Nazareth*, or *Nazara*, which is built in a beautiful valley that opens into the plain of Ibn-Omer, and is one of the most fertile and best-cultivated districts of Galilee. It has about 2000 inhabitants, and a fine church. *Tabarieh*, the ancient *Tiberias*, is on the banks of the Bahr-el-Tabarieh, on a small plain surrounded by mountains. Towards the land it is inclosed by a thick and well-built wall. It contains about 4000 inhabitants, who have some commerce with the Beduins. It is a place of pilgrimage for the Jews, who constitute about one-third of the population; the remainder of the population are Turks, with the exception of a few Christians. *Seafed*, or *Safed*, nearly due north of Tabarieh, is a neatly-built town, situated round a hill, on the top of which is a Saracenic castle. It contains about 600 houses, of which about 150 are inhabited by Jews, who consider this one of their holy cities, and about 100 houses by Christians. The population is between 6000 and 7000. *Zahle*, in a narrow valley which opens into the Bekaa, at the eastern base of Mount Libanus, contains from 800 to 900 houses, and is almost exclusively inhabited by Christians, who make much cotton-cloth and some woollen stuffs. They have 20 dyeing-houses, and a considerable trade with the Beduins of the Bekaa. *Baalbec* [BAALBEC]. *Deir-el-Kamr*, the capital of the emir of the Druses, in a valley of Mount Libanus, is a considerable place eight or nine hours S.E. from Beirut. It has five or six thousand inhabitants, some of whom are Christians, for in the town are two Maronite and two Melchite churches. The town is built like a second-rate town in Italy. Some silk-stuffs are manufactured. The emir of the Druses resides in the castle of Breddin, about one hour from the town.

2. The *Eyalet of Turabious* extends along the sea-coast from the Bay of Junch to Cape Basit or Possid, about 12 miles S. from the mouth of the river Ary, and comprehends the northern and more elevated portion of Mount Libanus, the plain separating this mountain from the Jebel Anzeiry, and the largest portion of the last-mentioned range. The whole of it, with the exception of the plain, is fertile and well cultivated. It produces silk, tobacco, oil, fruits, galls, and wax, for exportation. The following are the chief places in this eyalet, from south to north:—*Meinet Berdia*, a small harbour, and a still smaller town, which has some commerce with Cyprus. *Jebail*, or *Jubel*, the ancient *Byblus*, is a small town, inclosed by a wall a mile and a half in circumference. It has a small harbour, and carries on some commerce with Cyprus. *Byblus* was famous for the birth and worship of Thammuz, or Adonis. The most ancient name of the place appears to have been *Giblah*. The land of the Gibletes was assigned to the Israelites, but they never got possession of it. There are remains of a Roman theatre, and many fragments of granite columns on its site. *Giblah* gave title to a Christian bishop before it fell into the hands of the Moslem. *Batrun*, the ancient *Bostrys*, is a town consisting of from 300 to 400 houses, mostly inhabited by Maronites. There is no harbour, but an artificial inlet has been formed in the rocks, which admits a few coasting boats. Excellent tobacco is grown along the shores of the Mediterranean. *Tarabious*, the ancient *Tripolis*, one of the most commercial places of Syria, is built on the declivity of the lowest hills of Mount Libanus, and is divided by a river, called Kadish, into two parts, of which the southern is the more considerable. The town is well built, and is much embellished by gardens, which are not only attached to the houses in the town, but cover the whole triangular plain between the town and the sea. It is supplied with excellent water by an aqueduct, which crosses the river upon arches. The population amounts to between 15,000 and 18,000. There are some large manufactures of soap for exportation. The harbour is about two miles from the town; it is called *El-Myna*, or *El-Minyeh*, and is itself a small town, inhabited by sailors and shipwrights. This harbour is formed by a line of low rocks stretching from the western side of *Myna* about two miles into the sea towards the north, but it is not safe in northerly winds. In a north-north-west direction from the harbour there is a line of small islands, the farthest of which is about 10 miles from the mainland. The exports consist of a large quantity of silk, sponges, soap, and alkali, to Anatolia, galls brought from the Anzeiry Mountains, yellow wax from Mount Libanus, madder from Hamah and Hems, scammony, and tobacco. *Tartus*, the ancient *Antaradus*, and perhaps also *Orthosis*, formerly a strongly-fortified town on the coast, nearly opposite the Isle of Ruah, retains some remnants of its old Phœnician walls and vast castle. The place is often mentioned in the history of the

Crusades. Here, as in many other places along the Phœnician coast, sepulchral excavations are numerous. *Antaradus* was rebuilt by the emperor Constantius, after whom it was sometimes called *Constantia*. It gave title to a bishop till the Saracenic conquest. Tasso calls the town *Tortosa*. It is now a small place. *Jebit* is a small town, in the neighbourhood of which much tobacco is grown, which is exported to Latakia. There is a small port and an ancient theatre here. *Latakiah*, or *Ladikiyeh*, the ancient *Laodicea*, stands on the northern edge of an elevated tongue of land called Cape Ziarst, which advances nearly two miles beyond the general line of coast. The houses stand partly in the midst of gardens and plantations, and most of them have flat roofs. The port, called *Scala*, or *Marina*, is about half a mile from the town, and separated from it by gardens and plantations. The harbour, which is well sheltered, except to the west, admits only vessels of 100 tons burden. The chief exports of the place are tobacco of excellent quality (most of which goes to Egypt), cotton, raw silk, and wax. The imports are rice from Egypt, wine from Cyprus, and assorted goods, especially hardware, from England. In Mount Libanus is *Kanobin*, a convent, the seat of the patriarch of the Maronites. In its vicinity are the famous cedars of Mount Libanus. About a mile and a half from the coast is the island rock of *Ruad*, on which the ancient Phœnician town of *Aradus* was built. *Aradus*, the *Arpad* of the Old Testament, was next in importance to Tyre and Sidon; it was founded by a colony from the latter. It continued to be a flourishing place through the whole course of ancient history till the reign of the emperor Constantine, when it was demolished and its inhabitants expelled by a lieutenant of the khalif Omar. The town was never rebuilt; but about 3000 inhabitants dwell on the island, which is only about a mile round. Part of the old Phœnician walls, and also the ancient cisterns, still remain. As in ancient times, the inhabitants draw their fresh water from subterranean springs.

3. The *Eyalet of Haleb*, or *Aleppo*, contains the northern part of the Jebel Anzeiry, the valley of the lower Ary, together with the Ghab, the Jebel Amar, the Umk, the Hilly Region of Northern Syria, and the Northern Plain. The western and northern portion is very fertile, and in many places is well cultivated; the eastern is partly stony and partly sandy, and for the most part a desert.

On the coast are the harbours of SCANDEROON and *Sweidiyah*, or *Suadeiah*. The latter is not far from the mouth of the river Ary, and has good anchorage, but is much exposed to western and south-western winds. Near it there is a large and scattered village of the same name.

In the valley of the river Ary is *Antab* [ΑΝΤΙΟΧΗΑ], and in the plain is the capital, *Aleppo*, or *Haleb* [ALEPPO]. To the south-west of Haleb, and near the base of the Hilly Region, is the town of *Eddip*, containing more than 1000 houses, some manufactures of cotton-stuffs, a few dyeing-houses, and a large manufactory of soap. It has a considerable trade with the fertile and well-cultivated district in which it is situated, which it provides with rice, coffee, oil, tobacco, and manufactured goods. *Antab*, a large town at the base of the Alma Dagh, is the subject of a separate article. [ALM-DAGH.]

4. The *Eyalet of Damascus*, or *Sham*, extends over the southern of the two great plains which occupy the north-eastern portion of Syria, over the plains of Damascus, the southern portion of Mount Antilibanus, the greater part of the Wady Seisaban and El-Ghor, the table-land of Judæa, the Haouran, and the mountain regions of the Belka and the Shera. There are Beduin Arabs in every district.

On the table-land of Judæa is JERUSALEM, Nablous, and Khalil *Nablous* (a corruption of *Neapolis*), on or near the site of Sichem, is situated in a valley between Mounts Ebal and Gerizim. About two miles east of the town is another valley called *Eri-Mukhna*. At the north-east base of Gerizim is the village of *Astar*, probably the ancient *Sychar*, close to which are Jacob's Well and Joseph's Tomb. Nablous is a large and well-built town, with about 14,000 inhabitants, who are Mohammedans, with the exception of about 200 Samaritans. The streets are narrow and roughly paved, but the houses are well-built with stone and dome-roofed. The town is well supplied with water by streams and by fountains which spring up in the valley between Nablous and Astar. Nablous is commonly said to occupy the site of the *Sichem*, or *Schechem*, of the Old Testament, which however Eusebius and St. Jerome say was a suburb of Neapolis; and St. Jerome also maintains that Sychar in St. John's Gospel (iv. 5) is a corruption of Sichem. Pliny and Josephus respectively give the native name as *Mamortha* and *Mabortha*, which Reland corrects from coins to *Mortia*. This last name the same writer says is the classical form of *Moreh*, and both names (*Moreh* and *Sichar*) he supposes to have been adopted by the Jews from the prophet Habakkuk's '*Moreh Shaker*,' 'teacher of lies,' and applied to the Samaritan city as the seat of error. Sichem is a very ancient site. Abraham sojourned in it on his first coming into Canaan, and built an altar in it. Jacob's connection with it is marked by the well. It fell to Ephraim, and was a Levitical city, and a city of refuge. Here was the tabernacle in the time of Joshua, who set up a pillar near it shortly before his death. Here Gideon defeated the Midianites, and Rehoboam was made king. The name Neapolis was given during the occupation of Syria by the Greeks, who probably extended the city to the westward on account of the abundant supply of water. Simon Magus practised his sorceries in Neapolis, and Justin Martyr was a native of the same

city. About 10 miles S. from Nablous is *Silvan*, the ancient *Skiloh*. *Khalil*, the *Hebron* of the Bible, and one of the holy cities of the Jews, is south of Jerusalem, not far from the place where the table-land of Judæa joins the Desert of El-Tyh. It contains about 3000 inhabitants, and has some glass-houses. Hebron was frequently the residence of Abraham, Isaac, and Jacob, who were buried here in the cave of Macpelah; the tombs are still shown. David, as king of Judæa, resided above seven years in Hebron. The town was taken and burnt by the Romans in the great Jewish war. Outside the town are two reservoirs, one of which is supposed to be the 'pool of Hebron,' mentioned in 2 Sam., iv. 12.

On the banks of the river *Asy* are the towns of Hamah and Hems. *Hamah*, the ancient *Epiphaneia*, lies on both sides of the river, and is partly built on the declivity of a hill and partly on a plain. It contains between 30,000 and 40,000 inhabitants, among whom are many rich Turkish families. Though the houses make no great show, they are well arranged and furnished. It is one of the principal places to which the Arabs resort to buy tent-furniture and clothes, and it has several manufactures; the abbas, or woollen cloaks, made here are much prized. There are four bridges over the river. Hamah retains almost unaltered its ancient name *Hamath*, which it bore in the time of St. Jerome. *Hems*, the ancient *Emesa*, situated higher up the *Asy*, at a short distance from the northern extremity of the *Bahr-el-Kades*, contains a population of between 25,000 and 30,000 individuals, and several manufactures. It is not so well built as Hamah. *Emesa* was celebrated for its Temple of the Sun. Heliogabalus was a priest of this town before he was raised to the imperial dignity by the Roman legionaries of Syria. Near *Emesa*, Aurelian defeated Queen Zenobia, A.D. 272. To the south-east of Hems, at the distance of nearly 100 miles, are the ruins of PALMYRA.

In the valley of the Upper Jordan, or *Seissaban*, are *Hasbeya*, *Rasheyat-el-Fukhar*, and *BANEA*. *Hasbeya* is built on the top of a mountain, and is a thriving place, with 700 houses, and manufactures of cotton-cloth for shirts and gowns, and a few dyeing-houses. In the vicinity are traces of quicksilver, iron-ore, and upwards of 25 bitumens, which supply an article of trade to Aleppo, Damascus, and Beyrut. *Rasheyat-el-Fukhar* is a village on the top of a mountain; it contains about 100 houses, each of which may be considered as a manufactory of earthen pots. They are moulded in very elegant shapes, painted with red earth, and form a considerable article of inland trade, especially in the eastern districts of Syria. *Damascus* is the subject of a separate article. [DAMASCUS.]

In the mountain regions east of the Jordan are the towns of Szalt, Kerak, Tafyle, and Maan. *Szalt*, which is nearly in the centre of the Belka Mountains, is situated on the declivity of a hill. It constitutes a republic, independent of the Turkish pashas, who have made several attempts to subjugate it, but without success. The population consists of about 400 Mussulman and 80 Christian families of the Greek Church. The greater part of the population is agricultural; a few are weavers; and there are about 20 shops, which furnish the Beduins who inhabit this region with articles of dress and furniture. Much sumach, which is collected in the mountains, is sent to Jerusalem for the use of the tanneries; and ostrich-feathers are taken by the Beduins to Damascus. In its neighbourhood, to the south-east, are the ruins of Amman, or Philadelphia; and to the northward is *Jebel Jelad*, the ancient Mount Gilead. North of the *Zerka*, the ancient *Jabbok*, and nearly in 36° E. long., is *Jerash*, in which are many ruins of Roman buildings—a triumphal arch, Corinthian temple, a Christian church, theatre, and amphitheatre. *Kerak* lies in the northern district of the *Shera* Mountains, and is built on the top of a steep hill, which is surrounded by a deep and narrow valley. It is inhabited by 400 Mussulman and 150 Christian families. Whilst Syria was subject to *Mehemet Ali*, *Szalt* and *Kerak* were subjected to a strict obedience to government by Ibrahim, but under the Turks the chiefs of *Kerak* are nearly independent. The population send sheep, goats, mules, hides, wool, and madder to Jerusalem; and provisions to the *Hadji* road, which is about 15 miles to the east of the town. *Tafyle* is in the centre of the *Shera* Mountains, on the declivity of a hill, in a country abounding in springs and rivulets, and full of plantations of fruit-trees. Figs, wool, butter, and hides are sent to Gaza. The town contains about 600 houses, but suffers much from the exactions of the *Howeitah* Beduins, the authority of the Turkish government being very small. The town of *Maan* stands on two small hills on the desert table-land which is east of the mountains of *Shera*. It consists of about 100 houses on both sides of the *Hadji* route, which divides the town. There are several springs, by means of which the extensive plantations of figs, pomegranates, apricots, peaches, and plums are watered. The town owes its existence to the *Hadji*-road, and derives considerable profit from the pilgrims by selling them provisions brought from other parts, especially from *Khalil* and *Gaza*. West of *Maan* are the ruins of *Petra*, and a little farther west, *Mount Hor*, now called *Jebel-Neby-Harun*.

Manufactures.—Syria is the most manufacturing country in Western Asia. The most manufacturing town is Damascus, famous for its silk stuffs, especially satin and silk damasks and brocades, cottons, linens, and leather. The manufacture of saddles, and horse- and camel-trappings, is also important. Other products of Damascene industry are—jewellery, works in gold, silver, copper, and iron;

sword-blades, tobacco, soap, and articles in ivory and precious woods: perfumes, balms, aromatic oil, sweet-scenting essences, confectionary, pastry, &c. [DAMASCUS.] The manufactures of Aleppo are small compared with those of Damascus, and mostly limited to cotton and silk stuffs, and gold and silver lace. It must also be observed that some branches of manufacturing industry are carried on in all the towns, and even in some villages, such as cotton-stuffs for gowns and shirts, the dyeing of cotton, mostly blue and red, tanning leather, and making soap. Such places however supply only the neighbourhood and the Beduins who resort to them for such articles, and they rarely if ever work for a distant market.

Commerce.—The imports consist of rice, hardware, some French tissues, indigo, cochineal, and coffee. Very little sugar is imported: the *debe*, an extract from grapes, being used as a substitute; and this article is manufactured in Syria to a great extent. The most important article of export to Europe is silk. Other less important articles are galls, olive-oil, sponges, fruits, and tobacco. The fruits, which are principally exported, are dates, raisins, figs, and pistachio-nuts. Madder is also exported to a moderate extent. There is some coasting trade between Syria and Egypt, Cyprus, and the south coast of Asia Minor. Egypt receives chiefly live stock and tobacco, for which it pays with rice.

The commerce between Syria and the countries to the east and north of it is very extensive. At all seasons of the year numerous caravans are on the road going or returning from these parts. This commerce is concentrated in Aleppo. Manufactured goods go from Damascus to Aleppo, whence they are carried to Antolia and Constantinople, and to Mosul, Baghdad, and Basra. Two well-frequented routes lead from Aleppo to Constantinople through Anatolia. The most western leads from Aleppo westward to Antioch, and thence through the *Ballan Pass* to Scanderoon, whence it runs along the shores of the Bay of Scanderoon to Adana and Konieh in Asia Minor. The eastern commercial route runs due north from Aleppo, and traverses the chain of the *Alma Dagh* between Aintab and El-Bostan, where it proceeds to Kaisariyeh. Two routes lead from Aleppo to Persia, which divide at Orfa in Mesopotamia. From Aleppo the road runs north-east to Bir, where the Euphrates is crossed, and from which place to Orfa it continues eastward. The northern road leads from Orfa to Diarbekr, where it passes the Tigris, and thence goes over a very mountainous district to *Bedlis* and *Van*, and from *Van* it continues to *Tabris*. The southern road on leaving Orfa passes through *Mardin*, *Nisibin*, and *Mosul*, where it crosses the Tigris, and whence it continues through *Kirkuk*, *Kirmanshab*, and *Hamadan* to *Teheran*. This road is also sometimes used by the Baghdad caravans as far as *Mosul*. But the most frequented caravan route between Aleppo and Baghdad runs from Aleppo in a south-eastern direction through the northern part of the Syrian desert, which it enters after leaving the lake of *El-Sabkh*. It reaches the Euphrates at *Annah*, and runs along the river to *Hit*, where it crosses the stream, and then goes due east to Baghdad, or continues south-east by *Hilla* to *Basra*. It may be unnecessary to state that, though these routes are sometimes called roads, it must be understood that there are no roads in the European sense in the Turkish empire.

History.—Syria was the Greek and Roman name for the district called in the Bible *Aram*. [ARAM.] The Arabian name is *Sham*. The name is said by some to be taken from *Sur*, an ancient name (and also the modern name) of Tyre. Others say it is a shortened form of *Assyria*; and indeed the two names, Syria and Assyria, are often used indifferently by ancient writers, who differ however as to the extent of Syria. In its widest extent, Syria included all the country to the west of the Euphrates, as far south as Egypt and Arabia, while on the north and west it embraced the greater part of Cilicia, Cappadocia, and Pontus, its boundaries on this side being the river *Halys* and the *Euxine Sea*. (Herod., i. 72; v. 49; Strabo, xvi. p. 787; Rennell, 'Geog. to Herod.') *Pliny* (v. 13) and *Mela* (xi. 1) make it include Mesopotamia and Armenia. It appears indeed that all the tribes of the great *Aramean* family were called Syrians, in the widest and most ancient sense of the word.

In the most usual application of the word, Syria was bounded as stated at the beginning of this article. The Syrians (not including the inhabitants of Phœnicia and Palestine under the name) derived their descent from *Aram*, the youngest son of *Seth*. (Gen., x. 22).

The earliest records of the state of Syria represent it as consisting of a number of independent kingdoms. Damascus was the most powerful city, and in some sense the capital of the country. Its kings were frequently engaged in war with the Jews. The conquests of *David* (B.C. 1055, &c.) brought these states into subjection to the kingdom of Israel; but they again became independent at the close of *Solomon's* reign (B.C. 975). From this time the kingdom of Damascus especially is frequently mentioned in connection with the history of the Israelites, and it appears gradually to have grown in power, and to have held supremacy over the other states of Syria (1 Kings, xx. 1), and even to have given the kings of Israel great trouble, till the reign of *Joash* (B.C. 845), who obtained considerable successes against *Benhadad* (2 Kings, xiii. 22-25). The last king of Damascus was *Resin*, who having engaged with *Pekah*, king of Israel, in war against *Ahas*, king of Judah, *Ahas* invited *Tiglath-Pileser*, king of Assyria, to attack Damascus, which he took, and carried the

inhabitants captive to Kir about the year B.C. 740. From this time Syria formed a part of the Assyrian, Babylonian, Persian, and Macedonian empires in succession.

After the battle of Ipsus (B.C. 301), Syria, with the exception at first of Coele-Syria and Palestine, fell to the share of Seleucus Nicator, and henceforth it became the central portion of the kingdom of the Seleucids, the usual abode of the kings being at its capital, Antioch. The empire of the Seleucids was destroyed, and Syria was declared a Roman province by Pompey in the year B.C. 65. The small district of Commagene was left for a time under its own princes. During the civil wars of Rome, Syria suffered much from the conflicts of the two parties, the power of native robbers, and the incursions of the Parthians, and it was not till the reign of Augustus that it became quietly settled as a part of the Roman empire. It was governed by a pro-consul, who commonly resided at Antioch. In the year A.D. 6, upon the banishment of Archelaus, Judæa and Samaria were added to the province of Syria, to which they henceforth belonged, with a short interruption during the reign of Herod Agrippa I.

Under the Cæsars, Syria was one of the most populous, flourishing, and luxurious provinces of the empire. It had a considerable commerce, and formed indeed the emporium which connected the eastern and western quarters of the world. Hadrian, upon his accession (A.D. 117), fixed the eastern boundary of the empire at the Euphrates, and henceforth the frontier province of Syria was exposed to repeated inroads, first from the Parthians, and afterwards from the Persians. The province was overrun and almost subdued by Sapor (A.D. 258), from whom it was rescued by the Arab Odenathus (261-264), who was raised to a share in the empire by Gallienus. Odenathus was murdered by a cousin or nephew, with the consent of his wife, the celebrated Zenobia, in 266. The attempt of Zenobia to establish an independent sovereignty in the eastern part of the empire led to her defeat and capture by Aurelian (273).

At the end of the 3rd century, and in the 4th, the Saracens, or Arabs of the Desert, began to appear sometimes in the legions, but oftener among the enemies of Rome. In the reign of Phocas, Chosroes II., after reducing Mesopotamia and the neighbouring states, crossed the Euphrates, reduced Hierapolis, Chalcis, and Beroea, and finally Antioch, which he almost completely destroyed in 611. Heraclius, who had obtained the empire in 610, took the field in 622 against Chosroes, who had in the meantime conquered not only Syria, but also Palestine (614), and had overrun Egypt and Asia Minor (616). In a series of brilliant campaigns, Heraclius repeatedly defeated Chosroes, and at last drove him beyond the Tigris (627), and Siroes, his son (and, by the murder of his father, his successor) made a treaty of peace with Heraclius (628), one of the conditions of which was the restoration of the 'true cross,' which had been carried into Persia after the sacking of Jerusalem in 614. But this brilliant recovery of the eastern provinces was only the prelude to their final loss under the same emperor.

Mohammed, at the head of the Arabs, had taken a few towns of Syria (630), and his successor, Abu Bekr, had scarcely mounted the throne when he sent a circular letter to the Arabian tribes, calling them to the invasion of Syria (632). A large army of Saracens assembled at Medina, whence they marched into Syria under the nominal command of Abu Obeydah, but virtually led by the fierce Khaled, 'the sword of Allah.' They first attacked Bosra, on the east of the Jordan, which was betrayed by the governor Romanus. They then laid siege to Damascus (633). The defence was obstinate; and in the meantime Heraclius had assembled an army of 70,000 men at Emesa, under the command of his general, Vardan. The armies met at Ainsadin—the Greeks were utterly routed, and the Arabs returned to the siege of Damascus, which fell, after an obstinate resistance, in 634, about July or August. After some irregular exploits, the conquest of the country was carried on by the reduction first of Heliopolis and Emesa, and then of other important towns. In the meanwhile Heraclius had prepared for a last effort in defence of Syria. An army of 80,000 men, brought from the different provinces of the empire, with a light-armed force of 60,000 Christian Arabs, encountered the Mohammedans on the banks of the river Yermuk; but few Christians escaped from the field of battle (634). Henceforward the conquest proceeded with but little opposition. The sacred character of Jerusalem procured for it an honourable capitulation, which the khalif Omar himself came from Medina to receive (637). Aleppo submitted, but the castle offered an obstinate resistance, and was taken by surprise; and Antioch purchased its safety at the expense of obedience and 800,000 pieces of gold (638). In the same year Heraclius fled from Antioch to Constantinople, and, after a show of resistance at Cæsarea by Constantine, his eldest son, the province was abandoned to the Saracens, to whom the remaining cities at once submitted.

Under the Ummeyyads, or Ommayyads, the seat of government was at Damascus, whither it was removed from Kufa by Moawiya, who reigned from 656 to 679, but it lost this distinction in 749, when the Abbassides took up their residence at Baghdad. Syria was subjected, together with Egypt, to the Turkish usurper Ahmed Ebn 'e' Tooloon, whose dynasty lasted from 868 to 906, when the khalif Moktafee recovered both countries; and afterwards to another Turkish usurper, Akshahed Mohammed Ebn Tugh (986), whose dynasty lasted till 970,

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when Moes, a successor of Mahdee, conquered Egypt, and soon afterwards Syria, as far as Damascus, and founded the dynasty of the Fatimite khalifs, whose capital was at Cairo. In 1076 the Turks invaded Syria and Palestine, took Damascus and Jerusalem, and established an independent kingdom under the princes of the house of Ortok. The khalif Mostali retook Jerusalem in 1098, but lost it again, with a large portion of Syria, in the first crusade, at the close of which the Christian kingdom of Jerusalem was established, which included the ancient Palestine and a tract of country round Antioch. This kingdom lasted from 1099, the year in which the Crusaders took Jerusalem, to 1187, when Salah-ed-Deen (Saladin) recovered it. His dynasty, the Eyoobites, lasted till 1250, when it was destroyed in Egypt and Damascus by the revolt of the Baharite Memlooks. Seif-ed-Deen, the sultan of Aleppo, great-grandson of Salah-ed-Deen, recovered Damascus; but he was overthrown and slain in an invasion of the Moguls from Persia in 1260.

Syria continued subject first to the Baharite and then to the Circassian Memlooks. Their possession of the country was however interrupted for a short time by Tamerlane, who invaded Syria and sacked Aleppo in 1400, and in the next year destroyed Damascus. He did not however attempt to keep possession of the country. In the year 1516 Syria was conquered and united to the Turkish empire by the sultan Selim I. It was unsuccessfully invaded by General Bonaparte in 1799. In the year 1831, Mehemet Ali, viceroy of Egypt, formed the design of erecting Egypt and Syria into an independent kingdom. His son, Ibrahim Pasha, invaded Syria, took Gaza, and on the 9th of December attacked Acre, which he took on the 21st of May following, and Damascus on the 18th of June. On the 7th of July he defeated the army of the sultan at Hama, took Antioch on the 1st of August, and on the 21st of December utterly routed the forces of the sultan at Konieh in Asia Minor, taking the grand vizier prisoner, and then pressed on for Constantinople. In the meantime the sultan claimed the help of Russia. That power prepared to act against Mehemet Ali by sea and land. By the interference of France and England a peace was concluded, and the sultan (May 6, 1833) confirmed Mehemet Ali in his government of Egypt and Candia, granting to him in addition that of Damascus, Tripoli, Said, Safed, Nablous, and Jerusalem. Mehemet Ali still cherished his project. Hostilities were renewed in May, 1839. At the battle of Nezib (June 25) Ibrahim defeated the Turkish army, and soon after the Turkish fleet deserted to Mehemet Ali (July 4). Upon this, Mehemet announced to the new sultan, Abd-ul-Medjid, his determination to assert his claim to the hereditary government of all the provinces under his command, as a reply to the sultan's offer of the hereditary government of Egypt. England, France, Austria, Russia, and Prussia, now tried to bring about a settlement. Negotiations which followed ended in the secession of France and the conclusion of a treaty between the remaining four other powers and Turkey, to compel the submission of Mehemet. The treaty was signed in London on the 15th of July 1840. In pursuance of this treaty, a fleet, consisting of English, Austrian, and Turkish vessels, commenced operations on the coast of Syria by the storming of Beyrut. Acre and Sidon shared the same fate; and, after much negotiation, Mehemet consented to give up Syria, and receive the hereditary government of Egypt (January 11, 1841).

(Pococke; Volney; Burckhardt; Buckingham; Schubert, *Reise in das Morgenland*; Robinson, *Travels in Palestine and Syria*; *London Geographical Journal*; Robinson, *Biblical Researches*; Chesney, *Expedition to the Euphrates and Tigris*; Lynch, *Expedition to the River Jordan*; De Saulcy, *Discovery of the Site of the Destroyed Cities of the Plain*.)

SYRITES was the name given by the Greeks and Romans to two gulfs on the northern coast of Africa, one of which they called Syrtis Major, and the other Syrtis Minor. Both were the terror of the ancient mariners. The name is said to be derived from the Greek word for 'draw,' from their drawing in ships and swallowing them up in their sandy shoals. A more probable derivation is the Arabic 'sert' (sand), which is at this day applied to the district on the shores of the Syrtes.

The Greater Syrtis, now called the *Gulf of Sidra*, is a very large bay on the northern coast of Tripoli, lying between the promontories of Boreum (Ras Teyonas) on the east, and Cephalæ (Ras Kharras) on the west, the distance between which is 264 miles: its greatest depth is about 126 miles. The Sahara, or Great Desert, comes down almost to the sea, leaving here and there only a narrow strip of land inhabitable. The gulf is very shallow and full of quicksands, and the coast is covered by a chain of little islands. On this dangerous shore it was difficult to prevent ships from being driven by the north winds, to which the gulf is completely exposed, while the effect of such winds on the water made the soundings very uncertain.

The Lesser Syrtis, now the *Gulf of Khabs*, on the southern corner of Tunis, lies between the promontory of Brachodes, or Caput Vada (Ras Kapondiah), on the north, and the island Meninx (Jerbah) on the south. Besides this island, those of Cercina and Cercinitis (Karkennah) lie in its mouth, the width of which from these islands to that of Meninx is 69 miles. This gulf is said by Scylax to be even more dangerous than the Greater Syrtis. Its dangers however, say Rennell, arise not so much from quicksands as from "the variation and uncertainty of the tides on a flat shelvy coast." The Sy.

were known to the Greeks in very early times. (Herod. ii. 82, 150; iv. 189.)

The Lesser Syrtis is remarkable for the great variations of its tides, in consequence of the east winds, to which it lies open. The lake bordering upon it, which is now called El-Sibkah, seems to have been once connected with the Syrtis by a channel; and this lake must be included under the Lake Tritonis of Herodotus, if we suppose the latter to be the Lesser Syrtis.

(Rennell, *Geography to Herodotus*; Heeren; Mannert; Shaw, *Travels* p. 194.)

SYSRAN, RIVER. [SIMBIRSK.]
 SYSTON. [LINCOLNSHIRE.]
 SZARVAS. [HUNGARY.]
 SZATHMAR. [HUNGARY.]
 SZEGEDIN. [HUNGARY.]
 SZENTA. [HUNGARY.]
 SZOLNOK. [HUNGARY.]
 SZCZUCZYN. [POLAND.]

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TAB, RIVER. [PERSIAN GULF.]

TABARKAH, a small island on the north coast of Africa, about 50 miles east of Bonah, is situated at the mouth of the river Tusca (now the Zaine), on the left bank of which there was an ancient Roman town called *Tabarca*. (Pliny, 'Hist. Nat.' v. 2.) Of this town many ruins still remain. (Shaw, 'Travels,' p. 99.) The Genoese, who formerly held the island, built a fort upon it to protect the coral fisheries of the neighbourhood. It is now in the possession of the French, to whom it was given up in 1830 by the dey of Tunis.

TABASCO. [MEXICO.]

TABERG. [SWEDEN.]

TABLE BAY. [CAPE OF GOOD HOPE.]

TABOR, a walled town in Bohemia, is situated in 49° 24' N. lat., 14° 30' E. long., on an eminence called Mount Tabor, on the river Lunchnitz, and has about 4500 inhabitants. It was rebuilt, and strongly fortified in 1420 by the Hussites. The principal buildings are the cathedral and the Augustinian monastery. The chief industrial products are linen, coarse woollens, and room-paper.

TABOR, MOUNT. [SYRIA.]

TABRIZ, pronounced and often written *Tabreez*, the capital of Azerbaijan, in Persia, is situated in a plain about 4800 feet above the sea-level, in about 38° 4' N. lat., 46° 8' 30" E. long. It is said to have been founded by the wife of Harun al Raashid, in A.D. 791. The population amounts to about 50,000 or 60,000. The larger part of the area inclosed by the ancient walls is covered with ruins and gardens. The town has been often taken by the Turks, and it has been frequently damaged by earthquakes. Owing to its elevated site the town enjoys a moderate climate in summer, but the winters are intensely cold, the thermometer sometimes sinking to zero, and snow often lying from December to March.

Tabriz is built on a plain, surrounded on the north and south by ranges of high, bare, and rugged hills. The plain widens gradually as it approaches Lake Urmiyah, which lies to the westward. It is very fertile, and produces abundant crops of grain where it can be irrigated: it also contains extensive plantations of fruit-trees. The town is surrounded by a wall of sun-burnt bricks, which has a circuit of about three miles and a half, and in which are seven gates. The streets are tolerably straight, but not paved. The houses are made low, on account of the earthquakes, and mostly built of sun-burnt bricks. They have no windows towards the streets, but are convenient in the interior. The suburbs are extensive, and the orchards, which cover large spaces, are kept in good order, and watered by numerous karezis (subterranean canals). Grapes, melons, apricots, quinces, pears, and apples are of superior quality. In many of the gardens there are the ruins of magnificent old buildings. There are no buildings distinguished by architectural beauty, not even the mosques. The most remarkable is the old castle, which was built by Ali Shah.

Tabriz has some manufactures of coarse cotton-goods and silk stuffs. It is one of the most commercial towns of Persia. Its principal commerce is with Tiflis in Russia, with Trebizond, and with Constantinople. It exports to Tiflis silk, cotton, rice, galls, and dried fruits, and receives from Russia, iron, copper, caviar, cloth, leather, cochineal, and manufactured goods. European and especially British manufactures reach Tabriz by way of Trebizond, whence they are carried overland through Erzurum, Bayazid, and Khoi. English goods also reach Tabriz by caravans from Constantinople. The exports by this road are rice, wool, hides, sheep and goat skins, furs, carpets, shawls, and some minor articles. The foreign commerce of Tabriz annually introduces into Persia goods to the value of about a million and a half sterling. The European part of this trade has considerably suffered since the commencement of the war between Russia and Turkey. Tabriz receives the goods of India and Bokhara and some other eastern countries by the way of Herat and Teheran.

TACNA. [PERU.]

TADCASTER, West Riding of Yorkshire, a market-town, in the parish of Tadcaster, is situated on both sides of the river Wharfe, in 53° 52' N. lat., 1° 12' W. long., distant 9 miles S.W. from York, 192 miles N.N.W. from London by road, and 185 miles by the Great Northern and North Midland railways. The population of the town of Tadcaster in 1851 was 2527. The living is a vicarage in the arch-

deaconry and diocese of York. The Wharfe is crossed at Tadcaster by a handsome stone bridge. The town is lighted by gas. The parish church is a fine old building, probably of the 14th century. The Wesleyan Methodists and Independents have chapels, and there are National schools, a Grammar school, and Dawson's Charity for the education of 40 girls and the maintenance of poor widows. The lord of the manor, Colonel Wyndham of Petworth, grants small allotments of land to the labouring classes. The market is on Wednesday, and there are several fairs, chiefly for cattle, in the course of the year.

TADMOR. [PALMYRA.]

TAEKHA. [ASAM.]

TAFALLA. [NAVARRA.]

TAFILET. [MAROCCO.]

TAGANROG, a town in European Russia, in the government of Ekaterinoalaf, stands on the summit of a lofty promontory, near the north-eastern extremity of the Sea of Azof, in 47° 12' N. lat., 48° 40' E. long., and has about 16,000 inhabitants. The town, which was founded in 1688 by Peter the Great, had formerly a considerable commerce. But the bay has become so shallow that only ships of moderate burden can now enter it; larger vessels unload at Kertsch or Feodosia. The bay is frozen up from December to March. Taganrog has a gymnasium, ten churches, three of which are of stone, dockyards, large and numerous warehouses, and many very handsome private dwellings. The climate is temperate and remarkably healthy; the surrounding country is very fertile in wheat, excellent fruits, and vegetables. The emperor Alexander I. died in Taganrog on the 1st of December, 1825. The town was bombarded by the Anglo-French fleet in July, 1855.

TAGAVOST. [MAROCCO.]

TAGGIA. [NICE.]

TAGLIACOZZO. [ABRUZZO.]

TAGUS, named *Tajo* by the Spaniards, and *Tejo* by the Portuguese, is the largest river of the Spanish Peninsula. *Tagus* is the name in the Roman writers, and has been adopted in our language. The rivers by the confluence of which the Tagus is formed originate in the highest part of the table-land of Spain. In the elevated mountain-masses of the Sierra Molina and Sierra de Albaracin rise three rivers, the Molina, the Tagus, and the Guadiela, which flow west-north-west between high ridges and in narrow valleys. The Molina and Tagus unite on the boundary-line of the provinces of Soria and Cuenca, and after running south-west about 50 miles, are joined by the Guadiela where the three provinces of Cuenca, Guadalajara, and Madrid meet. The united river continues to flow in a south-west direction until it enters the more open country of the plain, when it turns to the west, and is joined by the Jarama (Xarama). This river originates on the Soma Sierra, not far from Buytrago. It runs south, and is first joined by the Henares about 15 miles east of Madrid, and then by the Tajuna, which joins the Jarama a few miles above its confluence with the Tagus. The country which is traversed by these branches of the Tagus is not much elevated above the water-courses, possesses a considerable degree of fertility, and is the most populous tract on the table-land of Spain. The Jarama joins the Tagus a little below Aranjuez, and at this place the river flows through a wide level plain very little elevated above its bed, and so fertile, that it is justly called the Garden of Castile. From this place the general course of the Tagus, as far as it lies within Spain, is nearly due west. Below Aranjuez the bed of the river gradually sinks deeper beneath the surrounding country; its banks are steep, and composed of rocks, which in some parts rise from the water abruptly to the height of 200 feet. The adjacent country is uneven and somewhat broken, but not hilly. After having received the Cedron from the south, and encompassed the hill on which the city of Toledo stands, the river again enters a level country, which extends for many miles westward, and in which it is joined by the Guadarama and Alberche from the north, and several smaller rivers from the south. Below the town of Talavera de la Reina the Tagus enters a hilly country, where it flows with great rapidity in a deep bed filled with rocks, and is joined from the north by the rivers Tietar and Alagon, which descend from the high ridge that divides the table-land of the two Castiles. The Alagon originates in the icy masses which cover the summit of the Sierra de Griegos, and the volume of

water which this river brings down is so considerable, that from the place of confluence at Alcantara the Tagus becomes navigable. Though the Tagus has run above 350 miles before it reaches Alcantara, no part of it is navigable, which is partly to be ascribed to the great rapidity of its current through the plain of Castile. Besides this, the greater part of its course is through narrow valleys, between steep hills, from which heavy masses of rocks have fallen down, which in many places greatly encumber the bed of the river, and cause rapids, which continue for several miles; but the greatest impediment to the navigation of the river is the small volume of water. The soil of the table-land absorbs a great quantity of moisture without forming springs, and at the same time the quantity of rain which falls on this region is much less than what falls in other parts of Europe; consequently the river is very scantily supplied with water, except during the few months when the rains are more abundant.

At Alcantara the level of the river is probably less than 300 feet above the sea, and it has still a course of about 200 miles to its mouth. Its course below Alcantara and as far as the mouth of its tributary the Zesere, below Abrantes, is west and south-west. For about 20 miles it constitutes the boundary-line between Spain and Portugal. In this part of its course the river is navigable, but the navigation is extremely tedious and not without danger, as the sandbanks are numerous and subject to change. It can only be navigated by small flat-bottomed boats. The Zesere, in which the numerous rivulets unite that collect the waters originating on the southern declivity of the Serra de Estrella, always brings a considerable volume of water to the Tagus, and from this point downwards the river may be navigated by vessels of 150 tons burden. In this part of its course numerous islands occur, which at first are small and rocky, but lower down are larger and alluvial. Below these islands the river expands into a lake-like basin, which extends from north-east to south-west, in the direction of the course of the river, nearly 80 miles, and is mostly about 12 miles wide, but in several places it is narrowed to 6 miles by projecting headlands. The country north-west of the basin is covered with gently-sloping hills, the offsets of the Serra do Junto, and on the south-east of it is the sandy plain of Alemtejo. The most western part of the basin constitutes the harbour of Lisbon, which is spacious enough to contain all the fleets of Europe. Where the town of Lisbon terminates on the west, the Tagus turns westward, and a broad rocky headland, consisting of high hills, advances northward from the Serra de Arrabida, and narrows the basin to about a mile or a little more in width. At the same time the offsets of the Serra da Cintra come close up to the river on the north, so that the Tagus passes to the sea between two rocky masses. The whole course of the Tagus exceeds 550 miles, and the area of the country drained by the river probably does not fall short of 40,000 square miles.

TAHAURAWE. [SANDWICH ISLANDS.]

TAHITI. [SOCIETY ISLANDS.]

TAHRAH. [CUTOH.]

TAIN. [DRÔME; ROSS-SHIRE.]

TAI-WAN, a Chinese island, known in Europe by the name of *Formosa*, or *Hermosa*, and called by the aborigines *Pekan*. It lies between 21° 58' and 25° 15' N. lat., 120° and 122° E. long., and extends from south-by-west to north-by-east about 240 miles. At its most southern point it is only about 4 miles wide, but at 28° N. lat. it is 60 miles wide, and at 24° N. lat. nearly 100 miles wide. Its northern portion decreases slowly in width, and near its northern extremity it is still 60 miles wide. The area is about 14,000 square miles; the population is about two millions Chinese, besides the native inhabitants, whose numbers are unknown. The island is separated from the mainland of China by the channel of Fokian, which at its narrowest part, opposite the north-western point of Tai-wan, is only about 80 miles across. In the widest part of the channel are the Ponghu, or Pescadore, Islands. The southern extremity of Tai-wan is divided from the Bashee Islands by the channel of Formosa, which is nearly 80 miles wide, and like the Fokian Channel has very irregular soundings.

The broad promontory which terminates the island on the south, and forms the south-east and south-west cape, is a low flat, but at the distance of about 2 miles the country suddenly rises into mountains, called Ta Shan, which continue to run in an unbroken chain northward nearly through the middle of the island to its northern extremity, terminating with high cliffs at the north-east cape. The Ta Shan Mountains are covered nearly the whole year with snow. They contain several volcanoes, and are supposed to attain an elevation of about 12,000 feet above the sea. The declivities are covered with fine trees and pasture-grounds, and thus the island when seen from the sea, presents a very pleasing appearance, whence it was called *Hermosa* ('beautiful') by the Spaniards, who first saw it. Besides the active volcanoes there are in this range some other mountains which exhibit traces of former volcanic action. Sulphur constitutes an important article of export.

The mountains have a steep declivity on both sides, but on the west side they terminate at a considerable distance from the sea, so as to leave a wide undulating tract between them and the shore. The adjoining sea is full of sand-banks and shoals, and can only be approached in a few places by vessels drawing more than 8 feet of water. On the east of the Ta-shan range the mountains seem to

occupy nearly the whole space between the crest of the range and the sea, and high rocks line the shore. A strong current runs from south to north along the east coast of the island, which is almost unknown, as vessels do not visit it.

Rivers are numerous on the west side. They descend from the mountains in rapids and cataracts, and are turned to advantage to irrigate the land. They generally form bars at their mouths, over which only small vessels can pass. There are numerous islands however along the shore, between which junks of 200 tons find good anchorage. Some of the rivers however are said to be navigable for a considerable distance inland, especially the *Tan-shuy-khy* which falls into Tan-shuy-kiang Bay, in the narrowest part of the channel of Fokian.

At the change of the monsoons the most violent gales come on suddenly, and are accompanied by typhoons, whirlwinds, and water-spouts. In the vicinity of the island the north-eastern monsoon generally lasts nine months, as it continues to blow to the beginning of June. In other respects the climate of the island is very temperate. Earthquakes are frequent and sometimes very violent. In 1782 the whole lower portion of the island was laid waste, and the sea inundated the country to the base of the mountains for twelve hours.

The soil of the lower tracts and the more gentle slopes of the mountains is very fertile, and produces abundance of corn, which is exported to the harbours of Fokian. The chief products are rice, wheat, millet, maize, vegetables, truffles, sugar, oranges, pine-apples, guavas, cocoa-nuts, areca-nuts, and other eastern fruits; also peaches, apricots, figs, grapes, pomegranates, and chestnuts. Melons are also much grown. Tea is cultivated. The blossoms of the wild jasmine are dried and exported to China, where they are used to give a scent to the tea. Other articles of export are camphor, pepper, aloes, and timber. Timber abounds in the large forests in the northern districts of the island. It is also stated that coffee, cotton, and silk are produced to a small amount.

The domestic animals are cattle, buffaloes, horses, asses, and goats, but sheep and hogs are rare. The horses are small. It is said that on the eastern portion of the island there are tigers, leopards, and wolves. On the western side, wild hogs, deer, monkeys, pheasants, and game are very abundant. Salt is largely exported.

The population consists of Chinese settlers and of aborigines. The Chinese are only found on the west side of the island. A considerable number of aborigines are settled among the Chinese, to whom they are subject, and are obliged to pay a tribute in corn and money. These aborigines are of a slender make; in complexion and language they resemble the Malays, but they do not differ from the Chinese in features. Nothing is known of the aborigines who inhabit the east side of the island. They are not subject to the Chinese, and are said to be continually at war with them. Inhabiting a country covered with lofty mountains, they are said to subsist mostly on the produce of the chase and by fishing.

The Chinese portion of Tai-wan is divided into four districts, which, from south to north, are Fung-shan-hian, Tai-wan-hian, Tahul-lo-hian, and Thang-hua-hian. The capital, *Tai-wan-fu*, is a considerable walled town, and has a garrison of 10,000 troops. The streets are straight, and intersect one another at right angles: they are full of shops, which are abundantly provided with all articles of Chinese industry. The largest building is that which was erected by the Dutch during their short sway in Tai-wan. There is still a small church built by the Dutch. It is stated that 1000 junks can anchor in the harbour; but the entrance even at spring-tides has but 9 or 10 feet of water. The commerce of this place with China is considerable. *Wu-teaou-kiang* has a harbour, which is frequented by junks and numerous coasting vessels, which bring the produce of the country, especially rice and sugar, to this place. *Tan-shuy-kiang*, at the embouchure of the river Tan-shuy-khy, is at the innermost recess of a fine bay, which is large enough for a numerous fleet. The best harbour is near the northern extremity of the island, and is called Ky-long-shai, or Quelong. It is capacious enough to contain 30 large vessels, and is the station of the Chinese navy at the island. An active commerce is carried on at this place.

The commerce of the island is limited to that with the eastern provinces of China, especially Fokian, to which it sends its agricultural produce, with sulphur and salt, and from which it imports tea, raw-silk, woollen- and cotton-stuffs, and other manufactures.

Opposite the southern extremity of the eastern coast of Tai-wan is the island of *Botol Tabago-xima*. It is elevated, about ten miles in circumference, and surrounded by a sea without soundings. It is said to be very populous.

The Dutch in 1634 built the fortress of Zelandia at the entrance of the harbour of Tai-wan-fu, where there was then a small town. At this time the Chinese had not settled on the island, but soon after many families emigrated from Fokian to Tai-wan; and on the overthrow of the Ming dynasty many of their adherents abandoned the mainland, and, under a chief named Tshing-tshing-kung, occupied the Ponghu Islands. Tshing-tshing-kung then proceeded to Tai-wan, and finding only a very weak garrison in the Dutch fortress, he took it, after a siege of four months, in 1662. Thus the Dutch lost the island, which was rapidly colonised by the Chinese. After the death of Tshing-tshing-kung a Chinese fleet in 1682 took possession of the

Ponghu Islands; and in the following year Tai-wan surrendered, without a struggle, to the court of Peking.

(Père du Mailla, *Lettres Édifiantes et Curieuses*, vol. xviii.; Klaproth; La Pérouse; *Parliamentary Reports*.)

TAJURRA, BAY OF. [ADAL.]

TAKELEY. [ESSEX.]

TAKKAZZIE, RIVER. [ABYSSINIA.]

TALAVERA. [CASTILLA LA NUEVA.]

TALCA. [CHILE.]

TALGARTH. [BRECKNOCKSHIRE.]

TALISH. [GEORGIA, *Asian*.]

TALLAHASSEE. [FLORIDA.]

TALLAPOOSA, RIVER. [ALABAMA.]

TALLARD. [ALPES, HAUTES.]

TALLOW. [WATERFORD, County of.]

TALUNG. [SIAM.]

TAMAN, a peninsula, or rather a deltoid island, is formed by the main branch of the Kuban, which empties itself into the Black Sea, and a small branch of the same river, which flows into the Sea of Azof north of the old fortress of Temruk. The western or large part of the island stretches between the Sea of Azof on the north and the Black Sea on the south, and is bounded on the west by the Strait of Yenikale, the ancient Bosphorus Cimmerius, and the Bay of Taman. The length of the island is 57 miles, and its greatest breadth 22 miles, but the real surface is far from corresponding to these dimensions, the middle of the island being occupied by the large Temrskoi Liman, or Lake of Temruk, and the whole of the remaining part being notched by creeks and bays in such a manner as to present rather the skeleton of an island than a real island. The south-western part of Taman, the ancient peninsula of Corocondama, presents a solid mass traversed by several ranges of hills from 150 to 180 feet high: they run from west to east, and near the village of Sennaya-Balka form a bifurcation. One branch runs between the Kubanskoi Liman, or the lake formed by the Kuban before it reaches the sea, and the Lake of Temruk, and terminates in a slip of land which divides this lake into two unequal parts. The other branch, the direction of which is north-east, forms the isthmus between the Lake of Temruk on the east, and the Bay of Taman on the west, and terminates before it reaches the isthmus between the Lake of Temruk and the Sea of Azof. The north-western part of Taman, or the peninsula between the Sea of Azof and the Bay of Taman, is no less elevated above the sea, but although it is a continuation of the mainland, it is separated from the eastern hills by a flat sandy isthmus, which seems to have been covered by the sea at a period not very remote from our own times. All these hills are mere masses of sand and pebbles cemented with clay. The higher part of them is barren, but the slopes, and the low grounds between them and the sea or the lakes, are covered with soil and fit for agriculture. They also make rich pasture-grounds. The isthmus between the Temrskoi Liman and the Bay of Taman, and principally that between the Lake of Temruk and the Kubanskoi Liman, are dotted with the neat farmhouses of the Cossaks; and on the meadows numerous flocks of cattle are fed. The eastern part of Taman is formed by two flat and narrow isthmuses, and a somewhat broader tract of lowland between the two branches of the Kuban. The whole of this country is marshy, partly covered with pastures and partly with a rank vegetation of rushes and reeds. In the rainy season all the low country is overflowed by the waters of the Kuban, and the higher part of Taman is separated from the continent by an immense lake which extends from one sea to the other. The whole of the eastern part of the island of Taman is a mere recent production of the immense quantities of clay and mud which the Sea of Azof and the Kuban have deposited before the mouth of this river. The western and elevated part however in its whole geognostical structure belongs to the opposite continent of the Crimea, from which it has apparently been separated by the current of the Cimmerian Bosphorus. In this latter part is the Sewernaya Kossa, a long but very flat and narrow slip of land which stretches from the north-west extremity of the northern peninsula in a south-west direction to the middle of the mouth of the Bay of Taman. A cluster of small islands extends from Point Yunays north-west till they reach the centre of the strait. Numerous small craters are situated on the ridge of the hills around the Bay of Taman, as well as along the Lake of Temruk. They present all the external appearances of volcanoes; though the matter which they throw out is not lava, but a thick mud of a deep black colour, which they discharge at irregular periods.

The Greeks knew this remarkable island under the name of Eion, and founded several colonies in it. The most considerable of them were—*Phanagoria*, a famous commercial town, which contained a beautiful temple of Aphrodite; *Kepeo*, or *Kepi*, a colony of the Milesians; *Hermonassa*, founded by the Ionians; and *Achilleion*: some ruins and marbles are the only traces that remain of their ancient splendour. There are now only two towns—*Tmatarakán*, the *Phanagoria* of the Greeks; and the present town of *Phanagoria*, which was built by the Russians on the shore of the Bay of Taman, 3 miles east from *Tmatarakán*, on account of its harbour being deeper than that of the latter town.

TAMAQUA. [PENNSYLVANIA.]

TAMATAVE. [MADAGASCAR.]

TAMAULIPAS. [MEXICO.]

TAMBOV, a province of Great Russia, is situated between 51° 30' and 55° 20' N. lat., 39° 40' and 43° 40' E. long. The area is 25,464 square miles, and the population 1,750,900. It is bounded N. by Nischni-Novgorod and Vladimir; S. by Woronezh; W. by Riasan, Tula, and Orel; and E. by Penza.

This government is a uniformly level country, without mountains, large rivers, or considerable lakes: on the north there are great forests, and on the south extensive steppes. The soil in the northern half is sandy, marshy, and poor; in the southern part it mostly consists of loam or black mould, and is fertile and productive. The steppes produce excellent pasturage, and when they have been brought under cultivation make good arable land: they are designated as steppes only because they are destitute of wood. The river Oka enters the government from Riasan, but passes only through one circle, where it is joined by the Mokscha, a considerable stream of which the Zna is a tributary. The Oka runs northward to join the Volga. The Don passes through a small part of the government. In the forests on the north there are marshes. The mineral waters at Lepetsk are much frequented. The climate is temperate and healthy, but cold in winter.

All kinds of corn usually grown in Russia are raised, rye, oats, millet, buckwheat and wheat, pease and other pulse; poppies, great quantities of hemp, barley, and flax; some hops are grown in the gardens, but there is little fruit, and that of the most ordinary kinds. The total annual produce of corn of all sorts varies from 11,500,000 to 17,500,000 quarters: of this only about 401,000 quarters are wheat; rye makes up about half the total amount; buckwheat a fourth, and oats about a sixth. In the vicinity of the forests the inhabitants are for the most part carpenters, coopers, and cartwrights, or employed in making pitch, tar, lamp-black, and charcoal. The breeding of cattle is carried on to a very great extent in the steppes; and the steppes from Tambow to Nova Khopertakaja-Krepost is covered with immense herds of oxen and horses. Oxen are used for draught, and great numbers are fattened for exportation. Sheep and swine respectively number about 1,200,000 and 800,000. The wool is coarse. Domestic poultry suffices for the consumption of the inhabitants: there is little game, and fish is by no means plentiful. Among the wild animals are the marmot and the hamster. Great quantities of bees are kept. The mineral products are lime, freestone, iron, and some saltpetre.

The manufactures of this government are unimportant: the peasantry barely make their own clothing. Spirit distilleries are numerous. The export trade in the products of the country is very considerable. The principal articles are rye, cattle, honey, tallow, butter, cheese, wool, hemp, iron, grain-spirits, hides, coarse cloth, and wooden wares.

The great majority of the inhabitants are Russians. There are some thousands of converted Tartars and Mordwines, and a few gipsies. Education is at a low ebb. The Greek Church is under the bishop of Tambow and Schask. The Mohammedan Tartars have their mosques, imams, and teachers.

Tambow, the capital of the government, is situated nearly in the centre of the province, on the river Zna, in 52° 44' N. lat., 41° 45' E. long. It is a large town, with 20,000 inhabitants, and was founded in 1636, as a bulwark against the Nogay Tartars. Almost all the houses are built of wood: the principal buildings are the monastery of Our Lady of Casan, in which there are two churches; seven stone and six wooden churches, the gymnasium, and the civil hospital. There is a military school, a seminary for priests, and a district school. The bishop resides in this city. The inhabitants manufacture shawls, kersey, sailcloth, cordage, and woollen-cloth, and there is an imperial alum and vitriol manufactory; they also carry on some trade, but their chief occupation is agriculture.

Jelasma, the most northerly town in the government, situated on the left bank of the Oka, carries on by means of that river a very great trade with Moscow: it has ten churches; the inhabitants, 6000 in number, have some manufactures of woollen-cloth, vitriol, and sulphur. *Koslow*, situated on the Lesnoi Woronezh, has above 8000 inhabitants: near the town is the convent *Troitkoi*, where a great annual fair is held. There are eight churches, of which five are of stone: the principal trade of the town is in oxen, salt meats, and hides. *Lepetsk*, on the Woronezh, near the north extremity of the government of that name, a town with 6500 inhabitants, is celebrated for its mineral-waters. *Morschansk*, a town of 6000 inhabitants, situated on the Zna, has manufactures of linen, sail-cloth, cordage, and tallow, and a brisk trade in corn, cattle, and honey.

TAMPICO. [MEXICO.]

TAMWORTH, Staffordshire, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parish of Tamworth, is situated on the right bank of the river Tame and Anker just at their junction, in 52° 38' N. lat., 1° 42' W. long., distant 25 miles S.E. by E. from Stafford, 115 miles N.W. from London by road, and 109½ miles by the Trent Valley branch of the London and North-Western railway. The church is in Staffordshire, on which account the town is commonly described as being in that county. The population of the municipal borough of Tamworth in 1851 was 4059; that of the parliamentary borough was 3655. The borough is governed by 4 aldermen and 12 councillors, one of whom is mayor; and returns two members to the Imperial Parliament. The living is

a vicarage in the archdeaconry of Stafford and diocese of Lichfield. Tamworth Poor-Law Union contains 24 parishes and townships, with an area of 46,740 acres, and a population in 1851 of 13,941.

Several of the Mercian kings appear to have resided at Tamworth. After the Conquest, the castle and adjacent territory were granted to Robert Marmion, hereditary champion to the dukes of Normandy. The castle now belongs to Lord Charles Townshend. The streets of Tamworth are lighted with gas and paved. The church, which was formerly collegiate, is one of the finest in the county. The transepts are Norman, some portions are of decorated date, and some perpendicular: some of the windows have had very fine tracery. The tower has been lately restored. There are an almshouse, founded by Guy, the founder of Guy's Hospital, Southwark; a town-hall, with a small jail beneath; a handsome stone building for the savings bank; a railway station, in the Elizabethan style, used jointly for the Trent Valley and Midland railways; and two bridges, one over the Tame, the other over the Anker. The remains of the castle are of various periods, and modern buildings have been added to adapt the whole to the purposes of a modern residence: the castle commands a fine prospect. The Wesleyan Methodists, Independents, Baptists, and Roman Catholics have chapels in the town. There are National and Infant schools; a Free Grammar school, founded in 1587; Sir Robert Peel's school, which educates 50 poor boys and provides for each a suit of clothes annually; Rawlet's Trustees' school for 20 boys, and a school of industry for 30 girls, both endowed; a library and reading-room, founded by the late Sir R. Peel, and a valuable library called the Permanent Library, containing upwards of 5000 volumes.

Coals and brick-earth are dug in the neighbourhood, and bricks, tiles, and glazed drain-pipes are extensively made. There are two manufactories for elastic garters and fancy articles. The market is on Saturday: there are several fairs for cattle and merchandises. In the market-place is a fine bronze statue of the late Sir Robert Peel. The Coventry Canal passes near the town. A county court is held in Tamworth.

TANA-ELF. [TRONDHEJEM.]

TANAGA. [ALEUTIAN ISLES.]

TANAIS. [AZOF.]

TANARO. [PO.]

TANDERAGEE. [ARMAGH.]

TANGIER. [MAROCCO.]

TANGNU-OOLA. [ALTAI MOUNTAINS.]

TANGUT is the historical name of a country in Asia, which occupies the centre of the eastern and more elevated table-land of that continent. This country still goes by the name of Tangut, though at present a part of it is incorporated in the Chinese province of Kansai, whilst another is mostly in the possession of two Mongol nations, the Olöth Tshoros and the Torbod Mongols. Tangut extends between 33° and 42° N. lat., 94° and 107° E. long. It is bounded S. by Tibet; W. by Chinese Turkistan, or the government of Thian-Shan Nanlu; and N. by Mongolia, of which also a portion is included within the lately erected province of Kansai.

The southern portion of Tangut, or that which lies south of 38° N. lat., is one of the most mountainous tracts on the globe, and extends over the upper course of the river Hoang-ho and the basin of the Lake of Khookhoo-nor. Along its southern border there are the BAYAN KHARA MOUNTAINS. Another elevated range traverses the country in the same direction from east to west near 38° N. lat. This range rises at a short distance from the banks of the Hoang-ho north of the town of Lantcheou, and in its eastern part is called Kilian-Shan; but farther west it takes the name of Nan-Shan. It rises to a great elevation, especially towards the west, where many of its summits are covered with snow and united by extensive glaciers. This mountain chain is supposed to be connected with the Kuenlun range near 92° E. long. The Bayan Khara and the Nan-Shan mountains occupy a great portion of the country between 33° and 38° N. lat., and nearly the whole of the remainder of the country is filled up by a third range, Siue-Shan, which connects these two, and extends from south-east to north-west. The Siue-Shan, or Snowy range, contains numerous summits which rise above the snow-line. The river Hoang-ho breaks through this range, but the huge rocky masses compel the river to make a great bend towards the west between 34° and 36° N. lat., and the circuit which the river makes shows the immense extent of these masses of rock. In this part of its course the river is said to be hemmed in by lofty mountains, so that no communication can be established along the banks. Its course above this bend is very imperfectly known. The river enters a wide valley by a narrow gorge formed by two very elevated mountains a little above the town of Ho-tocheou (36° N. lat., 102° E. long.). At the opening of this gorge is a fortress, called Tay-ahy-kuan.

Tangut is separated from China proper by a fourth range, the mountains of Sifan, which run south and north; they are connected at their southern extremity with the Bayan Khara Mountains and the Siue-Shan by an extensive mountain knot, which is in the country formerly called Sifan, whence the chain has obtained its name. Though this range is less elevated than the Siue-Shan, it rises in several places above the snow-line, and occupies a considerable width. It is supposed to terminate near the banks of the Hoang-ho, a few miles south of 38° N. lat. Opposite to it and on the northern banks of the river rises another chain, called Holang-Shan, which continues

along the western bank of the river as far north as 42° N. lat., rising only to a moderate elevation, and occupying in many places only three or four miles in width: it slopes on the west down into the steppe of the Olöth Tshoros. This range is distinguished from all the other ranges of Tangut by being thickly wooded on its eastern declivity.

Only a small portion of the countries inclosed by these mountain masses is fit for cultivation. It does not appear that there is any cultivation in the upper valley of the Hoang-ho above the fortress of Tay-ahy-kuan. Below that place and as far as Lan-tocheou, the valley is wider, and narrow tracts along the banks of the river are cultivated and fertile. Farther down, and as far as the neighbourhood of Ning-hia, a town built on the western banks of the Hoang-ho, at the eastern declivity of the Holang-Shan (38° 32' N. lat.), the valley has not been visited by Europeans. At this place the river runs in a wide valley, which has been rendered fertile by numerous canals, fed by the waters of the river; here rice is extensively cultivated. There are also numerous plantations of fruit-trees. The soil contains much saltpetre. The town of Ning-hia, the former capital of Tangut, is of considerable extent, being five miles in circuit. It has manufactures of carpets and paper, and a considerable commerce with the nomadic tribes who wander about in the country west of the Holang-Shan. Below the town of Ning-hia the valley of the Hoang-ho grows wider, but its fertility decreases. About eighteen miles from Ning-hia the canals cease and no rice is cultivated. Other grain is still grown about 30 miles farther north, where the country gradually changes into a sandy, arid desert, interspersed with hills, swampy tracts, and pastures.

The lateral valley of Si-ning-tcheou opens to the Hoang-ho from the west above the town of Lan-tcheou between the Kilian-Shan and the most elevated portion of the Siue-Shan. The valley is not extensive, but appears to be fertile: it contains the town of *Si-ning-tcheou*, which is not quite as large as Ning-hia, but a much more commercial place, as the road which connects northern China with Hlassa in Tibet passes through it. This road runs westward to the Lake of *Khookhoo-nor*, which is of great but unknown extent. It is an alpine lake inclosed by high mountains, and has no outlet. The remainder of the road lies partly over numerous large mountain masses, furrowed only by narrow glens and ravines, and partly over rocky and sandy table-lands; but in spite of the difficulties it is much travelled, and the bazaars of Si-ning-tcheou are well provided with provisions and articles of luxury. This town is a great depot for rhubarb, which grows on the more elevated parts of the Siue-Shan and Kilian-Shan, and is sent through Kischta and Russia to all parts of the world.

The northern part of Tangut, with the exception of the valley of the Hoang-ho, is occupied by a wide desert plain, which constitutes a portion of the GOBI. The steep declivities of the Kilian and Nan-Shan however do not come close to the desert, but are separated from it by a hilly tract from 30 to 50 miles wide, which contains some extensive tracts fit for cultivation, and in which some large towns have been built, as the great commercial route which connects China with the countries of Western Asia runs through it. The ranges of the Kilian-Shan and Nan-Shan are said to be covered with perpetual snow. The water which flows from these ranges is partly consumed in irrigating the adjacent fields, and the remainder is absorbed by the sandy soil, as soon as it reaches the plain, after having left the hilly tract. The hilly tract is diversified by high lands and depressions. The upper surface of the high lands is broken and rocky, and for the most part bare. The depressions, which are less extensive, exhibit a considerable degree of fertility where they are irrigated. To protect this hilly region, and the great commercial road which runs through it, the Chinese have continued the Great Wall along its northern border westward to 98° E. long., and along the wall are built the fortresses which protect the line and the towns through which the road runs. The road leaves the valley of the Hoang-ho at the town of Lan-tcheou, the capital of Kansai, and runs in a north-north-west direction to the towns of *Liang-tcheou* and *Kan-tcheou-foo*. This last is a large and well-built town, which has many manufactures of woollen stuffs and felts, articles in great demand among the nomadic tribes, who bring to the place their wool, horses, cattle, and sheep. It receives also large quantities of rhubarb from the Kilian-Shan. From *Kan-tcheou-foo* the road continues in a north-west direction to *So-tcheou*, a large and well-fortified town, with numerous bazaars, well provided with provisions and manufactured articles. The town is divided into two sections, one of which is occupied by the Chinese, and the other by the foreign merchants from Bokhara and Turkistan. The latter is divided from the former by a separate wall. As *So-tcheou* is the last large place through which the caravans pass before they enter the desert between Tangut and Thian-shan-nahr, the commerce is very great, especially in provisions. About 50 or 60 miles west of *So-tcheou* is the most western gate of the Great Wall, called *Kia-yu-kooan*, through which the caravans pass to enter the desert of Han-hai, which must be traversed in order to reach Hami in Thian-shan-nanlu. The last-mentioned town is 320 miles from the gate of *Kia-yu-kooan*, and that is the width of the Gobi at this place, which is considered the narrowest part of it.

The towns hitherto noticed lie along the great caravan-road, but farther west the Chinese geographers mention other places of importance. The largest is *Nyan-si-foo*, a town of the first rank, and the

capital of the whole district. North-west of it, and on the border of the desert, is the town of *Yu-men-kiang*, which is built near a pass between high hills, traversed by a road to Hami. South-west of Ngan-si-foo are the towns of *Toong-hoang-kiang* and *Sha-tcheou*. Marco Polo describes *Sha-tcheou* as rather a large place; he says that the inhabitants live on the produce of their fields and orchards, and have little commerce. Marco Polo reached it after traversing the desert of Lop by a thirty days' journey, having departed from the town of Lop, which is on the banks of a lake of the same name.

The cold in winter in Tangut is intense, and lasts for several months. The Jesuits found the Hoang-ho, near 40° N. lat., at the end of November, covered with thick ice, so that the caravan was able to pass over it, though the river was more than 300 yards wide. At Ning-hia a heavy fall of snow was experienced in the middle of April. In summer the heat is great, but much less than in the low countries of China; the climate is considered to be extremely healthy.

Every kind of grain is grown in the few tracts whose soil is fit for cultivation, and rice is raised where irrigation is practicable. The nomadic nations have numerous herds of camels, horses, and cattle, and large flocks of sheep and goats. In the mountain region is found the yak, whose tail gives the chowry. It is used for riding. In the desert are wild hogs, deer, argali, and hares. Wild horses and cattle are found, it is said, in some of the mountain forests. In the desert some extensive tracts are covered with agates, cornelians, and other precious stones.

The inhabitants of Tangut are a very mixed race. Mongol tribes inhabit the Gobi, and occupy also the mountain ranges north of Lake Khookoo-nor, but the mountaineers south of that lake derive their origin from Tibet. The agricultural population is mostly composed of Chinese and their descendants. In the towns the number of Turkish settlers seems to be considerable. They are Mohammedans, and there are mosques in the larger towns of Tangut. All the other inhabitants are Buddhists. In the time of Marco Polo there were also Nestorian Christians in the towns, but these have disappeared.

The Chinese emperors subjected the country of Tangut shortly before the birth of Christ. In the 8th century Tangut was occupied by a nation of Tibetan origin, called Tang, which founded in these parts the empire of Thufan. This was overthrown by the Chinese in the 9th century; but the Tibetans erected in the following century the empire of Tangut, or Hia, which maintained its power till it was destroyed by Genghis Khan in 1227. With the downfall of the dynasty of the Mongols (1341), the best part of Tangut remained under the sway of the emperors of the dynasty of Ming, though the Mongols after their retreat from China had occupied the northern and more desert portion of it, where they maintained their independence to the end of the 17th century. In the wars of the Galdan of the Olöth [SONGARIA], a tribe of the Olöth Mongols expelled the Khalkas from the country west of the Hoang-ho, and took possession of it; but after the defeat of the Galdan they submitted to the Chinese emperor in 1690, and since that time the whole of Tangut has been annexed to China. (Du Halde, *History of China*; Ritter, *Erdkunde*.)

TANJORE. [CARNATIC.]

TANNAH. [SALSETTE.]

TANSLEY. [DERBYSHIRE.]

TAORMINA. [MESSINA, Province of.]

TAPAJOS, RIVER. [BRAZIL.]

TAPLOW. [BUCKINGHAMSHIRE.]

TAPTY, RIVER. [HINDUSTAN.]

TAPUL. [SOOLOO ARCHIPELAGO.]

TARA. [MEATH; SIBERIA.]

TARAI. [HINDUSTAN.]

TARAKAI, or SAGHALIEN, a large island in the North Pacific Ocean, extends from 46° to 54° 20' N. lat., more than 600 miles in length. The width towards the southern extremity, north of the Bay of Aniva, is nearly 100 miles, but it soon contracts to about 25 miles, which is about its average width as far north as the Bay of Patience, where it suddenly expands to 120 miles, Cape Patience running far out into the Pacific. From this point (49° N. lat.) northward the island again grows narrower, but very gradually, so that at 51° N. lat. it is still nearly 80 miles wide. Farther north its average width does not exceed 50 miles. The area of the island probably exceeds 30,000 square miles.

Tarakai extends along the eastern coast of Asia between 142° and 145° E. long., and is separated from the continent by the Gulf of Tartary, which is 200 miles wide at its most southern extremity, but grows narrower farther north, until near 51° 30' N. lat. the width is less than 40 miles. At this point a shoal extends across the gulf, on which there is only water for boats. The gulf is almost always covered with thick fogs. Near 52° 30' N. lat. a low sandy cape stretches so far to the east as to approach very near the western shores of the island. North of this narrow and shallow part the gulf presents a circular basin, sometimes called the Gulf of Saghalien, about 50 miles wide, which receives the waters of the Amur. Krusenstern calls it the Liman of the Amur. This basin is united with the Sea of Okhotsk by a strait, which in the narrowest part is about 10 miles wide. The southern extremity of Tarakai is divided from the island of Yeso by the Strait of La Perouse, which is hardly 30 miles wide and in which the tides run with great velocity.

Though the coast of the island is of great extent and much indented, it does not appear that there are many good harbours. Along the western shores only open roadsteads have been found. At the southern extremity of the island, between Cape Crillon and Cape Aniva, is a wide open bay, the Bay of Aniva, which is inclosed by two projecting tongues of land, and extends 50 miles from south to north. There is good anchorage at its most northern extremity. The projecting headland, which occurs near 49° N. lat., on the eastern side of Tarakai, and terminates with Cape Patience, incloses the Bay of Patience, which is very extensive, but open and exposed to eastern and southern winds. At the most northern extremity of the island is the Northern Bay, between Cape Elizabeth and Cape Maria. It offers good anchorage and shelter.

The island is naturally divided into three tracts: the mountainous, which occupies the southern portion; the level, in the middle; and the hilly tract, which extends over the northern districts. The mountain region is the largest, and comprehends more than one-half of the island, terminating on the north near 51° N. lat. A chain of mountains begins at Cape Crillon, and continues in an uninterrupted line northward to an elevated summit called Peak Bernizel, where it seems to be united to another and lower chain, which traverses the eastern peninsula, and incloses the Bay of Aniva on the east. Farther north occur other summits, as Peak Lamanon, Peak Mongez, and Mount Tiara: the two last mentioned are north of 50° N. lat. None of these summits have been measured, but their elevation probably does not exceed 5000 feet above the sea-level. On the summits of the mountains snow lies till June. Along the western coast the mountains in some places come close up to the water's edge, but a narrow level tract generally separates them from the shore, and this tract is covered with high trees, while the declivities of the mountains are mostly bare. Extensive flats occur at Aniva Bay and the Bay of Patience. The low country which skirts the shore on the eastern side of the mountains appears to be more extensive and less interrupted than that along the western shores. The country extending from 51° to 53° N. lat. is so low that the shores are not visible at the distance of five or six miles, and it is sandy and overgrown with bushes. The interior is in general level, partly sandy and partly swampy, and a great part of it is covered with short bushes or small trees. A number of low sand-hills are dispersed over the country. The hilly tract occupies the most northern part of the island, or that which extends from 53° N. lat. to Cape Elizabeth. The coast is in general high and steep, being generally composed of perpendicular white cliffs. There are only a few tracts in which the coast sinks down to the level of the sea, and here the villages are built. The interior consists of a succession of high hills covered with full-grown trees to the very summits; the valleys which intervene between them are partly wooded and partly covered with a fine close turf. The winter seems to be long and severe, the summer months temperate, but continual fogs inclose the island nearly all the year round.

Productions.—The inhabitants derive profit from the spontaneous products of the soil: they dry the roots of a species of lily for winter food, and collect great quantities of garlic and angelica. The forests consist of oak, maple, birch, and medlar, but chiefly of fir. Large tracts are covered with juniper-trees. Gooseberries, raspberries, and strawberries abound, and also wild celery and watercress. Among wild animals martens and bears are mentioned. The sea supplies the inhabitants with abundance of salmon, herring, and cod. Dried and smoked salmon, skins of salmon, salt-herrings, and train-oil are the principal articles of export. Whales are numerous in the Strait of La Perouse and along the eastern coast. In the same parts, seals of different kinds and sea-otters are very frequent.

The inhabitants are aborigines, among whom a few Japanese have settled on the Bay of Aniva, and a few Mantchoos on the Northern Bay. In the Japanese settlements are a few Japanese officers, but no Chinese authorities have been seen, nor is this island enumerated among the possessions of the Chinese. The aborigines call themselves *Ainos*, that is, men: the same race inhabits the Kurile Islands, and extends along the shores of Asia from the Corea to Kamtschatka. They never cultivate the soil, nor apply themselves to hunting wild animals, and they keep no domestic animals except dogs, which they use in winter for drawing their sledges, like the inhabitants of Kamtschatka. They rarely exceed five feet six inches in height. They have tolerably large eyes, thick lips, high cheek-bones, and a somewhat broad and compressed nose. Their cheeks and chins are covered with long, thick, black beards. They manufacture a kind of cloth from the bark of the willow. Their huts are of wood, covered with the white bark of birch, and have a roof of wood thatched with dry straw. Their boats are of large size and strongly built.

TARANCON. [CASTILLA LA NUEVA.]

TARANTASIA. [SAVOY.]

TARANTO, an archiepiscopal town in the Kingdom of the Two Sicilies, in the province of Terra d'Otranto, is situated in 40° 23' N. lat., 17° 35' E. long., and contains 15,000 inhabitants. It occupies a small part of the site of the ancient *Tarentum*, being confined to the island or peninsula at the entrance of the inner harbour, or *Mare Piccolo*, on which formerly stood the fortress or acropolis of *Tarentum*. There are few remains of the ancient town. Taranto is ill built: it is fortified and has a castle, and several churches and convents.

It carries on some trade by sea in small craft, and has some manufactures of linen and of gloves and other articles from 'pinna marina.' A part of the population is employed in fishing. Excellent oysters are found on the coast. The inner port is nearly filled up, but the outer or large port is accessible to vessels of good size, and is protected by two islands which are situated at the mouth. The large gulf which lies between the coast of Calabria and the Iapygian peninsula is called the Gulf of Taranto. Two shore lakes, one of them of considerable extent, which lie south-east of the town, yield a great quantity of salt by evaporation.

Ancient *Tarentum*, the principal Greek city on the east coast of Italy, is said to have been originally a town of the Messapians, which Phalantus and the Parthenias took about B.C. 694. Tarentum, after many struggles with neighbouring cities and peoples, gained great prosperity by commerce, and acquired a considerable extent of territory. Archyta, a native of Tarentum, is said to have compiled a body of laws for the Tarentines.

About B.C. 338 the Tarentines, being engaged in war with their neighbours the Lucanians, applied to Sparta for assistance. Archidamus, the son of Agesilaus, was sent to them, and he was killed in fighting on their side. Some years after, being hard pressed by the Lucanians and Brutii, the Tarentines applied to Alexander, king of Epirus, and uncle to Alexander the Great. He came to Italy with troops, obtained considerable advantages, but was at last surprised and killed by the Brutii near Pandosia, B.C. 328. (Justin, xii. 2; Livy, viii. 24.) The Tarentines had by this time degenerated. (Ælian, 'Var. Hist.,' xii. 80.)

In the year B.C. 282 the Romans, after having conquered the Samnites, made war upon the Lucanians. The Tarentines, jealous of the encroachments of Rome, unexpectedly attacked the Roman fleet, which was sailing near their coast, and killed a great many of the crew. The Romans sent commissioners to demand reparation for the outrage, but the Tarentines treated them with insult. Aroused however to a sense of their danger, they applied to Pyrrhus, king of Epirus, for assistance, and sent vessels to convey him over with his troops, B.C. 281. Pyrrhus soon found that the Tarentines were too effeminate to give him much support. Chiefly with his own troops he carried on the war against Rome for several years, but was at last defeated by the consul M. Curius Dentatus, and obliged to re-embark for Epirus, leaving however a garrison in Tarentum, B.C. 275. The Tarentines having shortly after quarrelled with the Epirote garrison, applied to the Carthaginians for assistance to drive away the Epirotes. The Romans having had notice of this, sent the consul L. Papirius Cursor, who took Tarentum, and allowed the Epirote garrison to return home. Tarentum was thenceforward styled an ally of Rome till after the battle of Cannæ, when the Tarentines entered into some intrigues with Hannibal.

In the year B.C. 212 the hostages of the Tarentines ran away from Rome, but being pursued and overtaken near Terracina, they were brought back, and after being beaten with rods were thrown down the Tarpeian rock. This cruel punishment irritated the people of Tarentum; an agreement was made with Hannibal, and his troops were admitted into the city by night. The Roman garrison stationed in the citadel was besieged by sea and by land. In B.C. 209 the consul Q. Fabius Maximus retook Tarentum by surprise, and his soldiers plundered the city.

From that time Tarentum remained in subjection to Rome, and although it greatly declined in wealth and importance, it was still a considerable place in the time of Augustus. It was one of the chief strongholds of the Byzantine emperors in Southern Italy. About A.D. 774 Romauldus, the Longobard duke of Beneventum, took Tarentum from the Byzantines. The Saracens landed at Tarentum about A.D. 830. The town was afterwards several times taken and retaken and sacked, and it was during this period that the old town on the mainland was abandoned, and the inhabitants retired to the island. In the 11th century it was taken by the Normans, and Robert Guiscard made his son Bohemund prince of Tarentum.

TARARE, PASS OF. [RHÔNE, Department of.]

TARASCON-SUR-RHÔNE. [BOUCHES-DU-RHÔNE.]

TARAZONA. [ARAGON.]

TARBAGATAI MOUNTAINS. [ALTAI MOUNTAINS.]

TARBERT. [KERRY.]

TARBES. [PYRÉNÉES, HAUTES.]

TARENTUM. [TARANTO.]

TARIFA. [SEVILLA.]

TARIYANI. [BOOTAN.]

TARKI. [DAGHESTAN.]

TARMA. [PERU.]

TARN, a river in France, rises near Mont Lozère, in the department of Lozère, and flows first west to Sainte-Enimie, in the same department, 27 miles, and then south-west 27 miles to Milhau, in the department of Aveyron; from thence west-south-west 88 miles, by Alby and Gaillac, in the department of Tarn, to St-Sulpice; and thence 48 miles north-west and west by Mantauban (department of Tarn-et-Garonne) into the Garonne below Moissac. The navigation, commencing at Alby, has a length of about 90 miles.

TARN, a department in the south of France, is bounded N. by that of Aveyron, E. by that of Hérault, S. by that of Aude, and W. by

Haute-Garonne and Tarn-et-Garonne. The extreme length from north-west to south-east is 65 miles; the breadth is 46 miles. The area is 2218 square miles. The population in 1851 amounted to 363,073, giving nearly 164 inhabitants to a square mile.

The department is very mountainous in the south-east part, where it comprehends a portion of the Cévennes. A range of hills branching off from this chain, and running nearly parallel to it, crosses the north-west part of the department, skirting the valley of the Tarn; and there are some other ranges of less elevation and importance. The eastern side of the department is chiefly occupied by the granitic or other primary, or by the earlier secondary formations. West of this district the tertiary formations prevail. In the north and south of the department the secondary formations crop out in a few places from beneath the tertiary rocks. The mineral products are coal, iron, lead, copper, marble, gypsum, porcelain, and potters'-clay.

The department belongs entirely to the basin of the Garonne. The TARN flows westward to Alby and then south-west to the junction of the Agout, shortly after which it quits the department to enter that of Haute-Garonne. Just above Alby the Tarn has a fall, or rather a series of falls, over the steep face of a limestone rock: this fall is called *Saut-du-Tarn*. The tributaries of the Tarn which belong to this department are the Aveyron, the Tescou, and the Agout. None of them, except the Aveyron, is navigable.

There are in the department, 5 imperial, 28 departmental, and 25 communal roads.

About one-half of the surface is under the plough. The soil, except in the mountainous parts, is generally fertile; but agriculture is in a backward state. The produce in wheat, barley, oats, rye, maize, and buckwheat, leaves a surplus for exportation. Pulse, flax, hemp, aniseed, coriander, woad, and saffron are grown. The meadow and grass lands may be estimated at about 100,000 acres, and the heaths, commons, and other open pastures at 150,000 acres. The valleys and the slopes of the hills afford good pasturage, and the breeding of cattle is one of the principal sources of the wealth of the department. Sheep and pigs are numerous, and the veal is in high repute. The vineyards occupy nearly 80,000 acres; the cultivation of the vine is very carefully and skilfully managed, but none of the wines are of first-rate eminence. The woodlands occupy 200,000 acres; the oak, the beech, the ash, the maple, the chestnut, the walnut, the mulberry, and the wild cherry-tree are common.

Bees are numerous, and silk-worms are bred. The wild boar, the roebuck, the wolf, the fox, the badger, the polecat, and the hedgehog are found; and small game is tolerably abundant.

The department is divided into four arrondissements, which, with their population and subdivisions, are as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Albi	8	91	92,167
2. Castres	14	92	144,855
3. Gaillac	7	75	72,074
4. Lavaur	6	57	54,007
Total	35	315	363,073

1. In the first arrondissement are—ALBI, the capital of the department, which is described in a separate article; *Pampelonne*, N. of Albi, on the Viaur, population 2025; and *Realmont*, a well-built town, 10 miles S. from Albi, with about 3000 inhabitants in the commune.

2. In the second arrondissement are—CASTRES; *Brassac*, on the Agout, population 2055; *Angles*, 14 miles E. from Castres, population 2785; *La-Bruguière*, on the Tauré, population 3656 in the commune; *La-Coume*, population 3965 in the commune; *Vabres*, on the Gijou, population 2529; *Downgne*, 2250 inhabitants; *Lautrec*, N.W. of Castres, population 3467; *Masamet*, a considerable town, with a population of about 9700 in the commune, engaged largely in the manufacture of woollen goods; *Montredon*, 16 miles N.N.E. from Castres, population 5213; *Murat*, 2908 inhabitants; and *Roquecorbe*, population 2053, engaged in the manufacture of hosiery and woollen cloth.

3. In the third arrondissement the chief town is *Gaillac*, a large ill-built place with a college, tribunal of first instance, and 8152 inhabitants in the commune. It is situated on the right bank of the Tarn. It is an old town without any striking public buildings; there are an hospital and a small theatre. East of the town is a suburb, well laid out and pleasantly situated. There are brandy-distilleries and cooperages, and one or two tan-yards, dye-houses, and yards for building boats and other river-craft. Trade is carried on in corn, wine, and vegetables. *Cordes*, a mediæval town, built on a conical hill, 13 miles N. from Gaillac, has 2779 inhabitants. *L'île-d'Alby*, on the right bank of the Tarn, is a small town, with a place or square regularly laid out and adorned with a fountain. Considerable trade is carried on in corn and wine. Population of the commune 4951. *Rabastens*, in a fertile plain on the right bank of the Tarn, is an ill-laid-out and ill-built town, 11 miles S.W. from Gaillac, and has 5825 inhabitants, who manufacture blankets, and trade in corn, wine, and fruits. *Castelnau-de-Montmirail*, a considerable market-town, situated

in a district fertile in corn and fruit, has marble-quarries, and 3086 inhabitants.

4. In the fourth arrondissement the chief town, *Lavaur*, is situated on the left bank of the Agout (which is here spanned by a noble arch), and has a tribunal of first instance, a college, a public library, and 7113 inhabitants, who manufacture silks, serge, hosiery, leather, and cotton-yarn. *Graulhet*, prettily situated on the Dadou, 10 miles E. from Lavaur, has 5197 inhabitants in the commune. *Puy-laurens*, on a hill 14 miles S.E. from Lavaur, has silk-mills and 6095 inhabitants in the commune, who trade in horses and mules.

The department forms the diocese of the Archbishop of Albi. It is included in the jurisdiction of the Imperial Court and within the limits of the University-Academy of Toulouse; and in the 12th Military Division, of which Toulouse is head-quarters. Tarn returns three members to the Legislative Body of the French empire.

TARN-ET-GARONNE, a department in the south of France, is bounded N. by the department of Lot, E. by those of Aveyron and Tarn, S. by Haute-Garonne, and W. by Gers and Lot-et-Garonne. Its form is irregular; the greatest length is from north-east to south-west, 64 miles; the greatest breadth at right angles to the length is 44 miles. The area is 1436.6 square miles. The population in 1841 was 239,297; in 1851 it amounted to 237,553, which gives 165.3 to the square mile, or 9.2 below the average per square mile for the whole of France.

This department was formed by a senatus-consultum under the reign of Napoleon I. in 1808. It has no mountains and scarcely any hills; slight undulations alone vary its surface. The greater part is occupied by the tertiary formations of the basin of the Gironde: the most eastern district on the Aveyron is occupied by secondary formations. Among the mineral products are coal, iron, marble, freestone, limestone, marl, and potters'-clay.

The department belongs altogether to the basin of the Garonne. The GARONNE itself enters it on the south side, a little below Grenade, and has about 49 miles of its course in this department, navigable throughout. The Tarn enters the department on the south-east: it flows north-west and west to the Garonne, which it joins on the right bank: its whole course in this department is 40 miles, navigable throughout. These are the only navigable rivers. Of smaller streams the Garonne receives on the left bank the Lambon, the Gimone, and the Serre, above the junction of the Tarn; and the Larax, or Rats, below the junction of that river. The Barguelone joins the Garonne on the right bank. The AVEYRON, a considerable feeder of the Tarn, which it joins on the right bank, between Montauban and La-Française, has the lower part of its course in this department or along the boundary. The Tarn receives also the Tescou (of which the Tescoumet is a feeder) and the Lemboulas (of which the Latté is a feeder), both on the right bank. The Aveyron receives the Seye, the Bonnette, and the Lerc, on the right bank; and the Verre and the Tause on the left bank.

Highway accommodation is afforded by 7 imperial, 17 departmental, and a great number of communal roads. The railway in course of construction from Bordeaux to Cette passes through Moissac and Montauban.

The climate is generally mild but variable. Rains are frequent in spring; the summer heat increases gradually towards the end of July, when it is very great: autumn is the pleasantest season of the year: winter, though sometimes very cold, is generally dry. Snow rarely falls.

The area of the department may be estimated at about 910,000 acres in round numbers, of which about 575,000 acres, or above six-tenths, are under the plough. The soil is various; in some parts stiff and clayey, in others light and sandy; so sandy in some places as to be incapable of cultivation. The greater part however is very fertile: the plains and alluvial tracts which line the banks of the Garonne, the Tarn, and the Aveyron, are among the richest in France; but those along the banks of the Garonne are liable to be injured by the inundations of that river. The farms are generally separated by quick-hedges, and adorned with clumps of the wild quince-tree. The most important article of agricultural produce is wheat, which is of excellent quality. It is ground into flour, especially at Montauban; and large quantities are exported to America. Barley, oats, rye, maize, pulse, potatoes, vegetables of excellent quality, rape, flax, hemp, and tobacco are also cultivated to a considerable extent.

The meadows have an extent of about 48,000 or 44,000 acres, the heaths and open pastures of more than 41,000 acres. The number of horned cattle and pigs is considerable. Sheep are few. Horses, fitted for the light cavalry, are reared; and a considerable number of mules are bred for the Spanish market. Ducks, geese, turkeys, and other poultry are numerous. Quills and feathers are important articles of trade.

The vine is extensively cultivated on the slopes and more elevated plains. The district between the Tarn and the Garonne is particularly adapted to the growth of the strong red wines. The vineyards have an extent of about 90,000 acres. A large part of their produce is made into brandy for exportation.

The orchards and gardens occupy about 4500 acres: the walnut and chestnut-trees are of great size: the white mulberry is cultivated in order to rear the silk-worm. The woods occupy about 110,000 acres.

Game and fresh-water fish are abundant: great quantities of the lamprey and the shad are taken in the Garonne in the spring.

Manufactures are confined chiefly to the towns. They comprise broadcloth, serge, silk hosiery, paper, cutlery, soap, some cotton-stuff, leather, beetroot sugar, iron, and flour.

The department is divided into 3 arrondissements, which, with their subdivisions and population, are as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Montauban . . .	10	62	106,323
2. Moissac . . .	6	49	60,598
3. Castel-Sarrasin . .	7	81	70,632
Total . . .	23	192	237,553

1. In the first arrondissement the chief town is *Montauban*, which is also the capital of the department, and is noticed in a separate article. [MONTAUBAN.] Among the other towns are the following, the population in each case being that of the commune:—*Cassan*, on the left bank of the Lère, with a population of 4292, who manufacture linen, broadcloth, sugar, and leather; and trade in agricultural produce. *Caylus*, 24 miles N.E. from Montauban, has remains of an ancient castle, and a population of 5152. *Moliers*, population 2542. *Monclar* (2210). *Montpezat* (2900). *La-Française*, population 3222, has a manufacture of pottery from the fine clay which is dug in the neighbourhood of the Tarn. *St-Antonin*, on the right bank of the Aveyron, at the junction of the Bonnette, has manufactures of serge and other woollen stuffs, and there are tan-yards and paper-mills: considerable trade is carried on in leather and dried plums. *Nègrepelisse*, on the left bank of the Aveyron, has 3122 inhabitants, who manufacture cotton goods, and trade in corn, wine, and hemp.

2. In the second arrondissement the chief town, *Moissac*, is situated on the Tarn, 15 miles N.W. from Montauban, and has a tribunal of first instance, a college, and 10,541 inhabitants. The town is well built. The church of St-Pierre, which, with the cloister adjoining, formed part of the Abbey of Moissac, dates from about the year 1104. A walk shaded by fine trees surrounds the town on the site of the former ditch; there is also a fine public walk along the right bank of the river. Moissac trades in flour, oil, wine, and wool. Among the other towns are *Auvillar*, near the left bank of the Garonne: population, 2178. *Lasserre*, north of Moissac, on a hill near the Barguelone, with 3444 inhabitants, who trade in corn, wine, fruits, and cattle. *Montagny*, 18 miles N. from Moissac, population 4073; and *Valence*, on the right bank of the Garonne, population 3088.

3. In the third arrondissement the chief town, *Castel-Sarrasin*, is situated in a fertile plain on the Axin, near the right bank of the Garonne, and has a tribunal of first instance, a college, and 6500 inhabitants in the commune. It is a well-built place, with some remains of its old ramparts, and two fine gate-entrances. Serge, hosiery, hats, and linen are manufactured, and there is some trade in corn, oil, saffron, &c. *Beaumont-de-Lomagne*, on the Gimone, 12 miles S. from Castel-Sarrasin, is a well-built town with 4112 inhabitants, who manufacture coarse woollens, tiles, and leather. *Verdun-sur-Garonne*, on the left bank of the Garonne, has much declined, but has still some woollen manufactures and 4213 inhabitants. *St-Nicolas-de-la-Grave* (population 2033), is known for the excellent melons grown in the surrounding district. *St-Porquier* (population 1437), is known for the extensive cultivation of tobacco and saffron in the neighbourhood. *Montech*, on a hill 9 miles S.E. from Castel-Sarrasin, has a population of 2758.

The department forms the diocese of the bishop of Montauban; it is under the jurisdiction of the High Court and within the limits of the University-Academy of Toulouse; and belongs to the 12th Military Division, of which Toulouse is headquarter. The department returns 2 members to the Legislative Body of the French empire.

(*Dictionnaire de la France; Annuaire pour l'An 1853; Annuaire du Commerce.*)

TARNOPOL. [GALICIA, AUSTRIAN.]

TARPORLEY. [CHESHIRE.]

TARQUINIUM, an ancient town of Etruria, on the southern bank of the river Marta, which empties itself into the sea a few miles below. According to Strabo the town was founded by Tarcon, one of the companions of Tyrrhenna. In the reign of Anus Marcius, Demaratus of Corinth is said to have come with a band of his countrymen to Etruria, and to have been favourably received by the Tarquinians; and the story describes him as the father of L. Tarquinius Priscus. This tradition shows that Tarquinius experienced at an early period considerable influence from Greece. Tarquinius appears to have become in a short time a great and powerful city, as is clear from the war which it carried on with Rome, and from the important remains which have recently been discovered; and there is little doubt that it formed one of the twelve republics of Etruria. After the expulsion of Tarquinius Superbus from Rome, in B.C. 509, the Tarquinians unsuccessfully endeavoured to restore him by force of arms. In the 4th century before Christ they carried on frequent wars against Rome. At last in B.C. 356 they were defeated by the dictator Marcus Rutilius, and the year after they were compelled by C. Sulpicius to lay down their

arms. Shortly after the Tarquinians sued for a truce, which was granted for forty years. At a later period Tarquinii became a Roman Municipium (Cicero, 'pro Cæciliis,' 4).

The site of the ancient Tarquinii is clearly discernible in the ruins still extant on the hill of Tarchino, near the modern town of Corneto. The place has in modern times acquired a peculiar interest through the numerous works of art which have been discovered in the tombs and catacombs. Most important are the paintings with which the walls of the catacombs are decorated; but besides these, thernæ and temples with inscriptions, mosaics and vases, and other works of art, are found there.

TARRAGONA. [CATALUÑA.]

TARSHISH, a place mentioned in the Old Testament, particularly in connection with the commerce of the Hebrews and Phœnicians. In Gen. x. 4, the name occurs among the sons of Javan, who are supposed to have peopled the southern parts of Europe. In other passages it is mentioned as sending to Tyre silver, iron, tin, and lead. The prophet Jonah, attempting to avoid his mission to Nineveh, fled from Joppa in a ship bound to Tarshish. In several passages of the Bible 'ships of Tarshish' are spoken of, especially in connection with Tyre. Tarshish is generally identified with the Phœnician emporium of Tartessus in Spain, a place which would undoubtedly furnish the products said to have been brought from Tarshish. Aramsan pronunciation of 'Tarshish' would be 'Tarthesh,' which would at once become the Greek Tartessus. There seems now little doubt that the Tarshish of the Hebrews and Phœnicians and the Tartessus of the Greeks are identical with *Carteia*, an ancient city, which stood at the head of the bay of Algeciras, about 4 or 5 miles W. from Calpe, or Gibraltar. A hill called El-Rocadillo, midway between Gibraltar and Algeciras, is ascertained to have been the site of *Carteia*. Numerous coins of the city have been found; there are remains of an amphitheatre, and the ancient walls may still be partly traced. These remains however and the coins belong to the Roman imperial period; the coins bear the head of the Tyrian Hercules, who was especially worshipped here, and in whose Phœnician name (*Mel-Carthā*) Bochart seeks the original root of all the names of the city. The Romans would retain the Punic name *Carteia*, which, according to statements in Strabo, Pliny, Pausanias, Mela, Appian, and other ancient authors, was considered to be identical with Tartessus.

Of Tartessus nothing is known except its traditional renown as a great and wealthy emporium of the Phœnician trade. *Carteia* was one of the cities of the Bastuli Pœni, who were a mixed Iberian and Phœnician race. It was an important naval station in the second Punic war, when it witnessed the defeat of the Carthaginian fleet under Adherbalby Lælius (B.C. 206). In B.C. 171 it was colonised by 4000 men, the offspring of Roman soldiers and Spanish women. During the civil war in Spain *Carteia* was the chief naval station of Cneius Pompey, who took refuge here after his defeat at Munda, but was obliged to leave it on account of the disaffection of part of the citizens.

TARSUS, a city of Cilicia Campestris, on the Cydnus, in Asia Minor, is situated about 12 miles from the sea, in about 36° 55' N. lat., 34° 59' E. long. There are various fabulous legends about its origin. Stephanus Byzantinus says it was founded by Sardanapalus. Xenophon, 'Anab.,' i. 2, describes Tarsus as a great and flourishing city when it was taken and plundered by the younger Cyrus, who afterwards concluded a treaty with Syennesis, king of Cilicia, who had his palace there. Alexander the Great arrived at Tarsus just in time to save it from being burnt by the Persians. The city joined the party of Julius Cæsar, in honour of whom it took the name of Juliopolis; it was in consequence severely punished by Cassius, and rewarded afterwards by Antony, who made Tarsus a free city. Tarsus enjoyed the favour of Augustus, whose tutor Athenodorus, a Stoic, was a native of this place, and persuaded the emperor to release his countrymen from all taxation. Tarsus continued to be a wealthy and important city under the emperors. The Tarsians, according to Strabo, excelled in quickness of repartee and every kind of ready wit; and their schools of philosophy were not less celebrated than those of Athens and Alexandria. Tarsus was a metropolis, a free city, and tax-free, as before stated. St. Paul was a native of Tarsus. Jupiter, Apollo, Hercules, and Perseus are frequent types on the coins of Tarsus, and confirm the testimony of Dion Chrysostom ('Orat.,' 33, 20), who mentions these among the chief deities of the place.

Tarsus was seized by the Arabs during the early times of their empire, and was strongly fortified by Harun al Raahid, whose son and successor, Al Mamun, was buried there, A.D. 833. It was recovered by Nicephorus Phocas, the successor of Constantine Porphyrogenetus, after a great resistance. Ebn Haukal, who wrote in the 10th century, describes 'Tarsous' as a considerable town, with a double wall of stone, as a strong and pleasant place, and as containing above 1000 horsemen. Tarsus was afterwards retaken by the Arabs, but it was wrested from them by the Crusaders, under the command of Tancred. William of Tyre describes it at this time as a metropolis of Cilicia, with suffragan towns, and a population of Greeks and Armenians, much oppressed by the Arabs. In the 13th century, during the khalifate of Mostazem, the Arabs attempted to recover Tarsus, but failed. It was finally taken by Mohammed II., in 1458.

Very few remains of ancient Tarsus exist; at the north-west end of

the ancient town is part of an old gateway, and near it a very large mound, apparently artificial, with a flat top; on an eminence to the south-west are the ruins of a spacious circular edifice, probably the gymnasium. The Cydnus (now called the river of Tersoos) was navigable up to Tarsus in ancient times. It flowed into a kind of lake called Rhegma, which had dockyards and formed the port of Tarsus. The deposits of the river have filled up the lake, and the mouth of the Cydnus is so obstructed by sand-bars that only small boats can enter, but inside the bar the river is still deep and about 160 feet wide,

TARTARY. [TURKISTAN.]

TARTAS. [LANDES.]

TARTASH-TAGH. [BOLOB-TAGH.]

TARTESSUS. [TARSHISH.]

TARUDANT. [MOROCCO.]

TARUN. [PERIA.]

TARVIN. [CHESHIRE.]

TASKHEND. [TURKISTAN.]

TASMANIA. [VAN DIEMEN'S LAND.]

TATA. [HUNGARY.]

TAPTA. [HINDUSTAN.]

TATTERSHALL. [LINCOLNSHIRE.]

TAUAI. [SANDWICH ISLANDS.]

TAUNTON, Somersetshire, an ancient market-town, parliamentary borough, and the seat of a Poor-Law Union, is situated in a fertile vale called Taunton Dean, in 51° 1' N. lat., 3° 6' W. long., distant 46 miles S.W. from Bath, 141 miles W.S.W. from London by road, and 163 miles by the Great Western and Bristol and Exeter railways. The population of the borough in 1851 was 14,176. The borough is governed by two bailiffs chosen annually, two constables, and two portreeves, and returns two members to the Imperial Parliament. The living is a perpetual curacy in the archdeaconry of Taunton and diocese of Bath and Wells. Taunton Poor-Law Union contains 38 parishes and townships, with an area of 70,452 acres, and a population in 1851 of 35,114.

Taunton was a place of considerable importance in the Anglo-Saxon period. A castle was built after the Conquest by one of the bishops of Winchester, to whom the town and manor were granted. Perkin Warbeck held the castle and town for a short time; and in the civil wars Taunton sustained a long siege under Blake against 10,000 Royalist troops.

The town is about a mile long; the principal streets are well paved and lighted with gas. The woollen manufacture was established at Taunton in the 14th century, but has long since decayed; at present the only manufacture is that of silk, called here 'silk throwing.' The river Tone is crossed here by a stone bridge of two arches; but the river is only partially navigable, and the water communication is mainly by a canal between Taunton and Bridgewater, a distance of 12½ miles; there is a branch from this canal to Chard. The market-house stands in a spacious open area called the Parade. On the west side of the Parade is a handsome building of the Ionic order, erected in 1821, the upper part of which is appropriated as a library, museum, and reading-room; and underneath, and in the rear, are the markets for fish, poultry, dairy produce, &c. The castle is used for the assize courts. The Taunton and Somerset Institution, established in 1823, contains a good library, and a large public reading- and news-room. The church of St. Mary Magdalen, formerly a chapel to Taunton Priory, is a spacious and handsome edifice in the perpendicular style. St. James's church is a plain edifice with an ancient square tower. Trinity church is a gothic building, erected in 1842. The Wesleyan Methodists, Roman Catholics, Independents, Baptists, Quakers, and Unitarians have chapels. The Grammar school was founded by Fox, bishop of Winchester, in 1522. There are National, British, and Infant schools. The West of England Dissenters' Proprietary school, founded in 1847, had 112 pupils in 1854. The Wesleyan Methodists have a college here. There are in Taunton a mechanics' institute, a savings bank, and a philharmonic society. The Somerset Archaeological Society has its museum and its meetings in Taunton. A county court is held. Among the benevolent institutions are the Taunton and Somerset Hospital, and the Eye and Ear Infirmary. The markets are held on Wednesday and Saturday; a fair is held on June 17th.

TAUNTON. [MASSACHUSETTS.]

TAUNUS. [PRUSSIA.]

TAURICA CHERSONESUS was the ancient name of the peninsula which juts out southward from European Sarmatia, between the Pontus Euxinus (Black Sea) and the Palus Mæotis (Sea of Azof). It is now called the CRIMEA, under which head its form and physical features are described. The isthmus which connects it with the mainland was called *Taphros*, or *Tuphros*, and there appears to have been a town called Taphros upon the isthmus; and both most probably took their name from the ditch (*Tápros*) which crossed the isthmus and was fortified. (Strabo, vii. p. 308; Pliny, iv. 26; Mela, ii. 1.) On the west of this isthmus was the Sinus Carcinites, now the Gulf of Perekop; and on the east the shallow waters of the Putrid Sea (Palus Putris), now called the Saiwash. The south-western point of the peninsula was the promontory Parthenion, which is either the modern Cape Kherson or Cape St. George. The southern promontory was

called Criu-Metopon, now Aia-burun, or Cape Aia (1200 feet high); and either the south-eastern or the eastern point was called Korax. On the east the peninsula is divided from the coast of Asia by the Cimmerian Bosphorus, now the Strait of Kertch or Yenikale. In the south-western angle of the Crimea is a small peninsula terminated by Cape Kherson, and inclosed on the north by the Gulf of Achtiar, or Sevastopol, the ancient Portus Ktenus; and on the south by the Gulf of Balaklava, the ancient Portus Symbolorum. On this peninsula, at the distance of 100 stadia from the promontory Parthenion, stood the city of Chersonesus, which was a colony of Heraclea in Pontus, and therefore distinguished as the Heracleiotis Chersonesus. The peninsula itself was called the Small Chersonesus, and the Chersonesus Taurica the Great Chersonesus, for the sake of distinction. The other important towns were, on the isthmus, *Taphros*, now *Perekop*; on the west coast *Eupatoria*, now *Kazlov*, built by Mithridates Eupator; on the east coast *Theodosia*, now *Kefa*, *Kaffa*, or *Feodosia*, a colony of the Milesians; and near the eastern extremity of the peninsula, on the Bosphorus, *Panticapaeum*, now *Kertch*. There were several towns in the interior, of which one was named *Cimmerion*.

The earliest inhabitants of the peninsula appear to have been the Cimmerians (Herod., iv. 1, 11, 12.) Clear traces of this people remain in the names of Cimmerion, the Cimmerian Bosphorus, the Cimmerian Chersonesus (as the peninsula was sometimes called), and in its modern names of Crimea and Crim-Tartary. A Scythian or Slavic horde seems to have early mixed with or partially expelled the Cimmerii. In the earliest notices of the Chersonesus, by Greek writers, we find the mountainous region of the south and south-east inhabited by a piratical people, called Tauri, from whom the Chersonesus was called Taurica, and whose name remains in that of the modern Russian province of Taurida, in which the Crimea is included. Herodotus (iv. 99) says that the Tauri were a different people from the Scythians. It seems probable that the Tauri were a remnant of the old Cimmerian inhabitants, who had maintained themselves in the mountains, and that they got the name of Tauri from this very circumstance—'tau' being an old root, meaning a mountain. The Tauri were reputed by the Greeks to be inhospitable and cruel to strangers: they were said to offer human sacrifices, especially of shipwrecked mariners, to a virgin goddess, whose temple stood on the promontory of Parthenion. In this temple Iphigenia, the daughter of Agamemnon, was a priestess; and Herodotus says that the Tauri identified Iphigenia with the goddess. This legend enters into the *Agamemnon* of Euripides.

From about the sixth century before Christ downwards, several Greek colonies were planted on the Chersonesus, and these were gradually formed into two states, that of Chersonesus, comprehending the smaller peninsula on the south-west, and the kingdom of Bosphorus on the south-east. These two states were united under Mithridates. [BOSPORUS; CRIMEA.]

TAURIDA, a government of South Russia, situated on the Black Sea, consists of the Crimea or Tauric Peninsula and the Nogay Steppe. It is bounded N.W. by Kherson, N.E. by the country of the Don Cossaks, E. by Caucasia, S.E. by the Kuban, and S. by the Black Sea. The Crimea is described in a separate article. [CRIMEA.] The area, exclusive of the Saiwash, or Putrid Sea (which covers 990 square miles), is 24,617 square miles, with 572,200 inhabitants of many different nations, Tartars, Cossaks, Russians, Jews, Gipsies, Germans, and other foreign colonists, &c. It lies between 44° 30' and 47° 50' N. lat., 31° 25' and 40° 25' E. long. The Nogay Steppe includes the whole of the extensive country from the Dnieper and its limans to the Berda. It is a dry elevated steppe, on a basis of granite. The soil is dry, poor, in part sandy, and saltish, without wood; but there are here and there extensive hollows with rich black mould, which produce the finest grass. The climate is extremely mild, and differs little from that of the peninsula. The winter, though short, is severe. The only rivers are those which form the boundaries: the Dnieper on the north-west, the Konskaia on the north, and the Berda on the east. On the south-east of the steppe is the Sea of Azof, and on the south-west the Gulf of Perekop and the Black Sea. [RUSSIA.] In the Nogay Steppe are numerous lakes, some of them of considerable size. Lake Molotschnaia, into which the river Molotschnaia runs, and which is separated from the Sea of Azof by a narrow sandy spit, covers an area of over 108 square miles. The southern coast of the steppe presents a great number of those remarkable long narrow projections of sandy alluvial deposits called Kosas, or 'tongues.'

The long tongue west of the Gulf of Perekop and south of the estuary of the Dnieper, was anciently called Achilleos Dromos, or Racecourse of Achilles, from a legend, which gave it to Achilles as a stadium on which to exercise his celebrated swiftness of foot. This spit extended about 80 miles in length, including the part of the mainland to which it was attached near its centre. The western portion of it is now isolated by a narrow gap, and forms the Kosa Tendra. To the north of the Kosa Tendra is another long but rather broad and notched projection, which separates the Bay of Kil-burun from the estuary of the Dnieper, and is also called Kil-burun, which is a corruption of Achill-burun, or Cape Achilles, for the name of the old hero is connected with several localities in the west of the Black Sea. The name Kil-burun is further corrupted in many maps and books into Kilburn and Kinbourn. The point of Kil-burun and

both sides of the bay have been recently strongly fortified by the Russians.

The country of the Tschernomoraki, or Black Sea Cossaks, including the island or peninsula of Taman, is separated from the Crimea only by the Strait of Yenikale. It was formerly included in the government of Taurida, but now forms a separate region, territorially connected with Circassia, and under the peculiar government of the Cossak districts of the empire. [CIRCASSIA; COSSAKS; KUBAN; TAMAN.] The only towns worth naming in the government of Taurida are those of the Crimea, which are noticed either under that head or in separate articles. [CRIMEA; BARTCHERABAI; BALAKLAVA; KAFFA; KOZLOFF.]

TAURÖMENIUM. [MESSINA, Province of.]

TAURUS, and ANTI-TAURUS. [ANATOLIA.]

TAVASTEHEUS. [FINLAND.]

TAVIRA. [ALGARVE.]

TAVISTOCK, Devonshire, a market-town, parliamentary borough, and the seat of a Poor-Law Union, in the parish of Tavistock, is situated on the right bank of the river Tavy, in 50° 33' N. lat., 4° 10' W. long., distant 11 miles N. from Plymouth, 81 miles S.W. by W. from Exeter, and 138 miles W.S.W. from London by road. The town is governed by a portreeve, and returns two members to the Imperial Parliament. The population of the parliamentary borough in 1851 was 8086. The living is a vicarage in the archdeaconry of Totness and diocese of Exeter. Tavistock Poor-Law Union contains 24 parishes and townships, with an area of 152,434 acres, and a population in 1851 of 27,850.

At Tavistock the Tavy flows rapidly through a narrow valley, from which the ground rises steeply on both sides to the height of several hundred feet. The river is crossed by two bridges within the town. A narrow valley, or gully, from the north, is covered by houses. In 961 an abbey was founded at Tavistock, which was burnt by the Danes, and afterwards rebuilt on a larger scale. Henry I. (1100-35) granted to the abbot a weekly market and a fair. In 1539 the then abbot surrendered the abbey to the king, when its revenue was estimated at 902*l.* A printing-press was established in the abbey soon after the introduction of the art into England. Fragments of the abbey still remain, but they are chiefly incorporated with other buildings. The upper room of the gate-house contains a public library. The parish church is a spacious edifice, with a tower at the west end supported on arches. The Independents, Unitarians, Quakers, and Wesleyan and Association Methodists have places of worship. There are in the town a Grammar school; National, British, and Infant schools; almshouses for 19 poor persons; and a savings bank. The Tavistock Institution has a small collection of Devonshire minerals. Tavistock has had the privilege of returning two members to parliament since 1295 (23 Edward I.).

Tavistock is one of the four stannary towns in the county of Devon. A county court is held in the town. Friday is the market-day: several fairs and great cattle markets are held in the course of the year. A canal connects Tavistock with the river Tamar at Morwell Ham quay, and with the town of Plymouth. Sir Francis Drake was a native of Tavistock.

TAVOLIERE. [CAPITANATA.]

TAWI-TAWI. [SOOLOO ISLANDS.]

TAWTON, NORTH. [DEVONSHIRE.]

TAY. [PERTSHIRE.]

TAYGETUS. [LAOCONIA.]

TCHAD, LAKE. [AFRICA.]

TCHADDA. [NIGER.]

TCHERNIGOV. [CHERNIGOV.]

TEANO. [LAVOBO, TERRA DI.]

TEATE. [ABRUZZO.]

TEDDINGTON. [MIDDLESEX.]

TEDSL. [MAROCCO.]

TEES. [DURHAM.]

TEESDALE, a district extending on both sides of the river Tees, in the North Riding of Yorkshire and the county of Durham [GREAT BRITAIN; DURHAM], which gives name to a Poor-Law Union. The Union contains 44 parishes and townships, with an area of 174,162 acres, and a population in 1851 of 19,813. The Union work-house is at BARNARD CASTLE; the district of which the Union is composed extends for several miles on each side of that town.

TESTA, RIVER. [BENGAL.]

TEFLIS. [TIFLIS.]

TEFZA. [MAROCCO.]

TEGEA. [ARCADIA.]

TEGUCIGALPA. [HONDURAS.]

TEHERAN. [PERSIA.]

TEHUACAN. [MEXICO.]

TEHUANTEPEC. [MEXICO.]

TEIGNMOUTH, Devonshire, a market-town, in the parishes of East and West Teignmouth, is situated at the mouth of the river Teign, on its left bank, in 50° 32' N. lat., 3° 31' W. long., distant 15 miles S. from Exeter, 179 miles S.W. by W. from London by road, and 209 miles by the Great-Western and Bristol and Exeter railways. The population of the town of Teignmouth in 1851 was 5013. The livings are in the archdeaconry and diocese of Exeter.

East and West Teignmouth now form one town. East Teignmouth church is near the sea-shore; it was lately rebuilt on an enlarged scale. West Teignmouth church is a large inelegant octagonal structure, with a tower at one of the angles; it was built in 1815. The Independents, Wesleyan Methodists, and Baptists have places of worship, and there are National schools. The public assembly rooms, erected in 1826, is a large building with an Ionic pediment and a Doric colonnade. On the Den, an open space by the sea, is a fine promenade. Teignmouth is much frequented as a bathing-place. There are large exports of granite from the Haytor quarries, manganese, pipe-clay, potters'-clay, timber, bark, and cider: the imports are of culm, coal, deals, iron, &c. There is a considerable fishery for soles, mackerel, and pilchards on the coast, and for salmon in the river Teign. The bridge over the Teign, opened in 1827, is 1671 feet long. It consists of 34 arches supported on iron trusses; over the main-channel there is a swing bridge, to allow the passage of ships. The market in East Teignmouth is on Saturday for provisions: there are three fairs also in East Teignmouth.

TELLICHERRY. [HINDUSTAN.]

TEME, RIVER. [SHROPSHIRE.]

TEMESH, or TEMES, RIVER. [AUSTRIA; HUNGARY.]

TEMESWAR. The southern part of the country formerly called Hungary, from the Danube and the Save on the south to near 46° N. lat. on the north, from Transylvania on the east to the Danube on the west, has been recently formed into a Crownland of the Austrian empire, called the *Woiwodeschaft of Servia* and *Temeswar Banat*. The Crownland comprises what used to be called the Banat of Temeswar and the Bacscs. The total area of the Crownland is 10,686 square miles, and the population in 1851 was estimated at 1,380,757. The area and population are thus distributed among the 5 circles into which the Crownland is divided:—

Circles.	Arrondissements.	Area in Sq. Miles.	Population in 1851.
Temeswar .	6	2165	280,808
Lugos . . .	4	1978	219,805
Becserek . .	8	2694	336,765
Zombor . . .	6	2294	349,436
Neusatz . .	5	1555	193,943
Total . . .	29	10,686	1,380,757

The Temeswar Banat comprises the districts of Torontal, Temes, and Krassova, with certain portions of the Military Frontier towards Wallachia. It is bounded N. by the Maros, W. by the river Theiss and the Danube, S. by the Danube, and E. by the Cserna and the offsets of the Carpathians, which divide it from Little Wallachia and Transylvania. It is remarkable for great varieties of climate: in the eastern districts the snow on the high mountains and in the deep ravines never melts, and in other districts snow falls only in severe winters. A third part of the country, from the district of Krassova and extending between the Maros and the Danube, east of the Karasch, is mountainous, and almost everywhere well watered.

The district of Torontal extends from the Maros along the Theiss, and comprises the lower parts of the basins of the Temes and the Bega. It is a country of vast plains and marshes, with a warm but not salubrious climate, and a very fertile soil. The central part of the Banat comprises the circle of Temeswar, which is similar in soil and climate to the preceding, but lies nearer the mountains.

The ground which has been gained by draining the morasses on the banks of the Theiss and the Danube, and in the more elevated tracts by clearing the old forests, is extremely fruitful. The principal points of the high mountains are Sarko, Gugu, Murarn, Godjan; on the lower mountains there are vast forests and fine pastures. The principal rivers are the Danube, Theiss, Maros, which flow on the boundaries; the *Alt-Bega*, a feeder of the Theiss, which traverses part of the plain of Temeswar and Torontal: the *Temes*, or *Temesch*, which rises in the high mountains on the eastern frontier, and flows north-west past Lugos, thence westward, and then south-south-west through a vast plain intersected by marshes and woods to the Danube, which it enters by two mouths below Pancsova: the *Bega*, a feeder of the Temes, which flows northward from Mount Buska and joins the Temes on the right bank between Lugos and Temeswar: the *Karasch*, or *Karas*, which flows nearly south from the western slopes of the mountains in the Krassova district to its mouth in the Danube near Uj-Palanka: the *Nera*, which drains the southern slopes of the same mountains, and joins the Danube just below the mouth of the Karasch: and the *Cserna*, which rises in Little Wallachia and flows southward between high mountain ridges into the Danube on the frontier below Alt-Orsova.

Canals have been made to drain the marshes. The principal of these is the Bega Canal, 75 miles in length, which commences in the Krassova district, and after skirting the Bega, passes into the district and through the town of Temeswar. It then turns south-west, and traversing a great part of the plain of Torontal, it joins the Alt-Bega above Nagy Bekskerek. The Allibunar marshes, between the Karasch and the Temesch, are drained by the Borzava Canal and some connected cuts. By the draining of the marshes, tracts which were

formerly sources of pestilential exhalations, are now covered with the finest corn-fields, or, where they have been imperfectly reclaimed, with crops of rice, and the salubrity of the country has been greatly improved. The protection which the mountains give against the east and north-east winds, and the mitigation which the north winds experience in traversing the great plain, raise the temperature to that of a southern country, and the rich soil yields abundant crops. The wheat and maize of the Banat are of the finest quality. Rice is extensively cultivated. Successful attempts have been made to cultivate cotton and silk, and in some parts a sweet wine is produced. Mineral springs are frequent, but little use is made of them. Only those of Mehadia, which were known to the Romans by the name of 'Therma Herculis,' are still much resorted to, especially by the Wallachian and Moldavian nobles. About this place, as well as in other parts of the Banat, Roman antiquities are frequently found. The population of the Banat, which is continually increasing by the accession of foreign settlers, consists chiefly of Servians, Wallachians, Rascians, Magyars, Bulgarians, Gipsies, Germans, Jews, and other foreign settlers. In the mountainous districts, the Wallachian language is prevalent; in the towns and colonised plains, the German; and in the districts of the military frontier, the Illyrian. The natural productions are horses, horned cattle, swine, wheat, rice, flax, hemp, tobacco, fruit, wine, woad, madder, saffron, silk, timber, honey: game of all kinds and fish abound. The minerals are gold, silver, copper, zinc, and some iron. The gold is obtained by the Gipsies, by washing the sand of the rivers. The chief occupations of the inhabitants are agriculture and the breeding of cattle. There are no manufactures of any importance. There are remains of Roman entrenchments from Uj-Palanka, on the Danube, all the way across the plain to the Marosch near Alt-Arad.

The Bacscs, or district of Bacs-Bodrogh, forms the western part of the *Woiwodeschaft of Servia*; it lies between the Danube and the Theiss, the banks of the former river constituting its western and southern boundaries, and those of the latter its eastern. Its surface, with the exception of a semicircular and rather elevated plateau, arching to the south, between Szatanisits above Zombor and Maria-Theresiopel, is an uninterrupted plain. The plateau just mentioned, termed the 'Teletakan Hills,' is situated immediately north of what are called the 'Lesser and Greater Roman Entrenchments,' which extend in a serpentine line from Apatin near the Danube to Földvar on the Theiss. Between these entrenchments and the Teletakan Hills runs the Bacscs, or Franz Canal, which commences on the Danube, passes Zombor and Verbasz, and joins the Theiss: it is nearly 70 miles in length, and has a breadth of 62 feet, and a depth varying from 4 to 6 feet. Vessels from 250 to 300 tons navigate it. The district contains no stream of note besides the Moeztonga, which flows with a sluggish current, forming numberless swamps in its course, into the Danube below Bacs. There are several large sheets of water, such as the salt-lake of Polity, near Maria-Theresiopel, and the adjoining lake Ludasto. The soil is in parts of such great natural fertility as not to require manuring; in others it is utterly arid and sandy: the latter is more especially the character of many districts around Maria-Theresiopel, Madaros, Bája, and Monostor, and others in the northern part of the Bacscs. The productive portion of its surface is estimated at about 1,785,700 acres, of which nearly one-half is arable land. In consequence of the swamps the climate is in general insalubrious. The country yields vast quantities of grain; its wheat in particular is in great request, from the excellence of its quality, and it is exported in large quantities. The vineyards occupy about 90,000 acres, and an abundance of wine is made in the neighbourhood of Maria-Theresiopel, Bája, Zombor, and the Franzen Canal. Fruit is largely produced; hemp is cultivated to a great extent, and good tobacco is raised. Madder and woad are grown near Apatin. Woods, particularly of oak, abound along the banks of the Danube. Fuel is scarce; the poor use straw, dried-rushes, and cattle-dung as a substitute. The district contains above 550,000 acres of pasturage, on which cattle, horses, and sheep in considerable numbers and of excellent breeds are reared.

The Crownland comprises also the Syrmian districts of Ruma and Illok, which lie between the Danube and the Save, and were formerly included in Slavonia. [CROATIA.] The limits given to it in this article comprise also a portion of the Military Frontier; but this is under the peculiar government of that portion of the empire as explained under MILITARY FRONTIER. According to the decree issued on the formation of this Crownland, the emperor is styled the Grand-Woiwode of Servia, and the actual governor of the Crownland takes the title of Vice-Woiwode. The governor is assisted by a ministerial commission and a native administrative council. Temeswar is the capital of the Crownland.

Towns.—*Temeswar*, the capital formerly of the Banat and now of the whole *Woiwodeschaft of Servia*, is situated in 45° 45' N. lat., 21° 20' E. long., on the Bega Canal, and has 20,300 inhabitants. It is one of the strongest fortresses and one of the handsomest and most regular towns in the whole Austrian empire. When Prince Eugène took it from the Turks in 1718, strong fortifications were erected, and the town was built in the modern style. The inner town, or fortress, is surrounded with triple walls and moats, and consists of large uniform stone houses, in straight, broad, well-paved streets,

There are three gates, which are defended by strong blockhouses. The casemates are capable of containing 3000 men. Temeswar is the seat of the Roman Catholic bishop of Csanad, and of the schismatic Greek bishop of Temeswar: here too are the superior courts of justice for the Crownland and the offices of the governor, a military academy, a great arsenal, and many other offices connected with the administration. The most remarkable buildings are, the old castle of John Hunyady, the fine Gothic cathedral of St. George, the cathedral of the schismatic Greeks, the Roman Catholic parish church, the churches of the Piarists, and of the seminary; the elegant residence of the Bishop of Csanad, the remarkably fine building in which the chapter resides, the house of the commander of the military frontier on the parade, the large and handsome county-hall in the great square, the barracks, the military and civil hospitals, the synagogue, and the Rascian town-hall, which contains a theatre and assembly-rooms.

Temeswar has three suburbs, one before each gate, at the distance of 800 paces, with fine avenues of trees leading to them. Before the Vienna gate is the suburb Michala, inhabited by Wallachians, who have their own churches, and whose occupations are agriculture and the breeding of cattle. Before the Peterwardein gate is Josephstadt, an extremely pleasant suburb, with very broad straight streets, and trees planted in front of the houses. The inhabitants of this suburb are Germans. The fine Bega Canal passes through the middle of this suburb, and communicates with the Danube. Before the Transylvania gate lies the manufacturing suburb, so called from the great manufactories that were formerly established here, but most of which were broken up in 1738, when a Turkish war was apprehended. In this suburb there is a hydraulic engine, by means of which water is conveyed in iron pipes underground into the fortress. There is a considerable trade at Temeswar in the productions of the country, and some manufactures of cloth, paper, iron-wire, and silk. Under the walls of Temeswar, the Magyar insurgents were utterly and finally defeated by the Austrians under Marshal Haynau, August 9, 1849.

Lugos, or *Lugosch*, capital of the circle of the same name and of the Krassova district, is situated about 20 miles E. from Temeswar, on the Teme, which divides the town into two parts, one of which on the left bank is inhabited chiefly by Germans, while the part on the right bank is inhabited chiefly by Wallachians and Rascians. The population is about 10,000.

Becserek, or rather *Gross Becserek*, chief town of the circle of that name and of the district of Torontal, is situated on the Bega, a little below the junction of the Bega Canal. It is a place of some trade, and has about 12,000 inhabitants.

Zombor, in the Bacscs, is situated on the Mosztunka, near the Franzsen Canal and the Danube, by means of which it carries on some trade in corn and cattle. It has important silk manufactures and about 22,000 inhabitants, mostly Illyrians. The town is the seat of a Greek bishop, has several Catholic and Greek churches, and a gymnasium.

Neusatz, also on the Bacscs, is situated nearly opposite Peterwardein, on the left bank of the Danube, and has about 20,000 inhabitants, who trade extensively on the Danube, the Theiss, and the Save, with the principalities and the frontier provinces of Turkey. The town, which is inclosed by walls, and is joined to Peterwardein by a causeway and a bridge of boats, has numerous churches belonging to Catholics, Greeks, and Armenians, a synagogue, a gymnasium, and several special schools. Danube steamers put in at Neusatz.

TEMPE. [THESSALY.]

TEMPIO. [SARDEGNA.]

TEMPLE SOWERBY. [WESTMORLAND.]

TEMPLEMORE. [TIPPERARY.]

TENASSERIM is a long slip of country lying along the upper part of the west coast of the Malay Peninsula, acquired from the Birman empire by the peace of Yandobo, in 1826, and forms now a province of the government of Penang, in the presidency of Bengal. A continuous range of mountains, varying in elevation from 3000 to 5000 feet, runs along the peninsula, and forms the division between Tenasserim and Siam on the east, while the Saluen, which falls into the Gulf of Martaban, forms for some distance the boundary of Birmah on the west. At its southern extremity it narrows to a point where the river Pakcham, which is navigable for 40 miles, by a portage of about 20 miles, reaches to a Siamese river which falls into the Gulf of Siam near the town of Bardia. At this point the ridge of mountains which separates Tenasserim from Siam approaches the shore, but in the north it extends backwards to a distance of about 100 miles. The total area is about 30,000 square miles, and the population has been estimated at about 100,000. The soil is, on the whole, fertile, but the productions are few and inconsiderable, and the chief exports have been a small quantity of rice and some teak timber; coffee and nutmegs have been cultivated with some success. Domestic animals are not numerous, except the buffalo, which is of large size. Tigers, elephants, and rhinoceroses are numerous, as are also various species of deer. Among the birds are found parrots, the Indian peacock, the *Phasianus gallus*, hawks, and pigeons; and the *Hirundo cuculatus* breeds in the cliffs of the islands of the Mergui Archipelago, the nests of which are collected in considerable numbers and sold to the Chinese; fish is abundant in the neighbouring sea, and trepang, tortoise-shell, and ambergris are obtained. The climate is considered healthy. There are two seasons at Moulmein; the rains commence

towards the end of May, and for three months are heavy and incessant, but they diminish in September, and cease in October, which is the hottest part of the year. The thermometer has never been known to rise above 90°; in June it varies between 72° and 76°.

The country is known to be rich in minerals. Gold is found in small quantities in some of the rivers. Tin is the only metal which has been worked. Iron-ore of good quality is found in abundance in several places, especially in the districts south of the Tenasserim river. Antimony occurs in the neighbourhood of Moulmein. There are extensive coal-measures on the banks of the Tenasserim River. The coal is generally of good quality, and the best kind is near the banks of the river below the last rapids, so that it can be brought to Mergui at moderate expense.

The rivers are numerous, but those in the southern parts have very short courses, descending from the mountains which form the watershed between it and Siam. The most important are those which run parallel with the mountains, such as the Tenasserim, which rises in about 15° N. lat., and flows in a southern direction for more than 200 miles in a straight line. The upper part of its course is broken by rapids as low down as 13° 15' N. lat., up to which the tides ascend, but in the dry season it becomes there very shallow. At its confluence with the Little Tenasserim it becomes deeper, and here the town of Tenasserim is built, up to which vessels of 100 tons burden can ascend. It then takes a turn to the north and disembogues itself by several mouths a little south of the town of Mergui. The river Tavoy, which rises near 15° N. lat., has a course of not less than 100 miles. The town of Tavoy is in 14° 7' N. lat., and so far vessels of 120 tons burden may ascend. The navigation is intricate, owing to the numerous shoals and low islands. The Saluen rises in Yun-nan in China, and runs in a southerly direction between Birmah and the Shan states (Laos) subject to Siam. At its confluence with the Thoug-Yin, though it brings down a great volume of water, and is only 100 miles from the Gulf of Martaban, it is not navigable, owing to the numerous rapids. In 17° N. lat. it is divided into two streams by Colan Island, and the eastern branch then becomes navigable. The Zitang, the Atta-yan, and the Gyeng, fall into the Saluen near its mouth. The confluence of these rivers forms a broad sheet of water, 15 miles long from north-east to south-west, and from 5 to 6 miles wide, interspersed with numerous small islands, and separated from the sea by the island of Pelew Gewen, 20 miles long and 10 miles wide. The channel running westward along the end of the island is called the Martaban River: the eastern channel runs due south past Moulmein. Amherst is lower down, and though there are some dangerous sands, there is from 11 to 5 fathoms water up to the town.

Numerous islands occur along the western coast of the peninsula without the Ganges, between 14° 40' and 8° N. lat. North of 12° N. lat. they extend to the distance of 70 or 80 miles from the shore, but south of 12° N. lat. they occupy a space of only 30 miles in width. These islands are comprehended under the collective name of the Mergui Archipelago. The larger islands from north to south are Tavoy Island, King's Island, Ross Island, Domel Island, Kisseraing Island, Sullivan Island, and Kalegouk, or Bentinck Island. Tavoy harbour, on the east side of that island, is safe and good, and affords an abundant supply of wood and water, and with the other islands to the southward affords a continuous anchorage for 50 miles. The spring-tides rise here 50 feet. The harbour of King's Island Bay, opposite the town of Mergui, is spacious and safe, but the entrance has some difficulties, as a shoal extends over a part of it. Bentinck Sound, on the east side of the island, also affords good anchorage.

The inhabitants of the province are a mixed race; Birmans, Thilians, Siamese, and Karens. The greater part of them are Buddhists in religion. Of the towns, which are few, AMHERST and MOULMEIN have been noticed. Tavoy is small, but it has some commerce with Rangoon and Mergui. Mergui has the advantage of a safe and well-protected harbour. The roadstead is between the mainland and Madramacan Island, with a soft bottom in from 6 to 16 fathoms water, where large vessels are sheltered from all winds. The neighbourhood is well adapted for plantations of spice-trees, and is conveniently situated for commercial intercourse overland with Bangkok and the countries of Siam which surround the gulf of that name. Tenasserim, an ancient town, was destroyed in the wars between the Siamese and the Birmans; it is now in ruins. Coal has been found in the neighbourhood.

TENBURY, Worcestershire, formerly called Temebury, a small market-town, and the seat of a Poor-Law Union, in the parish of Tenbury, is situated in a fertile district on the right bank of the river Teme, in 52° 18' N. lat., 2° 35' W. long., distant 22 miles N.W. by W. from Worcester, and 133 miles W.N.W. from London. The population of the parish of Tenbury in 1851 was 1786. The living is a vicarage in the archdeaconry of Salop and diocese of Hereford. Tenbury Poor-Law Union contains 19 parishes and townships, with an area of 35,941 acres, and a population in 1851 of 7047.

At Tenbury the river Teme separates Worcestershire from Shropshire, and is crossed by a stone bridge of six arches. The Kyre, a small but rapid stream, which falls into the Teme at the upper end of Tenbury, often occasions inundations in the town: this river is also crossed by a handsome bridge. The Leominster Canal passes near the town. There is a considerable trade in hops, cider, and perry. A

county court is held. The old church was carried away by a flood in 1770, and the present edifice was erected in 1777. The Baptists have a place of worship; there are National schools and a savings bank. The market-day is Tuesday; several yearly fairs are held.

TENBY, Pembrokeshire, a market-town and parliamentary borough, is situated in 51° 40' N. lat., 4° 41' W. long., distant 10 miles E. from Pembroke, and 244 miles W. by N. from London. The population of the borough, which is contributory to Pembroke in returning a member to the Imperial Parliament, was 2982 in 1851. The living is a rectory and vicarage in the archdeaconry and diocese of St. David's.

Tenby was originally built by the Flemish colonists. It was defended by bastioned walls and a strong castle, of both of which there are considerable remains. Its Flemish inhabitants were celebrated for their woollen manufactures, and kept up a considerable trade with the continent. The fortifications were strengthened on the approach of the Spanish Armada. Tenby was twice besieged during the civil war, after which the town rapidly fell into decay; but within the present century it has risen into repute as a watering-place. St. Mary's church, originally built by one of the old earls of Pembroke, consists of a nave, aisles, and chancel. The tower is surmounted with a spire 152 feet high, which is painted white to serve as a landmark. There are chapels for Wesleyan Methodists, Independents, and Baptists, National and Infant schools, a literary and scientific institute, a subscription library and reading-room, baths, billiard-rooms, and a small theatre. Horse races are held in August, and there is a cricket club. Markets are held on Wednesday and Saturday. The fisheries are chiefly in the hands of the Brixham fishermen. The fish are sent by steamer to Bristol, or sold in the town. A new fish-market was opened in 1847. The supply of fish is abundant.

TENDA. [NICÆ.]

TENDRING, Essex, a village, and the seat of a Poor-Law Union, in the parish of Tendring, is situated on the left bank of a rivulet which flows into the sea at Holland Creek, in 51° 53' N. lat., 1° 7' E. long., distant 32 miles E.N.E. from Chelmsford, and 62 miles N.E. by E. from London. The population of the parish of Tendring in 1851 was 953. The living is a vicarage in the archdeaconry of Colchester and diocese of Rochester. Tendring Poor-Law Union contains 32 parishes and townships, with an area of 89,803 acres, and a population in 1851 of 27,710. Tendring is a rural village of scattered houses, containing a very ancient church, a chapel for Wesleyan Methodists, and National schools.

TENEDOS, an island in the Greek Archipelago, off the coast of Troas, lies between 39° 47' and 51° N. lat., 25° 58' and 26° 5' E. long. It is said to have been anciently called Leucophrys. According to Homer ('Il., xi. 624), it was sacked by Achilles, and occupied by the Greeks when they retired from the siege of Troy, immediately before its capture. (Virg., 'Æn., ii. 21.) It was colonised by Æolians from Amyclæ in Laconia, under the command of Peisander and Orestes. Tenedos was independent in the time of Cyrus, king of Persia, but was made subject to Persia after the revolt of Ionia in the time of Darius (B.C. 493); it was afterwards a tributary of Athens. On the ancient silver coins of the island are the types of a double-edged axe of a peculiar form, and on the reverse a bifacial head like that of Janus. The 'Tenedica Securis' (axe of Tenedos) was a proverb expressing any summary mode of executing justice or dispatching an affair.

Tenedos was made by the emperor Justinian a depôt for corn going from Egypt to Constantinople when detained by contrary winds. It contains few remains of antiquity worth notice. The greatest length of the island from east to west is 5 miles; the breadth is about 2 miles. In the market-place is the Soros of Atticus, father of Herodes Atticus. To the north of the harbour and town, which are at the north-east corner of the island, is a fortress mounted with cannon. The aspect of Tenedos from the sea is barren, but it is cultivated in the interior, and produces wheat, cotton, and very fine red wine.

TENERIFE. [CANARIES.]

TENIMBER ISLANDS. [SUNDA ISLANDS, Lesser.]

TENNESSEE, one of the United States of North America, extends between 35° and 36° 35' N. lat., 81° 37' and 90° 28' W. long. It is bounded E. by North Carolina; N.E. by Virginia; N. by Kentucky; W. by Arkansas; and S. by Mississippi, Alabama, and Georgia. Its form is that of a parallelogram, with a projecting point at the north-eastern angle. Its extreme length from east to west is about 450 miles; its breadth is 110 miles. The area is about 44,000 square miles. The population in 1850 was 1,002,717, of which 6422 were free coloured persons, and 239,459 slaves: the density of population was 22.79 to a square mile. The federal representative population, according to the census of 1850, was 906,830, in which number three-fifths of the slaves are included. This, according to the present ratio of representation, entitles the state to send ten representatives to Congress. To the Senate, like each of the other United States, Tennessee sends two members.

Surface and Soil.—This state is naturally divided into three regions, which may be called the Eastern or Mountain Region, the Middle or Hilly Region, and the Western or Level Region; and this division coincides tolerably well with that made for the administration of justice, according to which the country is divided into the Eastern, the Middle, and the Western District. The first and the last are

nearly equal in extent, each comprehending about 10,000 square miles, but the Middle District is about double that size.

The Eastern or Mountain Region lies within the ranges of the Appalachian Mountains. [ALLEGHANY MOUNTAINS.] The Kittatinny range, under the local designations of the Stone, Iron, Smoky, and Unika Mountains, forms the boundary between Tennessee and North Carolina. West of this ridge, traversing the state nearly north and south, is the Chestnut Ridge; and farther west, forming the western limit of the mountain region of Tennessee, is the Cumberland Ridge, known elsewhere as Laurel Ridge, which likewise runs in a generally northern and southern direction. None of the mountains exceed 2000 feet in height. The mountain region thus occupies the tract inclosed between the Kittatinny and Cumberland ranges, whose most elevated parts are about 70 miles distant from one another. The northern half of this tract is traversed by three minor ridges, which in general run parallel to the larger ranges, and thus with the outer ranges form four valleys, which are traversed by four of the upper branches of the Tennessee River, namely, Powell's, Clinch, Holston, and Frenchbroad rivers. The valleys are rather wide, but as there is little alluvial land along the watercourses, their surface is uneven and broken, and the soil, which consists mostly of siliceous gravel, is of indifferent quality, except in the valleys of the Holston and Frenchbroad rivers, where it contains a mixture of clay. Only a comparatively small portion of it is strong enough for the growth of wheat; the greater part produces rye and oats; but the mountains afford good pasture-grounds, and large herds of cattle and sheep are kept. The most elevated part of the mountains is overgrown with forests of pitch-pine, which yield timber, and from which tar, pitch, and turpentine are extracted. The country south of 35° 50' N. lat. can only be called mountainous near the southern portion of the Kittatinny Ridge and the Cumberland Mountains, the interior being covered by a succession of hills rising hardly more than 300 feet above their base. The soil of this tract is of indifferent quality, and mostly used as pasture-ground, but the forests contain many large trees, as pitch-pine, red-cedar, and black walnut. Along the watercourses there are some tracts of moderate extent fit for the growth of corn.

The Hilly or Middle Region extends from the Cumberland Mountains westward to the Tennessee River, where it traverses the state by running from south to north. The general level of this region is several hundred feet above the sea-level, and it is covered with numerous hills, which form several continuous ridges, such as that which, under the name of Elk Ridge, runs from east to west, near 35° 20' N. lat., between the Elk River and Duck River. The watercourses are usually much depressed below the general level, and most of them run in narrow channels. This tract varies greatly in fertility. Near the Cumberland Mountains, and to the distance of twenty miles from them, the soil consists chiefly of gravel mixed with limestone, and is of moderate fertility; but in general it is better than in the mountain region, and larger tracts are fit for the growth of wheat. The country west of this tract is the most fertile portion of Tennessee; it extends over the whole of the state from north to south, and reaches westward to 87° W. long. The soil is not inferior to the best part of Kentucky, and consists of a large portion of clay and loam mixed with sand and gravel. A large quantity of wheat is produced, but the staple articles are tobacco and maize. In the better lands, especially along the Cumberland River, the common produce of maize is from 60 to 70 bushels for one, and in other places 40 or 50 bushels. The forests, which still cover a great part of the surface, consist chiefly of ash, elm, black and honey locust, mulberry, sugar-maple, and the wild plum; and wild grapes are abundant. The western districts, or those which lie near the Tennessee River, and extend about 80 miles east of it, are less hilly, but they are also less fertile; they produce the same articles, but the crops are less plentiful. In some places cotton is cultivated.

The Western or Level Region lies between the Tennessee and Mississippi rivers. The surface is traversed by some swells of high ground; but the north-west districts are nearly a dead level, which descends imperceptibly to the banks of the Mississippi, where it terminates in a large wooded swamp, called the Wood Swamp. This level tract is very unhealthy and but thinly peopled. In these regions every kind of grain is grown, and cotton and tobacco are extensively cultivated.

Hydrography and Communications.—Numerous rivers drain this state; some of them have a long course, and are navigable for steam-boats for a considerable distance; the others are of much value for mechanical purposes. The Mississippi forms its western boundary for 160 miles, and is of great commercial importance. [MISSISSIPPI.]

The Tennessee River rises with numerous branches in the Appalachian Mountains: the most remote of these branches originate in Virginia near 37° N. lat. and 81° 20' W. long., and run south-west. The largest branches are the Clinch and Holston rivers: they unite with other branches, which rise in North Carolina, in the country inclosed by the Blue Ridge and the Iron Mountains, and break through the last-mentioned chain. The largest of them are the Frenchbroad River, the Tennessee, and the Hiwassee. After these numerous branches have united, the Tennessee traverses the mountain knot between 34° and 35° 20' N. lat. It passes through the ridge, which on the south is called Look-out Mountains, and on the north Walden's Range, with great impetuosity over a rocky bed: this place is called the Suck. Its

course within the mountain tract is very rapid, and it escapes from it by another gap near Fort Deposit, in Alabama. At this place it changes the south-west course into a western course, and after draining Alabama for about 200 miles, returns to Tennessee. In Alabama the river widens from two to three miles, and in this part there are extensive rocky shoals, which are known under the name of the Mussel Shoals, and occupy for seven or eight miles the whole of the bed. A canal 36 miles long enables steamboats to avoid these falls; the navigation is unimpeded for nearly 250 miles above these falls up to the Suck. The lower course of the Tennessee River, as far as it lies within Tennessee, is from south to north. After having entered Kentucky it gradually declines to the west, and falls into the Ohio. The whole course of the Tennessee exceeds 1000 miles; its descent from its source to its mouth is about 1700 feet.

The *Cumberland* rises in Kentucky, in the valley formed by the Cumberland Mountains and the Laurel Mountains, and traverses the south-eastern district of that state by a general western course: after a run of about 150 miles it turns to the south-west and enters Tennessee, where it soon resumes its western course. It drains the northern districts of Tennessee by a course of above 200 miles; and turning gradually more to the north, re-enters Kentucky, where its general course is to the north. It falls into the Ohio a few miles above the mouth of the Tennessee. This river runs about 600 miles, and as the current is very gentle, the navigation is easy for sloops and steamboats as far as Nashville, 200 miles from its mouth. Steamboats have ascended to Burkesville in Kentucky, but their usual upward limit is Carthage, at the confluence of the Caney Fork. The upper course is obstructed by extensive shoals in several places.

There are no canals in the state, but several of the rivers have been improved and rendered navigable by artificial adjuncts. In all, there are twelve lines of railway in Tennessee, having, on the 1st of January, 1855, a total of 517 miles in operation; and upwards of 900 miles are stated to be in course of construction. The chief railway centres are Nashville and Knoxville. From Nashville lines diverge northwards towards Louisville, Cincinnati, &c.; eastward towards Charleston and Savannah; southwards towards Mobile and New Orleans; and westwards towards the Mississippi at Memphis, &c. From Knoxville lines diverge to Louisville, Richmond, and the South Atlantic ports.

Geology and Mineralogy.—There is a considerable diversity of geological formations in the state. Lower Silurian strata, known as the Stone River and Nashville groups, occupy a considerable portion of the centre of Tennessee. A narrow strip of Upper Silurian, locally designated gray limestone, and by Mr. Safford the Harpeth and Tennessee River group, extends along the whole of the eastern border of the state. Strata belonging to the Devonian formation, comprising the upper gray limestone, and extending to a depth of from one to two hundred feet, traverse the state from north to south, west of both the Upper and Lower Silurian deposits. Carboniferous rocks are extensively developed around the Central Silurian group. The Lower Carboniferous strata consist of black slate, siliceous, encrinital, and oolitic limestone. Upper Carboniferous strata, or coal measures, traverse the state from south-west to north-east, and form a connecting link between the great coal basins of the Ohio and Pennsylvania, and those of Alabama. West of the Devonian formation is a broad belt of cretaceous rocks; and west of these, lying along the Mississippi River, are tertiary and recent deposits.

The eastern and middle sections of the state possess considerable mineral wealth. Gold has been found in small quantities in the mountains bordering on North Carolina. Lead exists in the same mountains, but is not much worked. Iron ore is found in great abundance along the Cumberland River; about 45,000 tons are produced annually. Copper has been found, and is expected to afford rich workings. Coal of tolerable quality is obtained in the Cumberland Mountains, but owing to the inaccessible position of the mines, is only available for local use. Limestone and marble are got in the Cumberland Mountains; and nitre in abundance in some extensive caves near the mountain region. Salt-springs are numerous in the eastern part of the state, where are also sulphur and other mineral springs.

Climate, Productions, &c.—The soil and general character of its products have been already noticed. The climate is mild and on the whole salubrious, the exceptions being the low valleys and the borders of the great rivers. In the countries west of the Cumberland range the rivers are generally covered with ice for a few days in the winter. Snow falls to the depth of ten inches, but seldom lies more than twelve or fifteen days on the ground. In winter and spring a considerable quantity of rain falls; but in the other seasons rain is not frequent, nor does it continue for any length of time. The air in some parts of Tennessee is remarkable for its dryness.

The agricultural products are similar to those of the valley of the Ohio in general, with the addition of cotton, which is largely grown in the south and west. The chief grain crop is of maize, above 50 million bushels of which are annually raised. Wheat is grown in considerable quantities, but not so extensively as formerly. Oats are very largely raised. Rice is grown to some extent. Tobacco forms one of the leading products, from 20 to 80 million pounds being grown annually. Cane-sugar, flax, and hemp, are also important crops in some districts. Both common and sweet potatoes are extensively cultivated. The

sugar maple abounds. In the eastern part of the state are extensive pine forests, from which turpentine, tar, &c., are obtained.

The raising of cattle, chiefly for export to the south, is a principal employment in the eastern part of Tennessee. Horses, sheep, and swine are also reared in large numbers. Buffaloes were once numerous, but they have entirely disappeared; the elk and moose-deer are only found in the mountain region, where deer are still abundant. Bears, pumas, wild-cats, wolves, beavers, otters, and musk-rats are still met with. Racoons, foxes, squirrels, &c., are numerous. Pheasants, partridges, pigeons, swans, wild turkeys, ducks, and geese abound. Fish are found in all the rivers, but not very abundantly.

Manufactures and Commerce.—Although there are no great manufacturing towns in the state, there is a considerable amount of manufacturing industry displayed in and around Nashville, Knoxville, Memphis, &c., and several villages possess extensive works. The chief manufactures are of cotton and woollen goods, iron, machinery, hardware, tobacco, paper, earthenware, cord, carriages, saddlery, &c. The grist-, flour-, and saw-mills employ about a third of the capital invested in manufactures. There are likewise numerous tanneries and distilleries, together with breweries, brick-yards, &c.

Tennessee has no direct foreign commerce, its products being forwarded, and its imports received, by way of New Orleans and the South Atlantic ports, and northwards by way of Pittsburgh and the lakes. The internal trade is very large.

Divisions, Towns, &c.—Tennessee is divided into 79 counties; 28 in Eastern, 32 in Middle, and 19 in Western Tennessee. Nashville is the political capital and the largest town in the state. There are few towns of much size; the following are among the most important: the population is that of 1850:—

Nashville, the capital, is a city and port of entry, situated on an elevated bluff on the left bank of the Cumberland River, 120 miles from its mouth, and 714 miles S.W. from Washington, in 36° 9' N. lat., 86° 49' W. long.: population, 10,478. Nashville stands in the midst of a district rich in agricultural and mineral wealth, and is rapidly increasing in trade and population since it has been made the centre of a well-planned system of railways. The city is regularly laid out, contains a spacious state-house, court-house, university, state prison, lunatic asylum, 14 churches, some of them large and handsome edifices; numerous schools, and other public buildings. Considerable manufactures are carried on, and there is an extensive river trade. In 1850 Nashville district owned river steamers amounting to 3797 tons. In the vicinity of the city is Franklin College. Five daily and seven weekly newspapers are published at Nashville.

Clarksville, at the confluence of Red River with Cumberland River, 40 miles N.W. from Nashville, is a place of considerable trade. *Columbia*, the capital of Maury county, situated on the Duck River, about 40 miles S.S.W. from Nashville, population about 2000, is likewise a place of local importance, and the seat of Jackson College. *Knoxville*, a city and the capital of Knox county, stands on the river Holston, at the head of the navigation, 160 miles E. by S. from Nashville: population, 2076. It is one of the chief centres of the state railways, and appears likely to become an important commercial town. The city is regularly laid out, contains a court-house and other county buildings, several churches and schools, East Tennessee College, and other public buildings. *Memphis*, next to Nashville the chief town in Tennessee, stands on a bluff on the Mississippi River, near the south-western corner of the state, about 200 miles W.S.W. from Nashville: population, 8889. Memphis has considerable cotton and other manufactories, and is said to be likely to rise into some consequence as a commercial city. A navy-yard is established here capable of building vessels of the largest size. None of its public buildings are of much architectural value. *Murfreesborough*, the capital of Rutherford county, and formerly the capital of the state, occupies an elevated site on a branch of Stone River, 30 miles S.E. by S. from Nashville: population, 1917. It is a place of considerable trade, being the centre of a fertile corn and tobacco district. It contains the usual county buildings, churches, schools, &c.; also Union Baptist College.

History and Constitution.—The first settlements in Tennessee were made about the middle of the last century, but in 1760 they were destroyed by the Cherokees, then the possessors of this country, from the northern and central part of which they were expelled in 1780. Since that time the number of settlements has continuously increased. Up to 1790 Tennessee formed a part of North Carolina, but in that year it was ceded by that state to the United States, who in 1794 converted it into a territory. In 1796 it was admitted into the Union as a sovereign state.

The original constitution of Tennessee was amended in 1834. By it the right of voting is vested in every white male citizen 21 years old—every man to be considered white who is a competent witness in a court of justice. No person who denies the being of a God, or the existence of a future state of rewards and punishments, can hold any office in the state. The general assembly cannot emancipate slaves without the consent of their owners.

The legislature consists of a Senate of not more than one-third the number of representatives (at present composed of 25 members), and a House of Representatives of 75 members. The executive power is vested in a governor, who, like the members of the legislature, is

chosen by the electors for the term of two years. The judges of the supreme and inferior courts are elected by the people for the term of eight years.

The total public debt of the state was returned in October 1853 at 7,100,065 dollars, of which the absolute debt amounted to 5,746,856 dollars, and the contingent debt to 1,353,209 dollars. The total revenue of the state for the same year was 1,202,046 dollars, and the expenditure 1,218,387 dollars. The state militia at the last return was composed of 71,252 men, of whom 3607 were commissioned officers. The number of public schools in the state in 1850 was 2667, with 2804 teachers, and 103,651 pupils. There are 8 colleges and 4 theological, medical, and law schools in the state.

(*Statistical Gazetteer of the United States; Seventh Census of the United States; Troost, Geological Survey of Tennessee; Marcou, Geological Map of the United States; American Almanac for 1855, &c.*)

TENNSTADT. [ERFURT.]

TENOCHTITLAN. [MEXICO.]

TENTERDEN, Kent, a market-town, municipal borough, and the seat of a Poor-Law Union, in the parish of Tenterden, is situated in 51° 4' N. lat., 0° 41' E. long., distant 19 miles S.E. from Maidstone, and 55 miles S.E. from London. The population of the borough in 1851 was 3901. The borough is governed by 4 aldermen and 12 councillors, of whom one is mayor. The living is a vicarage in the archdeaconry of Maidstone and diocese of Canterbury. Tenterden Poor-Law Union contains 11 parishes and townships, with an area of 46,889 acres, and a population in 1851 of 11,279.

Tenterden is a member of the cinque port of Rye. The town stands on an eminence, in a rich agricultural district. The church is a spacious and handsome edifice, chiefly of perpendicular character, having a lofty tower at the west end, to which a beacon was formerly attached. It was as early as the 16th century a popular saying that "Tenterden steeple was the cause of Goodwin Sands." This has been supposed to originate from the circumstance of the funds destined for keeping up Sandwich Haven having been applied to the building of this church. There are places of worship for Wesleyan Methodists, Bryanites, Baptists, and Unitarians; National schools, partly endowed; a British school; Dr. Curtis's endowed school for girls; two Commercial schools; an Athenaeum; and a mutual improvement society. The town-hall is a modern building. The market is held on Friday; and a yearly fair for cattle, wool, &c., on the first Monday in May. A county court is held in the town.

TEOS, now called Búdrún, a town of Ionia, situated on the south side of a peninsula between the Gulf of Smyrna and the Gulf of Clazomena, very near Cape Courco, in 38° 15' N. lat., 26° 30' E. long. It was originally colonized by Minyæ from Orchomenus, and afterwards strengthened by colonies from Athens and Bœotia. Teos was one of the twelve cities which formed the confederacy of the Panionium (Herod., i. 142). It was also one of the four cities of Ionia which participated in the Hellenism at Naucratis in Egypt, in the time of Amasis. (Herod., ii. 178.) On the conquest of Ionia by Cyrus the Teians retired to Abdera in Thrace, where they founded a colony which eclipsed the parent state. (Herod., i. 168.) At the battle of Lade 17 Teian ships are mentioned among the forces of the Greeks. Teos was the birth-place of Apellicon, the preserver of the works of Aristotle, and of Anacreon, who is represented on the coins of the city playing on his lyre. It appears from Livy (xxxvii. 28) that it had two ports, one in front of the city, which is now partly dry and choked up with sand; and the other, Gera, 4 miles to the north-west, the entrance to which was so narrow as hardly to admit two ships at a time; it is now the site of the castle and town of Sigha-jik. The site of Teos is now covered with olive-trees and corn-fields, divided by walls and hedge-rows. The city walls, of which traces are extant, were about 5 miles in circuit. Chandler found remains of the temple of Bacchus and a theatre. Hamilton mentions several other temples and ruins, and the mole of the city harbour, on which are still seen "several projecting stones terminating in a ring," for the purpose of mooring vessels to the quay. [ASIA MINOR, vol. ii., pp. 11—17.] At a short distance east of Sigha-jik are the celebrated marble-quarries, in which several gigantic blocks, chiselled and marked for some great building, still lie. The Teians believed that Bacchus was born there, and on his account their territory was sacred, or protected against violation.

TEPIC. [MEXICO.]

TEPLITZ. [TÖPLITZ.]

TERAMO. [ABRUZZO.]

TERCEIRA. [AZORES.]

TERLING. [ESSEX.]

TERLIZZI. [BARI, TERRA DI.]

TERMINI. [PALERMO, province of.]

TERMOLI. [SANNIO.]

TERMONDE. [DENDERMONDE.]

TERMONFECKAN. [LOUTH.]

TERNATE, one of the Moluccas, situated near 0° 50' N. lat., 127° 20' E. long., is 10 miles long and about 5 miles wide. Its sovereignty is in possession of a considerable portion of the islands of Gilolo and Celebes. The Dutch have an establishment on the island at Fort Orange, which numbers about 3000 residents. The northern group of the Moluccas is sometimes called the Ternate Islands.

The greater part of the island consists of a volcanic mountain 4095 feet above the sea-level. The remainder of the island is very fertile, and affords rice and the other productions of the Indian Archipelago. The Dutch have recently made Ternate a free port. The exports are—rice, edible birds-nests, trepang, sharks-fins, tortoise-shells, small pearls, and lories. The inhabitants are Malays, who have embraced Islam. The king is dependent on the Dutch.

Ternate was first visited by the Portuguese in 1521, and some years afterwards they formed a settlement, which passed into the hands of the Dutch in 1606, who in 1680 reduced the king to a state of dependence on them, and enlarged their establishment. In 1797 it was taken, together with Amboyna, by the English, who restored it at the peace in 1801; it was again taken in 1810, and again given up to Holland by the treaty of Paris in 1814.

TERNI. [SPOLITO.]

TERRACINA, a town in the States of the Church, near the Neapolitan frontier, about 56 miles S.E. from Rome, has about 4000 inhabitants. The old town, which is built on the site of the ancient *Anxur*, rises in the form of an amphitheatre on the slope of a calcareous rock, which is a projection of the ridge called Monti Lepini, leaving but a narrow strip of land between it and the sea, along which runs the high road to Naples in the track of the ancient Via Appia. Along the road are the modern buildings of Terracina, consisting of the post-house and inns, custom-house, granaries, and other structures for public use. The old harbour, which was restored by the emperor Antoninus, has been long since filled up, but remains of the mole are still seen. The old town is an assemblage of poor-looking houses, perched one above another, surrounded and overtopped by white cliffs, which are seen from afar. (Horace, *Sat.*, l. 5.) Above all rises the cathedral with its lofty steeple; an elegant palace built by Pius VI.; the remains of the palace called that of Theodoric, which is a structure of the 5th century of our era, and is situated on the summit of the hill, and about 600 feet above the sea; and an old castle raised in the middle ages. Remains of an ancient theatre are also seen. The climate of Terracina is very mild and genial in winter, but unwholesome in summer.

Anxur was a thriving town of the Volsci; was taken by the Romans in the year B.C. 403; was retaken by surprise in B.C. 399; and taken again by the Romans three years after. It afterwards became a Roman colony by the name of *Tarracina*. The Temple of Jupiter at Tarracina is mentioned by Livy. (Livy, iv. 59; v. 10-13; xxviii. 11.)

TERRANOVA. [CALABRIA; SICILY.]

TERRASSON. [DORDOGNE.]

TERRE-HAUTE. [INDIANA.]

TERRE-NOIRE. [LOIRE.]

TERRINGTON, ST. CLEMENTS. [NORFOLK.]

TERSCHELLING. [FRIESLAND; HOLLAND.]

TERUEL. [ARAGON.]

TESCHEN. [MORAVIA.]

TETBURY, Gloucestershire, an ancient market-town, and the seat of a Poor-Law Union, in the parish of Tetbury, is situated near the Wiltshire border, on elevated ground, in 51° 38' N. lat., 2° 9' W. long., distant about 20 miles S. by E. from Gloucester, and 98 miles W. by N. from London. The population of the town in 1851 was 2615. The living is a vicarage in the archdeaconry of Gloucester and diocese of Gloucester and Bristol. Tetbury Poor-Law Union contains 13 parishes and townships, with an area of 25,641 acres, and a population in 1851 of 6,254. The manufacture of woollen cloth employs some of the inhabitants. The market-day is Wednesday. Fairs are held three times a year for cheese, cattle, sheep, horses, &c. The parish church was rebuilt in 1784, with the exception of the tower; a modern spire was placed on the tower. The Baptists and Independents have chapels, and there are a Grammar school, a savings bank and almshouses for eight poor persons.

TETFORD. [LINCOLNSHIRE.]

TETTE. [MOZAMBIQUE COAST.]

TETTENHALL. [STAFFORDSHIRE.]

TETUAN. [MOROCCO.]

TEVERONE RIVER. [ROMA, COMARCA DI.]

TEVIOTDALE. [ROXBURGHSHIRE.]

TEWKESBURY, Gloucestershire, an ancient market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parish and hundred of Tewkesbury, is situated on the left bank of the Upper Avon, near its junction with the Severn, in 51° 59' N. lat., 2° 10' W. long., distant 10 miles N.N.E. from Gloucester, 103 miles W.N.W. from London by road, and 130 miles by the Great Western and Bristol and Birmingham railways. The population of the borough in 1851 was 5878. The borough is governed by 4 aldermen and 12 councillors, of whom one is mayor; and returns 2 members to the Imperial Parliament. The living is a vicarage in the archdeaconry of Gloucester and diocese of Gloucester and Bristol. Tewkesbury Poor-Law Union contains 23 parishes and townships, with an area of 38,918 acres, and a population in 1851 of 15,131.

The immediate neighbourhood of Tewkesbury is subject to floods. Within half a mile of the town is a handsome iron bridge of one arch, 172 feet in span, over the Severn; and there is an ancient bridge of several arches over the Avon, with a causeway leading from it to the above-mentioned iron bridge. Tewkesbury has returned two members

to parliament since the 7th James I. The town appears to be of Saxon origin. Early in the 8th century two brothers, dukes of Mercia, founded a monastery here, which became the chief seat of the monks of Cranborne. A great battle was fought on the 14th of May 1471 within half a mile of Tewkesbury, when the Lancastrians sustained a disastrous defeat. In 1644 the town was taken by the parliamentary forces, who held it until the close of the war.

The principal manufacture carried on in Tewkesbury is the cotton and lambs-wool hosiery. On the Avon are several corn-mills. Tewkesbury possesses an extensive carrying trade on the Severn and Avon. A short branch-line joins the Bristol and Birmingham railway. The collegiate church of the ancient monastery, now the parish church, is a noble structure of Norman date, and consists of a nave, choir, and transepts, with a tower rising from the centre, supported on massive and lofty piers with circular arches. The Wesleyan Methodists, Independents, Baptists, and Quakers have places of worship. There are a Free Grammar school; National, British, and Infant schools; a savings bank; almshouses; and several medical and other charities. Besides the town-hall and borough court-room, there are a jail, penitentiary, and house of correction. A county court is held in the town. The market-house is a handsome building, with Doric columns and pilasters supporting a pediment in front. There are a small theatre, and a public library and news-room. The market-days are Wednesday and Saturday. Eight fairs are held in the year. In the vicinity is a race-course, where races take place annually.

TEXAS, one of the United States of North America, lies between 26° and 36° 30' N. lat., 93° 30' and 106° W. long. It is bounded E. by the state of Louisiana; N.E. by that of Arkansas; N. by the Indian territory; W. by the territory of New Mexico; S.W. by the republic of Mexico; and S. by the Gulf of Mexico. Its greatest length from north to south is 700 miles; its greatest width from east to west, 800 miles. The area is estimated at 325,520 square miles, or nearly equal to the united areas of Great Britain and France. The population in 1850 was 212,592 (of whom 58,161 were slaves), or 0.65 to the square mile. This however does not include the Indians, chiefly occupying the hill country, who were in 1853 estimated by the Commissioner of Indian Affairs at 29,000. The federal representative population according to the Census of 1850 was 189,327, in which number three-fifths of the slaves are included. This, according to the present ratio of representation, entitles the state to send two representatives to Congress. To the Senate, like each of the other United States, Texas sends two members.

Surface, Hydrography, &c.—The surface of so vast a country is of course greatly varied, but it may be broadly described as comprising a low and level region, an undulating or prairie tract, and a hilly or mountainous district, answering generally to what have been called Southern and Eastern, Middle, and Western Texas.

The level region occupies the entire coast, and reaches 60 or 80 miles into the interior. For 10 or 12 miles inland the country is subject to inundation, but behind this swampy tract it rises imperceptibly for some miles, and then stretches out in a wide plain with a nearly level surface. This plain is from 10 to 30 feet above the water-courses, and with the exception of the low bottoms along the banks of the rivers, it is not subject to inundation. The tide, though it varies only from two to three feet, ascends the rivers to the distance of 45 or 50 miles from the sea in a straight line. The whole of the plain is wooded, with the exception of the highest tracts of land between the rivers, which are destitute of trees, and exhibit fine prairies. The forests consist of different kinds of oak, hickory, iron-wood, sugar-maple, and other useful trees, which are found in the southern states of the American Union. The whole of this tract is in process of conversion into an immense field, producing cotton, maize, wheat, tobacco, and every kind of plants and fruit-trees which grow in the temperate zone and on the borders of the tropics; the sugar-cane flourishes here, but is not much cultivated.

The undulating country at the back of this plain, though naturally less fertile, has a more genial and healthy climate, and with moderate culture appears capable of producing almost unlimited supplies of corn, cotton, and tobacco, while the uplands afford vast and excellent grazing-grounds, being covered with grass, which maintains its verdure during many months. This is the most populous and productive portion of the state. The country between the river-bottoms generally rises from them with a gentle acclivity to an elevation of 200 to 400 feet, and presents for the most part an undulating surface, on which isolated hills of moderate elevation are dispersed. By far the greatest part of this tract is destitute of trees, which occur only in isolated clumps about the bases and declivities of the hills, and at considerable distances from one another.

Western Texas, the hilly and mountainous district, includes the southern portion of the Sierra Sacramento, and a nearly parallel range on the east called the Guadalupe Mountains. This region is little known, being as yet left to the Indian tribes, chiefly Comanches, to the wild animals, and to the hunter. Many of the mountains are believed to rise more than 2000 feet above their bases. Most of the rivers of Texas have their origin in the mountain region, and American writers speculate freely on what it may become when the 'water-power' is fairly turned to account.

Texas owes much of its great capability for agricultural purposes

to its numerous rivers and the regularity of their course. Nearly all the rivers, even those which run only 50 miles, are navigable for small craft in the greatest part of their course. The most remarkable of these rivers from west to east are—the *Rio Grande*, noticed under MEXICO, between which country and Texas it forms the boundary; the *Rio Nueces*, which flows about 250 miles with a general south-eastern course, the *San Antonio*; the *Rio Guadalupe*, which falls into a lagune forming the harbour of Espiritu Santo; the *Colorado*, or *Red River of Texas*, which traverses in its upper course the mountain tract of San Saba, flows upwards of 400 miles, and falls into the lagune constituting the harbour of Matagorda; the *Rio Brazos*, or *Brazos de Dios*, whose origin is near to that of the Red River, and which, flowing chiefly in a south-south-easterly direction, intersects nearly the centre of Texas and the most fertile districts, and enters the sea after a course of more than 400 miles; and the *Rio Trinidad*, which, after a course of more than 300 miles in a south-south-easterly direction through a very fertile tract, falls into Galveston Bay. Red River and Sabine River, which separate Texas from the Indian territory and Louisiana, are noticed under LOUISIANA. The *Sabine* has a length of 350 miles, and is navigable for 150 miles, and much higher, by keel boats. Before reaching the gulf it expands into a lake 30 miles long and 8 miles wide. The bar at its mouth has 4 feet of water over it at low tide.

There are several good harbours along the coast. The low coast is skirted by a number of long flat islands, separated from the main by narrow straits; but these are much deeper than those farther south, and afford in several places good anchorage for vessels of moderate burden. The bars at the mouths of the rivers have tolerably deep water on them, and there is no part of the extensive Gulf of Mexico which has more or better harbours, bays, and inlets than those of Texas. There are no lakes of any importance in the state; and no canals have yet been constructed.

A southern Pacific railway is to cross Texas from east to west, and several other railways are projected, but none have as yet been carried into execution. The ordinary roads are many of them well laid out, and in good condition.

Geology, Mineralogy, &c.—The geological features of Texas have been but cursorily examined. The mountainous country consists chiefly of igneous and metamorphic rocks. In the eastern portion of this district a considerable belt of Lower Salurian strata has been observed. North of this, along the Saba River, carboniferous strata occur. Much of the centre and north of the state appears to belong to the cretaceous system of rocks; while the whole of the level region, and the low districts bordering the Gulf of Mexico, consist of tertiary and recent deposits.

In minerals the state is believed to be very rich. Gold has been found along several of the smaller streams of the western portion of the mountain district. Silver also occurs in the hill country, and the silver-mine of Saba is said to have been one of the richest in America during the Spanish occupation. Iron ore appears to be very widely diffused. Lead and copper have also been found in several places. Coal occurs on the Trinidad and Brazos rivers. Alum is obtained in two or three places. Salt occurs very extensively in salt springs and lagunes; large quantities are annually taken from a salt lake near the Rio Grande. Potash and soda are also obtained in dry seasons near the salt lagunes. Asphaltum is obtained on the coast. From the limestone of the prairie country abundance of lime is obtained. Red and white sandstone, or freestone, may be quarried through a large portion of the state. A soft white stone, which becomes quite hard on exposure to the atmosphere, and is very useful for building purposes, is found in several places along the eastern side of the hill country. Agate, chalcedony, and jasper, are found. Saline, white and blue sulphur, and other mineral springs, said to possess considerable curative properties, are very numerous.

Climate, Productions, &c.—The temperature varies according to the locality, from tropical to temperate; yet, except along parts of the coast and the rivers where subject to inundations, the climate is said to be generally pleasant and salubrious—in some places eminently so. The summer heat is modified by refreshing breezes, which blow almost uninterruptedly from the south. In winter, ice is seldom seen, except in the northern part of the state. Texas has periodical winds: from March to November they are from the south, and little rain falls; the rest of the year northerly winds prevail, and in December and January they are strong and keen.

The characteristics of the soil and productions have been noticed in speaking of the surface of the country. Cotton has now become the staple of Texas: it generally grows well and of good quality; that grown along the coast is said to be little inferior to the celebrated Georgian Sea Island cotton. Tobacco also thrives well, and is becoming an important product of the state. The sugar-cane flourishes, but, as already noticed, engages very little attention from the Texan farmer. All the cereals produce abundant crops. Maize is the chief grain staple: two crops of it are frequently obtained annually. Wheat and oats are the next in importance among the cereals, and both are grown extensively. Buckwheat, rye, and millet are also grown. Rice is somewhat largely cultivated, and its culture could be very greatly extended. Both common and sweet potatoes are largely raised. Indigo, vanilla, and the chill, or cayenne pepper, are indigenous almost throughout the state.

All kinds of fruit ripen well. The vine grows luxuriantly, and it appears probable that Texas will become a wine-growing country. The orange, lemon, fig, peach, nectarine, pine-apple, olive, paw-paw, plum, apple, gooseberry, and many other fruits of both southern and northern climes ripen here side by side; while indigenous fruits are very numerous. Garden vegetables of almost every kind thrive remarkably here. Among the indigenous plants are the yaupon, or Texan tea-tree, the leaves of which yield an infusion which serves as an agreeable and cheap substitute for the tea of China; and the nopal, which is a favourite food of the cochineal insect, while cattle and horses feed on its fruit and leaves, and its wood is used for making fences, and for fuel. The native wild flowers include many of the choicest favourites of the European garden and conservatory; among others are the dahlia, stellaria of every variety, geraniums, passion-flowers, trumpet-flowers, perpetual roses, mimosas, and an endless variety more of the most brilliant hues.

The forests of live oak and cedar surpass those of any other state in the Union. The entire coast, the river bottoms, and the chief part of the eastern section of the state, are heavily timbered with pine, oak, ash, hickory, walnut, cedar, cypress, and other forest trees, often of noble dimensions; and forest islands occur all over the prairie country.

Horses and cattle form an important portion of the wealth of Texas, the rich prairies affording unlimited pasture-grounds. Swine are also raised in vast numbers. The wild animals, once so numerous, are rapidly diminishing in numbers. Buffaloes however yet roam the wilds in herds of many thousands; as do also deer. Wolves and foxes are still numerous, and the black bear abounds among the canyons of the coast. The peccari and the wild-hog are numerous in the woods. Mustangs are found in droves in the west and north; when domesticated, they are much prized for their fleetness. Moose-deer, antelopes, mountain-goats, racoons, opossums, rabbits, squirrels, and numerous smaller animals abound in the forests and about the hills. Wild-fowl, in almost interminable numbers and of the most various kind, afford ample supplies of game to the sportsman; and there are numerous singing-birds, paroquets, mocking-birds, &c. All the rivers abound in fish, both of the ordinary kinds, as cod, mullet, pike, &c., and of species not usually met with, as the red-fish (which gives its name to Red-Fish River, where it abounds), a fish of delicious flavour and large size, sometimes weighing 50 lbs.; the gar-fish, remarkable for the length of its snout; the alligator-gar, which is said to measure several yards in length, and to resemble the alligator in shape, &c. The common alligator is met with of very large dimensions, in the lagoons and the lower course of several rivers. Oysters, lobsters, crabs, and other shell-fish are taken all along the coast. Turtles abound in the bays and harbours.

Manufactures, Commerce, &c.—The manufacturing industry is chiefly that incidental to an agricultural state, the bulk of the capital being invested in grist- and saw-mills, tanneries, implement-manufactories, &c. There are somewhat considerable iron-works, machine-shops, and carriage and harness factories.

The direct foreign commerce, though steadily increasing, is not very great, most of the exports being made coastwise to New York, New Orleans, &c. The exports during the year ending June 30, 1853, amounted to 1,029,681 dollars, of which 569,918 dollars were of domestic produce. The imports during the same period amounted to 281,459 dollars, of which 156,144 dollars were carried in American, and 125,315 dollars in foreign vessels. The total shipping owned in the state in 1850 was 3897 tons, of which 3309 tons belonged to the district of Galveston.

Divisions, Towns, &c.—Texas is divided into 77 counties. Austin City is the political capital, but Galveston is the chief commercial emporium, and the most populous town in the state. The following are the more important towns: the population is that of 1850:—

Austin City, the capital, is situated on the left bank of the Rio Colorado, in 30° 28' N. lat., 97° 45' W. long.: population 629. It is merely a village, but it contains the state buildings, and supports two weekly newspapers.

Galveston, a city and port of entry, and the capital of Galveston county, is situated near the east end of Galveston, about 200 miles S.E. from Austin: population, 4177. The harbour of Galveston is the best in Texas, and six-sevenths of the shipping of the state belong to this port. The trade of Galveston is very considerable, and steadily increasing. A regular line of communication by steamships is maintained with New Orleans. There are a few good public buildings in the city, and numerous warehouses, hotels, &c. Galveston Island, on which the city stands, is 32 miles long and about 2 miles wide. It was once a favourite lurking-place for pirates, but is now thoroughly cultivated, and the residence of several wealthy farmers. During summer it is much resorted to by invalids.

Houston stands at the head of steam-navigation on Buffalo bayou, 160 miles E.S.E. from Austin City: population, 2396. Next to Galveston, Houston is the chief business town in the state, being the centre of a rich cotton district. There are several public buildings, churches, and schools. A wharf 500 feet long, with a cotton press at each end, extends along the front of the city.

San Antonio, near the source of the river of the same name, 75 miles S.E. by S. from Austin City, population 3488, is the oldest town in

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Texas, and one of the oldest in North America. It contains several ecclesiastical edifices erected during the Spanish occupation, a large ruinous fortress, and other vestiges of its former possessors; also a United States arsenal and some modern structures.

History, Government, &c.—Until 1836 Texas formed a part of Mexico. For some years prior to that date the American colonists, an active, numerous, and united body, had been making every possible effort to prepare the way for a revolt against the Mexican authority. In 1835 hostilities commenced in earnest. The Mexican government was unable to suppress the rising; and eventually the Mexican army, under General Santa Anna, the president of Mexico, was defeated at Jacinto by the Texans, under the American general Houston. Santa Anna was made prisoner, and, as a condition of his release, agreed to sign a treaty acknowledging the independence of Texas. The Mexican senate disavowed the authority of Santa Anna to make such a treaty, but no steps were taken towards effecting a re-conquest of Texas; and in 1845 the United States of North America formally admitted Texas into the Union as a sovereign state. This led at once to war between Mexico and the United States; but the former country was in too disorganised a condition to hope for success in such a contest, and, after suffering a series of humiliating defeats, was constrained to accept peace on terms of acknowledging the independence of Texas, and ceding to the United States a large portion of territory, including the whole of the northern provinces. [MEXICO.]

The constitution was adopted in August, and ratified in October, 1845. By it the right of voting is vested in every free white male citizen who shall have resided in the state for one year. The legislature consists of a Senate of not less than 19 nor more than 33 (at present 21) members, who are elected for four years; and a House of Representatives, of not less than 45 nor more than 90 (at present 66) members, who are elected for two years. The governor is elected for two years. The admitted public debt was returned by the state auditor in November 1851 as—Ostensible debt, 9,647,253 dollars; par value, 4,807,764 dollars. But the real condition of the state finances is difficult to understand from the involved and incomplete accounts published. The state militia is composed of about 18,500 men and 1248 commissioned officers. In 1850 there were in the state two colleges, having 7 teachers and 165 students; and 349 public schools, having 360 teachers and 7946 scholars.

(*Gazetteers of the United States; Official Reports relating to Texas, &c.; Seventh Census of the United States; American Almanac, 1855; Marcou, Humboldt, &c.*)

TEXEL. [HOLLAND.]

TEYNHAM. [KENT.]

TEYS, THE. [ESSEX.]

TEZA, or TAZA. [MAROCCO.]

TEZUCCO, LAKE. [MEXICO, City of.]

THAKEHAM, Sussex, a retired rural village, and the seat of a Poor-Law Union, in the parish of Thakeham, is pleasantly situated in 50° 57' N. lat., 0° 24' W. long., distant 10 miles E. by S. from Petworth, and 48 miles S.S.W. from London. The population of the parish of Thakeham in 1851 was 631. The living is a rectory in the archdeaconry and diocese of Chichester. Thakeham Poor-Law Union contains 15 parishes and townships, with an area of 35,599 acres, and a population in 1851 of 7434.

THAME, Oxfordshire, a market-town, and the seat of a Poor-Law Union, in the parish of Thame, is situated on the left bank of the river Thame, a feeder of the Thames, in 51° 45' N. lat., 0° 59' W. long., distant 14 miles E. from Oxford, and 44 miles W.N.W. from London. The population of the town in 1851 was 2869. The living is a vicarage in the archdeaconry and diocese of Oxford. Thame Poor-Law Union comprises 35 parishes and townships, with an area of 54,562 acres, and a population in 1851 of 15,624.

The town consists chiefly of one long and spacious street, with a commodious market-place. The church is a large and handsome structure, of early English architecture; it consists of a nave, with side aisles, transepts, and chancel, with an embattled tower rising from the intersection. There are chapels for Wesleyan Methodists, Independents, and Baptists; National, British, and Infant schools; a Free Grammar school, a mutual improvement society, almshouses, and a savings bank. The market is on Tuesday, for corn and cattle. There are four annual fairs. A county court is held in the town.

THAMES, the most important river in Great Britain, rises in the central part of England, and flows eastward into the German Ocean. Our description will comprehend a notice of its basin, course, and affluents, and its commercial importance.

Basin.—The limits assignable to the basin of the Thames will depend on the place at which the mouth is fixed. We may consider as such the opening between Whitstable in Kent and the east extremity of Foulness Island in Essex, where the tideway has a breadth of 18 miles. Here the Thames opens into a large bay, separating Kent on the south from Essex and Suffolk on the north, and having for its extreme points the North Foreland in Kent and Orford Ness in Suffolk, 50 miles distant from each other. The basin of the Thames, commencing at Whitstable, is bounded by the high grounds which there run down to the coast, and form the cliffs east of that town. The boundary runs in a very irregular line across the county of Kent and the Weald district of Kent and Sussex to the high ground on the

southern border of Ashdown Forest, in the latter county. From Ashdown Forest the boundary runs across the high ground of Tilgate and St. Leonard's forests to Leith Hill in Surrey, and thence, in a very irregular line, past the head of the Wey in Woolmer Forest to the verge of the chalk downs near Alton, Hants. This boundary separates the basin of the Thames from the basins of the Sussex Ouse and the Arun. From the neighbourhood of Alton, the boundary of the basin is formed by the chalk downs which extend across Hants and Wilts by Basingstoke, Kingsclere, Highclere, and Burbage, near Great Bedwin; and from thence by the downs which run north-westward to the neighbourhood of East Kennet and Abury. From near East Kennet the boundary turns along the green-sand hills by Compton Bassett and Chadderton; and from thence to the western extremity of the basin near the commonly reputed head of the Thames amid the Cotswold Hills between Cirencester and Tetbury. From the neighbourhood of Tetbury the boundary runs northward along the ridge of the Cotswolds, to the head of the Churn (or true Thames), about three miles south from Cheltenham; and from thence along by the same hills to near Campden, and by Long Compton Hill and Edge Hill to the Arbury Hills near Daventry, at the northern extremity of the basin. From the Arbury Hills the boundary of the basin runs south to the neighbourhood of Bicester, and thence eastward across Buckinghamshire, Bedfordshire, and Hertfordshire, along the Dunstable, Luton, and Royston downs, to the north-western corner of Essex. This part of the basin of the Thames is drained by its affluents the Cherwell, the Thame, and the Lea. An irregular line drawn through the county of Essex from its north-western corner, first south-south-east by Dunmow and Brentwood, and then east by Rayleigh and Rochford to the coast, will complete the boundary. The greatest extent of this basin from east to west is from the mouth of the Thames to the neighbourhood of Tetbury, about 136 miles; the greatest extent from north to south is from the neighbourhood of Daventry, Northamptonshire, to that of Alton, Hampshire, about 78 miles. The basin comprehends the whole or part of the counties of Kent, Surrey, Sussex, Hants, Berks, Wilts, Oxon, Bucks, Herts, Middlesex, and Essex, with small portions of Warwickshire, Northamptonshire, and Bedfordshire; its area may be estimated at about 6500 square miles. The basin of the Thames is occupied wholly by the secondary and tertiary formations. The sources of the river and the course of its upper waters are in the oolitic beds of the Cotswold Hills. Owing to the entire absence of coal, the basin of the Thames has no manufactures except those of the metropolis; but it contains some of the richest agricultural districts in the kingdom.

Course and Affluents.—Thames Head, the spring which has commonly been regarded as the head of the Thames, is about 3 miles S.W. from Cirencester, near a bridge over the Thames and Severn Canal, which is called 'Thames-Head Bridge;' but that which is to be regarded as the true head of the Thames is about 3 miles S. from Cheltenham. Two streams rise, the principal one from several openings at a spot popularly called The Seven Springs, and the other from four springs near Ullen Farm, the westernmost of which springs is the remotest head of the river: both streams rise on the south-eastern slope of the Cotswolds, and form by their junction, about a mile from their respective sources, the river Churn. At Cricklade, 20 miles S.E. from its source, the Churn joins the commonly reputed Isis or Thames, the length of which above the junction is only about 10 miles. From Cricklade the river flows 9 or 10 miles east-north-east to Lechlade. Just above Lechlade it receives, on the left bank, the Colne, from the Cotswold Hills, east of Cheltenham; and below Lechlade it receives the Lech, or Leach, which also rises in the Cotswolds. From Lechlade the Thames flows 14 miles eastward to the junction of the Windrush. The Windrush rises in the Cotswolds between Winchcombe and Campden, and after a course of 34 miles joins the Thames on the left bank. Below the junction of the Windrush the Thames receives on the left bank the Evenlode, which rises in the Cotswolds near Moreton-in-the-Marsh, and receives the Glyme, which flows through Woodstock and Bleubheim Park. The Thames then turns south, and flows to Oxford, where it joins the Cherwell. The Cherwell rises in the Arbury Hills, near Davenport in Northamptonshire, and flows southward by Banbury: it joins the Thames on the left bank.

From the junction of the Cherwell the Thames flows south-south-east to the junction of the Thame at Dorchester, making however a considerable bend westward to Abingdon, where it receives the Ock on the left bank. The Thame rises near Stewkley in Buckinghamshire, between Winslow and Leighton Buzzard, and flows south-west by the town of Thame into the Thames, which it joins on the left bank. From Dorchester the course of the Thames is south-east by Wallingford to the junction of the Kennet near Reading. The Kennet rises near Broad Hinton, a village to the north of Marlborough Downs, flows south to East Kennet, and then, turning eastward, flows by Marlborough, Newbury, and Reading into the Thames, which it joins on the right bank. It receives the Lambourn and the Embourn or Auburn.

From the junction of the Kennet the Thames flows eastward, though in a very winding channel, making first a considerable circuit to the north by Henley, Great Marlow, and Maidenhead, to Windsor; and then a considerable circuit to the south by Staines, Chertsey,

Kingston, and Richmond, to Brentford, whence it proceeds by Hammersmith, Putney, and Chelsea, to the metropolis. In this part of its course the Thames receives several feeders. The Loddon rises in the chalk downs of North Hants, near Basingstoke; the Colne rises, under the name of the Ver, in the chalk downs of Hertfordshire, and passes St. Albans, Watford, Rickmansworth, Uxbridge, and Colnbrook; the Wey rises near Alton, Hants, passes Farnham, Godalming, and Guildford, and joins the Thames at Weybridge; the Mole rises on St. Leonard's Forest, in Sussex, passes through Leatherhead, and joins the Thames at East Molesey; the Cran and the Brent, two small streams, rise on the borders of Middlesex and Herts, and join the Thames, the first at Isleworth, the second at Brentford; and the Wandie, a short stream, joins it at Wandsworth. Of these, the Colne, the Cran, and the Brent, fall into the Thames on the left bank; the others on the right bank.

Below London, up to which sea-borne vessels ascend, the river flows eastward, but with various reaches or bends, 54 miles to its mouth, or to the Nore Light (at the commonly reputed mouth), 46½ miles. Between Deptford and Greenwich, about four miles below London Bridge, the Thames receives on the right bank the Ravensbourne, from Keston, near Bromley, in Kent; about two or three miles farther down, on the left bank, the Lea, which rises in Bedfordshire; four or five miles lower, the Roding, from near Dunmow, also on the left bank; and six miles lower, on the right bank, the Darent, which passes Dartford and receives the Cray. The only remaining feeder of the Thames which here requires notice is the Medway, which rises in Sussex, and flows by Maidstone, Rochester, and Chatham. The principal arm of the Medway joins the Thames at Sheerness just above the Nore; but the smaller arm, called the Swale, which cuts off the Isle of Sheppey from the mainland, opens into the Thames just above Whitstable.

The whole course of the Thames, from its source to its mouth, is about 220 miles. The principal affluents of the Thames are more fully described under the counties to which they respectively belong. The Thames, in the first part of its course, belongs wholly to Gloucestershire, but below Cricklade is almost entirely a border river, dividing Gloucestershire from Wiltshire, Oxfordshire and Buckinghamshire from Berkshire, Middlesex from Surrey, and Essex from Kent. Some part of its course is therefore described in the articles on those counties.

Commercial Importance.—The navigation of the Thames commences at Lechlade, where the river is about 258 feet above low-water mark at London Bridge. Its importance was early appreciated, and there are Acts of Parliament relating to it as early as the 2nd Henry VI. The Thames and Severn Canal, which follows the valley of the Churn and the Thames from near Cirencester, opens into the Thames at Lechlade, thus connecting it with the Severn and the western coast of the island. None of the tributaries above Oxford are navigable. At Oxford the Oxford Canal joins the Thames, and opens a communication with the grand canal system of the central counties. It follows the course of the Cherwell from above Banbury. At Abingdon the Wilts and Berks Canal joins the Thames, and, as well as the Kennet and Avon Canal, which joins the Kennet at Newbury, opens a communication with the Somersetshire (or Bristol) Avon, and by it with the Severn. The Wey is navigable from Godalming, about 17 miles from its junction, and is connected with the Wey and Arun Canal, and the Basingstoke Canal, the former of which opens a communication with the river Arun and the Sussex coast. The Grand Junction Canal, which unites with the Oxford Canal at Braunston, in Northamptonshire, opens into the Thames by the mouth of the Brent, the lower part of which is incorporated with the canal. Below London Bridge, the Lea, which is navigable chiefly by artificial cuts for 25 miles, and has one of its feeders (the Stort) also navigable, opens into the Thames; and just above the Lea, the Regent's Canal, which encircles the north and east sides of the metropolis, and communicates with the Paddington Canal, and so with the Grand Junction Canal, also opens into the river.

The corporation of the city of London has the almost uncontrolled conservancy of the Thames, and the regulation of its navigation and fishing. The navigation of the upper part of the Thames is kept up by locks and weirs, the lowest of which is at Teddington, which is consequently the limit of the tide. Teddington is about 18 miles above London Bridge. Vessels of 800 tons get up to the St. Katherine's Docks, and those of 1400 tons to Blackwall, about 6 miles below bridge. No river in the world equals the Thames in its commercial importance. The river for some two miles or more below bridge is crowded with vessels, chiefly coasters, steam-vessels of all sizes, and colliers, which moor alongside the quays or in tiers in the stream; and for larger vessels there are several docks excavated on the banks of the river. There is a dockyard for the navy (now little used) at Deptford, about 4 miles below London Bridge; one at Woolwich, 9 miles below; one at Sheerness, in the Isle of Sheppey, at the junction of the Thames and Medway; and one at Chatham, the most important of the four, on the Medway. The fortifications at Sheerness defend the entrance to both rivers. The passage of the Thames is further protected by Tilbury Fort, and that of the Medway by Gillingham Fort.

The width of the river at London Bridge is 290 yards. For nearly the whole way below London Bridge the river is embanked, and is

almost throughout its lower course skirted with narrow marsh-lands. The width of the river at Woolwich, at high water, is 490 yards; at Gravesend Pier, 26 miles below London Bridge, it is 800 yards; at Coal-house Point, three miles below Gravesend, it is 1290 yards; it then gradually increases to the width of about 6 miles at the Nore, and to 18 miles at the point where we have fixed the mouth.

It is a common opinion that this river in the upper part of its course is properly called Isis, and that it is only below the junction of the Thames that it is called Thames, which name is said to be formed by combining the two names Thame and Isis. But this is a mistake: the name Isis never occurs in ancient records.

THAMES, River. [CANADA.]

THANAAN-ARIVE. [MADAGASCAR.]

THANET, ISLE OF, or Ringalow hundred, a hundred forming the north-east corner of the county of Kent, which has been constituted a Poor-Law Union. The Isle of Thanet is noticed in the article KENT. The Isle of Thanet Poor-Law Union contains 11 parishes and townships, with an area of 29,783 acres, and a population in 1851 of 31,798.

THA'PSACUS, or THA'PSACUM, was a very ancient, populous, and commercial town in Syria, on the right bank of the Euphrates, about 24 miles W. from the junction of the river Chaboras with the Euphrates. Thapsacus, the *Thapsach* of the Bible, the *Tapasa* of the Vulgate, and the *Thapsa* of Josephus ('Antiq.,' ix. 11), was the most eastern town of the kingdom of Solomon after David had conquered the country as far as the Euphrates. At an equal distance from Tyre by land and from Babylon by water, Thapsacus became an emporium, where the Gerrhaei kept stores of the commodities and spices of Arabia, which they carried there on barks, and which were afterwards transported by land to Syria and Phœnicia. (Strabo, xvi. p. 766, Cas.) Its military position was also of great importance. At the time of the expedition of the younger Cyrus (B.C. 401), there was a ford at Thapsacus, but no bridge: subsequently there was a bridge. This town was the most southern passage by which an army could penetrate, either from Mesopotamia into Syria and Cilicia, or from these countries into Mesopotamia and Persia, without being obliged to traverse the deserts of Arabia. The younger Cyrus crossed the Euphrates at Thapsacus (Xenophon, 'Cyropæd.,' i. 4); Darius also crossed the river at Thapsacus when he was advancing against Alexander in Cilicia; and Alexander, when he was pursuing Darius into Assyria. (Arrian, 2, 13; 3, 7.) In the age of Strabo the bridge at Thapsacus existed no longer. (Strabo, p. 747, Cas.) Eratosthenes chose Thapsacus as the centre of his geographical measurements in Asia Minor and the adjacent countries. (Strabo, ii. p. 77-91, Cas.) The site of Thapsacus is now marked by the island and Arab village of Deir, in the Euphrates.

THASOS, an island belonging to Turkey, situated off the coast of Thrace, at a short distance from the mouth of the river Nestus or Karaou, and a little to the south-east of the Gulf of Kavalo. Volgaro, which is nearly in the centre of the island, is in 41° 45' N. lat., 24° 40' E. long.

Five generations before the time of the Grecian Hercules, Thasos was peopled by Phœnicians, who came from Tyre in quest of Europa, led by Thasos, son of Agenor, from whom the island is said to have taken its name. (Herod., ii. 44; Pausan., v. 25.) It was afterwards colonised by settlers from Paros, among whom was Archilochus the poet, about B.C. 708. Thasos was enriched in very early times by the possession of gold-mines in the island, and at Scepte Hyle, on the opposite coast of Thrace. According to Herodotus, who visited them, the most considerable were those which had been worked by the Phœnicians on the north-east side of the island, the excavations for which were very evident.

The Thasians, who were very rich, were besieged by Histæus of Miletus about B.C. 492, for a short time. In consequence of this attack, they built ships of war and strengthened their fortifications. They were reduced by Mardonius, and compelled by Darius (B.C. 491) to throw down their walls and surrender their ships of war. (Herodotus, vi. 46.) On the expedition of Xerxes into Greece, the honour of receiving his army in their continental territory was imposed upon them, and on this entertainment they expended 400 talents of silver. (Herod., vii. 118.) After the Persian war they became subject to Athens, from which they revolted B.C. 465. (Thucyd., i. 100.) Cimon, after defeating them at sea, took Thasos after a three years' siege, B.C. 463. The Thasians were compelled to destroy their fortifications, to surrender their ships, to pay a large sum of money at the time and tribute for the future, and to give up their mines and settlements on the continent.

On the ascendancy of the party of Pisander at Athens, at the close of the Peloponnesian war, Diotrophes was sent by him to Thasos, and established an oligarchy there. This injudicious policy furnished an immediate opportunity of revolting from Athens. The island, reduced by famine and civil war, was finally restored to the Athenians by Thrasybulus, B.C. 407. Subsequently the Thasians appear to have regained some of their continental possessions, and in B.C. 359 they fortified Crenides, probably as a frontier post for their Thracian territory: this was seized by Philip, son of Amyntas, king of Macedon, who placed a number of Macedonian settlers in it, and gave it the name of Philipp. Under his management its gold-mines were made

much more productive than before. When attacked by Philip V., king of Macedon, they submitted to him, with the stipulation that they should retain their own laws, and be exempt from garrison, tribute, or other burdens, B.C. 202. (Polyb., xv. 24.) They were shortly afterwards released from his rule by the Romans, B.C. 197. Under the emperors Thasos is styled *Libera*, or a free state.

The coins of Thasos are very numerous. The most ancient generally represent a satyr carrying off a nymph; on some are two fish. To these succeed massive coins in a good but rather heavy style, with a head of Bacchus on the obverse, and Hercules kneeling, shooting an arrow, on the reverse. The Thasians originally worshipped the Tyriau Hercules, and afterwards the Grecian Hercules. The broad tetradrachms of the Macedonian period had the head of the young Bacchus, and Hercules on the reverse. These coins are abundant, and many of them, with letters and type ill executed, are found in Transylvania.



Coin of Thasos.

Actual size. Silver. Weight, 117½ grains.

The ancient town of Thasos is situated on the north coast of the island, and occupies three eminences. On the site are remains of the Greek walls, mingled with towers built by the Venetians during their occupation of the island after the taking of Constantinople by the Latins. Near it is a large statue of Pan in a niche in the rock, and upwards of fifty sarcophagi of white marble.

Thasos is nearly circular in shape, and has an area of about 85 square miles. It is longest from north to south. In the northern and highest part of the island three peaks extend in a north-west and south-east direction. The inhabitants, who are all Greeks, live in nine villages—Volgaro, Casawith, Sotiro, Kaikarahi, Moriss, Kastro, Potamia, Liman or Panagia, and Theolog, the largest situated nearly in the centre of the island. The chief produce of this fertile island is oil, maize, fruit, honey, and timber; the last grows in great abundance, and forms the chief article of export: the plane-trees in particular are of great size. In ancient times this island was celebrated for its wine, but little wine is now made here, and some is imported from Tenedos: the principal food of the inhabitants is maize. Large herds of cattle and flocks of sheep are kept in the island; asses and mules are more used than horses on account of the steepness of the roads. The inhabitants are hospitable, industrious, and simple in their manners.

THATCHAM. [BERKSHIRE.]

THAXTED, Essex, a market-town in the parish of Thaxted, is situated on the left bank of the river Chelmer, in 51° 57' N. lat., 0° 20' E. long., distant 19 miles N.N.W. from Chelmsford, and 41 miles N.N.E. from London. The population of the parish of Thaxted in 1851 was 2556. The living is a vicarage in the archdeaconry of Essex and diocese of Rochester. Thaxted is a very ancient place; it was incorporated by charter of Philip and Mary, but the corporation became extinct in the time of James II. The chief ornament of the town is the church; it is mostly in the perpendicular style, and consists of a nave and chancel with side aisles, transept, and an embattled tower and handsome spire at the west end. There are meeting-houses for Quakers, Independents, and Baptists; a Free Grammar school; National and British schools; almshouses; and some minor charities. Rope making, brewing, and malting are carried on. A small market is held on Thursday. There are two fairs in the year.

THEBAID, or THEBAIS, signifies the territory or district belonging to Thebes, and is consequently applied to the whole territory subject to the city of Thebes in Bœotia. [THEBES IN BŒOTIA.] In a similar, though a much wider sense, the name was given to the whole of Upper Egypt, the modern Said, of which Thebes was the principal city. This territory extended from Hermopolis Magna southward as far as the first cataracts of the Nile, or to Philæ; or, according to others, as far as Hiera Sicamina. This great province was, according to Strabo (xvii. p. 787), originally divided into ten nomes (*royai*); but Pliny ('Hist. Nat.,' v. 9) enumerates eleven, and others mention fourteen—Lycopolites, Hypseliotis, Aphroditopolites, Tinites, Diosopolites, Tentyrites, Phaturites, Hermonthites, Apollinopolites, Antsopolites, Pano-polites, Coptites, Ombites, and Dodscaschoenus. Respecting the nature of these nomes and the physical features of the Thebaid, see EGYPT.

THEBES. Towns and cities of this name occur in several parts of the ancient world, but the two which are most renowned in history are the Egyptian and the Bœotian Thebes.

The Egyptian *Thebes*, in the Bible called No, or No Ammen, was situated in the central part of Upper Egypt, on both banks of the Nile. The city extended on each side from the river to the foot of the hills which inclose the valley of the Nile. This gigantic city, whose ruins still excite astonishment, was believed to be the most ancient town of Egypt, and the original metropolis of Egypt. Its original circumference is stated to have been 140 stadia. Its most

flourishing period appears to have been about B.C. 1600, when it was the capital of all Egypt, and when, according to Herodotus and Aristotle, the whole country of Egypt bore the name of Thebes. During that period, which probably comprises several centuries, Thebes was the residence of the Egyptian kings, whose tombs are still extant in the rocks on the western side of the city, and extend even to the borders of the desert. Homer ('Iliad,' ix. 381, &c.) speaks of the splendour, greatness, and wealth of Thebes, and calls it "the city with a hundred gates, each of which sent out two hundred men with horses and chariots." During the invasion of Egypt by the Persians under Cambyses, Thebes, like other towns, suffered very severely, especially the private dwellings, which were for the most part constructed of wood, while the great architectural works defied the flames as much as they have defied the slower influence of time. After this catastrophe the city appears never to have recovered its former greatness. During the time of the Ptolemies, when the seat of government was in the northern extremity of the country, Thebes appears to have been neglected by the Egyptian kings. In the reign of Ptolemy Lathyrus, about B.C. 86, it revolted, and after a siege of three years it was taken and plundered by the Greeks. As early as the time of Strabo, when its name had been changed to Diospolis ('City of Jove'), and the circuit of the city, which could still be traced, amounted to 80 stadia, the place consisted of a number of villages, and what remained of the ancient city consisted chiefly of temples. Under the Roman dominion something appears to have been done to preserve the venerable city; but new calamities broke in upon it when Christianity was introduced into Upper Egypt, and the Christians in their religious zeal destroyed as much as they could of the works of the ancient idolaters. At present, the site of the city is occupied by four principal villages—Luxor and Carnac on the eastern, and Gournou and Medi-net-Abou on the western side of the river. The buildings and sculptures still extant are the most ancient of any that exist in Egypt, and are the best and most genuine specimens of Egyptian art and architecture; for we have every reason to believe that by far the greatest part of them were executed before Egypt had yet experienced the influence of the Greeks, that is, long before the Persian invasion. (B.C. 525.) The ruins, chiefly consisting of temples, colossi, sphinxes, and obelisks, occupy nearly the whole extent of the valley of the Nile, a space of six miles from east to west; and on the western side, where the ruins of the city end, there begins, as it were, the city of the dead, the tombs in the rocks with their paintings, which are still as fresh as if they had been made only a few days ago.

At Luxor, near the river, are the remains of a temple, the entrance to which is through a magnificent propylon, or gateway, consisting of two pyramidal moles, the lower part of which is now concealed by accumulated sand, but which probably form a propylon as large as that of Carnac, hereafter described. In front of the propylon, which is covered with elaborate sculptures, stood two of the most perfect obelisks known to exist; one about 82 feet high, the other 76 feet, and from 8 to 10 feet wide at the base. The smaller obelisk was removed by the French in 1831, and erected in the Place de la Concorde, in Paris, on October 25, 1836.

But the remains of Carnac, about a mile and a quarter lower down the river, are still more wonderful than those of Luxor. An irregular avenue of sphinxes, 2180 yards in length, connects the southern entrance of Carnac with the northern entrance of the temple of Luxor. Carnac is about 830 yards from the east bank of the Nile, and is surrounded by a wall of unburnt bricks about 5300 yards in circuit, or more than three miles. The largest building, which some have thought to be a temple and some a palace, is 1215 feet in length, 360 feet in its greatest width, and 321 feet in its least width. The entrance to it fronts the Nile, with which it is connected by an alley of crio-sphinxes. This alley conducts to a propylon, without sculpture, 360 feet long and 148 feet high, with a great doorway in the centre 64 feet high; passing through which a large court is entered, having a range of pillars on the north and south sides, and a double row of loftier pillars down the middle, which terminate opposite two colossal statues in front of a second propylon. A flight of 27 steps then leads to an enormous hall, 338 feet by 170½ feet, and comprising an area of 57,629 square feet. The roof, which is flat, and when perfect was formed of very large slabs of stone, is supported by 134 columns, the largest of which are about eleven feet in diameter, and the smallest nearly nine feet. The interior propylon, pillars, and walls are covered with sculptures. Four beautiful obelisks form the entrance from the hall to the adytum, or sacred place, which consists of three apartments, all of granite; and the central room, or sanctuary, is adorned with sculptures, and painting and gilding. Beyond the adytum are porticoes and galleries, which were probably continued to another propylon at the eastern end.

Four propylæ, with colossi in front of them, form the entrance on the south side, at the end of the long avenue of sphinxes leading from Luxor; and there was probably a similar entrance on the north side.

(*Egyptian Antiquities*, vol. i.; Wilkinson, *Handbook of Egypt*.)

THEBES (in Bœotia), one of the most ancient and most important cities of Greece, was situated in the plain between Lake Hylœ on the north, and a range of low hills on the south. The Acropolis of the city, built upon an eminence in this plain, was said to have been founded by Phœnicians under Cadmus, whence it was called Cadmea.

Around this citadel the city arose at a later time, and was so disposed, that the greater portion of it occupied the part north of the citadel. Previous to the Trojan war the city was destroyed by the Epigoni; it took no part in that war. In the time of Homer, however, who calls it "a city with seven gates," it appears to have again been in a flourishing condition. In B.C. 335 Thebes was destroyed a second time, by Alexander the Great, who left nothing of the lower city standing, except the gates, the temples, and the house of Pindar the poet: 6000 inhabitants were killed, and 30,000 sold as slaves. Cassander rebuilt the city in B.C. 316, with the generous aid of the Athenians, Messenians, and Megalopolitans. (Pausanias, ix. 7.) The city suffered a third time in B.C. 291, under Demetrius Poliorcetes. Dicaearchus, who saw Thebes about this time or shortly after, has left an interesting description of it. After the Macedonian time the city declined still more, and Sulla seems to have given it the last blow by depriving it of half of its territory, which he assigned to the Delphians (Pausanias, ix. 7, 4); and Strabo remarks that in his time it had scarcely the appearance of a village (ix., p. 403, ed. Casaub.). In the time of Pausanias, the citadel, then called Thebes, was still inhabited, but the lower city was entirely abandoned; and he only saw the walls, gates, and temples, of which he gives a description. The place which now occupies the ancient Cadmea is called Theba, or Pheba; and here, as well as in the surrounding plain, there are many remains of ancient buildings, sculptures, and inscriptions. The inhabitants of ancient Thebes were once distinguished above all the other Greeks for rusticity, fierceness, and passion. The women were celebrated for their gentleness and beauty.

As a state, Thebes comprised the whole territory between the eastern coast of Lake Copais and Mount Cithæron, and extended to the north as far as the river Cephissus, which empties itself into the sea between Eubœa and the mainland. This whole territory was called Thebais, and contained a great number of towns, which were subject to Thebes. Among the fourteen confederate states of Bœotia, Thebes was the first, whence it is generally called the capital of Bœotia, which, in the strict sense of the word, it certainly was not.

Besides the Egyptian and Bœotian Thebes, the following towns of this name are mentioned by ancient writers:—

1. Thebes in Phthiotis, in Thessaly, an important commercial town with a good harbour. [THESSALY.]

2. Thebe in Troas, in Asia Minor, was celebrated as a fortified place as early as the Trojan war. It was situated north of Adramyttium, and taken and destroyed by Achilles. The plain in which the town had been situated was known down to the latest times as the Plain of Thebe.

3. Thebes in Arabia Felix.

4. Thebes in Lucania, in Italy.

THEISS, RIVER. [AUSTRIA; HUNGARY.]

THENON. [DORDOGNE.]

THEIRA, an island in the Grecian Archipelago, and the chief of the Sporades. Its modern name is *Santa Thira*, which is usually written *Santorini*. It is about 36 miles in circumference, and in figure like a horse-shoe. When it first emerged from the sea, it is said to have been called Calliste; *Therasia*, a small island to the west, and called at present by the same name, was torn away from it, according to Pliny. Volcanic action seems at one time to have been actively at work in this part of the sea. (Strabo, i. 57.) Pliny speaks of an island which arose between Thera and Therasia, to which he gives the names of Hiera and Automate, and of another which appeared in his own age, called Thia. The former is now called Aspronisi, or 'the white island'; the latter Kaimeni, or 'the burnt.'

Thera was originally inhabited by the Phœnicians, who are said to have been left there by Cadmus. It was subsequently colonised by a mixed colony of Minyans and Spartans (Herod., iv. 147, 148), and always remained faithful to its mother-city Sparta. Thera founded the colony of Cyrene in Africa, under the guidance of Battus, in B.C. 631. (Herod., iv. 150, &c.)

In the present day the island is covered with pumice-stone; and though the soil is dry and barren, it produces a large quantity of cotton and wine. The wine is strong, and is exported to all parts of the Archipelago. There is no wood in the island. They have hardly any cattle, and very little fruit except grapes, and there is only one spring in the island. It contains a few castles, surrounded by some houses; but the majority of the inhabitants live underground in caves cut out of the pumice-stone, which are arched over with very light stones of a reddish colour. The island has a very desolate appearance, the coast being craggy and rugged, and the rocks burnt and scorched. It has only one harbour, in the shape of a half-moon; but no ship can anchor in it, as no bottom has yet been found by the plumb-line.

The inhabitants number about 13,000; they are under a Greek and a Catholic bishop. [See SUPPLEMENT.]

THERESIENSTADT. [BOHEM.]

THERMOPYLÆ. [SPARTA; THESSALY.]

THESPROTIA, a district of the ancient Epirus, around the river Acheron. It seems to have included the coast from the mouth of the Ambracian Gulf northwards to the river Thyamis, and the country inland as far as Mount Tomarus. The south-eastern part of Thesprotia, south of the river Acheron, was called Casopœa.

Thesprotia was one of the chief abodes of the Pelægi. In Thesprotia was the oracle of Dodona (Herod., ii. 56), the chief seat of the old

Pelasgic religion. [DODONA.] In Thesprotia Aristotle found the Hellenes under their ancient name of Græci (Aristot. 'Meteorolog.' i. 14.) From this country the Thessali migrated to take possession of Thessaly, about sixty years after the Trojan war, having previously left their original seats in Thessaly, and proceeded into Thesprotia, about eight generations before the Trojan war.

THESSALONICA (*Saloniki*), an ancient city of Macedonia, in the district of Mygdonia, was formerly called Therme or Therna: it is in 40° 38' N. lat., 22° 57' E. long., about ten miles east of the ancient river Echedorus, at the head of the modern Gulf of Saloniki, formerly called the Thermaic Bay, from the ancient name of the city. Therme was at first an inconsiderable place. Xerxes made some stay here on his march into Greece (Herod., vii. 128). A short time previous to the commencement of the Peloponnesian war (B.C. 432) it was taken and occupied by the Athenians, but it was soon afterwards restored to Perdiccas, the king of Macedonia. The name of Thessalonica was given to it by Cassander, the son of Antipater, in honour of his wife Thessalonica, who was sister of Alexander the Great. With a view to its aggrandisement, Cassander collected together (about B.C. 315) the population of several adjacent towns, so as to make it one of the most important cities of northern Greece. (Strabo, l. c., p. 330.) After the battle of Pydna (B.C. 168), in which the Romans defeated Perseus, the then king of Macedonia, Thessalonica, with the other Macedonian towns, surrendered to the Romans, and was made the capital of the second of the four regions into which Macedonia was divided by them. (Livy, lib. xlii., c. 10 and 45; lib. xlv., c. 29.) Livy speaks of it as being then a very celebrated city. It possessed an excellent harbour, and had the additional advantage of lying on the great Roman military road, the Via Egnatia, which, commencing at Dyrrachium, on the western side of Greece, and extending to Byzantium, afforded the easiest land communication with Thrace, Asia Minor, and the shores of the Euxine. In St. Paul's time it was much frequented by people of different nations; the Jews had a synagogue in it; and it was also the seat of the Roman government. Under the empire, it continued to be so flourishing and important a city, that it was selected as the residence of the prefect of Illyricum, and the metropolis of the Illyrian provinces. In the reign of the emperor Theodosius, Botheric, commander of the garrison, with his principal officers, was murdered by the people of the town for having imprisoned one of the popular characters of the circus (A.D. 390). The emperor Theodosius gave orders for the punishment of the people, and no less than 7000 persons were massacred by barbarian soldiers in a promiscuous carnage, which lasted for three hours (Gibbon, 'Roman Empire,' c. xxxvii.).

Saloniki is a large walled commercial town, imposingly built on the slope of a hill, and commanded by a strong castle called Heptapyrgium, or the 'Seven Towers,' and has about 75,000 inhabitants. Part of the walls are of polygonal architecture; the gate of Varlar was built in honour of Augustus, after the battle of Philippi. There are two other ancient triumphal arches in the town. The hippodrome is a vast area in the centre of the town, entered by a propylæum, formed by five magnificent Corinthian pillars supporting an entablature in Attic, with figures in high relief. The rotunda is built after the model of the Pantheon in Rome; its interior is covered with mosaics. The church of Santa Sophia is now a mosque. The metropolitan church of St. Demetrius has been also converted into a mosque. An ancient temple of Venus has been likewise appropriated to Mohammedan worship. The town has handsome and large bazaars, and important silk factories. It has a good trade in British produce, and exports corn, cotton, wool, raw silk, wine, tobacco, bees-wax, sponges, sesamum, timber, and staves. Foreign consuls reside in Saloniki. It is the capital of an eyalet, which comprises ancient Macedonia and Thessaly.

THESSALY, one of the principal divisions of Northern Greece, and the cradle of many of the inhabitants of Greece in general, is an extensive and generally unbroken plain, about 80 miles in extreme length and 70 miles in breadth, comprising an area of about 5500 square miles, and forming an irregular sort of square. This description applies only to what may be called Thessaly Proper, which is bounded W. by the range of Pindus; N. towards Macedonia by the Cambunian Mountains; S. by the range of Mount Othrys; E. by a range of mountains running along the coast nearly parallel to Pindus, and including the summits of Pelion and Ossa. The basin of Thessaly is thus surrounded by mountain barriers, broken at the north-east corner only by the valley and defile of Tempe (or the Cut), which separates Mount Ossa from Olympus, and presents the only road from Thessaly to the north which does not lead over a mountain pass. At the eastern base of the mountain range which runs from Tempe to the Bay of Pagassa, now the Gulf of Volo, there is a narrow strip of land called Magnesia, between the hills and the sea, interrupted in several places by lofty headlands and ravines, and without any harbour of refuge from the gales of the north-east. South of Othrys, the southern boundary of Thessaly Proper, lies a long narrow vale, through which winds the river Spercheius, and which, though generally considered as a part of Thessaly, is separated from it by the range of Othrys, and is very different from it in physical features. It is bounded on the south by the range of Ceta, which runs from Pindus to the sea at Thermopylia in a general direction nearly parallel to the Cambunian Mountains; and on its eastern side by the shores of the Bay of Malis, now the Gulf of Zeitoun. According to Greek

traditions, Thessaly was known in remote times by the names of Pyrrha, Æmonia, and Æolia. The two former names belong to the age of mythology; the last refers to the time when the country was inhabited by the Æolian Pelasgi, previous to the occupation of any part of it by the Thessalians, who, according to Herodotus (vii. 176), came from Thesprotia, a region in the west of Epirus, and settled in the country, which from them derived its future name. The name does not occur in Homer, although the several principalities of which it was composed at the time of the Trojan war are enumerated. ('Iliad,' ii. 700.)

From very early times Thessaly was divided into four districts, or tetrarchies, Hestiasotis, Pelasgiotis, Theasalotis, and Phthiotis; and the division still existed in the time of the Peloponnesian war (B.C. 404).

Hestiasotis was the mountainous country between Pindus and Olympus; having generally for its southern limit the river Peneus. Herodotus (i. 150) applies this name to the country in the neighbourhood of Ossa and Olympus, the original abode of the Dorians before they settled in Peloponnesus. From a statement in Strabo (ix., p. 437), it would seem that the name of Hestiasotis was derived from a district in Eubœa, whose inhabitants were transplanted to this part of Thessaly by the Perrhæbi. In historical times the Perrhæbi dwelt in the valley of the Titaresius under Olympus. The north-western part of Hestiasotis was in ante-historical times (Homer, 'Il.' ii. 774) occupied by a mountain tribe of uncertain origin, called the Æthices. In the time of Strabo (ix., p. 434) scarcely any trace remained of them.

The most remarkable towns of Hestiasotis were as follows:—*Phaloria*, or *Phaloria*, the first town of any importance on entering Thessaly from Epirus by the passes of Pindus (Liv., xxxii. 15): *Oryneia* and *Eginium*, the latter of which Livy describes as a place of great strength, and almost impregnable. *Gomphi*, an ancient fortress, situated on the Peneus to the south of Phaloria: it was a place of great strength, and might be said to be the key of Thessaly on the side of Epirus to the north. In the time of Cæsar ('Bel. Civ.,' iii. 80) it was a large and opulent city: it is supposed to be represented by the modern Stagoua. *Tricca*, now *Trikkala*, on the left bank of the Peneus, about 12 miles south from Gomphi: it is celebrated by Homer ('Il.' ii. 729), and placed by him under the rule of the sons of Æsculapius, who was said to have been born in the neighbourhood; about 12 miles to the north of it is now situated the convent of Meteora, whose name (the Hanging) is descriptive of its situation upon lofty columns of rock. *Metropolis*, a town to the north of the Peneus, which contained within its territory the lands of three other places not so famous, but more ancient, and which contributed to the formation of the new city. *Metropolis*, with *Gomphi* to the north-west, *Tricca* to the south-west, and *Pelionna* to the south-east, formed a square of fortresses, in the middle of which was the ancient Ithome, called by Homer the 'precipitous.' *Pelionna*, more commonly *Pellinæum*, was an important city on the north of the Peneus, and about 10 miles east of *Tricca*. *Ithome* is supposed to have occupied the site of the castle which stands on the summit above the village of Fanari. *Echalia*, a city celebrated in mythology, is coupled by Homer with *Tricca* and *Ithome*. *Gonnus*, or *Gonni*, a town of considerable importance and antiquity, was situated on the left bank of the Peneus, about 20 miles from the great city of Larissa, and close to the entrance of the gorge of Tempe. *Gonnocondylon*, a stronghold in the windings of the valley, was situated in the defile above *Gonnus*. The Pelagouian *Tripolis*, also a district, which included the three towns of *Pythium*, *Asorus*, and *Doliche*, was situated in the north-east of Hestiasotis, and is also reckoned under Perrhæbia by Livy.

Pelasgiotis was in the southern part of the lower valley of the Peneus, and includes the Pelasgian plains which stretch from Larissa to Phæra, near Pelion, having for its boundary on the east the range of Pelion and Ossa. According to Strabo (ix., p. 441), this part of Thessaly was originally occupied by the Perrhæbi, an ancient tribe of apparently Pelasgic origin. It was however wrested from them by the Lapithæ, another Pelasgic nation, whose original abode was in Magnesia. They forced some of the Perrhæbi to retire northward and across Pindus, while those who remained in the plains were incorporated with themselves, under the common name of Pelasgiota. The principal towns of Pelasgiotis were as follows:—*Larissa*: this was one of the most ancient and flourishing towns of Thessaly: it was situated in the most fertile part of the old country of the Perrhæbi. The constitution of the city was democratical, the magistrates being elected and removable by the people. (Aristot., 'Politica,' v. 6.) The territory of this city was extremely rich and fertile, but it frequently suffered by the inundations of the Peneus. The name is Pelasgian. *Cranon*, or *Crannon*, to the south of Larissa, was one of the most ancient and considerable towns of this part of Thessaly. *Scotussa*, to the east of *Cranon*, though noticed by ancient authors, does not appear to have been known to Homer. (Strabo, ix., p. 441.) Within its territory was the hill of Cynocéphale, or Dogs' Heads, where a victory was gained by the Romans over Philip of Macedon (B.C. 197). It is one of the hills which separate the plain of Larissa from that of Phæraia. *Phæra* was near the southern extremity of the Lake Boebei. Its territory, according to Polybius (xviii. 2), was most fertile, and the suburbs were surrounded by gardens and walled inclosures. Its port was Pagassa, about 11 or 12 miles distant. There

are hardly any traces of antiquity here. The fountain Hypereia, mentioned by Homer ('Iliad,' vi. 457), is in the suburbs of the modern town of Belestina, at the foot of the ancient Acropolis. A small lake of about 100 yards in diameter, and with water as clear as crystal, bubbles up out of the ground. The Dotius Campus is also in Pelasgiotis, on its eastern side: it is a considerable plain, encircled by hills to the north, and terminated to the south by the Lake Boebeis, the most extensive in Thessaly, and included within the limits of Pelasgiotis.

Thessaliotis was so called from its having been first occupied by Thessalians, who came from Thesprotia, and inhabited the plains below Hestiotis, having the district of Pelasgiotis on the east. This tetrarchy contained towards the south-east the city of *Pharsalus*, celebrated for the battle fought in its plains between Pompey and Cæsar. It is situated not far from the junction of the Enipeus and the Apidanus, and was a city of great size and importance. There is a modern town called *Pharsala*, on or near the site of the old Pharsalus. South-west of it there is a hill surrounded with ancient walls, and on a lofty rock above it are ruins of an ancient Acropolis. Other towns of Thessaliotis were—*Cierium*, supposed to be identical with the ancient *Arne*, the chief town of the Æolian Boeotians. *Ichnæ*, or *Achnæ*, where the goddess Themis was especially worshipped. *Proerna*, not far from Pharsalus.

Phthiotis, according to Strabo, included all the southern part of Thessaly, stretching lengthwise from the Maliac Bay on the east to Dolopia and Pindus on the west, and in breadth from Mount Oeta on the south as far as Pharsalus and the Thessalian plains on the north, an average distance of about 30 miles. Homer comprised within its limits the districts of Phthia and Hellas properly so called, and the dominions of Achilles. Its inhabitants were the Achæans, or Achæi Phthiotæ, a double name under which they were generally enumerated in the lists of the Amphictyonic nations. The principal cities of Phthiotis were *Halos*, or *Alos*, on the west side of the Gulf of Pagassa. It contained a temple sacred to Jupiter Laphystius, which was visited by Xerxes as he passed through the city. *Iton*, about 6 miles west from Halos, on the river Cuarius, celebrated for a temple of Minerva Itonia. The district of *Arne*, from which the Æolian Boeotians were expelled by the Thessalians, is by some supposed to have been near these towns and on the shores of the Pagassæan Bay; but Müller ('Dorians,' ii. 475) adduces satisfactory reasons for believing that the *Arne*, which the Thessalians first occupied, lay to the north-west in Thessaliotis, and that it was identical with the ancient Pierium. North of Halos and Iton lay *Thebes*, the most important town of this part of Thessaly. It was called Phthiotic, to distinguish it from the Thebes of Boeotia. In a military point of view it possessed considerable importance, as it commanded the avenues of Magnesia and the upper parts of Thessaly. Philip, son of Demetrius, changed its name to Philippopolis. Some ruins between the modern towns of Armiro and Volo are supposed by Sir W. Gell to be those of Thebes. They consist of an Acropolis, with very ancient walls constructed with very large blocks; some towers also are still standing. The port of Thebes appears to have been *Pyræus*, about 2½ miles distant. A little south of Thebes was *Larissa Cremaste*, or the Hanging, so called from its position on the side of a hill; it was also called the Pelagian. It lay in the dominions of Achilles, whence he is called Larissæus by Virgil ('Æneid,' ii. 198). The ruins of it still exist, and Sir W. Gell says of it, "The form of Larissa was, like that of many very ancient Greek cities, a triangle, with its citadel at the highest point. In the Acropolis are the fragments of a Doric temple; and from it is seen the magnificent prospect of the Maliac Gulf, the whole range of Oeta, and over it Parnassus." *Melitia* was situated at the foot of Mount Othrys, on the river Enipeus. Its ancient name was *Pyrrha*, and it boasted of possessing the tomb of Hellen, the son of Deucalion. To the north-west of Melitia lay the town of *Thaumaki* (the Wonderful), so called from the singularity of its position on a lofty and perpendicular rock. It was on the great road leading from Thermopylæ by Lamia to the north of Thessaly. "After a rugged route over hill and dale," says Livy (xxxii. 4), "you suddenly open on an immense plain like a vast sea, which stretches below as far as the eye can reach." Dodwell says of it, "It is about five hours from Pharsalia. It must always have been a place of importance. The view from it is one of the most wonderful and extensive I ever beheld."

On the west of Phthiotis, and close to it, but still separated from it, lay the territories of the Dolopians. According to Homer ('Il,' i. 480), *Dolopia* was at the extremity of Phthiotis; but it does not follow that it was included in that district; nor are the Dolopians in early times ever mentioned as the vassals of the Thessalians. They occupied the extreme south-west angle of Thessaly, formed by the chain of Tymphrestus, a branch of Pindus, on one side, and Mount Othrys on the other. They were a very ancient nation, as appears from their sending deputies to the Amphictyonic council. At a later period they were subjects of Jason, the tyrant of Phæra. It was conquered by Peræus, the last king of Macedonia. Dolopia was a rugged mountainous district, with few towns of note. Ctemene, or Ctimene, was perhaps the most important.

The *Ænians* lived in the upper valley of the river Spercheius, being separated from the Dolopes by the hills of Tymphrestus and Othrys. They were also called *Æteans* from their position on the

slopes of Mount Oeta. They were a tribe of great antiquity and of some importance, as appears from the fact of their belonging to the Amphictyonic council. Their origin is uncertain, and they made many migrations from one part of Thessaly to another. Their chief town was *Hypata*, on the banks of the Spercheius.

The *Malians* were the most southern tribe connected with Thessaly. They occupied principally the shores of the Maliac Gulf (the Bay of Zitun), from the pass of Thermopylæ on the south to the northern boundary of the Valley of the Spercheius. Their country is generally flat; the plains in some parts are extensive, in others narrow, where they are confined on one side by the shores of the Maliac Gulf, and on the other by the mountains of Trachinia. They were always a warlike people. The Amphictyonic council was held in their country, and the Malians are included in the lists of the Amphictyonic states. They always maintained friendly relations with the Dorians of Lacedæmon. The principal towns of the Malians were—*Anticyra*, at the mouth of the Spercheius; it was said to produce the genuine hellebore, considered by the ancients as a cure for insanity. *Lamia*, 4 or 5 miles N. of Anticyra; it was celebrated as the scene of the Lamian war, carried on between the Athenians and their confederates against the Macedonians under Antipater; on its site is the modern Zitun. *Trachis* (the 'rough') was so called from the mountainous character of the surrounding country; it was once the chief town of the Trachinians, who were always in close alliance with the Dorians. In later times *Heraclea* was the most important town of Trachinia. It was a colony from Lacedæmon, founded (B.C. 426) at the request of the Trachinians, about 3 miles from the sea. Their object in making the request was to gain additional strength against the Ænians, or Æteans, with whom they were at war. It soon became an object of jealousy with the other Thessalian tribes. It was seized by Jason of Phæra, who caused the walls to be pulled down; but it again became a flourishing city under the Ætolians, who sometimes held the general council of their nation there. It sustained a long siege from the Roman consul Acilius Glabrio, after the defeat of king Antiochus at Thermopylæ (B.C. 191). The surrounding country was marshy and woody, but the vestiges of the city itself are observable on a high flat on the roots of Mount Oeta. On the coast of Trachia, close to the mouth of the small river Asopus, which runs through a gorge in the mountain inclosing the Trachinian plain, was the village of *Antikele*, near to which was the temple of the Amphictyonic Ceres, and the place of meeting of the Amphictyons. This locality was also famous for the celebrated Pass of *Thermopylæ*.

Magnesia is a country physically distinct from Thessaly, but in historical times was subject to it, and politically included within it. It is a narrow strip of country between the mouth of the Peneus and the Pagassæan Bay on the north and south, with the chain of Pelion and Ossa on the west, and the sea on the east. The people of this district were called Magnetæ, and they were in possession of it from very early times. ('Iliad,' ii. 756.) They were an Amphictyonic state. The extreme northern point of Magnesia was Mount *Homole*, a limb of Ossa, celebrated by the poets as the abode of the ancient Centaurs and Lapithæ, and a favourite haunt of the god Pan. (Virgil, 'Æneid,' vii. 874.) To the south, at the foot of Ossa, was *Melibœa*, a town on the coast, ascribed by Homer ('Iliad,' ii. 716) to Philoctetes. Still farther south was the promontory of *Sepias*, off which the fleet of Xerxes was wrecked. Beyond the southern promontory of Magnesia, now called Hagios Georgios, the coast takes a south-westerly direction to the entrance of the Pagassæan Bay, the Gulf of Volo. Among the principal towns of Magnesia were Iolœa, Demetrias, and Aphetæ. *Iolœa* was a place of great antiquity, and the birthplace of the mythological hero Jason and his ancestors. It was situated at the foot of Pelion, near the small river Anaurus: it was once a powerful city. Pagassæ, the port of Iolœa, and afterwards of Phæra, was famed in Grecian story as the harbour from which the ship Argo set sail on her voyage to Colchis: the name, according to Strabo (ix., p. 436), was derived from the number of springs near it. The site is nearly occupied by the present castle of Volo. Iolœa no longer existed in the time of Strabo. *Demetrias*, founded by Demetrius Polioretetes about B.C. 290, soon became a flourishing city, and was one of the most important fortresses in Greece, being well situated for defending the approaches to the Pass of Tempe, both on the side of the mountains and of the plains. Its maritime position also contributed to its importance. After the battle of Cynoscephalæ it became the chief town of the Magnesian republic, and the seat of government; subsequently it was attached to the house of Macedon, until the battle of Pydna, when it fell under the Romans. (Livy, xlv. 13.) Many ruins mark its site.

The principal mountain ranges of Thessaly were—the Cambunian, on the north; Pindus, on the west; the ridges of Othrys and Oeta, on the south; and those of Pelion and Ossa, on the east.

The *Cambunian Range* is a branch from Mount Pindus, running in a direction nearly at right angles to it, and separating Thessaly from Macedonia. In this chain is the Mount Olympus. The principal road between the two countries over the mountains was by the Pass of Voluatana, marked in modern maps as Volutza. Another important defile, leading from Thessaly into Macedonia, passed by Pythium, a village with a temple sacred to the Pythian Apollo, situated on Mount Olympus, at the north-east extremity of the range.

Through this latter defile many armies (that of Xerxes among the number) marched in ancient times. The road which led through Thessaly to this Pythium was called the Via Pythia. The defile is still much frequented by travellers going to Larissa from the north-western parts of Macedonia. *Mount Olympus*, one of the most celebrated mountains of Greece, is represented in Greek mythology as the habitation of the Gods. It divides the north-east of Thessaly, or Perrhæbia, from Pieria, the extremity of Macedonia on the south-east. It rises to the height of about 6500 English feet, and the highest parts of it are scarcely ever entirely free from snow. The part of the Cambunian range which lies to the west of Olympus was called *Mount Titarus*, an outlier or limb of which, *Mount Cyphus*, rises in the upper valley of the Peneus. Olympus and Ossa lie on opposite sides of the defile by which the Peneus enters the Vale of Tempe.

Mount Pindus, the western boundary of Thessaly, is part of the range of mountains which issues from the Thracian Scomius. On the north it joins the Illyrian and Macedonian ranges, and to the south it is connected with the branches of Cæta and the Ætolian and Acarnanian Mountains. It separates the waters which fall into the Ionian Sea and the Ambracian Gulf, from those which empty themselves into the northern part of the Ægean. The most frequented pass over Pindus from Thessaly into Epirus lays over a part of it called *Mount Ceresius*, probably not far from the modern town of Metzovo. One of the highest points of *Mount Pindus* was *Tymphrestus*, forming its southern extremity, from which branched the ridge of *Mount Othrys*, closing the great basin of Thessaly on the south, and separating the waters which flow into the Peneus from those which run into the southern Spercheus. Its eastern extremity separates the Maliaic from the Pagæsean Gulf, sinking gently toward the coast. It is now known by the different names of Hellovo, Vari-bovo, and Goura. To the south of Othrys lies the ridge of *Cæta*, which however has no connection with Thessaly Proper. It is a huge pile of mountains stretching from Pindus to the sea, which it meets at the Pass of Thermopylæ; it forms the inner barrier of Greece, as the Cambunian range does the outer, to which it is nearly parallel in direction and equal in height. On the west it branches out into the country of the Dorians and into Ætolia. On the south-east, beginning from *Mount Callidromus*, the highest summit of the range, it is continued without interruption along the coast of the Eubœan Sea, till it sinks into the valley of the river Asopus. By means of another branch to the south-west, it is connected with Parnassus, and after skirting the Corinthian Gulf under the names of Cirphis and Helicon, it forms the northern boundary of Attica, under the names of Cithæron and Parnes.

Pelion is a chain of some extent, running from the south-east extremity of the lake called Boeësis to the extreme south of Magnesia, forming a part of the boundary of Thessaly on the east. Homer ('Iliad,' ii. 743) alludes to it as the seat of the Centaurs, and it was associated with many remarkable events in Grecian story. It was exceedingly well wooded. To the north of Pelion and following the line of the coast lies the chain of *Ossa* (now *Kissovo*), the roots of which unite with one of the branches of *Mount Pelion*. At its northern extremity it towers into a steep conical peak, and according to the songs of the country, rivals its neighbour Olympus in the depth and duration of its snows, though it is 1100 feet less in height. Between Ossa and Olympus lies the celebrated Vale and Pass of Tempe.

The two principal rivers of Thessaly into which the smaller streams fall are the Peneus and the Spercheus. The *Peneus* (now called the *Salymbria*) rises in the north-west of Thessaly under Pindus, between the lower ridges of which and the outliers of the Cambunian range its upper valleys are confined. Near *Metsora*, not far from the rocky Ithome of Homer, its basin opens somewhat towards the south. At *Tricca* it makes a turn to the east, and its valley expands into a vast plain towards the south-east, on the right of the river, though it is still confined by the hills on the left, till within about 10 miles from Larissa, where there is a considerable flat on the north, the soil of which is said to be alluvial. After leaving *Tricca* the course is generally north-east, and passing along the Vale of Tempe, the only outlet for the waters of Thessaly, it empties itself into the Ægean Sea. It is a very small stream, sluggish and shallow, except after the melting of the snows, when it sometimes floods the surrounding plains. The *Marab*, or *Lake Nesonia*, on the road between Larissa and Gonnus, is said to be caused by the floods of the river. The principal tributary of the Peneus on the north is the *Titaresius*, now the *Saranta Poros*, which joins the Peneus a little above the Vale of Tempe. The waters of the two rivers did not however mingle; those of the *Titaresius* being impregnated with a fat unctuous substance, which floated like oil on the surface. (Strabo, ix., p. 441.) This river was also called the *Eurotas*, and supposed to be a branch of the *Styx*, one of the rivers of the Infernal Regions. At the present day the inhabitants of its banks are remarkable for their healthy complexion, while the Peneus is surrounded by a sickly population. Its waters also are said to be clear and dark-coloured, while those of the Peneus are muddy and white. On the south, the affluents of the Peneus were the *Pamius*, the *Onochonus*, the *Enipeus*, and the *Apidanus*. Herodotus describes the *Apidanus* as one of the largest rivers of

Achaia, but still inadequate to the supply of the Persian army with water.

The second great river of Thessaly was the *Spercheus*, now the *Hellada*. It flows from *Tymphrestus*, a branch of Pindus, and after winding through a long narrow vale between the ridges of Othrys and Cæta, it falls into the Maliaic Gulf. It was much celebrated by the ancient poets, and Homer mentions it as belonging to the territory of Achilles round the Maliaic Gulf. Its bed and mouth have undergone many changes from the deposit of alluvial matter.

The plains of Thessaly were amongst the most fertile and productive of Greece in wine, oil, and grain, but more especially in grain, of which it exported a considerable quantity. The Thessalians consequently became very rich, and luxurious in their mode of life ('Athen.,' xii. 624). Thessaly was also famous for its cavalry, the best in Greece; its plains supplied abundance of forage for horses.

The lands of Thessaly were not cultivated by the Thessalians themselves, but by a subject population, the *Penestæ*, who were the descendants of the Æolian Boeotians, who did not emigrate when their country was conquered by the Thessalians, but surrendered themselves to the conquerors on condition that they should remain in the country and cultivate the land for the new owners of the soil, paying, by way of rent, a portion of its produce. Many of them were richer than their lords. (Athenæus, vi. p. 264.) They sometimes accompanied their masters to battle, and fought on horseback as their knights or vassals. They formed a considerable portion of the population, and frequently attempted to emancipate themselves.

Thessaly is now included in the Turkish eyalet of Selanik or Saloniki. Its chief products are corn, cotton, olive-oil, and silk. The chief towns are Larissa, Trikala, Volo, and Ambelakia.

Larissa stands on rising ground on the right bank of the Peneus, in 39° 37' N. lat., 21° 28' E. long., about 20 miles from the sea, and has about 30,000 inhabitants. It occupies the site of the ancient Larissa, and has been through all historical times a place of considerable importance. The Turks call it *Yeni-Sheher*. It is the seat of an archbishop and the residence of a pasha. The population numbers about 30,000. There are no ancient remains here; the walls are about 3 miles round.

Trikala is a large straggling town, about 40 miles W. from Larissa, with several churches, mosques, and synagogues, and 12,000 inhabitants, who manufacture cotton and woollen stuffs, and trade in corn with Albania and Epirus.

Volo, on the north shore of the Gulf of Volo, to which it gives name, is a small place with about 2000 inhabitants. In the gulf is the island of *Trikeri*, which gives name to the *Trikeri Channel*, connecting the Ægean with the Gulf of Volo, and Ziton to the north of Eubœa.

Ambelakia, N.E. of Larissa, in the vale of Tempe, has about 4000 inhabitants, who have some cotton manufactures.

History.—Homer ('Iliad,' ii. 710) describes Thessaly as divided into several independent principalities and kingdoms, and enumerates the chiefs to whom they were subject at the time of the Trojan war. Soon after a new constitution was adopted. The different states agreed to unite in one confederate body, under a president or *Tagus*, elected by the members of the confederacy. Strabo (ix. 429) informs us that this confederacy was the most considerable as well as the most ancient society of the kind established in Greece. It is deserving of remark that the majority of the Amphictyonic states were either Thessalian or connected with Thessaly. Except during a very short period, under Jason of Phœra, Thessaly never assumed that rank among the states of Greece to which it was by its position and extent entitled. In the Persian invasion under Xerxes the Thessalians, being left to their own resources by the Greeks, submitted to the invaders, to whom they proved active and zealous allies. The Athenian general Myronides marched into Thessaly to restore Orestes, son of Eocheatidas, to his throne, and advanced as far as Pharsalus; but he was checked in his progress by the Thessalians, who were superior in cavalry, and he was forced to retire, without having accomplished the objects of his expedition. In the Peloponnesian war the Thessalians did not as a nation take any part. In B.C. 394 they leagued themselves with the Boeotians and their allies against Sparta. The Thessalians, with their cavalry, endeavoured to harass and obstruct Agesilaus on his march through their country from Asia. His skilful manœuvres however thwarted their designs, and Agesilaus gained considerable credit by defeating on their own ground, with horsemen of his own training, the most renowned cavalry of Greece. Towards the close and after the end of the Peloponnesian war, most of the Thessalian cities acknowledged the ascendancy of Pharsalus or Phœra, the latter of which was, about B.C. 400, under the dominion of Lycophron. This prince endeavoured to extend his power over all Thessaly; and Xenophon ('Hellen.,' ii. 4) mentions a victory which he gained over the Thessalians of Larissa as one of the events which happened in the year of the fall of Athens (B.C. 404). Ten years afterwards Lycophron was still engaged in a contest with Larissa, then subject to Medius, who was probably one of the powerful family of the *Aleuada*. Lycophron was supported by Sparta, and Medius by the Boeotian confederacy, by the assistance received from which he was enabled to make himself master of Pharsalus, then occupied by a Lacedæmonian garrison.

The success of Agesilaus on his return from Asia produced some

change in the affairs of Thessaly, for Pharsalus soon recovered its independence, and rose to such eminence as to become a rival of Pheræ. Polydamas, whose character and virtue had gained the confidence of all parties, was intrusted with the citadel and the administration of the revenues of the city, a trust which he discharged with the strictest integrity.

At Pheræ, the supreme power passed into the hands of Jason, who kept a standing army of 6000 mercenaries, all picked men, and, notwithstanding the opposition of Pharsalus, compelled most of the principal Thessalian cities to enter into alliance with him. The objects of Jason's ambition were, the supremacy of Greece, and the overthrow of the Persian empire in the East; the same schemes, in fact, as were subsequently executed by Alexander, king of Macedon. The first objects which he had to gain were the title of Tagus, and the union of Thessaly under his authority. After a frank statement of his views, Jason prevailed upon Polydamas to second them. A compact was then made between them; and Polydamas exerted his influence so successfully in Jason's behalf, that the Pharsalians entered into an alliance with him, and a general pacification followed. Not long afterwards Jason was elected Tagus, and by his influence and talents several important cities were induced to join the confederacy. He then fixed the contingents of infantry and cavalry to be furnished by the different states, and raised them to a greater amount than they had ever been before. The army which he could bring into the field consisted of 8000 cavalry and more than 20,000 heavy-armed infantry; and his light troops, as Xenophon ('Hellen,' vi. 1, 6) observes, were enough to oppose the world. He built and manned a considerable fleet. But these schemes were too vast for the ordinary duration of a human life, though he kept them constantly in view, and made all his actions subservient to them. After the battle of Leuctra, in which the Thebians defeated the Lacedæmonians, they invited him to join them in overpowering Lacedæmon. Jason joined them with his forces, but he did not comply with their request. His policy was to keep an even balance between the two states, so as to ensure the dependence of both on himself, and therefore, instead of annihilating the power of Sparta, he offered his services as a mediator between the contending states, and obtained a truce for the Lacedæmonians, under favour of which the remnant of their forces decamped by night (B.C. 371). In the following year, whilst making preparations for an expedition to the south of Greece, he was assassinated by seven young men; and the honours which were paid in many of the Grecian cities to the assassins, showed the alarm which his ambition had excited. On the death of Jason, Thessaly relapsed into its former insignificance, though his dynasty survived him, and two of his brothers, Polydorus and Polyphron, for a short time shared his authority between them. Polydorus was soon assassinated, and Polyphron became sole Tagus. By his administration the office was changed into a tyranny, and he put to death Polydamas and eight other principal citizens of Pharsalus. After a reign of one year he was murdered by his nephew Alexander, who thus gained the government, in which he became infamous for his cruelty. The atrocities which he committed filled all his subjects with terror, but especially the ancient families, who were likely to be the objects of his jealousy. The Aleuads of Larissa accordingly applied to Alexander, the then king of Macedon, who, on being thus invited by the Thessalians, complied with their request. He defeated the tyrant, and took possession of Larissa and its citadel, and afterwards of Crannon, and garrisoned both with his troops. The affairs of his own kingdom however obliged him to withdraw from Thessaly; and the Thessalians, being thus exposed to the vengeance of Alexander, solicited aid (B.C. 368) from the Thebans, who accordingly sent Pelopidas to assist them. The tyrant granted him an interview, which ended in Pelopidas settling the affairs of the country on an apparently firm footing. But the order which he had established was soon deranged by the conduct of Alexander; and the Thebans, on being applied to again, sent out Pelopidas, with his friend Ismenias, but simply in the character of ambassadors, and without troops. They imprudently put themselves into the power of the tyrant, who threw them into prison. To rescue them and avenge the insult, Thebes sent out an army, which however was reduced to such a strait by his cavalry that it was obliged to retreat; and but for the interference of Epaminondas, who accompanied it, though not as general, it would have been destroyed.

In the following year (B.C. 367), an army was again sent out under Epaminondas, through fear of whom the prisoners were released. Subsequently, Alexander renewed his attacks on the liberty of the Thessalian cities, and greatly extended his dominion in the tributary districts. The Thessalians again appealed to the Thebans, and Pelopidas was sent out to aid them (B.C. 364), who fell in his first battle, in which however Alexander was defeated. The campaign ended in the tyrant being obliged to resign his conquests, withdraw his troops from Phthiotis and Magnesia, and enter into an alliance with Thebes. At last, his wife Thebe conspired with her three half-brothers to murder Alexander (B.C. 359). They effected their purpose; and one of them, Tisiphonus, assumed the government. At the end of B.C. 358, Lycophron, another of the brothers, was at the head of affairs. The new dynasty, however, seems to have been as unpopular with the Thessalians as the old one, and accordingly, with the Aleuads

at their head, they applied to Philip, king of Macedon, and requested his assistance. Philip invaded Thessaly, and, after gaining some success, was obliged to retire; but he shortly afterwards returned at the head of a large army, and made himself master of the whole country, Lycophron withdrawing into Phocia. Philip restored popular government at Pheræ (Diodorus, xvi. 38), but kept possession of its port, Pagasæ, and garrisoned Magnesia with his own troops. About B.C. 344, either the tyrants of Pheræ or their party there had regained their ascendancy, and Philip was again invited to dislodge them. This he effected with ease, and then availed himself of the opportunity to make Thessaly entirely subservient to his interests. After expelling the dynasty of the tyrants, he garrisoned the citadel of Pheræ with his own troops—revived the tetradarchies as political divisions of the country—and at the head of the four governments he placed his devoted adherents, the chiefs of the Aleuad party, so that they were in reality his viceroys or deputies. He also received the harbour duties and customs of the country, and appropriated to himself the tribute which had always been paid to Larissa by her subject Perrhæbian cantons. (Strabo, ix. p. 440.) On Philip's death, the states of Thessaly passed a decree confirming to his son Alexander the supreme station which Philip had held in their councils. The Thessalians took a very prominent part against Macedon in the Lamian war, which followed soon after Alexander's death (B.C. 323), and which nearly proved fatal to the Macedonian influence, not only in Thessaly, but over the whole continent of Greece. By the skillful generalship of Antipater, Leonnatus, and Craterus, however, Thessaly was preserved to the Macedonian crown till the reign of Philip, son of Demetrius, from whom it was taken by the Romans after the battle of Cynoscephalæ (B.C. 197). All Thessaly was then declared free (Liv., xxxiii. 32) by a decree of the Roman senate and people; but from that time it may be considered as under the dominion of Rome, though its possession was disputed by Antiochus (Liv., xxxvi. 9), and again by Perseus, son of Philip, between whom and the Romans it was the arena of more than one conflict. It was already a Roman province when the fate of the empire of the world was decided by the battle between Pompey and Cæsar on the plains of Pharsalus.

The slave-merchants of Greece were generally Thessalians. (Aristophanes, 'Plutus,' 517.) Their chief slave-market was Pagasæ, the port of Pheræ.

THETFORD, Norfolk, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parish of Thetford, is situated chiefly on the left bank of the Little Ouse, in 52° 24' N. lat., 0° 44' E. long., distant 30 miles S.W. from Norwich, 80 miles N.N.E. from London by road, and 95 miles by the Eastern Counties and Norfolk railways. The population of the borough in 1851 was 4075. The borough is governed by 4 aldermen and 12 councillors, of whom one is mayor; and returns two members to the Imperial Parliament. The living is a perpetual curacy in the archdeaconry and diocese of Norwich. Thetford Poor-Law Union contains 34 parishes and townships, with an area of 117,870 acres, and a population in 1851 of 19,040.

The town of Thetford is very ancient. Under the East Angles it was a place of importance: a synod was held here in 669. When the Danes invaded England in the reign of Ethelred I., they fixed their head-quarters, in 870, at Thetford, which they sacked. In the reign of Ethelred II. the town was burnt by the Danes, in 1004, under Sweyne. They burned the town again in 1010. The bishopric of the East Angles was transferred in 1075 from North Elmham to Thetford, and was again removed in 1094 to Norwich. About the same time a Cluniac priory was founded here. There were several other religious houses at Thetford. The town was the seat of one of the suffragan bishoprics established by Henry VIII. There have been as many as twenty churches in the town; thirteen are mentioned in the Domesday Book. Thetford now comprehends three parishes; the parishes of St. Cuthbert and St. Mary are very much intermingled, and are partly in Suffolk and partly in Norfolk; the whole of the other parish (St. Peter) is in Norfolk.

The town has no manufactures, but a good deal of malting is carried on, and the trade of the place is favoured by the river being navigable up to the town. St. Peter's church consists of a nave with two aisles, chancel, and tower; the last rebuilt in 1789. The ancient part is built chiefly of flint, whence it has obtained the name of 'the black church.' St. Mary's is on the Suffolk side of the river, and is meanly built. There are places of worship for Wesleyan Methodists, Independents, Quakers, and Roman Catholics, a Free Grammar school, founded in 1610, and National and Infant schools. Considerable remains of the Cluniac priory, and of other religious structures, still exist.

THEUX. [LIÈGE.]

THEZENAY. [SÈVRES, DEUX.]

THIAN SHAN MOUNTAINS. [SONGARIA.]

THIAN SHAN NANLU is the name of a Chinese government, situated nearly in the centre of Asia. European geographers generally call it Eastern or Chinese Turkistan, and also Little Bucharia. The name of Turkistan is applied to it because the bulk of the inhabitants in that part of Asia is composed of Turkish tribes; and as these tribes are frequently designated by the collective name of Bucharians, from the town of Bokhara, Eastern Turkistan is also called Little

Bucharia, or rather Bokharia, to distinguish it from Western or Proper Turkistan, which is called Bucharia without any epithet. Thian Shan Nanlu, in Chinese, signifies the 'southern road of the Thian Shan Mountains,' and has been applied to the countries south of that mountain system, because they are traversed by the southern of the two great commercial roads which connect China Proper with the countries of Western Asia, whilst the countries north of the Thian Shan are traversed by the northern commercial road, and on that account are called Thian Shan Pelu, 'the northern road of Thian Shan.' The last-mentioned countries constitute the government of Ili, or SONGARIA.

Thian Shan Nanlu lies between 36° and 44° N. lat., and extends from 71° to 96° E. long. From east to west it extends about 1250 miles, and its width from south to north varies between 550 and 300 miles. Its area probably exceeds 500,000 square miles. It is bounded N. by Songaria, or Thian Shan Pelu; E. by the province of Kansai and South Tibet. On the south-west is Ladakh, on the west Kundus, including Badakshan and Bokhara, and on the north-west Khokan.

Thian Shan Nanlu is a country entirely isolated from the rest of the world. On the north, west, and south it is inclosed by mountain ranges of such extent and elevation that the places which are permanently inhabited can only be reached by passing for several days over mountains, which are not inhabited except for two or three months in the year, when they are visited by a few families of wandering tribes of mountaineers. On the east of Thian Shan Nanlu is an extensive desert, which appears to be uninhabitable. The country inclosed by the three ranges and the desert receives an abundant supply of water from the mountains, a considerable portion of which is always covered with snow, and the numerous rivers which descend from them form a large river, called the Tarim, which is as large as the Danube, and terminates in an extensive lake situated on the western edge of the desert. The basin of the river Tarim is the largest closed river-basin on the globe.

Mountains.—At the south-western angle of Thian Shan Nanlu stands an extensive mountain knot called Pushtikhur, which occupies the space between 36° and 37° N. lat., 71° and 74° E. long. From its western side issues that elevated chain which is known in Afghanistan by the name of Hindu Kush; from its northern edge another range, called the Tartashling, or Bolor-Tagh, which extends northward; and in the eastern part begins a third range, which traverses the whole of Central Asia, and extends through China Proper to the shores of the Pacific. This last-mentioned range is called by the Chinese Kuenlueu, but that portion of it which is contiguous to the mountain-knot of Pushtikhur goes by the name of Tsungling.

The Tsungling may be considered as that portion of the Kuenlueu range which extends from the Pushtikhur on the west (72° E. long.) to the mountain-pass of Karakorum on the east (between 76° and 77° E. long.), and occupies nearly the whole of the space between 35° and 37° N. lat. Little is known of this region, but it is stated that a mass of perpetual snow covers these mountains for more than 300 miles in length, and that on their northern declivity there is a continuance of rain for three successive months. That portion of the Kuenlueu range which is east of the Pass of Karakorum is still less known. Two roads traverse the Kuenlueu range. The most western leads through the Karakorum Pass from Hindustan and Cashmir by the way of Leh in Ladakh, to Khoten in Thian Shan Nanlu. The highest part of the pass probably does not exceed 12,000 feet above the sea-level. This road is much more frequented in winter than in summer, because the melting of the snow on the mountains adjacent to the road renders travelling in summer almost impossible. The eastern road connects the town of Lhassa in Tibet with Khoten, and traverses a very mountainous country of great extent, passing near the large lake of Tengri-Nor, and issuing from the mountains by the narrow valley in which the town of Keriya is built.

The western districts of the Thian Shan Nanlu are occupied by several ranges, belonging to the Tartashling, or Bolor-Tagh. This mountain-system extends north of the mountain-knot of Pushtikhur, from 37° to near 41° N. lat., where it descends with long slopes towards the valley of the river Sihoon, or Jaxartes. In the interior of the mountain region, and within the boundary-line of Thian Shan Nanlu, an extensive elevated plain occurs, which is called the table-land of Pamir. The elevation of this table-land is so great, that no trees are found on it, and travellers feel their respiration rendered difficult by the rarefaction of the air. The nomadic Kirghis, who visit this elevated region in summer on account of its excellent pastures, keep herds of camels and sheep, and of kashgaw, or yaks. [BADAKSHAN.] Among the wild animals peculiar to this region are the kutch-kar and the raa.

The Thian Shan range extends along the northern boundary-line of Thian Shan Nanlu, which is separated by it from the government of Ili. This mountain range has been noticed under SONGARIA, where also the road is mentioned which connects Thian Shan Nanlu with the government of Ili.

Rivers.—The largest supply of water is derived from the Tartashling, in which three of the great branches of the Tarim River rise. The principal branch originates within the mountain region in a large lake, called Karakol, which is situated near 39° N. lat., and receives the drainage of a considerable country which surrounds it on all sides.

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The river issuing from this lake runs eastward, and is called *Yaman-gar*. It leaves the mountain region below Tashbalik, near 73° 30' E. long., and is soon afterwards joined from the north by the *Kashgar Daria*, which brings to it the drainage of the north-eastern part of the Tartashling. Near the point of confluence the rivers are met by a third river, the *Kesyl Daria*, which flows about 200 miles in a direction from east to west, and brings down the waters collected on the mountain-chain which unites the Tartashling to the Thian Shan. After the union of these three branches the river continues to be called *Kashgar Daria*, and to flow eastward for 300 miles; between 80° and 81° E. long., it is joined from the north by the *Aksu Daria*, from the west by the *Yarkiang Daria*, and from the south by the *Khotan Daria*, which flow respectively from the Thian Shan, the Tartashling, and the Kuenlueu mountains, and are from 300 to 400 miles in length.

After the confluence of these several branches the river is called *Tarim*, or *Tarim-gol*, and continues to flow in a nearly due east direction for 400 miles more, when, near 88° E. long., it is lost in an extensive lake, *Lop-Nor*, which is surrounded by still more extensive swamps. No river joins the *Tarim* from the south, east of 81° E. long., but it receives a considerable supply of water from the Thian Shan Mountains, by two rivers, the *Ukiat*, or *Chagar Daria*, and the *Barun Yulduz*, or *Kaidu River*. The *Ukiat Daria* runs more than 200 miles in a south-east direction, and joins the *Tarim* near 84° E. long. The *Kaidu River* is probably the largest of the confluents of the *Tarim*, as it collects the drainage of the Thian Shan Mountains between 80° and 87° E. long. Its course for about 100 miles is in an elevated valley, parallel to the Thian Shan range from east to west, after which it drains another parallel valley about 200 miles long by an eastern course, and falls into a large lake called *Bostu-Nor*, which is surrounded on the north and south by chains of high hills, but on the east by a sandy desert. In the hills which inclose the lake on the south is a break by which the *Bostu Nor* discharges its waters into the *Tarim*. The whole course of the *Tarim* amounts to nearly 1200 miles in a straight line, or about 1500 miles including the windings of the river.

The plain is of great extent, measuring on an average more than 300 miles from north to south, and about 900 miles from west to east. It is about 2000 feet above the sea-level. The eastern parts of it are a complete desert, which occupies the whole country east of 88° E. long., and surrounds the lakes of *Lop-Nor* and *Bostu-Nor* on the east. South of the river *Tarim* it extends westward to the banks of the *Khotan Daria* (81° E. long.), so that it covers about one-half of the plain. The worst part is that which lies east of 88° E. long., and is called *Han-hai*, or the *Dry Sea*. Its surface is covered with a very fine sand, which is frequently raised into the air by the wind, so that the traces of the caravans soon disappear. Through this desert is the nearest road from China to Hami in Thian Shan Nanlu. On the north, where it approaches the Thian Shan range, this vast extent of desert is skirted by a narrow tract of hilly ground, which is fit for cultivation or used as pasture-ground. Its width may vary between 20 and 30 miles, and it is in many places abundantly watered by rivers which descend from the mountains on the north, but which as soon as they have traversed the hilly region are lost in the sand of the *Han-hai*. Only a small portion of this tract can be irrigated, but it is cultivated with the utmost care, and produces various grains, vegetables, and fruits. It is especially famous all over China for its excellent melons and grapes. Cotton is also grown. The greater part of this tract however is used as pasture-ground for horses, camels, cattle, and sheep.

The country west of 88° E. long., and between the *Tarim River* and the Thian Shan Mountains, contains a much larger portion of cultivable ground, especially in the valleys of the *Barun Yulduz*, or *Kaidu River*. The hills inclosing the valley rise probably more than 1000 feet above their base, and are used as pasture-ground. Along the base of the southern ridge of hills are also considerable tracts of cultivated land.

Farther west, between 84° and 80° E. long., the hilly country is not so wide, extending only to the distance of 40 to 50 miles from the Thian Shan Mountains. The hills also have less elevation, and yield only a scanty supply of water for irrigation. Between 77° and 80° E. long. is the valley of the *Aksu Daria*, which is inclosed by high hills, and in its upper part contains very extensive tracts of fertile land, which are cultivated with great care, producing every kind of grain, and a variety of excellent fruits. The rich pastures feed herds of horses, sheep, camels, and cattle.

In the plain, west of the *Aksu Daria*, which extends between the *Kashgar Daria* and the Thian Shan Mountains, the cultivated land seems to be almost entirely limited to the bottom of the *Kesyl Daria*, where considerable tracts produce rice and other grain in abundance, as well as rich crops of cotton. The uplands north of the river produce abundance of grass during some parts of the year, and are used as pasture-grounds by the *Kara Kirghis*, or *Black Kirghis*, who go in summer with their herds of horses and camels to the Thian Shan Mountains. The uplands between the *Kesyl Daria* and the *Kashgar Daria* have a sandy soil.

The western districts of the Thian Shan Nanlu, or those which extend at the base of the Tartashling, are not more favourable to cultivation

than the northern districts which we have just noticed. It is chiefly on the banks of the rivers that the ground is cultivable. The principal objects of agriculture are rice, wheat, barley, and millet, with beans and vetches. The mulberry plantations are extensive, and large quantities of silk are collected at Yarkand; cotton, hemp, and flax are also grown. Fruit-trees are abundant. Melons and cucumbers are of excellent quality. The greater part of the country is covered with grass, especially those tracts which are mountainous, and accordingly it abounds in horses and sheep. The wool collected in these parts is of very fine quality. There are numerous herds of cattle and camels.

Along the base of the Thsungling our knowledge is limited to the tracts that surround the town of Khotan, where a large district is under cultivation, and produces rice, wheat and millet, cotton, hemp, and flax; large quantities of silk of the first quality are collected. The vineyards are extensive. Some plants are raised which yield dyeing-stuffs, which are exported to China. Among the domestic animals the yak is numerous, and also horses and sheep. North of this cultivated tract is the desert of Kara-kitai, or Rikistan, mostly covered with sand, and extending westward to the vicinity of Yarkand, and northward to the banks of the Yarkand-Daria.

Climate.—The climate of the Thian Shan Nanlu is distinguished by that dryness which is characteristic of all table-lands which are considerably elevated above the sea. Heavy gales are very frequent, and often so strong as to throw down travellers and their beasts of burden. The moisture required for the growth of plants is derived from the mountain rivers, which yield an abundant supply of water for about two or three months of the year. In the districts south of the Thian Shan Nanlu Mountains large reservoirs have been made, which are filled by the watercourses after the melting of the snow, and from these reservoirs the greater part of the water supply is taken. The western districts are much colder in winter; at Yarkand the river is for three months covered with thick ice, and caravans pass over it with their beasts of burden. The heat in summer is very great all over the country, but the cold of the winter seems to decrease as we proceed from west to east, as frost is hardly known at Hami. The country is subject to earthquakes. An extinct volcano exists in the Thian Shan Mountains, and traces of volcanic action are frequently met with in that range.

The domestic animals of Europe abound, with the exception of hogs, which are only kept by the few Chinese settled in the country; the other inhabitants, being Mohammedans, hold this animal in abhorrence. Camels are kept in the plains and on the mountains. In the Tartashling Mountains the yak is reared by the Kirghis; the larger species of the domestic animals are found in a wild state in the deserts of Thian Shan Nanlu. Of wild sheep there appear to be several kinds. On the Thian Shan Mountains the argali is found, and on the Tartashling the kutch-kar and the raa above mentioned. Among wild animals are jackals, tigers, wolves, lynxes, and foxes. On the Thian Shan Mountains a black eagle of great size is met with, and on the Tartashling a still larger kind, called syrm.

Gold is said to be found in the affluents of the Khotan Daria, and also in the eastern portion of the Thian Shan Mountains. Copper and iron are found at several places, and are worked. From the Thian Shan Mountains sulphur and sal-ammoniac, asbestos and saltpetre, are obtained. Several precious stones are abundant, and two kinds, the yew and the agate, form considerable articles of commerce to China.

Inhabitants.—The bulk of the population is of Turkish origin. The language of Thian Shan Nanlu is not intermixed, as that of the other Turkish tribes, with terms derived from the Persian and Arabic languages, and it is considered the purest of the Turkish dialects. The Turks of Thian Shan Nanlu are divided into two tribes, Ak-tak and Kara-tak, which hate one another, and frequently make war on each other. Each tribe is ruled by its own chief, or Beg, the Chinese reserving to themselves only military affairs, police, and customs. The army which the Chinese keep in the country, and which amounts to between 20,000 and 30,000 men, is commanded by Mantchoo officers. The tribute which the Chinese government levies upon the inhabitants is small, but is somewhat increased by the duty on imports. The inhabitants however are much oppressed by their own chiefs, and the Chinese do not interfere between them. The foreign commerce is carried on partly by the Turks, but mostly by the Tajicks. Both are Mohammedans. The Tajicks, or Tadjicks, are that nation which considers the Persian as its native language, and which is widely spread over Central Asia. In other countries their industry is mostly directed to the cultivation of the soil, but in Thian Shan Nanlu they are chiefly engaged in trade. They conform in costume to the Turks, but preserve their own language. There are in the eastern districts, especially in the town of Hami and its vicinity, a considerable number of Olöth Kalmucks, who after the defeat of the Galdan quietly submitted to the sway of the Mantchoos. [SONGARIA.] The number of Chinese is not large. Besides the officers of government, a small number is established in the large commercial towns as merchants and traders. In the mountains at the north-west corner of Thian Shan Nanlu is a tribe of Kirghis, called the Kara-Kirghis, and another tribe of that nation is met with in the ranges of the Tartashling. Both are nomadic tribes.

Commerce, Towns, and Manufactures.—About 1800 years ago a commercial road was established, which traverses this country in its

length from east to west, and by which the commerce between China and Western Asia has been carried on nearly without interruption. This road passes through the countries which lie along the base of the Thian Shan Mountains. Another road, which has probably been used for an equal length of time, connects Thian Shan Nanlu and China with the northern parts of India, especially with Cashmir, and is also much used at the present day.

The caravans of China, bound for the western countries, or Siyu, as they are called, after leaving the town of Shataheou and the gate of Kia-yu-kooan [TANGUT], pass through the Desert of Han-hai, and arrive after twenty days' journey at Hami (42° 53' N. lat., 98° 50' E. long.). Hami, or Khami, is a fortified place, surrounded by high walls, which inclose a space about two miles and a half in circuit. The town is surrounded by large suburbs, and is populous. The streets are straight and regular, but the houses low and built of dried clay. The district round the town is carefully cultivated.

About 240 miles west of Hami is *Pidahan*, a fortress which is nearly 2 miles in circuit, and near which the caravan road passes. About 60 miles farther is *Turfan*, a considerable place, which however suffered much in the wars of the last century. *Karashar* is 290 miles west of Turfan. Its fortress does not exceed one mile in circuit. The town is populous, and built on the banks of the Kaidu River. Its commerce is considerable; the inhabitants excel in embroidery. *Kurli*, or *Kurungli*, is situated on that portion of the Kaidu River which connects the Bostu-Nor with Lop-Nor, and contains a population of about 4000 individuals. The soil in the vicinity is very fertile. The town is 50 miles distant from Karashar to the south-west. *Bugur*, or *Bugur*, nearly 200 miles distant from Kurli, contains 10,000 inhabitants, and has a considerable commerce in copper, oil, sheep-skins, butter, and furs, especially lynx-skins.

Kutsho, which is 100 miles distant from Bugur, is a large town, which is three miles in circumference, and contains a great population, of which 6000 are Turks. The mountains north of the town contain several mines, from which copper, saltpetre, sulphur, and sal-ammoniac, are obtained. At this town begins the road which leads across the Thian Shan Mountains to Kuldaha in Ili, by the mountain pass called Musur Dabahn. Before it reaches the mountain pass, it runs through the town of *Sailim*, which is built in an elevated valley, and near some mines. South-west of Kutsho is the town of *Stager*, in a district producing abundance of rice, melons, and fruit. It contains a population of 4000 individuals.

In the valley of the Aksu Daria are the towns of Aksu and Uahi. *Aksu* is a large commercial and manufacturing town, which contains about 8000 houses. It is not fortified. Its commercial importance is derived from its situation at the junction of the road from Kuldaha in Songaria with the great western caravan route. Its manufactures are numerous, especially those of cotton-stuffs, and a kind of stuff, half silk and half cotton, deer-leather, harness and saddles (which are embossed with great art). There are also some potteries, and many persons are employed in cutting and polishing precious stones. The Chinese garrison, consisting of 3000 men, inhabits a separate quarter of the town. *Uahi*, which lies higher up in the valley of the Aksu Daria, is built in the centre of an extensive country of great fertility, and is stated to contain 10,000 families. This place appears to carry on a considerable commerce.

The town of *Kashgar* is situated in the north-western angle of Thian Shan Nanlu, and at the commencement of the mountain road which leads to Ferghana and the towns of Khokand and Tashkend. At this place also begins the other caravan-road, which, passing along the eastern declivity of the Tartashling, leads over the Karakorum Pass to Leh, Gertope, and Cashmir. Besides these two lines of communication and the great caravan-road to China, a fourth road, commencing at Kashgir, runs north-east over the Thian Shan Mountains by the Rowat Pass, to Kuldaha and the banks of the Irtish. These roads concentrating at Kashgar render it one of the most commercial towns in the interior of Asia. It is said to contain 15,000 houses, and a population of 80,000. All persons who are of Turkish origin have free access to the town; but the entry of Europeans is prevented by the Chinese authorities. In the middle of the town is a large square, from which four extensive bazaars branch off. The Chinese garrison consists of 8000 men, who are stationed here to repress any invasion from the side of Khokand, and are quartered in a strong fortress. The manufactures are silk-stuffs, as satin, damask, cottons, &c. The jewellers are very expert in cutting the yew and in working gold. Kashgar suffered much by the invasion and rebellion of the Kodjas (1827). South-west of Kashgar is the important town of *Tashbalig*, on the banks of the Yaman-yar River. On the road leading from Kashgar to Yarkand is *Yengi Hisar*, a place of considerable extent.

Yarkand, or *Yarkand*, may be considered the capital of Thian Shan Nanlu, as the Chinese military governor generally resides here. The city or fortress is surrounded by a high wall of stone, and is more than three miles in circumference. Numerous suburbs lie round it. In the fortress a garrison of 7000 men is kept. The houses are mostly built of sun-dried bricks. The river Yarkand Daria is divided into two arms, and by canals from them the streets are supplied with water. There are numerous public buildings, especially mosques and medrasses, or colleges. There are two large

bazaars, one in the city and the other in the suburbs, which are more than three miles long. Most of the shopkeepers are Chinese. The country surrounding the town supplies it with three important articles of commerce, silk, fine wool, and small Kirghis horses. The commerce with the countries north of Hindustan and with Tibet is very considerable. There are several kinds of manufactures. The number of inhabitants who pay capitation-tax is stated to be between 30,000 and 40,000, which would give a population of between 180,000 and 240,000. Many foreigners are settled in this place.

Kaotan appears to have been formerly the name of the town which at present is called *Ilitai* or *Eelohi*, whilst the name of *Khotan* is applied to the country which extends along the northern base of the *Thuingling*. This country contains 700,000 persons who pay capitation-tax, which would give a population of 3,500,000. This is by far the most populous and important part of *Thian Shan Nanlu*. A large number of the inhabitants are Buddhists. The town of *Ilitai* is large and populous, and is of commercial importance. The eastern road passes from *Ilitai* to *Keriya*, and *Tibet*. The western road joins the great caravan-road which leads from *Yarkiang* to *Leh* and *Cashmir*. The principal articles which the country supplies for exportation are the yew-stone and silk, the last of which is produced in large quantities. Silk and cotton-stuffs are made to a great extent, and there are glass-houses. Every week a fair is held, which is sometimes attended by 20,000 persons. Horses are exported in great numbers. Near the town of *Keriya*, through which the road passes to *Tibet*, are gold-mines. The articles which are sent from *Yarkiang* to *Cashmir* are silver, goats' and sheep's wool, Russia leather, embroideries of gold and silver, rice, and some articles of Chinese manufacture; there are taken in return shawls of different qualities, cotton-stuffs, sheep- and goat-skins, and some minor articles. A caravan goes annually from *Yarkiang* to *Badakhan*, which carries a large quantity of tea and some silver, and brings back slaves and precious stones, especially rubies. The articles exported to *Khokand* are silver, china-ware, tea in boxes, and pressed tea. The imports from *Khokand* are raw silk and different kinds of cotton-stuffs. The commerce of *Yarkiang* with the northern provinces of China is very active. The articles sent to China are raw silk, great numbers of horses and cattle, the yew and other precious stones, and some dyeing stuffs; in return there are sent to *Yarkiang* tea, china-ware, and several manufactured articles.

History.—Before and at the beginning of our era this part of Central Asia formed a portion of the powerful empire of the *Hiongnu*, a Turkish race, which for more than two centuries made war on China, and sometimes laid waste the northern provinces; but in the first century after Christ was overthrown by the dynasty of the *Han* emperors. The Chinese soon afterwards extended their conquests to the *Caspian Sea*. But in the 5th century after Christ the Chinese were dispossessed of this country by the *Tang-hiang*, a Tibetan race; and this and other races of the same origin continued to govern *Thian Shan Nanlu* up to the time of *Gengis Khan*. From the 10th to the 13th century it formed a part of the empire of *Tangut* [*TANGUT*], the overthrow of which, in 1227, was the last of the numerous exploits of the *Mongol* conqueror. As the *Mongols* soon afterwards got possession of China, *Thian Shan* was again united to that country, and remained so as long as the descendants of *Gengis Khan* were masters of China. But when the *Yuan* dynasty was overthrown, in the 14th century (1366), by the *Ming* dynasty, and the *Mongol* empire was split into several states, *Thian Shan* became independent, and several small sovereignties arose under chiefs of Turkish origin. *Tamerlane*, towards the end of the 14th century, brought it under his dominion. After his death the Turkish chiefs gradually resumed their independent station, and preserved it to the middle of the 16th century, when the *Galdan* or emperor of the *Olöth Kalmucks* made *Thian Shan Nanlu* tributary. When the *Galdan* had been defeated by the Chinese (1697), the country was subjected to the *Songares*, who kept it till 1756, when they were conquered by the Chinese. The most powerful of the Turkish princes, the *Kodjas* of *Yarkiang* and *Kashgar*, now made an effort to gain their independence, and refused to submit to the authority of the *Mantchoo* emperor. But the emperor sent two armies from *Ili* over the *Thian Shan Nanlu* Mountains, which subjected the whole of the country, and in 1759 the *Kodjas* were obliged to retire to *Badakhan*. In 1826 the descendants of the *Kodjas* obtained from the *Khan* of *Khokand* the support of a small army, entered *Thian Shan* by the *Terek Pass*, and succeeded in taking *Kashgar*, *Aksu*, *Yarkiang*, and *Khotan*; but a Chinese army of 60,000 men being sent against them, they were defeated in three battles, and again retired to *Badakhan*.

(Du Halde; Klaproth; Ritter; *Journal of the Asiatic Society of Bengal*, vol. iv.; Wood, *Journey to the Source of the Oxus*.)

THIBET. [TIBET.]

THIEL. [GUELDERLAND.]

THIELT. [FLANDERS, West.]

THIERS. [PUY-DE-DÖME.]

THINGOE, a hundred in the western part of the county of Suffolk which gives name to a Poor-Law Union. The hundred of Thingoe consists of 22 parishes and hamlets, with an area of 31,114 acres, and a population in 1851 of 7064. Thingoe Poor-Law Union, which includes portions of the neighbouring hundreds of *Risbridge*, *Black-*

bourn, and *Thewestry*, contains 46 parishes and townships, with an area of 82,464 acres, and a population in 1851 of 19,014.

THIONVILLE. [MOSELLE.]

THIRSK, North-Riding of Yorkshire, a market-town, parliamentary borough, and the seat of a Poor-Law Union, in the parish of *Thirak*, is pleasantly situated on both sides of the *Codbeck* stream, a feeder of the *Swale*, in 54° 14' N. lat., 1° 20' W. long., distant 23 miles N.N.W. from *York*, 217 miles N. by W. from *London* by road, and 213 miles by the *Great Northern* and *York Newcastle* and *Berwick* railways. The population of the town of *Thirak* in 1851 was 5319. The borough returns one member to the *Imperial Parliament*. The living is a perpetual curacy in the archdeaconry of *Cleveland* and diocese of *York*. *Thirak* Poor-Law Union contains 41 parishes and townships, with an area of 62,444 acres, and a population in 1851 of 12,760. At the south-western extremity of the town is the site of the ancient castle. Over the *Codbeck* there are two substantial stone bridges. In the new town, which is built on the west side of the stream, is an extensive market-place. The church is a large and handsome gothic structure, said to have been formed out of the ruins of the ancient castle. There are places of worship for *Independents*, *Wesleyan Methodists*, and *Quakers*; a *British school*, a *Charity school* for girls, an *Infant school*, and a *savings bank*. At the market, held on *Monday*, great quantities of provisions are disposed of. Fairs are held seven times a year. A county court is held.

THIS. [ABYDOA.]

THISTED or TISTED. [AALBORG.]

THIVIERS. [DORDOGNE.]

THOISSEY. [AIN.]

THOMAR. [ESTREMADURA, Portuguese.]

THOMAS, ST., or ST. THOMAS THE APOSTLE, Devonshire, a suburb of *EXETER*, and the seat of a Poor-Law Union, is situated on the right bank of the river *Ex*, opposite to *Exeter*, with which it is connected by a handsome stone bridge. The living is a vicarage in the archdeaconry and diocese of *Exeter*. The population of the parish in 1851 was 4577. *St. Thomas* Poor-Law Union contains 49 parishes and townships, with an area of 129,927 acres, and a population in 1851 of 48,787.

THOMAS, ST. [VIRGIN ISLANDS.]

THOMASTOWN, county of *Kilkenny*, Ireland, a market-town and the seat of a Poor-Law Union, is situated on the river *Nore*, in 52° 32' N. lat., 7° 8' W. long., distant 11 miles S.S.E. from *Kilkenny*, 92 miles S.W. by S. from *Dublin* by the *Waterford* and *Kilkenny* railway, and 75½ miles from *Dublin* by road. The population in 1851 was 1843. *Thomastown* Poor-Law Union comprises 27 electoral divisions, with an area of 107,577 acres, and a population in 1841 of 37,187; in 1851 of 27,298. The town consists chiefly of three rather wide and well-paved streets, in which are some good houses. The parish church was the chancel of an ancient *Dominican* abbey. There are a large and handsome *Roman Catholic* chapel, two *National schools*, a court-house and *bridewell*, a *dispensary*, and a *Union workhouse*. Barges of 80 tons burden ascend the *Nore* to the town, from which considerable quantities of flour, corn, and provisions are exported. Three large flour-mills, two breweries, and a tannery give some employment. Quarter and petty sessions are held. Fairs are held *March 17th*, *May 25th*, *June 29th*, and *September 15th*.

THORN. [MARIENWERDER.]

THORNBURY, Gloucestershire, a market-town and the seat of a Poor-Law Union, in the parish of *Thornbury*, is situated in 51° 36' N. lat., 2° 30' W. long., distant 23 miles S.W. by S. from *Gloucester*, and 124 miles W. by N. from *London*. The population of the borough of *Thornbury* in 1851 was 1470. The living is a vicarage in the archdeaconry of *Gloucester* and diocese of *Gloucester* and *Bristol*. *Thornbury* Poor-Law Union contains 21 parishes and townships, with an area of 52,520 acres, and a population in 1851 of 16,341. The parish church is a large handsome structure, having a lofty tower, which is ornamented with rich open-worked battlements and eight pinnacles. The *Independents*, *Baptists*, and *Wesleyan Methodists* have places of worship. There are *National schools* and a *savings bank*. *Saturday* is the market-day; fairs are held three times a year. A county court is held in the town.

THORNE, West Riding of Yorkshire, a market-town and the seat of a Poor-Law Union, in the parish of *Thorne*, is situated on the right bank of the river *Don*, in 53° 37' N. lat., 0° 58' W. long., distant 28 miles S. by E. from *York*, and 166 miles N. by W. from *London*. The population of the town was 2320 in 1851. The living is a perpetual curacy in the archdeaconry and diocese of *York*. *Thorne* Poor-Law Union contains 13 parishes and townships, with an area of 71,946 acres, and a population in 1851 of 15,886. The town is situated in the district called the *ISLE OF AXHOLME*. *Thorne* contains an ancient parish church; chapels for *Wesleyan* and *New Connexion Methodists*, *Independents*, *Quakers*, and *Unitarians*; *Brook's Charity school*; *Travis's Charity school*; a school supported by *Wesleyan Methodists*; and a *mechanics institute*. On the bank of the *Don* are ship-, rope-, and timber-yards, and wharfs for merchandize. Steam-vessels ply daily between *Thorne* and *Hull*, except at neap-tides, when they stop at *Newbridge*, on the *Dutch river*, 4 miles below *Thorne*. *Wednesday* is the market-day; fairs are held twice a year.

THORNEY, Cambridgeshire, a town, formerly a market-town,

the parish of Thorney, is situated on a slight eminence rising out of the midst of the fens, in 52° 37' N. lat., 0° 6' W. long., distant 35 miles N.N.W. from Cambridge, and 82 miles N. by W. from London. The population of the parish in 1851 was 2174. A monastery is said to have been founded here by Saxulph, first abbot of Medeshamsted, or Peterborough; and here, in the year 870, were a prior and several anchorites. In 972 this establishment, which had been destroyed by the Danes, was refounded by Ethelwold, bishop of Winchester, for Benedictine monks. The abbot was mitred. The nave of the conventual church, rebuilt in 1085 and 1125, now serves as the parish church. The west end presents a very mixed style, the lower part being Norman, the upper part of perpendicular character. There are National and Infant schools, a subscription library, a Sunday library, and some almshouses. Fairs, held on July 1st and September 22nd, are much frequented for the sale of horses and cattle.

THORNHILL. [YORKSHIRE.]

THORNIEBANK. [RENFREWSHIRE.]

THORNTON. [YORKSHIRE.]

THORPE. [NORFOLK.]

THORPE-LE-SOKEN. [ESSEX.]

THOUARS. [SEVRES, DEUX.]

THOUROUT. [FLANDERS, WEST.]

THOYDON. [ESSEX.]

THRACE was in earlier times the name of the country bounded N. by the Danube, S. by the Propontis and the Ægean Sea, E. by the Black Sea, and W. by the river Strymon and the chain of mountains which form the continuation of Mount Rhodope. This country is divided into two parts by Mount Hæmus (now the Balkan), which runs from west to east, separating the plain of the Lower Danube from the rivers which flow into the Ægean Sea. Two extensive ranges branch off from the southern side of Mount Hæmus: one at about a hundred miles from the Euxine, which runs in a south-eastern direction towards Constantinople; the other, which is far larger, branches off near the sources of the Hebrus, and likewise runs to the south-east. The latter bore the name of Rhodope, and is now called the Despoto Mountains. Between these two ranges there are many plains, which are drained by the Hebrus (the Maritza), the principal river of Thrace, and its tributaries. [BALKAN MOUNTAINS; MARITZA.]

In ancient times there was a great quantity of corn and wine grown in the valley of the Hebrus. In the 'Iliad' the ships of the Æchiæans are described as bringing wine every day to Agamemnon from Thrace (ix. 72); and the Maronean wine, which retained its reputation in the time of Pliny ('Hist. Nat.' xiv. 6), is spoken of in the 'Odyssey' (ix. 197). In the mountainous parts of the country there were also mines of precious metals. (Justin, viii. 3.)

The Thracians were divided into many separate and independent tribes; but the name of Thracians seems to have been applied to them collectively in very early times. Oceanus, it was said, had four daughters, Asia, Libya, Europa, and Thrace, from whom the four parts of the world were named. Josephus and many Biblical scholars suppose that the name Thrace is derived from Tiras, the son of Japhet.

The Thracian nation, according to Herodotus (v. 3), was, next to the Indians, the most numerous of all, and if united under one head would have been invincible. The Thracians, says Herodotus (v. 6), sell their children to be carried out of the country as slaves; they do not guard their young women, but permit them to have intercourse with whatever men they please; they purchase their wives with great sums; they puncture or tattoo their bodies, which they regard as a sign of noble birth; agriculture they despise, and consider it most honourable to live by war and robbery. Deep drinking prevailed among them extensively, and the quarrels over their cups became almost proverbial. In earlier times however there must have been a greater degree of civilisation among some of their tribes at least, than prevailed at a later period. The earliest Greek poets, Orpheus, Linus, Musæus, and others, are all represented as coming from Thrace; and Eumolpus too, who founded, according to tradition, the Eleusinian mysteries at Attica, is also said to have been a Thracian. At an early period likewise the Thracians spread extensively over southern Greece.

The first historical event respecting them is their conquest by Megabazus, the general of Darius, who conquered all the separate tribes, with the exception of the Satra, who were the only Thracian people that had retained their independence down to the time of Herodotus. (Herod., v. 2; vii. 111.) After the failure of the expedition of Xerxes, the Thracians recovered their independence; and in the time of the Peloponnesian war we find a powerful native empire in Thrace, which was under the dominion of Sitalces, who is called by Thucydides (ii. 29) king of the Thracians. The empire was founded by the father of Sitalces, Teres, the king of the Odryæ, one of the most powerful of the Thracian tribes. The power of the Odryæan empire however did not last long. In little more than twenty years from the death of Sitalces it had lost its former greatness; and when Xenophon crossed over into Thrace, B.C. 400, he found Medorus, the reigning king of the Odryæans, unable to command the obedience of his Thracian subjects. (Compare 'Anab.' vii. 2, s. 32, &c.) Philip, the father of Alexander, reduced the whole of Southern Thrace at least, and compelled it to pay tribute. (Diodorus, xvi. 71.)

On the death of Philip there was a general movement among the Thracians to throw off the Macedonian supremacy, at the head of which the Triballi placed themselves. But Alexander crossing the Hæmus, defeated the Triballi, advanced as far as the Danube, which he crossed, and offered up a sacrifice on its right bank. (Arrian, 'Anab.' 1, 2, 3; Strabo, vii. 301.) On the death of Alexander, Thrace fell to the share of Lysimachus, who erected it into an independent monarchy; but it subsequently came under the dominion of the Macedonian kings. On the conclusion of the war with Perseus however, Cotys, a native Thracian prince, was allowed to continue in possession of his kingdom, notwithstanding the assistance he had rendered to Perseus. (Livy, xlv. 42.)

Thrace was not reduced to the form of a Roman province till a late period. The part north of the Hæmus was conquered by the Romans in the reign of Augustus, and was afterwards erected into a separate province under the name of Moesia. The name of Thrace was then confined to the country south of the Hæmus, and between the Euxine, the Propontis, and the Ægean Sea. Its boundary on the west differed at various times: in the time of Ptolemy (iii. 11) it seems to have been the Nestus; but the Strymon was anciently the boundary between Macedonia and Thrace.

Amphipolis, founded by the Athenians on the left bank of the Strymon, was one of the most important towns in Thrace. [AMPHIPOLIS.] The next town of importance east of Amphipolis was Philippi, which was founded by Philip of Macedonia: it was previously called Crenides, but was then only a small place inhabited by the Thasians, who settled there for the purpose of working the gold and silver mines in its neighbourhood. West of Philippi the country was an extensive plain stretching towards Amphipolis, which has become memorable on account of the battle fought there by Antony and Octavius against Brutus and Cassius. Under the Romans Philippi became a colony, and was the chief city in that part of the country, when it was visited by St. Paul.

West of the Nestus the first town of importance on the coast is Abdera. [ABDERA.] Next comes Dicaea or Dicosopolis, which was a Greek city on the shores of the Lake Bistonis (Herod., vii. 109); and then Maroneia and Ismarus, which were both in the country of the Cicones, where Ulysses landed and was defeated by the inhabitants, after he had taken their city. ('Odyss.' xi. 39, &c.) The Maronean wine has been already mentioned, and the city was in consequence sacred to Dionysius, as may be seen from its coins. Its ruins are still named Maroni. Ismarus is not mentioned by later writers as a city, but only as a mountain celebrated for its wine. Following the coast we next come to Stryme, a colony of the Thasians; then to Mesembria, built by the Samothracians (Herod., vii. 108); and next to Doriscus, situated in a large plain, in which Xerxes numbered his army. Crossing the Hebrus we come to Ænos, which is mentioned under this name by Homer, as the place from which Pirous came to the Trojan war. ('IL.' iv. 520.) It was a place of considerable importance in later times, and under the Romans was a free town. (Pliny, 'Nat. Hist.' iv. 18.) It is still called Enus.

After passing round the head of the Gulf of Melas, now the Gulf of Saros, we come to the Thracian Chersonese, now Gallipoli, which was very early colonised by Greek settlers, and though but of small extent is of considerable importance in ancient history. On the isthmus was Lysimachia, which was founded by Lysimachus, who made it his capital. It was on the western side of the isthmus, not far from the ancient Cardia, the inhabitants of which he removed to his new city. (Diodorus, xx. 29; Pausan., i. 9, s. 10.) South of Lysimachia were Agora, Ide, Pæon, and Alopeconesus, the last of which only was of any importance. It was an Æolian colony, and was one of the chief towns of the Chersonese in the time of Demosthenes. On the eastern side of the Chersonese, upon the Hellespont, the most southerly town was Cynossema, near which the Lacedæmonian fleet was defeated by the Athenians, in B.C. 411. Above Cynossema was Madytus, and north of Madytus was Sestos. North of Sestos was the small river of *Egospotamoi*, with apparently a town of the same name at its mouth, near which the Athenian fleet was totally defeated by Lysander, in B.C. 405. Above *Egospotamoi* were *Callipolis*, now Gallipoli, which has given its name to the peninsula, and *Pactya*, opposite Lysimachia.

On the Propontis the chief seaport was *Perinthus*, afterwards called *Heraclea*, and sometimes also *Heraclea Perinthus*. On the Bosphorus the ancient Greek city of *Byzantium* was situated, which occupied part of the site of the modern Constantinople. [BYZANTIUM.]

On the European coast of the Euxine the chief towns were *Salmessus*, *Apollonia*, and *Mesembria*.

In the interior of the country the towns most worthy of mention are *Trajanopolis*, on the Egnatian road to the west of the Hebrus; *Plotinopolis*, so called in honour of Plotina, the wife of Trajan, to the north of *Trajanopolis*; *Hadrianopolis*, on the Hebrus, originally called *Orestias*, and now *ADRIANOPLE*; and, lastly, *Philippopolis*, also on the Hebrus.

The Via Egnatia [MACEDONIA] entered Thrace at Amphipolis, and passed by the towns of Philippi, Neapolis, Abdera, Maximianopolis, *Trajanopolis*, *Cypsela*, *Apri*, *Heraclea*, till it reached Byzantium.

Xenophon ('Anab.' vi. 4), speaks of Thrace in Asia, which he describes as extending from the junction of the Bosphorus and the

Euxine along the Asiatic coast as far as Heracleia: the country within these limits was inhabited by Thraces Bithyni.

THRACIAN SEA. [ÆGEAN SEA.]

THRAPSTON, Northamptonshire, a market-town and the seat of a Poor-Law Union, in the parish of Thrapeton, is pleasantly situated on the right bank of the river Nene, in 52° 24' N. lat., 0° 32' W. long., distant 21 miles N.E. from Northampton, 73 miles N.N.W. from London by road, and 89 miles by the North-Western and Northampton and Peterborough railways. The population of the parish of Thrapeton in 1851 was 1183. The living is a rectory in the archdeaconry of Northampton and diocese of Peterborough. Thrapeton Poor-Law Union contains 26 parishes and townships, with an area of 51,188 acres, and a population in 1851 of 12,841. The church is of early English, decorated, and perpendicular characters. The Wesleyan Methodists and Baptists have places of worship, and there are National schools. A county court is held. Corn-mills and a paper-mill are on the river, and sand-pits and stone-quarries in the neighbourhood. The market is on Tuesday, for corn and live-stock; there are two yearly fairs for live-stock, pedlery, and shoes, and for hiring servants. The Nene is here crossed by a handsome stone bridge.

THREE RIVERS. [CANADA.]

THUIN. [HAINAULT.]

THUN, TOWN and LAKE. [BERN.]

THURGAU (*Thurgovie*), a canton of Switzerland, bounded N. partly by the Lake of Constance, and partly by the Rhine, which divides it from the canton of Schaffhausen; E. and S. by the canton of St. Gallen, and W. by that of Zürich. The river Thur, which comes from the canton of St. Gallen and is joined by the Sitter from Appenzell, has given its name to the canton 'Thurgau,' or 'district of the Thur,' the river crossing the middle part of it from east to west. The valley of the Thur is separated from the basin of the Lake of Constance by a succession of hills which rise in terraces on both sides, and are intersected by several valleys. On the south and west sides other hills divide the Thurgau from the valley of the Toss in the canton of Zürich. The whole country belongs to the plateau or table-land of Switzerland, and is a considerable distance from the Alpine region. The climate of Thurgau is comparatively mild; a great part of the country is planted with fruit-trees, especially apple, pear, and cherry: the vine also thrives in several localities. The produce of corn is not sufficient for the consumption. Horned cattle are numerous. The rivers and the lake abound with fish. The area of the canton is 268 square miles; the population in 1851 was 88,908, of whom about 67,000 are Protestants, and the rest Catholics. German is the language of the country. The principal manufactures consist of cotton goods, linen, cotton-yarn, and silks. The other exports consist of wine, cattle, oats, dried fruit, and cider. The principal imports are—iron and metal ware, woollen goods, cotton-yarn, salt, colonial articles, and wheat.

Thurgau is divided into eight districts—Frauenfeld, Arbon, Bischofzell, Tobel, Weinfelden, Gottlieben, Steckborn, and Diessenhofen. The principal towns are—*Frauenfeld*, which is the head town of the canton, situated in a fertile valley near the confluence of the Murg with the Thur. The inhabitants amount to 3544. The old castle, formerly the residence of the Swiss vogten or governors of Thurgau; the town-house, where the Helvetic diet used to assemble in the time of the old confederation; the arsenal; and the Protestant and Roman Catholic churches, are the chief buildings. *Steckborn*, a small town on the Zellersee, or smaller basin of the Lake of Constance, has several manufactories, and about 2000 inhabitants. In the neighbourhood of Steckborn is the residence of Arensburg, which was purchased by Queen Hortense, and in which she died in 1840. Thurgau returns 41 members to the Swiss national council.

THURINGIA (*Thüringen*) is the ancient name of an extensive tract of country in the central part of Germany, situated between the Harz Mountains, the rivers Saale and Werra, and the Thüringerwald. It was in ancient times inhabited either by the Catti or the Cherusci. Vegetius mentions the Thuringi about the year 404. Thuringia long gave the title of margrave to the elector of Saxony. It is now divided among Prussia, Saxe-Weimar, Saxe-Coburg, and Schwarzburg. The name is still preserved in Thüringerwald, a continuation of the Fichtelgebirge, from which it branches out near the Münchberg and Gefree, in the kingdom of Bavaria, and runs north-west to its termination near Eisenach. The length of this range is 70 miles, and its breadth varies from 9 to 18 miles. The two highest points in it are the Schneekopf, 2700 feet, and the Inselsberg, 2604 feet above the level of the sea. The highest points consist of granite, clay-slate, and porphyry: the whole chain is clothed to the very summit with pine-forests, mixed in a few places with oak and other timber. Numerous rivers rise in this chain, which flow on one side into the Elbe, and on the other into the Weser.

THURLES, county of Tipperary, Ireland, a market-town and the seat of a Poor-Law Union, is situated on the river Suir, in 52° 42' N. lat., 7° 47' W. long., distant 29 miles N. from Clonmel, 90 miles S.W. from Dublin by road, and 86½ miles by the Great Southern and Western railway. The population was 5921 in 1851. Thurles Poor-Law Union comprises 22 electoral divisions, with an area of 148,350 acres, and a population in 1841 of 62,639; in 1851 it was 48,539.

The town of Thurles consists of several streets on both sides of

the river, which are intersected by the main street which crosses the river from east to west. In the town are a neat parish church, erected in 1812; a large Roman Catholic chapel, the cathedral of Cashel, which cost 10,000*l.*, and ranks among the finest ecclesiastical buildings in Ireland; a convent of Ursuline and one of Presentation nuns; a monastery of religious brothers; and a chapel for Baptists. St. Patrick's Roman Catholic College is a seminary for ecclesiastical and general education, with a president and seven professors. There are a new court-house, a market-house, bridewell, infantry barracks, dispensary, and Union workhouse. The town has a savings bank. It has an extensive retail trade, and there are considerable sales of grain at the two weekly markets. Quarter and petty sessions are held. Fairs are held on Easter Monday, August 21st, December 21st, and on the first Tuesday of every month. The market-days are Tuesday and Saturday. Thurles is a place of considerable antiquity, and was in the 10th century the scene of a severe battle between the native Irish and the Danes. A Carmelite monastery was founded here about the year 1300.

THURSO. [CAITHNESS.]

THYATEIRA. [LYDIA.]

TIBER. [PAPAL STATES.]

TIBERIAS. [PALESTINE.]

TIBET is the most southern of the three great table-lands of Middle Asia. The Bolor Mountains, a branch of the Hindu Kush, which stretches towards the north-west, in 72° 30' E. long., form the western boundary. The length of this frontier is about 87 miles. It is bounded on the south-west by the Hindu Kush, from Mount Tutukan Mutlami and the north-western part of the Himalaya as far as the western frontier of Nepal, a distance of about 480 miles. The southern boundaries are formed by the range of the Himalaya from the western frontier of Nepal to the eastern frontier of Bootan, a distance of about 740 miles, and by the northern boundaries of Assam, Burma, and part of the Chinese province of Yunnan. This latter part runs in a south-eastern direction, and most probably as far as the junction of the Yu-leang-ho, or Li-tchou, with the Kincha-kiang, or Yang-tse-kiang, in Yunnan, between 102° and 103° E. long. The length of this part of the frontier in a straight line between the two extremities is about 320 miles. The whole length of the southern frontier, according to a rough estimate, is 1540 miles, but as this frontier forms a curve, its real length is much more. The eastern frontier of Tibet is formed by the western boundaries of the Chinese province of Sitchuan (Setchuen), Shen-si, and Kansu. From the junction of the Yu-leang-ho with the Kincha-kiang it stretches northward, and probably along the river Ya-long-kiang as far as 30° N. lat. It then takes a north-eastern direction, and stretches as far as Kiai, along a range of wild and snowy mountains, which, on some maps, are called the Yun-ling Mountains. At Kiai it takes a north-west direction, crosses the Hoang-ho, or Yellow River, runs to the east as far as Hongchin, and then takes a north-west direction as far as a point situated in the mountains of Amegangar, in 38° 25' N. lat., 100° E. long. That part of Tibet however which lies south of 29° N. lat., and east of the Kincha-kiang, or the mountains of Batang, was ceded to China in 1727, and is now under the immediate sovereignty of the emperor of China. The whole extent of the eastern frontiers of Tibet is at least 900 miles. The northern frontiers begin in the Bolor Mountains, whence they are said to stretch east-south-east along the mountains of Kárakorum as far as a point situated in the mountains of Kuenlun (Onouta, or Kulkoun) in 35° N. lat., 85° E. long., across the deserts of Khor and of Katchi, or Katche. Thence they run north-east and east, until they reach the eastern frontier at that point which we have mentioned above as situated in 38° 25' N. lat., 100° E. long. The whole length of the northern frontier, including the larger bends, amounts to about 1300 miles. It is however doubted whether the extensive country of Khukhu-nor, in north-eastern Tibet, belongs to Tibet in the political sense of the word; and if so, the northern frontier of Eastern Tibet will not extend beyond 36° N. lat. But geographically speaking, Khukhu-nor belongs to Tibet. Thus Tibet is bounded W. by Independent Turkistan; S.W. and S. by Hindustan, Nepal, Bootan, and Assam; S.E. by Assam and China; E. by China; and N. by the desert of Gobi and Chinese Turkistan.

Mountains.—Tibet is a table-land, the highest plains of which are more than 10,000 feet above the level of the sea. This table-land is divided into three great and distinct parts. The first, which is long, and not very wide, begins in the east, near Mount Kailasa, in the Himalaya, and stretches to the north-west, between parts of the Himalaya and of the Hindu Kush in the south-west, and the range of the mountains of Kárakorum in the north-east. It is traversed in its whole length by the upper part of the Indus. Its lower or north-western part, Balti, or Baltistan, is also called the First Tibet, or Little Tibet, and is an independent state. Its upper, or south-eastern part, has the name of Ladakh, and is also called the Second Tibet, or Great Tibet, because it is larger than Baltistan. Sometimes the name of Little Tibet is given to the whole valley of the Indus. Ladakh is also an independent state, but the most eastern part of it, as far as Teshigang on the Indus, belongs to China. The second great division of Tibet begins in the south, near Mount Kailasa, and is an immense elevated desert, the western part of which is called Khor, and the

eastern part Katchi. Its boundaries are the range of Kárforum on the west; the Kuenlun Mountains on the north; the Snowy Mountains around the sources of the Kincha-kiang, the Om-tsu, and the Lake of Tengri-nor in the east; and the mountains of Dzang and Ngari in the south. Katchi is traversed by the great road which leads from H'Lassa to Yarkand, in Chinese Turkistan. The third great division of Tibet contains the remainder of this country, which lies east and south of Khor and Katchi.

The second and third natural divisions have the common name of Eastern Tibet, or Tibet proper. Eastern Tibet is subject to China.

Khor and Katchi are an immense table-land, some parts of which are 10,000 feet above the level of the sea. This table-land however is not a level plain. It is a country traversed by chains of mountains, which have a height varying from 3000 to 4000 feet above their base, or from 13,600 to 14,000 feet above the sea. The middle part seems to be less elevated than the boundaries, as the country contains several rivers which terminate in the table-land; and the southern and western parts are higher than the eastern and northern parts, the direction of the greater number of those rivers being from the west to the east, and from the south to the north.

The aspect of the southern and eastern parts of Tibet proper, is very different from that of Khor and Katchi. It is traversed by numerous ranges of lofty mountains, the direction of which is from west to east and from north-west to south-east. From these ranges lateral branches run out in different directions, and contain deep valleys between them. In proportion as the principal chains advance towards the south-east, they converge towards one another, and thus the valleys between them gradually become narrower, until at last, on the frontiers of Yunnan and Burma, they are mere mountain-passes. On this spot there are four parallel valleys, traversed by four of the greatest rivers of the world, and the breadth of these four valleys together seems not to be more than 100 miles. But the range of the mountains of Ngari and Dzang diverges from the Himalaya; and the valley between them, which is traversed by the Dzangbo, becomes broader as it advances towards the east. The chain which, in the south-eastern corner of Tibet, separates the Kincha-kiang in the east from the Langtang-kiang in the west, has the name of Ning-taingshan, or Man-li (Moung-lan), the summits of which are covered with perpetual snow. The height of the mountains in southern and eastern Tibet is much greater than in the northern and central parts of the country, and the whole tract towards China, Nepal, and Bootan, is an immense alpine country. Several passes in the Mang-li Mountains are from 10,000 to 11,000 feet above the sea; the region of perpetual snow seems to begin at 12,500 feet, and the number of summits which have an absolute elevation of above 12,500 feet must be very considerable. Some of them probably attain the height of 26,000 feet above the sea. The extent of the Mang-li Mountains between Bathang on the Kincha-kiang, and Tsiamdo on the Lang-tan-kiang, according to the Chinese itineraries, is 1405 li, of 250 to a degree. All this country is intersected by deep valleys and chasms. The summits of the mountains are covered with perpetual snow, and the traveller crosses the chasms by means of bridges, which are enveloped in the clouds. The mountains north of the Mang-li, around the sources of the Lang-tan-kiang, in the province of Tsiamdo, are no less elevated. A very extensive range begins at Mount Kailasa in the Himalaya, and stretches to the east as far as 90° E. long. These are the mountains of Ngari and Dzang, the most western part of which is called Gangdiar, or the country of the snow mountains. At the beginning of this westernmost part, and in the north-eastern part of the province of Ngari, is situated the celebrated Mount Kailasa, or Onouta, which is said to be higher than the Dhawalagiri. The Kailasa is steep on all sides, and is 140 li (above 50 miles) in circumference; its summit is always covered with snow, and the water tumbles down from it in cataracts into the surrounding valleys. East of the Kailasa are situated four mountains, or perhaps groups of mountains, the K'habhabha, each of which resembles a different animal. The length of these four mountains is said to be 800 li (300 miles), and with respect to the valleys which begin at their foot and stretch in different directions, they resemble Mount St. Gothard in Switzerland.

Rivers.—The sources of the *Dzangbo*, or *San-poo*, are on the east side of the K'habhabha, in the province of Ngari. Its complete name is Yaru-dzangbo-tau, that is, the pure frontier river of the west. According to the Chinese geographers, the source of the Dzangbo is on Mount Tamtsiogh, in 30° 10' N. lat., 81° 55' E. long. It flows in an east-south-eastern direction, through the whole of southern Tibet, a distance of about 700 miles, and waters the provinces of Ngari, Dzang, and Wei. The valley of this river is formed by the Himalaya on the south, and the mountains of Ngari and Dzang on the north. The country through which it flows being very extensive, and all the mountains being covered in winter with snow, of which an immense quantity melts in the summer, the volume of water in this river must be very considerable. The tributary rivers of the Dzangbo, on its left, or northern side, are—the Nauk-dzangbo; the Dzang-tsu, or Galdjao-muren, which has its sources about 200 miles to the north-east near H'Lassa, and which is sometimes confounded with the Dzangbo itself. There are five considerable rivers between the Nauk-dzangbo and the Dziang-tsu. The tributary rivers on the right or southern side are—the Guyang, which has its source near Mastang, in

the Himalaya, and the Pai-nom-tsu, or Fuang-dse, along which Turner travelled, from its source at Phari to its junction with the Dzangbo, and which has a fine iron bridge of thirteen arches. An iron suspension-bridge is thrown over the Dzangbo, south of H'Lassa, on the great road from the west to this town. The course of the Dzangbo is known as far as a point which is situated about 100 miles east of H'Lassa. It has been conjectured that the Brahmaputra is the continuation of the Dzangbo [BRAHMAPUTRA], but according to Klapproth the continuation of the Dzangbo is the Irawaddy. The Nu-kiang is a northern tributary of the Dzangbo.

The sources of the Gakbo-dzangbo-tsu, or the Clear River of Gakbo, are situated in 31° 30' N. lat., on the frontiers of the provinces of K'ham and of Wei. Its upper course has the name of Sang-chu, or Dziangbo-tsu. Its direction is at first south-east. The great road from China to L'Hassa crosses this river some distance east of the celebrated temple of H'Lari. Dzangbo-tsu then enters the country of Gakbo, where it receives a considerable river called Bo-dzangbo, which enters it on the left or eastern side. After having entered the country of H'Lokba, it probably takes a southern direction as it enters the Chinese province of Yunnan, and there receives the name of Lung-chuan-kiang. The Om-tsu is formed by the junction of three rivers—the Ser-sumbu, or Ser-tsu, in the east, the Uir-chu in the west, and the Kárf-us-su, the largest of the three, in the middle. It has a south-east course, through a very deep and narrow valley, inclosed by steep rocks of an immense height, whence it flows into the province of Yunnan in China, where it receives the Chinese name Nu-kiang, that is, 'the river of the barbarians.' The Lang-tang-kiang traverses almost the whole extent of Eastern Tibet from north-west to south-east. Two rivers, the Om-chu in the west and the Dzo-chu in the east, the sources of which are situated north of the upper part of the Om-tsu, in the province of K'ham, join at Tsiamdo, and thus form the Lang-tang-kiang, the direction of which is from north-west to south-east. This river is also called La-chou and Lo-tsu. After having traversed Yunnan, it enters Leo, forms the frontier between Siam and Cochinchina, and flows into the Chinese Sea in 10° N. lat., after a course of more than 1700 miles. The sources of the Kincha-kiang, or Yang-tee-kiang, which traverses China from west to east, are situated between 37° and 38° N. lat., 89° and 92° E. long., on the table-land towards the north-western frontiers of Eastern Tibet. Its upper part is called Muru-us-su by the nomadic Mongols of that country; its middle part has the Tibetan name of Bourai-tsu, and it is only in China that it is called Kincha-kiang. Its direction is east as far as 95° E. long.; from this point to Batang the direction is south-east and south; from Batang to its junction with the Litohou (the old frontier of Tibet), it is again south-east. This latter part of the Kincha-kiang forms a part of the present frontier between Tibet and China. The Ya-long-kiang is an important tributary of the Kincha-kiang. Its sources are in the Bayan-Khara Mountains. Its direction is generally south-east. The Hoang-ho, or Yellow River, has its sources north of the Bayan-Khara, in the province of Sifan. [HOANG-HO.] The country between the upper part of the Hoang-ho in the north-west, the Ya-long-kiang in the south-west, and the frontier of China in the east, or the eastern parts of Sifan and Khu-khu-nor, is traversed by ranges of high mountains covered with perpetual snow. Very little is known about it in Europe.

Lakes.—The Tengri-nor, the largest lake of Tibet, is nine days' journey north of H'Lassa. The Chinese call it Thian-ohhi, or the Celestial Lake. This lake appears to be surrounded by high mountains and rocks covered with snow and ice. It receives the Tarku-dzangbo, a river which comes from the west. The Lake of Palte, which is situated south-west of H'Lassa, in the valley of the Dzangbo, resembles a large ditch surrounding an extensive island which fills up the middle of the lake. On the Tibetan maps it has the name of Bhal-di-Yumtso, and the Chinese call it Yar-brok-Yumtso. It is said that north of this lake there is a high mountain called Kambala, from the summit of which extensive high snowy ranges may be seen to the north. In the extreme north of Tibet is situated the Lake Khu-khu-nor, or Kóke-nor, that is, the Blue or the Celestial Lake, which name has been given to all the surrounding country.

Climate.—Tibet is known in India and China as a country of hunger and misery. The climate of the valleys, and especially of the valley of the Dzangbo, is hot. From March to September the weather is fair. In H'Lassa the trees bud at the end of April and in the beginning of May. The harvest is reaped in August and September. Dew falls in the summer nights; it hails often; the snow is not deep in winter. On the high table-lands the climate is very different. From May to October the sky is always clear, and the sun shines with uncommon brightness. From October to May there are violent gales. The surface of the weather-beaten rocks breaks in pieces, which the air dissolves into fragments as small as dust; and clouds of this dust, raised by whirlwinds, are driven from the plain to the summits of the mountains, and from the mountains down to the houses of the inhabitants. The air is excessively dry, and its effects resemble those of the dry heat of the Sahara. The cold in winter is intense. The mountains and table-lands are characterised by cold and barrenness.

Productions.—Among the minerals there are gold, silver, copper, tin, salt, corundum stone, lapis lazuli, turquois, and agate. Besides a great number of grasses which are common in Europe, Tibet pro-

duces a kind of gray barley, grapes, assafotida, rhubarb, madder, safflower, apples, nuts, apricots, peaches, pomegranates, and figs in the valleys. The cedar grows in Tibet. Among the animals, there are wild oxen with long hair, buffaloes, yaks, goats with a very fine fleece, goats with long fine hair, silk-worms, wild cats, tigers, leopards, lynxes, argali with horns of one hundred pounds weight, pigs, white eagles, and swans. All our domestic animals are known in Tibet. Fish are abundant in the rivers, but they are not eaten, being prohibited by the religion of Buddha.

Political Divisions.—1. The territory of the Dalai-Lama contains the eastern and north-eastern parts of Tibet. The capital, *H' Lassa* or *Lassa*, is situated in a beautiful plain on the banks of the Dzung-tsu, about 12 leagues above its junction with the Dzungbo. It is a populous and very commercial town, and distinguished by many fine public buildings, especially Buddhist convents and temples. There are a small-pox hospital, a printing-office, and several schools. The town has walls and five fortified gates. In the neighbourhood of the town are four magnificent convents, the largest among the 3000 convents of Tibet. The residence of the Dalai-Lama is in the convent of Pobrang-Marbu (the Red Town), on Mount Botala, north-west of H' Lassa. It is said that the principal building of this residence is 367 feet high, and that it contains 10,000 rooms. *Figa-gung-ghar*, a town inhabited by 20,000 families, is situated east of H' Lassa, on the Dzungbo.

2. The territory of the Teshu-Lama contains the provinces of Dzung and Ngari, and perhaps also the countries of Khor and of Katchi. His residence is at the palace of Teshu-H' Lumbu, in 29° 4' N. lat., 89° 7' E. long. It was founded in 1447, on a small plain surrounded by lofty mountains; but as this plain is a part of the high table-land, the environs are cold and desert. Teshu-H' Lumbu lies almost opposite to a pass across the Himalaya of Bootan, which is defended by the fortress of Dzigidze-Jeung. Teshu-H' Lumbu, or, more correctly, Iachi-H' Lumbu, contains from 300 to 400 houses, convents, temples, and palaces, which are surrounded by a wall, and all communicate with each other. The chief building, where the Lama resides, has the name of Lapranza. The greater part of the country between Teshu-H' Lumbu and H' Lassa is a fertile and beautiful tract, which extends along the river Dzungbo from west to east. At one day's journey east of Teshu-H' Lumbu is *Pina* (Bainsam), a small town with a fortified castle. *Baldi*, or *Bedi*, another small town, lies on the northern bank of Lake Paite.

Inhabitants and History.—The first accounts of the history of Tibet are in the annals of the Mongols and of the Chinese. The Tibetans belong to the Mongol race; they were at first divided into many independent tribes which led a nomadic life. The first king of Tibet was Seger-Sandilitu-Khaghan-Tül-Esen, who was exposed by his father, and afterwards found in a copper box swimming on the river Ganga. He became king in B.C. 313, and united the four great tribes of Ngari, of Dzung, of K'ham, and of H' Lassa or Wei. One of his descendants was H' latotori, who was born in A.D. 348, and who became king in 367. In the fortieth year of his reign (407) Buddhism was introduced into Tibet. Srongdsan-Gambo, who ascended the throne A.D. 629, founded the town of H' Lassa, where he held his residence. His reign is particularly remarkable for the introduction of the Tibetan alphabet, which is a modification of the Sanscrit alphabet. Srongdsan-Gambo died in 699. His successors carried on war with China, in which they were often successful; but in 821 Tibet was compelled to pay tribute to China. Under King Dharma, who ascended the throne in 901, Buddhism was almost destroyed, the king having adopted the Black religion, or the Islam. Buddhism again became the dominant religion after Dharma had been murdered in 925.

In the beginning of the 11th century, each of the seven grandsons of King Bilamgur-Dzung became an independent prince; and from this event dates the entire decline of the kingdom of Tibet, the power of which had been already broken by the civil troubles which accompanied the persecution of Buddhism. One of the new kingdoms was TANGUT, in the northern part of Tibet. Genghis Khan subdued all Tibet in 1206, and it was not before the end of the 13th century that the country recovered from the calamity of the Mongol war by the careful administration of Khublai Khan. The easternmost parts of Tibet were gradually conquered by the Chinese in 1125, 1255, 1362, and 1371. Since the year 1720 all Tibet has been a tributary vassal of China, and Chinese garrisons are in its towns, and they watch the passes in the frontier mountains. The number of Chinese troops in Tibet amounts to about 64,000 men. The government of Tibet is supported by a hierarchy. The name of the chief priest is Lama, and the Dalai-Lama is the first of them; the second is the Teshu, or Bogdo-Lama. The people are kind, tolerant, polite, and much more civilized than the Mongols, although they are generally poor. Brothers are allowed to have one woman in common. Arts and literature are cultivated. Both the lamas are absolute princes in religious matters, but their sovereignty is checked by the authority of the emperor of China, whose generals in Tibet have the command of the army and the direction of temporal affairs. The high functionaries are almost all Chinese.

(Ritter; Turner, *Embassy to the Court of Teshoo Lama in Tibet*; Asiatic Journal; Klapproth; Remusat; Kircher; Sanang Setsen, *History of the Mongols*; Schmidt, *Forschungen im Gebiete der Völker Mittelasiens*.) [See HIMALAYA MOUNTAINS in SUPP.]

TIBUR. [TRVOLL.]

TICEHURST, Sussex, a village and the seat of a Poor-Law Union, in the parish of Ticehurst, is situated in 51° 2' N. lat., 0° 26' E. long., distant 23 miles N.E. from Lewes, and 45 miles S.E. from London. The population of the parish in 1851 was 2850. The living is a vicarage in the archdeaconry of Lewes and diocese of Chichester. Ticehurst Poor-Law Union contains eight parishes and townships, with an area of 51,659 acres, and a population in 1851 of 15,507. The parish church is a neat building. The Wesleyan Methodists have a chapel, and there are National schools and an extensive asylum for lunatics. Fairs are held May 4th and October 7th.

TICINO, one of the Swiss cantons situated on the Italian slope of the Alps, takes its name from the river Ticino, which has its sources in the great central group of the St-Gothard, flows southward along the Val Levantina, passes by Bellinzona, and then enters the Lago Maggiore at its northern extremity, and issues out of it at the opposite end by the town of Sesto in Lombardy. [Po.] The canton is very mountainous, being intersected by several offsets from the great chain of the Lepontine and Rhätian Alps. A number of valleys, large and small, lie between these offsets, the largest running nearly parallel to each other, and sloping towards the south. The principal valleys are the Val Levantina, which runs in a southern direction through the centre of the canton, and the Val Maggia, one of the largest in the canton, which in its upper part is called Val Lavizzara; it is drained by the river Maggia, a rapid Alpine stream, which enters the Lago Maggiore near Locarno.

A ridge called Monte Cenere runs across the southern part of the canton from north-east to south-west. It detaches itself from the Iöri Berg, and runs to the east bank of the Lago Maggiore. South of this ridge lies the basin of the Lake of Lugano, which is thus separated from the rest or northern part of the canton, the waters of which run into the Lago Maggiore. The Lake of Lugano, called also Ceresio, lies within the territory of the canton, with the exception of its north-east extremity, which stretches into Austrian Lombardy. Its length is about 20 miles, but the breadth is little more than a mile, except in front of the town of Lugano, where it is about two miles wide: the surface is about 800 feet above the sea, and the greatest depth is 500 feet. A number of trading-boats ply on the lake. Its outlet is formed by the river Tresa, which runs into the Lago Maggiore. The Lake of Lugano separates the southern part of the canton, consisting of the district of Mendrisio and the circle of Ceresio, which form part of the district of Lugano, from the rest of the canton, which lies north of the lake.

The canton is bounded N. by the cantons of Uri, Valais, and the Grisons; E. partly by the Grisons and partly by the Austrian provinces of Como; S. by the Milanese and Piedmont. The surface of the canton of Ticino may be divided into five regions:—1. The region of the vine, the fig, and the peach, which includes the lower valleys and hills, and extends to the height of 2400 feet above the Lago Maggiore. The olive, orange, and lemon-trees thrive in some favoured spots. 2. The region of the chestnut, the pear, the apple, and cherry-tree, which rises about 1000 feet higher. 3. The region of the fir-tree, which rises to about 4500 feet above the level of the lake. 4. The alpine pastures, which reach as high as 6000 feet. 5. The region of perpetual snow, which includes several Alpine summits between 8000 and 9000 feet high. There is consequently a great variety of climate as well as of productions in the canton. Horned cattle, sheep, goats, and pigs are numerous; there are few horses or mules. Wolves and bears are hunted in the mountains. The rivers and lakes abound in fish. The principal articles of export are cattle, cheese, wine and fruits, hay, hides, and marble. Corn is imported from Lombardy. The manufactures are of no very great importance; they consist chiefly of coarse cloth, leather, platted straw, and tobacco. The silk-worm is reared.

The area of the canton is 1033 square miles, and the population in 1850 was 117,759, all Catholics but 50. The language of the canton is a dialect of Italian. Several thousand people emigrate every year to work in other countries, as masons, porters, glaziers, chocolate-makers, and sellers of barometers.

The principal towns are:—*Lugano*, a pretty thriving town on the north-west shore of the Lake of Lugano, in a lovely situation, enjoying an Italian climate, has some fine churches, some large mansions, an hospital, a theatre, manufactories of silk, paper, tobacco, leather, iron and copper works, and 5142 inhabitants. There are at Lugano many merchants, it being on one of the great high roads between Switzerland and Italy. A fair is held in the month of October. Lugano has a college, several elementary schools, and a reading-room. Three newspapers are published in the Italian language. The country around Lugano is planted with vines, olives, and other southern trees, and full of country-houses. *Bellinzona*, a walled town situated in the valley of the Ticino, on the high road of the St-Gothard, has a very fine church, a college, an arsenal, and 1926 inhabitants. *Locarno*, a small town with a fort on the Lago Maggiore, has several churches, a castle which is now the government-house, and 2676 inhabitants. *Mendrisio*, a town of 1700 inhabitants, in a fertile country, and on the high road to Como and Milan, has a college, several churches, a printing-press, and some silk manufactories.

At the beginning of the 16th century the Swiss obtained possession

of Locarno, Lugano, and the rest of the country, which they formed into several Landvogteyen, or bailliages, some of which were under the exclusive dependence of the three Forest cantons, and others, such as Lugano and Locarno, were subject to the whole Swiss confederation. These districts were united into one canton by the name of Ticino, and as such it was acknowledged by Bonaparte in his Act of Mediation, and afterwards by the allied powers in 1814. The franchise is vested in all natives of the canton who are 25 years old, and possessed of real property or capital of the value of at least 300 francs. The Great Council, or legislature, consists of 114 members, elected for 4 years; it appoints the executive, as well as the judges of the various courts. In ecclesiastical matters the canton of Ticino depends partly on the bishop of Como and partly on the archbishop of Milan. The canton returns 6 members to the National Council of SWITZERLAND.

TICKENHALL. [DERBYSHIRE.]

TICKHILL. [YORKSHIRE.]

TIDESWELL. [DERBYSHIRE.]

TIDORE, one of the Moluccas, is situated in the strait which divides the island of Gilolo from that of Celebes, and is traversed by 127° 25' E. long. It is well wooded, and about 21 miles in circumference. Near the southern coast rises a conical mountain, which is of volcanic origin, and above 4000 feet above the sea. The soil is abundantly watered and of great fertility, well cultivated, and produces rice in abundance. The sago-tree, the clove- and nutmeg-tree, grow wild. The island is very populous, and governed by a sultan, who also possesses portions of Gilolo. The sultan is dependent on the Dutch government. The inhabitants are Mohammedans.

TIFLIS, or TEFLIS, the capital of the Russian province of Georgia, is situated in 41° 41' N. lat., 44° 50½' E. long., on the river Kur, at an elevation of 1100 feet above the level of the Black Sea, and has about 50,000 inhabitants. The Kur here flows through a valley confined between two ranges of lofty mountains. The town stands at the foot of a line of dark and barren hills, whose high and caverned sides gloomily overshadow it. Every house, every building within its walls, seems to share the dismal hue of the surrounding heights. It is built on both sides of the river; but the larger portion, which is on the right or west bank, contains the houses of the wealthiest inhabitants, the great bazaar, the principal squares, the finest churches, the public offices, the residence of the military governor, and of the commander-in-chief. This is the city properly so called, which again is divided into two parts, the old and new town. The limits of the old town are distinctly marked by the ruins of the ancient fortifications. The new town extends to the north and west beyond these walls, and is distinguished from the old town by its new buildings in the European style and broader streets. The greater part of it is called by the Georgians Goretuban, that is, the 'street out of the city.' On the left bank is the extensive suburb Awlabar, a large caravansary, the barracks, and the fortress, or citadel, built by the Turks in 1576. Towards the south the town leans against the chain of hills running from the south-west, on the summit of which are extensive ruins of a very ancient fortress; its highest point at the western end of the old wall is 392 feet above the bridge over the Kur; towards the west it rises higher, and thence a small stream of water is conducted to the city, the bed of which however is generally quite dry except immediately after rain.

There are in Tiflis 15 Greek churches, 20 Armenian and 2 Roman Catholic churches, some of which are very handsome structures; several hotels, many elegant shops, a fine bathing establishment, and numerous schools. At a point where the river is hemmed in by rocks, a bridge of a single arch connects the town with the suburb of Awlabar. Here also are the ruins of an ancient fort, church and houses, and about two miles farther from this side of the city stand the remains of another sacred edifice, on the summit of a lofty hill. In the older parts of Tiflis the houses are ill built, and the streets so narrow that only one carriage can pass through the widest, and in the smaller streets there is scarcely room for a horseman.

Tiflis has been chiefly indebted for its celebrity to its warm baths, and its Georgian name, Tphiliak Alaki, is equivalent to 'warm town.' The building of Tiflis and the transferring of the royal residence to this place from Mzchet, on the declivity of the Caucasus, were effected about the year 455, by king Waktang I., Gork-Aslan. The mineral springs rise in considerable numbers at the south end of the city, between the strata of limestone, whence they are conducted into the cavern excavated in the solid rock, under one immense roof, divided into different apartments for the men and the women. These waters are reputed to be very beneficial in rheumatic complaints and cutaneous disorders. The hottest spring marks 115° 25' on Fahrenheit's thermometer; the coldest 74° 75'.

The situation of Tiflis would certainly make it one of the most delightful spots in the world, if the mountains between which it lies were not totally destitute of trees. They reflect the rays of the sun from the southern slope of the Caucasus, and thus produce in the valleys an oppressive heat, which may perhaps be the cause of the bilious diseases prevalent here. The heat in July rises to above 100° Fahr. In 1820 the population did not exceed 15,000, and it now probably exceeds 50,000, about one-half of whom are Armenians, the remainder chiefly Georgians, some Roman Catholics, and about a hundred Mohammedans. It is the residence of a Georgian patriarch,

a Georgian metropolitan, and an Armenian archbishop. There are some manufactories of woollen, cotton, and silk.

Tiflis is most favourably situated to be the medium of an extensive trade between Europe and Asia, but the restrictive tariff of Russia prevents its commerce from attaining its natural expansion; although since Georgia has had the advantage of a settled government under the Czar the commercial transactions of Tiflis have vastly increased. European goods were formerly landed at Redout-Kaleh on the east coast of the Black Sea, and carried to Tabriz and other towns of the east by way of Tiflis—giving rise to a most important transit trade. But the high duties on imports imposed by the ukase of 1831, and the vexatious regulations for their transit, have driven all this trade to Trebizond. The trade with Persia is still very important, and is almost entirely in the hands of the Armenians.

TIGRANO'CERTA, for some time the capital of Armenia, was built by king Tigranes after he had extended his dominion over Mesopotamia, Syria, and Phœnicia, about B.C. 80. Artaxata, the old capital on the Araxes, was situated in the north and in the neighbourhood of the Caucasian nations. Tigranocerta was situated a short distance from the Upper Tigris, on the Nicephorius, a river of considerable breadth, as Tacitus states. Sert or Sered, a small town, surrounded by ancient ruins, is generally supposed to be on the site of Tigranocerta. Sert is situated on the Bithlis River, which is considered to be identical with the Nicephorius. [ARMENIA, vol. i. col. 516.] According to Tacitus, Plutarch, and Appian, Tigranocerta had very strong fortifications; its suburbs contained gardens and fish-ponds. The town was inhabited partly by barbarians, and partly by Greeks, the inhabitants of twelve Greek towns who were transplanted thither by Tigranes after he had ravaged Cappadocia. Lucullus, in his campaign against Mithridates and Tigranes, laid siege to this key of Armenia before he ventured to enter the defiles that lead to the central table-land of Armenia. The united kings hastened to relieve the town, but they were beaten, and Tigranocerta with immense treasures fell into the hands of the victor (8th October, B.C. 69), who sent the greater part of the Greek inhabitants back to their homes in Cappadocia. Strabo says that, when Lucullus took Tigranocerta, it was only half finished, and that after its destruction there was nothing but a little village on the spot. However it soon became again a town, and in the wars of Corbulo, A.D. 63, it was a considerable and well-fortified place. (Tacitus, 'Annal,' xv. 4.) The termination *certa*, Kerta, Cirta, is a modification of the Phœnician *Carth*, 'a city'; *Kird*, or *Kerd*, and *gherd*, its modern forms, occur in the names of several towns in Armenia and Persia.

TIGRÉ. [ABYSSINIA.]

TIGRIS and EUPHRATES, two large rivers of western Asia, unite their waters at Kurnah, in the lower part of the plain of Babylonia, and take the name of *Shait-el-Arab*, which falls into the Persian Gulf near 30° N. lat., 48° 30' E. long. Both rivers rise in the central table-land of Armenia, and after breaking through the Taurus inclose the great plains of Mesopotamia, the Euphrates forming the boundary on the west and south, and the Tigris on the east.

The Euphrates is formed about two hours above Kebban Maden, (39° N. lat., 39° E. long.) by the confluence of two rivers, to both of which the name *Frat* is occasionally applied, but which are more generally known, the eastern as the Murad, the western as the Kara-Su.

The *Murad* rises on the west side of Ala-Tag, near the north-east termination of the mountain group that encircles Lake Van. [ARMENIA.] The stream flows down a mountain ravine nearly six hours due north to Diyadin (39° 32' N. lat., 43° 40' E. long.), where it enters the plain of Arishkerd, and turning north-west flows in that direction about 24 miles to Kara-Kilisa. At Kara-Kilisa it receives the *Sharwan-Su*, which flows east from its source near Molla-Suleiman. From Kara-Kilisa to the junction of the Char-Buhur (about 39° N. lat., 41° 30' E. long.) the Murad flows in a general direction of south-west, having the mountain range of which Ala-Tag, Sapan-Tag, and Nimrud-Tag are the most remarkable summits, stretching parallel to it at a considerable distance on the south-east, and the Bingöl Mountains south of the Aras and of Erzurum at about an equal distance to the north-west. [ARMENIA.] Near Malaskird, a town about 36 miles below Kara-Kilisa, the Murad is joined by the *Kaleh-Su*, which has its source at Khinis, and flows from the north-west. Near the source of the *Kaleh-Su* is Khinis. The Char-Buhur rises in the angle between the Dujik and the Bin-Göl Mountains, and flows nearly east by south till it joins the Murad: the rivers meet in a straight line, the former coming from the west, the latter from the east, and the surface of the water at the point of junction is about 70 yards wide in the month of June, and 4188 feet above the sea. The united stream turns off at right angles to the south, through a narrow valley which widens gradually till it becomes part of the plain of Mush. The river retains the direction of south for about 10 miles, when it receives the Kara-Su, which traverses the plain of Mush. The Murad from its junction with the Kara-Su to the plain of Kharput flows in a general western direction, between the Dujik-Dagh on the north and the continuation of the Taurus Mountains on the south. Between the plain of Mush and Kharput the river is navigated by keleks, or rafts, loaded with charcoal, fire-wood, &c. For a short distance before the Murad enters the plain of Kharput the mountains close in upon it on both sides, so that the stream is narrowed in some places to a breadth of 33 yards. The basin of the Murad between the plain of Mush and the plain

of Kharput is described in the article ARMENIA, vol. i. cols. 518, 514. At Palu, on the northern side of the plain, the river in the month of July is 100 yards wide and the current very rapid: there is a ford opposite the town, but intricate and precarious. Below Palu the Murad receives a considerable feeder on the right, which is called the Perez-Su, and carries down the drainage of a considerable portion of the Dujik Mountains. A few miles below the junction of the Perez-Su the river turns north-west, and flows in that direction through a mountainous country for about 50 miles to its junction with the Kara-Su, or Western Euphrates, a little above the village and lead-mines of Kebban-Maden, and near the point indicated by 39° N. lat., 39° E. long. Where the Murad turns north-westward, below the junction of the Perez-Su, a small stream flowing eastward enters the river at this its most southern point, flowing through the plain of Kharput, and past the village of Alshan. Here the Murad is not more than 25 miles from the source of the Tigris.

The Kara-Su, or Western Euphrates, rises, according to Mr. Abbott, at Domlu, 7½ hours N.N.E. from Erzurum. Two hours below Domlu the stream enters the plain of Erzurum, through which it flows from east to west for about 40 miles. It there receives a torrent flowing from Kara-Kulak to the east, and the united stream turning to the south descends through a ravine into the plain of Tergan. The south boundary of the plain of Erzurum is formed by the mountains already noticed under the names Bingol-Tag and Dujik-Tag; the northern boundary by a range of highlands, continuations of the Antitaurus, which divide the basin of the Euphrates from the rivers which flow into the Black Sea. At the point where the river quits the plain of Erzurum it is 100 yards broad in the month of October. The plain of Terjan, at the lower end of the ravine by which the Kara-Su escapes from the plain of Erzurum, lies considerably lower, and has a much milder climate than the table-land about Erzurum. In the lower plain the Kara-Su receives the Mama-Khatun (a considerable stream, which rises in the Bingol-Tag near the sources of the Aras), and becomes a considerable river, fordable only in few places even in the driest season. From the plain of Tergan the course of the Kara-Su to its junction with the Murad-Chai, a distance of about 130 miles, is in a general south-west direction, through a succession of difficult mountain passes and narrow but fertile plains, which are described in the article ARMENIA (vol. i. cols. 511, 512). From Erzingan (which gives name to the fine plain of Erzingan) to Kemakh, a distance of about 26 miles, the Kara-Su flows through a mountain defile, having the Dujik range on the left, and on the right mountains all but precipitous. Immediately above Kemakh the river forces its way through a deep narrow chasm; and just before it precipitates its waters into this rent in the mountains it receives the Keumer-Su from the west, a stream by which great quantities of wood are floated down. The Keumer-Su descends from the plain of Divrigi, about 60 miles to the west, and 3116 feet above the sea. The valley of the Keumer-Su has a considerable declivity, and the Kara-Su must therefore have sunk at the point of their junction much below its level in the plain of Erzurum.

From Kemakh to Egin is a distance of nearly 43 miles. There is sufficient water in the Kara-Su between Kemakh and Egin to render it navigable for boats, but the frequent rapids, rocks, and shoals impede the navigation. At Egin the mountains rise from the banks of the river by a steep slope, which is terminated by abrupt precipices; the whole height of the mountains above the stream may be about 4000 feet, and the valley is so narrow that they seem to overhang the town. From Egin to the confluence of the Kara-Su and Murad-Chai (about 35 miles), and thence to Kebban-Maden (about 5 miles farther), the channel of the river is obstructed by shoals and rocks and only employed in floating timber-rafts. At the ferry near Kebban-Maden the river is about 120 yards wide, deep, and rapid. The elevation of the confluence of the Kara-Su and Murad-Chai has not been ascertained, but it seems to be about 2700 feet above the level of the Black Sea. Below the confluence of its two head streams, near Kebban-Maden, the Euphrates follows the direction of the Kara-Su, and flows south-west through a naked mountainous country; and, after sweeping to the westward and half encircling the remarkable peninsula of Abdu-l'Wahab, formed by the rocky heights of Munghar, it receives the Tokhmah-Su at the pass of Is-Oglu, the ancient Elegia, and takes an easterly bend to pass through the Taurus, between the rocky mountains of Bhagli-Khanli and the Beg-Tagh. The Tokhmah-Su rises more to the west than any other affluent of the Euphrates. The Injeh-Su and the Balikli-Su, which by their junction form this river, have their sources about 36½° E. long., and between 38½° and 39° N. lat., about 4000 to 5000 feet above the sea. The Tokhmah-Su has a course of upwards of 100 miles, and runs a little to the northward of Malatiah, which is about 12 miles from the right bank of the Euphrates.

Near the ferry of Fex-Oglu, a few miles below the confluence of the Tokhmah-Su, the Euphrates precipitates itself through a gap in the mountains which extend from east to west between the Murad and the Upper Tigris, and curves through them with a general easterly direction to Gergen-Kaleshi, a distance of about 45 miles. In this part of its course the stream is hemmed in by lofty precipices and interrupted by rocks and small rapids, but warlike stores have been floated downwards on rafts. The subsequent course of the river as far as the mouth of the Saklawiyah Canal (about 33° 25' N. lat.,

40° 50' E. long.), where it may be considered as having entered the central plain, is through an upland country, furrowed by alternate ridges and depressions, with a general declivity to the south-east. From Sumeisat (the ancient Samosata), 45 miles below Gergen-Kaleshi, the Euphrates is navigable without serious interruption to the sea. From Sumeisat to Rum-Kaleh, a distance of 51 miles, following the windings of the stream, the river flows W.S.W. Its course thence to Balis (36° 1' N. lat., 38° 7' E. long.), a distance of 114 miles, winds along a line running north and south. Fourteen miles below Rum-Kaleh, at Graun, the channel of the Euphrates is only 80½ miles distant in a direct line from the Mediterranean at Bayas. The Tigris steamer ascended the river as high as Bir in Colonel Chesney's expedition to the Euphrates. At this point the river is 628½ feet above the level of the Mediterranean at the mouth of the Orontes, from which it is distant 133 miles in a direct line, which gives only a fall of little more than 6 inches per mile to the Persian Gulf (distant 1117 miles), assuming the level of that sea to be the same as the level of the Mediterranean. Twenty-five miles below Bir the Euphrates receives from the west one arm of the Sajur, and 5 miles lower down another; this is a considerable affluent, the lowest of any importance that falls into it on that side. At Balis, 88 miles below Bir, the river turns to the south-east, a general direction which, making allowance for its windings, it may be said to retain till it reaches the Persian Gulf. Near Rakkah it receives on the east bank the Belik, which rises near Harran, to the north. After a tortuous course of 80 miles the Euphrates breaks through a chain of hills which comes on the west from Palmyra, and on the opposite side of the river, from the direction of Sinjar. In this pass the river flows in a small channel 250 yards wide and 7 fathoms deep, between precipices which rise abruptly 200 or 500 feet from the water's edge. Fifty miles from this pass, by the windings of the river, but little more than half that distance in a straight line, the Khabur (the ancient Chaboras) falls into the Euphrates from the north, bringing down the drainage of Mount Masius and the eastern part of the Taurus. [BAGHDAD, Pashalic of.] The Khabur enters the Euphrates in 35° 6' N. lat., 40° 27' E. long. From the Khabur to the Werdi, 75½ miles by the river, 45½ in a straight line S.E. by S., the Euphrates has an average width of 400 yards, with an ordinary depth of 18 feet, and a current of four miles an hour during the floods: it forms many islands. Between Werdi and Anah (the ancient Anathe), 92 miles, 50½ miles east in a straight line, the river has at the same season a breadth of 350 yards, a depth of 18 feet, and a current of 4 miles an hour. About 100 miles below Anah the Euphrates passes Hit, well known for its bituminous fountains, which are mentioned by Herodotus (i. 178) under the name of Ia. Seventy miles below Hit, at the mouth of the Saklawiyah Canal, it has entered the great central plain. From Werdi to near the mouth of this canal a range of hills extends at a distance of some miles along the north-eastern bank of the Euphrates, the opposite declivity of which sinks to the bed of the Tarthar. [BAGHDAD, Pashalic of.] The high ground on the south-west side of the Euphrates extends a few miles farther to the south than that on the opposite bank; and at its termination, curving round to the north-east, approaches nearer the river, and terminates in an abrupt cape, surrounded on all sides by the level plains of Babylon.

The Tigris.—The principal source of this river is on the southern declivity of the mountain range which forms the southern wall of the valley of the Murad-Chai, near Alshan, and not much more than 10 miles distant from the most easterly point of the bend of the Euphrates, between Malatiah and Sumeisat. The Tigris runs from its source 25 miles to the north-east, and about 4568 feet above the sea. It then flows southward for nearly the same distance, and, receiving near the mines of Arghana-Maden a small stream from the west, adopts the course of this tributary, and then flows again towards Diar-Bekr (about 37° 55' N. lat., 39° 55' E. long.), distant 40 miles in a straight line. Opposite Diar-Bekr the Tigris is about 250 yards wide in the season of floods, but it is only used to float timber-rafts from the mountains. At Diar-Bekr the Tigris turns suddenly round to the east, and continues to flow in that direction for 105 miles, till it receives the Bitlis River on its left bank. In this part of its course the Tigris flows parallel to the high mountains which separate its valley from that of the Murad-Chai, an extensive plain intervening between its banks and their bases. On the south the river has the hill range, on the opposite side of which are the sources of the Khabur. This upper plain of the Tigris is described in the article ARMENIA (vol. i. cols. 514-516).

From its junction with the Bitlis River, the Tigris bends round to the south, and it continues nearly in the direction of south-east to the mouth of the Great Zab (36° N. lat., 43° 20' E. long.). For the greater part of this distance the range of hills which separates the valley of Diar-Bekr from the basin of the upper Khabur accompanies the Tigris on the south-east; they terminate on its banks a little to the north of Mosul (36° 20' N. lat., 43° 15' E. long.). In this interval the Tigris receives a number of affluents on both banks, the most important of which is the Eastern Khabur. The Khabur, at its junction with the Tigris, comes from the north of east, but 80 miles farther up it comes from the north. It rises high up among the Arjerosh-Dagh, which bound the southern shores of Lake Van.

The main branch of the Zab Ala, Upper or Great Zab, has its

source on the slope of the Sar-al-Bagh range, at an elevation of about 7500 feet above the sea, and nearly midway between the lakes of Van and Urumiyah. [ARMENIA, vol. i. col. 518.] At first the Zab flows to the south, but about 37° 19' N. lat. it turns to the west-south-west. Near the village of Kiyau it receives the Berdisawi (called also by the inhabitants the Lesser Zab), which is said to rise in the Erdoash, or Arjerash-Tag, a few miles south of the eastern termination of Lake Van, and which descends to the principal stream in a succession of cataracts. After the junction the Zab flows south-east till about 12 miles east of Amadiyah, from which point its course is rather to the north of east, to 10 miles west of Rowandiz, where it receives a large affluent. Between Amadiyah and Rowandiz, the Zab has on the north the colossal mountains in which it has its rise; on the south a range of hills which stretch from near the mouth of the Eastern Khabur to the base of Mount Rowandiz (11,000 feet above the sea). Turning round between the base of Rowandiz and the eastern extremity of this ridge, the Zab crosses a hill-range parallel to it on the south, and flows south-west to the Tigris, which it enters with a deep stream 60 feet wide, but the width is much greater a little higher up.

About 84 miles below the mouth of the Great Zab the Tigris forces its way through the Hamrin Hills. About 12 miles below the Great Zab there is a ford in the Tigris; 20 miles farther down it receives an affluent from the west near Kalah Shirkat; and 23 miles below this it is joined by the Zab-Afsal, Lower or Lesser Zab from the north-east. The main branch of this tributary rises 20 miles south-west of the south extremity of Lake Urumiyah; flows 30 miles to the south-east, and then turns abruptly to the south-west; about 20 miles onwards it receives four affluents from the mountains to the south-east, and carries to the Tigris, after flowing parallel to the Great Zab for the last 50 or 60 miles of its course, a deep stream 25 feet broad. At the point of junction the Tigris has a breadth of 500 yards. Below the passage of the river through the Hamrin Hills, high grounds, which separate its valley from the Valley of the Tarthar, extend close to the termination of the Median Wall. Here the Tigris issues from the hills into the great central plain. Between Diar-Bekr and Mosul (296 miles) the river is navigable for rafts at certain seasons; below Mosul it is navigable throughout the year; in 1838 the 'Euphrates' steamer ascended it to within 20 miles of Mosul.

A few miles below Baghdad the Tigris is joined by the Diyalah, which is known in its upper course as the river of Shirwan. This river rises among the mountains above Hamadan near 34° 40' N. lat., 47° 30' E. long., and flows for about 30 miles from east to west; then, turning at first to the north of west, for nearly 100 miles in a semi-circular sweep round the base of Mount Dalahu, it receives a number of streams on its south bank. Some of the summits of this mountain group rise, by the estimate of Major Rawlinson, 5000 feet above their base. At the most northern part of its course the Shirwan receives the waters of the Taj, one of whose branches comes from Suleimaniyah. It then flows south-east for about 30 miles, till it issues into the plain through a gap in the Hamrin Hills. Above these hills the river flows in a strong rapid current 400 yards broad. Its breadth at its mouth at Ctesiphon, above the Zak Keasa, is about 60 yards. From the Kermandah district the Diyalah receives the Holwan and the Arwand. The other feeders of the Tigris above Kurnah, and the tributaries of the Shalul Arab below that town, are noticed in the article BAGHDAD, Pashalic of (vol. i. cols. 820, 821).

Five miles below Baghdad the Saklawiyah Canal, from the Euphrates, joins the Tigris; the distance along this canal from river to river was found by Lieutenant Lynch (who sailed along it in 1838, in the Euphrates steamer) to be 45 miles. The current (in the season of floods) was about 4 miles an hour, from the Euphrates to the Tigris. On the parallel of Baghdad, the canal expands to a considerable lake, which again contracts into a narrow channel before it joins the Tigris. The Diyalah, which joins the Tigris 21 miles below the mouth of the Saklawiyah Canal, brings into the Tigris a large body of water. From the confluence the course of the Tigris is extremely winding, but its general direction is south-east. About 97½ miles in a straight line from Baghdad in that direction, it reaches Kut-el-amarah, a small town on its left bank, where a bifurcation takes place; and here the Tigris, instead of receiving an addition to its waters from the Euphrates, as by the Saklawiyah, sends a considerable stream to that river. The smaller branch, called Shat-el-hai, flows south and joins the Euphrates, after giving off a number of canals on both sides, about 140 miles from Kut-el-amarah: it is navigable throughout for light boats. The main branch of the Tigris turns off at that town to the north of east, with an apparently undiminished stream (200 yards broad), and flowing in that direction 28 miles, and then south by east 32 miles, reaches Imam Gharbi, the most distant part of its course in the plain from the Euphrates (95 miles). At 66 miles (by water) a channel called Hud flows off on the east bank, and joins the Kerkhah near Hawisah. Ten or eleven miles below Imam Gharbi, the Tigris turns south to 84° E. long., becomes deep and narrow, and makes a number of abrupt bends through a marshy plain for 40 miles to the tomb of Esra. It there resumes its former breadth, and winds in a general south direction to its junction with the Euphrates at Kurnah, a distance of about 123 miles by the windings of the river. The current of the Tigris in the plain averages one mile and a half in the hour.

From the Saklawiyah Canal the Euphrates flows south-east, through

a pastoral country, 43 miles, to the Mounds of Mohammed: it is here only 18 miles distant from the Tigris. From the Mounds of Mohammed the river flows across a flat barren country to Hillah (32° 28' 35" N. lat., 44° 28' 40.5" E. long.), which is almost due south of Baghdad, and between 50 and 60 miles distant from it. In this part of its course the stream has an average breadth of 200 yards, with an ordinary depth of 15 feet, and a current of barely 2¼ miles an hour. From Hillah to a bifurcation a short way above Lemlun (a distance of 75½ miles by water, or 55½ miles S.E. by S. direct), the volume of water in the Euphrates is materially diminished by canals of irrigation. The two narrow channels formed at this point reunite at Karayem (33½ miles from the bifurcation), after flowing in short bends through a marshy country. On issuing from these marshes the Euphrates suddenly re-appears on its former large scale, inclosed between high banks covered with jungle. At 56½ miles from Karayem the Euphrates is joined by the Hai, the branch which diverges from the Tigris at Kut-el-amarah; and 78 miles farther on it receives at Kurnah the waters of the main branch. The distance (by water) from the remotest sources of the Tigris to Kurnah is about 1146 miles, little more than half the length of the Euphrates. The Euphrates and Tigris now form one tidal channel, known by the name of the Shat-el-Arab, about half a mile wide, which flows S.E. by S. almost in a straight line. Five miles below Kurnah, it is joined by the Kerkhah, which, near Hawisah, where it leaves the hills, receives the Hud from the Tigris. [BAGHDAD, Pashalic of.] From Kurnah to Basrah is 39½ miles by the river, and thence to Mohammarah, where the Harfar Canal brings the main portion of the Karun into the Shat-el-Arab, is 22½ miles by water. [BAGHDAD, Pashalic of.] Between Kurnah and Basrah the river has an average breadth of 600 yards, with a depth of 21 feet; between Basrah and Mohammarah, a breadth of 700 yards, and a depth of 30 feet. The current below Kurnah is 2 miles an hour during the flood and 3 miles during the ebb tide. Between Kurnah and Mohammarah the river forms five islands, all large. The Shat-el-Arab discharges the united waters of the Euphrates and the Tigris into the sea at Basrah. It is navigable in mid-stream for vessels of 500 tons.

The basin of the Euphrates (giving that name to the area drained by all the waters which enter the Persian Gulf by the Shat-el-Arab) comprises about 108,000 square miles. The physical features, products, &c., of this vast region are described in the articles ARMENIA, BAGHDAD, Pashalic of, MESOPOTAMIA, ASSYRIA, BABYLONIA, &c. The melting of the snows on the mountains and tablelands of Armenia, causes the Euphrates to rise from the end of March to the end of May, when the floods are at their height, about 14 feet. The same cause, aided by the melting of the snows on the mountains of Kurdistan, occasions a rise in the Tigris of about 20 feet. The tide ascends the Euphrates above Kurnah, a distance of 60 miles; it scarcely extends 35 miles up the Tigris.

(Colonel Chesney; *Expedition to the Euphrates and Tigris; Journal of the Royal Geographical Society of London*; Rich, *Koordistan*; Morier, *Fraser, and Ainsworth, Travels*; Martin, *Mémoires sur l'Arménie*.)

TIKHWIN. [NOVOGOROD.]

TILBURG. [BRABANT, North.]

TILBURY. [ESSEX.]

TILEHURST. [BERKSHIRE.]

TILLICOUNTRY. [GLACKMANNANSHIRE.]

TILLINGHAM. [ESSEX.]

TILSIT. [GUMBINNEN.]

TILSTOCK. [SHROPSHIRE.]

TIMANA. [NEW GRANADA.]

TIMBUCTOO, a city in the interior of Northern Africa, is situated in about 17° 8' N. lat., 2° 58' W. long., on the declivity of an inconspicuous eminence about 8 miles N. from the Niger, and at the most northern part of its course where it makes the great semicircular bend from the north-east to the south-east direction. Cabra, the port of Timbuctoo, stands at a distance of 5 miles from the town, and is connected with the Niger by a narrow canal. Between Cabra and Timbuctoo there are two lakes. A wady, filled during the rainy season with a stream of water, extends from north-east of Timbuctoo, and, passing to the south of that town, disembogues into the Niger to the south-west of it. All round the wady extend immense plains of loose shifty sands of a yellowish-white colour. Timbuctoo has been from remote antiquity the meeting-place of many converging lines of traffic. It is the nearest point at which the traders from the commercial districts that skirt the coasts of the Mediterranean west of Barca, and of the Atlantic north of Cape Nun, can strike, after crossing the great desert, the fertile lands extending to the south-east and south-west along the Upper and Lower Niger.

Leo Africanus states that Timbuctoo was built by Mansa Suleiman, about the year 610 of the Hejira (A.D. 1214), and that it soon became the capital of a powerful state. But there is strong reason to suppose that either the Kúpha or Nigeira Metropolis of Ptolemy, previously occupied the site of the town built by Mansa Suleiman. Indeed, according to an author quoted by Cooley ('Negroland of the Arabs,' p. 68), a town bearing the name *Tombuti* existed hereabouts as early as the year 297 of the Hejira. Rulers with the title Mansa continued to govern Timbuctoo from 610 to 792 of the Hejira. The chiefs of Morocco

and Fex rendered Timbuctoo tributary, and from that time the communications of the Arabs with that country became more frequent and regular. Leo Africanus mentions that the grand mosque of the town and the palace of the king were built by an architect from Granada. The Arab conquerors allowed however the native dynasty to remain on the throne. The expulsion of the Arabs from Spain, and the weakening of the Arab power in North Africa by the Turkish conquests in Tunis, Tripoli, and Algiers, in the course of the 15th century, increased the impunity of the predatory nomad hordes; and about the same time, or a little later, the formation of settlements on the west coast of Africa, first by the Portuguese and afterwards by the English and French, by creating a new line of traffic with the interior, diminished the importance of Timbuctoo as a commercial entrepôt. About the year 1500 a negro general of Souheili, king of Timbuctoo, raised the standard of revolt on the death of his master, overturned the Moorish supremacy, conquered a number of the neighbouring provinces, and recalled to Timbuctoo a part of the trade which had left it for Jenné on the Niger. About 1670 Timbuctoo seems to have fallen under the dominion of the king of Bambarra. Since 1727 it appears to have been governed by a negro ruler, that is, by one who is neither an Arab, nor a Tuarik, nor a Fellatah.

Caillié estimates the permanent inhabitants of Timbuctoo at from 10,000 to 12,000. After the arrival of the caravans the town assumes for a portion of the year a much more populous and probably a much more bustling appearance. The streets are clean, and wide enough to allow three horsemen to pass abreast. The houses are of sun-dried bricks, and consist entirely of a ground-floor; in some a sort of closet is constructed over the entrance; the apartments are built on the four sides of an open court in the centre. Both within the town and round about it there are numerous straw huts of a conical form. The town is not walled. In the centre of the town is a square surrounded by circular huts, and planted with a few trees: in the middle of it a large hole is dug as a receptacle for filth. Two enormous heaps outside of the town appeared to be accumulations of rubbish. Some buildings on the east side of the town are overwhelmed with sand. There are seven mosques; two of them large, and part of the largest apparently of considerable antiquity; each is surmounted by a brick tower. To the west-south-west of the town are large excavations from 35 to 40 feet deep, which collect in the rainy season the supplies of water which serve the inhabitants for drinking and culinary purposes throughout the year. There is no spontaneous vegetation near the town except some stunted mimosa-trees. Near the reservoirs are some small plantations of bad tobacco. The inhabitants of Timbuctoo draw from Jenné their supplies of millet, rice, vegetable butter, honey, ootton, Soudan cloth, pepper, onions, dried fish, pistachios, &c. Fire-wood and timber for building, and provender for cattle, are brought from Cabra. They purchase cattle from the nomads of the tribe of Zawât, who possess the country two days' journey distant from Timbuctoo to the north-east; from the people of Sala, ten days' journey to the east; and from the Tuariks, who are the most powerful race, on all sides. They procure salt for their own consumption and for the trade with Soudan from Tâdei il, which lies twenty days' journey north-west of the town.

The negro and Arab inhabitants of Timbuctoo are exclusively engaged in trade. The negro inhabitants dress like the Moors, and are zealous Mohammedans. They have several wives, whom, as well as their slaves, they employ in menial affairs. Caillié represents all classes of the inhabitants as cleanly both in their persons and houses. Cabra, the port of Timbuctoo, is secured against inundations by being slightly elevated above the marshes; the sandy desert commences immediately to the north of it. This place has about 1000 or 1200 inhabitants, all of the poorer class, engaged in the service of the merchants of Timbuctoo. The dwellings are either mean houses or small huts; the street is neat, but the landing-place is dirty. The merchandise is conveyed between the port and Timbuctoo on asses and camels: these belong in general to the inhabitants of Cabra; but sometimes the poorer Tuariks hire their camels for the purpose.

(C. Ptolemaei, *Geographia*, lib. viii.; M'Queen, *A Geographical Survey of Africa*; Walckenaer, *Recherches Géographiques sur l'Intérieur de l'Afrique*; Cooley, *Negroland of the Arabs*; *Travels of Park, Lyon, Denham, Clapperton, Caillié, &c.*)

TIMOR and TIMOR LAUT. [SUNDA ISLANDS, *Lesser*.]

TINCHEBRAI. [ONE.]

TINIAN, one of the Ladrone or Mariane Islands, lies nearly in 15° N. lat., 146° E. long. It is uninhabited and of small extent. Lord Anson remained on the isle of Tinian from the 26th of August to the 21st of October, 1742. It extends about 12 miles from south-south-west to north-north-east, and the breadth is about half as much. The soil is somewhat sandy, but very dry and healthy. The land rises in gentle slopes from the beach to the middle of the island, but the ascent is often interrupted by small level valleys, many of which wind irregularly through the country. These valleys and the gradual swellings of the ground are most beautifully diversified by an alternation of woods and lawns, which traverse the island. There are no running streams, but good water is found by digging. Near the middle of the island there are three small lakes. Black cattle, in a wild state, are numerous. The common domestic fowl is plentiful in the woods. There is also an abundance of wild hogs. Besides the

cocoa-nut palm and the bread fruit-tree there are guavas, limes, and sweet and sour oranges. There is no harbour, but only an open roadstead near the south-western extremity of the island. The island contains some remarkable ruins. [LADRONES.]

(Anson, *Voyage round the World*; Kotzebue, *Voyage of Discovery into the South Sea, &c.*)

TINNIVELLY. [CARNATIC.]

TINO. [ARCHIPELAGO, *Grecian*.]

TINTAGEL. [BOSSINEY.]

TINTENIAC. [ILLE-ET-VILAINE.]

TINTERN. [MONMOUTHSHIRE.]

TIOOMEN. [SIBERIA.]

TIPPERAH MOUNTAINS. [HINDUSTAN; SILHET.]

TIPPERARY, an inland county in the province of Munster, Ireland, is bounded N. by Galway and King's County, E. by King's County, Queen's County, and Kilkenny, S. by Waterford, and W. by the counties of Cork, Limerick, Clare, and Galway. It lies between 52° 12' and 53° 9' N. lat., 7° 20' and 8° 26' W. long. Its greatest length from north to south is 70 miles, from east to west 40 miles. The area is 1659 square miles, or 1,061,731 acres; of which 843,887 acres are arable, 178,188 acres uncultivated, 23,779 acres in plantations, 2859 acres in towns, and 13,523 acres under water. The population in 1841 was 435,553; in 1861 it was 331,487.

Surface, Hydrography, and Communications.—The greater part of the county is comprehended in the basin of the Suir, which falls into Waterford Harbour. The other rivers, which are small and unimportant, are the Nore, the Nenagh, and the Broma. The Suir rises north of Templemore, on the south-eastern slope of the mountains that there cross the county, and flows by Thurles, Golden, and Cahir, to the junction of the little river Nier; after which it flows along the border of this county and Waterford, by Clonmel and Carrick, below which it quits the county. Its course in Tipperary may be estimated at about 76 miles. The Suir is navigable by large barges up to Clonmel.

The lakes in this county, of which there are many, are very small, the largest not exceeding 40 acres; but Lough Derg, which forms its western boundary with Galway and Clare for a length of 22 miles in a straight line, affords, with the Shannon and the Suir, its southern boundary with Waterford from Clonmel to Carrick, the only navigation of the county.

The coach road from Dublin to Cork enters the south-eastern side of the county, and passes through Clonmel and Clogheen. Another road from Dublin to Cork by Athy passes through Cashel and Cahir. The road from Dublin through Kildare and Maryborough (Queen's County) to Limerick crosses the northern part through Roscrea, Toomevara, and Nenagh; another road from Dublin through Parsonstown (King's County) and Borris-o-Kane unites with the foregoing at Nenagh. The road from Waterford to Limerick enters the county on the south-east at Carrick-on-Suir, and passes through Clonmel, Cahir, and Tipperary. The road from Clonmel to Ballinaloe in Galway, passes through Fethard, Cashel, Thurles, and Roscrea. There are other roads of less importance.

The Great Southern and Western railway enters the county near Roscrea, and runs in a generally southward direction past Templemore to Thurles, whence it is continued in the same direction to Gool'd's Cross, and is connected with Cashel. From Thurles the main line turns south-westward to the north of Tipperary, and past Emly, a few miles beyond which it quits the county. There is a branch to Limerick, of which only a small portion is within this county. There is also a short branch to Tipperary.

Geology, Mineralogy, &c.—A considerable part of the county is hilly or mountainous, but the mountains lie in groups, and not in connected ranges. The Knockmeledown Mountains, on the south border of the county, rise to the height of 2700 feet above the level of the sea. They are placed in a table-land of clay-slate, partly bordered on the flanks by sandstone, and on the higher grounds sustaining isolated caps of the same rock, or upholding more continuous mountain-masses. On the north the limestone track separates the Knockmeledown Mountains from the Galtees, of which the principal summits (3000 feet high) are in this county. North of the Galtees rise the Slieve-na-Muck Mountains, which form a subordinate and lower range. Both the Galtees and the Slieve-na-Muck are composed wholly of sandstone, and the intermediate valley or glen appears to be occupied by the same formation. The sandstone is in general composed of grains of quartz closely aggregated. The sandstone of Slieve-na-Muck yields excellent flags. In the south-eastern corner of the county, north of Clonmel and Carrick-on-Suir, is a group of hills called Slieve-na-Man, the geological character of which is similar to that of the mountains already described: the group consists of a nucleus of clay-slate, surrounded and surmounted by sandstone.

The principal bogs are in the eastern and central part of the county; one continuous line of bog extends from near the border of the coal-field, near Killenaule, to the south-eastern foot of the central range of hills at Roscrea, a distance of nearly 30 miles; and there are smaller detached bogs westward of this, and some in the northern part of the county, between the Lower Broma and the Shannon.

In the centre of the county is another important group of mountains. It commences in the county of Limerick, and is there known

as the Doon Mountains; but as it extends north-eastward into Tipperary, the most important summits are known as the Bilboa and Keeper Mountains (the latter 2100 feet high), and the Devil's-Bit Mountain: it crosses the county of Tipperary in a north-eastern direction by Temple-derry and Roscrea, and enters Queen's County and King's County, which it separates from each other, and where it is known under the designation of Slieve Bloom. Keeper and Bilboa and the adjacent parts of the range consist of clay-slate, generally flanked by sandstone. To the north-east of Temple-derry the range is entirely composed of sandstone. Copper was formerly dug in these mountains, at Lackamore, five miles east of Newport. Copper is now found at Hollyford, and lead mixed with silver is obtained at Shallee and Silvermines.

Near the lower part of Lough Derg, one of the lakes through which the Shannon flows, are the Arra Mountains, a group occupying a small part of this county on the western side, and extending across the Shannon into the county of Clare. There are quarries in these mountains which yield slate not inferior to that of North Wales.

The rest of the county is occupied by the stratified limestone, except a portion of the district between the southern groups of mountains (Slieve-na-Man and the Galties) and the central range, which is occupied by the coal-field of Killenaule; and one or two small tracts on the western side of the county, where trap-rocks appear interstratified with the limestone.

The coal-field of Killenaule extends about 18 miles in length from north-east to south-west, from near the river Nore to the neighbourhood of Cashel, and about 6 miles in breadth. It is partly in this county and partly in that of Kilkenny. There are two very small outlying portions near Cashel. This coal-field varies in its elevation, being highest and most abrupt on the north-western side, where the hills rise from 300 to 600 feet above the limestone plain. Towards the south-east the surface declines gradually, and the streams which water the tract mostly flow in that direction. Immediately above the limestone, shale and gritstone alternate, there being two beds of each: the upper gritstone, when not covered by the superior beds, constitutes the main body of the elevated part of the coal-hills: it is marked by repeated undulations, forming unequal ridges, with intervening hollows or troughs, having their greatest extension or length generally from north-east to south-west. In these troughs the coal-beds are found resting upon fire-clay, which intervenes between them and the gritstone, and forms the floor of the coal, and covered by shale, grit, and then shale again. The coal is of the nature of blind coal, or anthracite.

Climate, Soil, and Agriculture.—The climate of Tipperary, though drier than that of the maritime counties, is sufficiently moist, and the hilly districts are cold, but it is reckoned very healthy on the whole. The soil, a rich calcareous loam, is of extraordinary fertility, especially in the lower grounds of the districts called the Golden Vale, and of which Tipperary town forms the centre, extending from Limerick to the borders of the county of Kilkenny; and another district, occupying the level tracts of the baronies of Upper and Lower Ormond. The number of acres under crop in 1853 was 310,264; of which 42,125 acres were wheat; 89,883 acres, oats; 17,756 acres, barley, bere, rye, peas, and beans; 46,006 acres, potatoes; 30,687 acres, turnips; 5301 acres, other green crops; 336 acres, flax; and 73,170 acres, meadow and clover. In 1841 the total extent of plantation, including detached trees and orchards, amounted to 29,602 acres. In 1852 there were 24,786 holdings, on which were 25,386 horses, 12,326 mules and asses, 160,496 cattle, 177,866 sheep, 81,789 pigs, 14,806 goats, and 437,948 head of poultry. Agriculture forms nearly the entire occupation of the county; wheat of excellent quality is largely grown and exported, as is also flour and meal; and dairies are numerous, butter being the next largest product for exportation. There are establishments at Nenagh and Roscrea for the preparation of flax.

Divisions, Towns, &c.—The county is in the dioceses of Cashel, Emly, Killaloe, and Lismore, and contains 193 parishes. It is divided into two ridings, North and South; and the North Riding into 6 baronies—Ormond Lower and Upper, Owney and Arra, Ikerrin, Eliogarty, and Upper Kilnemanagh; the South Riding into 6 baronies—Slieveardagh, Lower Kilnemanagh, Middlethird, Clanwilliam, East and West Offa and Iffa. The principal towns are—CAHIR, CLONMEL, NENAGH, CARRICK-ON-SUIR, THURLES, TIPPERARY, CASHEL, ROSCREA, and CLOGHEEN, which are noticed under their respective titles; with Fethard and Templemore, which we notice here, together with the smaller towns and principal villages: the population is that of 1851.

Fethard, a municipal, market, and post town, 9 miles N. from Clonmel, population 2767. The town is chiefly on the left bank of a small stream, the Glashall. There are a parish church, and chapels for Presbyterians, Primitive Methodists, and Roman Catholics. There are also an infantry barrack, a police station, a loan-fund office, and a dispensary. The town was formerly walled, and most of the walls and of the gateway towers remain. A market is held weekly, and fairs are held four times a year. The town was incorporated at an early period, and sent two members to the Irish Parliament, but was disfranchised at the Union.

Templemore, a market and post town, 9 miles N. from Thurles, population 4375. It is supposed to derive its name from the Knights Templars, who had a house here. The town is pleasantly situated

near the right bank of the Suir, and is well built and neat. The church has a handsome tower and spire. There are chapels for Roman Catholics and Methodists, a good market and court-house, a bridewell, extensive barracks, a fever hospital and dispensary, and ball-and-news-rooms. A market is held weekly, and eight annual fairs are held.

Ballina, a village on the left bank of the Shannon, near where it leaves Lough Derg, is a suburb of Killaloe, county Clare. [KILLALOE.] *Borris-o-Kane*, a small town, 91 miles W.S.W. from Dublin, on the road from Parsonstown to Nenagh: population 1176. The town is watered by a small stream which flows into Lough Derg. There are a parish church, a chapel, police barracks, a dispensary and fever hospital, and a small bridewell. There are some remains of a square castle of massive construction, called Tumbriane. Four fairs are held in the year. *Borris-o-Leagh*, a small town, 5 miles S.W. from Templemore: population 1125. There are a church and a Roman Catholic chapel. Three yearly fairs are held. A body of the county constabulary are posted in the town, and there is a dispensary. *Clogh-jordan*, a village and post-town, about 8 miles N.E. from Nenagh: population 1058. There is a district church, of light and elegant architecture, built in 1830; and there are meeting-houses for Baptists, Wesleyan and Primitive Methodists; also a dispensary and fever hospital. *Emly Golden*, a small market and post-town, about 4 miles W. from Cashel, on the road to Tipperary, population about 500, is delightfully situated in the Golden Vale, one of the most fertile districts of the county, and is divided into two parts by the river Suir, over which is a stone bridge. In the neighbourhood are the remains of Athassel Abbey. The parish church and a Roman Catholic chapel are in the town. Four markets are held in the year. *Killenaule*, a market and post-town, 16 miles N. from Clonmel, population about 1500. There are a church, a Roman Catholic chapel, a dispensary, and police barracks. A weekly market and six yearly fairs are held. *Mullinahone*, a small post-town, on the road between Callan and Fethard, population 1011. A considerable quantity of butter is sold here at the weekly market, and there are four yearly fairs for cattle and pigs. There are a church, a Roman Catholic chapel, a dispensary, and a loan-fund. *Newport*, a small market and post-town, on the road from Silvermines to Limerick, population 1114. The parish church is in the town; and there are a Roman Catholic chapel, a bridewell, a dispensary, and infantry barracks. There are four yearly fairs, one of them a large cattle fair. *Silvermines*, a village, about 5 miles S. from Nenagh, population about 600. It is surrounded by a mountainous district called the Silvermines, forming a part of the Keeper Mountains. Lead-mines were formerly worked here, the produce of which yielded an unusual quantity of silver; but in the parliamentary war of 1641 the works were destroyed, and the miners (chiefly foreigners) massacred. The working of the mines has been resumed of late years. The parish church and a Roman Catholic chapel are in the village, and there is a dispensary. There are four yearly fairs.

The county returns four members to the Imperial Parliament: two for the county at large, and one for each of the boroughs of Cashel and Clonmel. It is in the Leinster circuit. The assizes for the North Riding are held in Nenagh, for the South Riding in Clonmel, each of these towns having a county jail. Quarter sessions for the North Riding are held at Nenagh, Roscrea, and Thurles; for the South Riding at Clonmel, Carrick-on-Suir, Cashel, Clogheen, New Birmingham, Newport, Roscrea, Templemore, Thurles, and Tipperary. Petty sessions are held in 22 places. There are three stipendiary magistrates in the North Riding, two at Nenagh and one at Borris-o-Kane; and four in the South Riding, one each at Cahir, Carrick-on-Suir, Thurles, and Tipperary. The Lunatic Asylum is at Clonmel, the county infirmary at Cashel, and Fever hospitals are at Cahir, Carrick-on-Suir, Cashel, Clogheen, Clonmel, Roscrea, Templemore, Thurles, and Tipperary. There are 46 dispensaries in the county. Savings banks are at Cashel, Clonmel, Roscrea, and Thurles; and loan-funds at Cahir, Cashel, Fethard, Nenagh, Roscrea, and Tipperary. The Union work-houses are at Clonmel, Borris-o-Kane, Nenagh, Carrick-on-Suir, Cashel, Clogheen, Roscrea, Thurles, and Tipperary. The northern part of the county is in the military district of Limerick; the eastern part, including Clonmel and Carrick-on-Suir, is in the Kilkenny district. In September 1852 there were 199 National schools, attended by 14,839 male and 14,054 female children.

History and Antiquities.—Sir James Ware supposes that the Coriondi and the Udise, or rather Uodias, of Ptolemaeus, occupied this county and the adjacent ones to the west and south-west. We think it not improbable that the Brigantes may have occupied the south-eastern parts, while the Uodias occupied the south-western. In the division which prevailed before the English conquest, Tipperary appears to have been divided between the kingdom of Thomond, or North Munster, governed by princes of the Dalcaasian race; and Desmond, or South Munster, held by princes of the Eoganacht, or Eugonian, family; the princes of which two kingdoms appear to have possessed in alternate succession the paramount dominion of Munster. One of these sovereigns, Mukertach, in 1101, gave the city of Cashel to the church, dedicating it to God and St. Patrick.

In the English invasion, Henry II. (1172) summoned an assembly of the Irish prelates and princes at Cashel, where the sovereignty of the English king was recognised, and various regulations were made,

increasing the power of the clergy, and more completely assimilating the practices of the Irish Church to those of the Church of Rome. Tipperary was one of the districts erected into counties by King John (1210), during his expedition to Ireland, at the head of a considerable army. It is probable that the northern part at least of the county was part of the seat of war (1274-1277) between the O'Briens, who retained a portion of Thomond, and the Anglo-Norman, or as we may now term them, Anglo-Irish family of the De Clares. In 1328 the royal privileges in the county were granted to James Butler, earl of Carrick, now created also Earl of Ormond; these royalties were long retained by the earls of Ormond. The county was the scene of frequent contests between the Geraldines and the Butlers. The burning of the cathedral of Cashel was one of the charges brought against the Earl of Kildare in his examination before the privy council (1496). His reply to the charge was characteristic: "Spare your evidence," said he; "I did burn the church; for I thought the bishop had been in it." In the great civil war in 1642, Cahir, Cashel, Fethard, Clogheen, and Clonmel were all taken by Cromwell, and suffered severely. In the war of the Revolution, Clonmel was abandoned by the Jacobites on William's advance towards the south after the battle of the Boyne (1690).

The antiquities of the county consist chiefly of the ruins, more or less dilapidated, of castles and monastic buildings. The Mitchelstown stalactitic caverns, situated within two small hills, about 100 feet high, of gray-limestone, are remarkable and beautiful natural curiosities. They lie on the northern side of the Galtees Mountains, about 12 miles from Cahir, on the road from that town to Mitchelstown, in the county of Cork. They both contain many chambers and galleries, with singular stalactitic deposits, and the series called the New Caves, which are connected with each other, has a length from north to south of 870 feet, while the breadth in an east and west direction is 570 feet.

TIPPERARY, county of Tipperary, a market-town and the seat of a Poor-Law Union, is situated on the Arra, an affluent of the river Suir, and on the Waterford and Limerick road, in 52° 28' N. lat., 8° 8' W. long., distant 23 miles W.N.W. from Clonmel, 111 miles S.W. from Dublin by road, and 110 miles by the Great Southern and Western, and Limerick and Waterford railways. The population was 7001 in 1851. Tipperary Poor-Law Union comprises 80 electoral divisions, with an area of 179,987 acres, and a population in 1841 of 76,405; in 1851 it was 60,886. The town, which is agreeably embowered by the rich landscape of the Golden Vale of Tipperary, consists of one principal street, with some branches at right angles to it. It contains the parish church, a fine cruciform building, with a tower and spire 142 feet high, erected in 1830; a large Roman Catholic chapel, a Presbyterian meeting-house, a classical school on Erasmus Smith's foundation, two National schools, a neat market-house with a new-room over it, a new court-house and jail, a dispensary, fever hospital, and Union workhouse. A chalybeate spring in the neighbourhood is much frequented in summer. A good deal of farm produce is disposed of at the market. Quarter and petty sessions are held in the town. Fairs are held April 5th, June 24th, October 10th, and December 10th. A castle was built here by King John, which was soon after captured by the Prince of Thomond, one of the hereditary chiefs of the neighbouring territory.

TIPTON. [STAFFORDSHIRE.]

TIRRE, or TYREE. [ARGLESHIRE; HEBRIDES.]

TIRHUT. [HINDUSTAN.]

TIRLEMONT. [BRABANT, South.]

TIRNAN. [HUNGARY.]

TIRYNS, an ancient city of Argolis, in the Peloponnesus, situated in 37° 40' N. lat., 41° 1' E. long., on a low flat rocky hill which rises out of the level plain, at no great distance from the head of the Argolic Bay. According to an ancient tradition related by Strabo it was built by Proetus, an ancient king of Argolis, who in the construction of the citadel employed masons from Lycia, who were called Cyclopes. The Greeks attributed most architectural works which were characterised by rude massiveness and great antiquity to the Cyclopes, and such works were consequently described as Cyclopean. Homer ('Iliad,' ii. 559) calls Tiryns the 'walled,' or perhaps the 'wall-walled' Tiryns; and Pausanias (ii. 25), 1000 years after him, thus describes the remains as they existed in the second century of our era:—"The wall of the fortification, which still remains, is the work of the Cyclopes, and is built of unwrought stones, so large that not even the least of them could be even moved by a pair of mules. The intervals between them have been long since filled up with smaller stones, so as to make the whole mass solid and compact." The entire circuit of the walls still remains more or less preserved. Some of the masses of the stone are shaped by art, some of them are rectangular; but these are probably repairs, and not a part of the original work described by Pausanias. The finest specimens of the Cyclopean masonry are near the remains of the eastern gate, where a ramp, supported by a wall of the same kind, leads up to the gate. On one side of this gateway Colonel Leake measured a stone of 10·6 by 3·9 by 3·6. Here the wall is 24½ feet in thickness; in other parts from 20 to 23 feet.

The fortress, or citadel of Tiryns appears to have consisted of an upper and a lower inclosure of nearly equal dimensions, with an intermediate platform. The southern entrance led, by an ascent to the

left, to the upper level, and by a direct passage between the upper inclosure and the eastern wall of the fortress into the lower inclosure, having also a branch to the left into the middle platform, the entrance into which last was nearly opposite to the eastern gate already described. There was also a postern on the western side. In the eastern, as well as in the southern wall, there were galleries in the body of the wall of singular construction, the angle of the roof being formed by merely sloping the courses of the masonry. In the eastern wall there are two parallel passages, of which the outer has six recesses in the exterior wall. Of the upper inclosure very little remains. The fortress itself is only a third of a mile in circumference, so that in all probability it must have been no more than the citadel of the Tirynthii, the town itself being situated in a plain of 200 or 300 yards in breadth, on the south-west of the fortress: beyond this plain lies a marsh, extending a mile farther towards the sea.

Proetus, the reputed founder of Tiryns, was succeeded by his son Megapenthes, who is said to have transferred it to Perseus. Perseus transmitted it to his descendant Electryon, whose daughter Alcmena married Amphitryon. The latter prince was expelled from Tiryns by Sthenelus, king of Argos; but his son Hercules recovered his inheritance, and was in consequence called Tirynthius. (Diodorus, iv. 10; Pindar, 'Olymp.,' x. 87.) From Perseus to Amphitryon, Tiryns was a dependency of Mycenæ. At the time of the Trojan war it seems to have been subject to the kings of Argos. ('Iliad,' ii. 559.) Subsequently it was partially destroyed by the Argives, perhaps about B.C. 468. The Tirynthian citadel was called Licymnia, from Licymnius, a son of Electryon, and brother of Alcmena. (Pindar, 'Olymp.,' vii. 49.)

(Leake, *Morea*; Cramer, *Greece*; Gell, *Itinerary of the Morea and Argolis*; Dodwell, *Classical Tour*.)

TISBURY, Wiltshire, a village and the seat of a Poor-Law Union, in the parish of Tisbury, is situated near the left bank of the river Nadder, in 51° 4' N. lat., 2° 4' W. long., distant about 28 miles W. from Salisbury, and 109 miles W.S.W. from London. The living is a vicarage in the archdeaconry and diocese of Salisbury. Tisbury Poor-Law Union contains 20 parishes and townships, with an area of 42,494 acres, and a population in 1851 of 10,181. Besides the parish church, which is a spacious Norman structure, there are a chapel for Independents, and National schools. Fonthill Abbey, the once celebrated seat of Beckford, the author of 'Vathek,' is about two miles W. from Tisbury.

TITCHFIELD. [HAMPSHIRE.]

TITLESHALL. [NORFOLK.]

TIVERTON, Devonshire, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parish of Tiverton, is situated on the slope of a hill at the confluence of the rivers Ex and Loman, in 50° 54' N. lat., 3° 39' W. long., distant 13 miles S. by E. from Exeter, 165 miles W.S.W. from London by road, and 184 miles by the Great-Western and Bristol and Exeter railways. The population of the borough of Tiverton in 1851 was 11,144. The borough is governed by 6 aldermen and 18 councillors, of whom one is mayor; and returns two members to the Imperial Parliament. The livings are in the archdeaconry and diocese of Exeter. Tiverton Poor-Law Union contains 27 parishes and townships, with an area of 106,291 acres, and a population in 1851 of 38,521.

Tiverton is watered by a brook called the Town Leat, which rises above five miles north of the town. On the west side of the river Ex is a large suburb called Westex, very densely populated, and principally inhabited by operatives. One of the greatest attractions of the town is the trout-fishing in the two rivers. The oldest part of the parish church was built in 1073; the south front and porch, with other portions, were rebuilt, and the whole of the church new seated, in 1825. It is a noble edifice, 136 feet long, and 82 feet wide; the tower is 116 feet high. St. George's Chapel is of the Doric order. The Independents, Baptists, and Wesleyan Methodists have places of worship. There are in Tiverton Blundell's Free Grammar school; National schools; a British school; Chilcott's Endowed school for boys; a Blue-Coat school for boys, and a Blue-Coat school for girls. There are several almshouses and various minor charities.

The woollen trade of Tiverton was formerly very extensive, but early in the present century it yielded to the superior capabilities of the Yorkshire manufacturers. The cotton manufacture was subsequently introduced, but it soon declined. The making of bobbin-net introduced in 1816 is still carried on, and gives regular employment to a considerable number of persons, besides temporary employment to several hundred girls and women. A county court is held in the town. Tuesday and Saturday are the market-days; fairs are held on the second Tuesday after Whitsuntide, and on September the 29th. A spacious market-place was erected in 1830, with a suite of rooms for assemblies; there is also a theatre. Races are held annually on the Castle Meadows for two days in the month of August.

TIVOLI, the ancient *Tibur*, a town of the Comarca di Roma, 16 miles E.N.E. from Rome, is situated on the slope of a hill on the left bank of the Anio, or Teverone, just above the spot where that river falls by a succession of rapids into the lowlands of the Campagna. Tibur was a much more ancient city than Rome itself. Virgil, in relating the wars of the Latins and Rutuli against Æneas, speaks

repeatedly of Tibur. Coras and Catillus, two brothers of Tiburtus, the reputed founder of Tibur, fought against Æneas and his Trojan followers. ('Æneid,' vii., 670-672.) Pliny ('Hist. Nat.,' xvi. 87) mentions three old oak-trees, existing in his time, which were reported to be older than Tiburtus, the founder of Tibur, and were consecrated to him. According to a passage in Horace ('Od.,' i. 7), they were called 'Tiburni lucus.' The fane and grove of the Sibyl Albuca at Tibur are celebrated by Horace and Virgil, and her oracles were consulted from the oldest times.

In the early part of the history of Rome Tibur is mentioned as one of the principal towns of the Latin Confederation. It stood where it still stands, on the left bank of the Anio, which river divided the territory of the Latini from that of the Sabini, and it was strong by its situation between the mountain and the river. It was finally subjected by Rome, B.C. 337. [LATIUM.] During the Samnite wars the Romans made a road from Tibur over the Apennines to the country of the Peligni, which was called Via Valeria. The aqueducts of the Anio Vetus and Anio Novus, and of the Aqua Marcia, which supplied Rome with wholesome water, passed through the territory of Tibur, where their remains are still seen. The healthy and romantic situation of this district induced the wealthy Romans to construct in it handsome country residences. Scipio Æmilianus, Metellus Numidicus, the famous Marius, Mæcenas, Munatius Plancus, and Manlius Vopiscus, had their Tiburtine villas. The families of the Munatii, the Coponii, and the Plautii, which flourished at Rome in the latter times of the republic and under the first emperors, were from Tibur. The mausoleum of the Plautii (a massive round tower) is still seen at Ponte Lucano, a few miles from the town on the road to Rome.

Augustus used to visit Mæcenas at his villa at Tibur, and Suetonius ('Octav.,' 72) mentions his holding his tribunal under the porticoes of the splendid temple of Hercules, part of the cells of which is still seen behind the choir of the modern cathedral, which has been partly constructed with the materials of the ancient temple. Gellius (xix. 5) mentions a public library as annexed to the temple. Horace preferred Tibur to all other places of resort, and he had a country house in the neighbourhood, distinct from his Sabine farm at Digentia.

The emperor Hadrian constructed near Tibur a magnificent villa, of which extensive remains are still seen. Under his reign Getulius, a native of Tibur, and his wife Simphorosa, with their seven sons, being converts to Christianity, suffered martyrdom. Zenobia, queen of Palmyra, after her capture by Aurelian, was ordered to reside at Tibur, and here she lived many years. The grammarian Nonius Marcellus, who belongs to the 4th century, was a native of Tibur.

In A.D. 543 the Goths under Totila took Tibur, and slaughtered most of the inhabitants, including the bishop. During the Longobard dominion in Italy, Tibur was included in the duchy of Rome. After the fall of the Carolingian dynasty, Tibur, like most other towns of Central Italy, governed itself as a municipal community. Its territory, which extended westward about half-way between Tibur and Rome, embraced in the opposite direction the whole valley of the Anio as far as the borders of Naples. In the 12th century the Tiburtines were frequently at war with the abbots of Sublaqueum, now called Subiaco, who had assumed the civil jurisdiction over the upper part of the valley, of which they had already acquired by various grants the 'utile dominium.' In 1141 the Tiburtines acknowledged the anti-Pope Anacletus, and the people of Rome, who had had frequent border quarrels with them, seized this opportunity to assail their town with a considerable force. While they were trying to break open one of the gates, the inhabitants turned off part of the waters of the Anio, and made them fall with overwhelming force down the declivity upon the assailants, part of whom were swept away; and the citizens, rallying out at the same time, routed the remainder of the besiegers, who ran away, leaving behind their tents and baggage. In the following year the people of Tibur, being threatened with another attack, thought it prudent to make their peace with Pope Innocent II., and they swore allegiance to him, which so incensed the Romans, who were bent upon the destruction of Tibur, that they rose in arms against the pope, restored the senate, and proclaimed the republic. In 1145 Pope Eugenius III. took refuge at Tibur from the turbulence of the Roman people. During the subsequent dissensions between the emperor Frederick I. and the pope, the people of Tibur remained faithful to the latter. Frederick II., in his wars against the pope, held for a time possession of Tibur. After a course of desultory warfare between Rome and Tibur, a treaty was concluded and signed by the magistrates of both towns in August, 1259, by which the city of Rome secured the right of sending to Tibur a count, rector, or podestà; but the judges, the captain of the militia, and the councillors of the commune, continued to be chosen by the citizens of Tibur as heretofore. The town of Tibur was to pay to the senate of Rome an annual tribute. After this the people of Tibur remained attached to the pope. Pope Pius II. built a castle at Tivoli, which remains.

Tivoli is one of the few ancient towns of Latium which stand on its ancient site. The temple of the Sibyl, with its Corinthian pillars, still occupies its commanding position on a rock that overhangs the Valley of the Cascades; the temple of Hercules has been transformed into a cathedral; the Roman road, or Via Tiburtina, traverses the town; the Roman bridge called Ponte Celio, or Ponticelli, is still extant. There are considerable remains of the villa of Mæcenas near the

Cascate. A ruined octagonal building, with a circular interior, vulgarly called Tempio della Tosca, stands outside of the Roman gate, near the villa of Mæcenas. This building, according to Nibby, dates from the 4th century, and was a Christian church. On the walls are still remains of paintings representing our Saviour and the Blessed Virgin. The churches of San Andrea and La Carità date from the 5th century.

Tivoli is a bishop's see. It has a college, and a library of about 6000 volumes; several manufactories of iron, leather, and paper; and 6300 inhabitants. The surrounding hills are covered with olive-trees. The streets of the town are narrow and steep. Near Tivoli is the extensive Villa d'Este, constructed about the middle of the 16th century. It has all the formal magnificence of the gardens and pleasure-grounds of that age: its trees cut in architectural shapes, its mosaic-like parterres, its handsome fountains and water-works, its avenue of Italian pines, and its terraces, constitute a princely residence, suited to the character and style of its former owners. The mansion is adorned with frescoes by Zuccari and Musiano. The view from the terrace before the house is magnificent. The vines of Tivoli are famed for a superior sort of grape, called pisrutello and pergolase, which is much in request for the table. This grape is spoken of by Pliny the elder. ('Hist. Nat.,' xiv. 4.) The stone commonly called travertino, of which many of the buildings of Rome are built, is dug near Tivoli.

TLASCALA. [MEXICO.]

TLEMSSEN. [ALGÉRIE.]

TMOLUS. [LYDIA.]

TOBAGO, an island in the Columbian Archipelago, in 11° 16' N. lat., 60° 30' W. long., is the most southern of the Caribbee Islands, and lies about 25 miles N.N.E. from Trinidad, and 82 miles S.E. from Grenada. Its greatest length from north-east to south-west is 32 miles; the greatest breadth, 12 miles. The area is 97 square miles, or 62,080 acres, of which about 8000 acres were under cultivation in 1852. The population in 1852 was 14,794, of whom 190 were whites. Scarborough, the capital of the island, situated at the foot of a hill, on the south-east coast, has a population of about 3000. A mountainous ridge, 2000 feet high, at its north-eastern extremity, extends the whole length of the island, descending towards the south and west in a succession of conical heights and hills of no great elevation, which are separated from the coast by broken plains and lowlands. Eight rivers, with numerous tributaries, water all parts of the island. The rocks are chiefly limestone. The soil of the lower grounds is generally a rich dark mould, which, with the climate of the island, is extremely favourable to the cultivation of the sugar-cane. On both sides of the island there are bays admitting vessels of from 150 to 250 tons burden; vessels of the largest size find shelter in King's Bay on the south-east coast, and in the bays of Man of War, Courland, and Sandy Point, on the north-east coast.

The climate is agreeably tempered by the sea breeze, but in the less open parts the heat is oppressive, and acting on the extensive marshes, produces at times much fatal sickness. The rate of mortality among the white troops has been found during a series of years to be above 15 per cent., being double that of the other West India islands. The climate however has considerably improved with the increase of cleared lands. At Fort King George, which occupies the summit of a hill above Scarborough, the mean temperature of the year is 79° Fahr. The hurricanes, so frequent in other West India islands, seldom reach Tobago, which however suffered considerably from one of those visitations in October, 1847. The most valuable productions of the island are the sugar-cane, coffee, cotton, Indian and Guinea corn, cocoa-nuts, figs, pine-apples, pomegranates, oranges, lemons, bananas, grapes, tamarinds, papaws, cashew-nuts, melons, and pumpkins. Potatoes, yams, onions, and cassavas are grown. Horses, asses, cattle, and sheep have multiplied greatly in the island, and wild hogs are very numerous. Cultivation is confined to the low grounds and a few patches on the declivity of the hills, and the chief article of produce and export is sugar.

Tobago is included in the government of the Windward Islands, and its affairs are administered by a lieutenant-governor, a legislative council of 9 members, and a house of assembly of 16 members. It possesses nine courts of judicature. The revenue is derived from import tonnage and lighthouse dues, export duties, assessed taxes, and an income and land tax. The exports are chiefly sugar, rum, and molasses, with small quantities of cotton and arrow root. The imports are cotton, linen, and woollen manufactures, hardware, earthenware, saddlery, stationery, soap and candles, flour, fish, and lumber. In 1852 the revenue of the island was 7476*l.* The colonial expenditure was 7677*l.* The value of the imports was 53,519*l.* The value of the exports was 56,831*l.* The shipping inward amounted to 8172 tons; the shipping outward amounted to 9296 tons. Tobago is in the diocese of Barbadoes and the archdeaconry of Trinidad, and is divided into three rectories, comprising five churches and chapels. The Wesleyan Methodists have five chapels, and the Moravians two. The Church of England has eight schools in the island; the Wesleyan Methodists have six schools; the Moravians have two schools.

Tobago was discovered by Columbus in 1496, and derives its name from the pipe ('tobacco') used by the natives in smoking the herb 'kohiba' (tobacco). At an early period the British flag was planted

on the island, and James I. granted it to the Earl of Pembroke, but no attempt was made by the English to colonise it. In 1632 the Dutch formed a settlement and called the island New Walcheren, but the Spaniards from Trinidad attacked and destroyed the colony. Twenty years afterwards the Dutch returned, and soon after a party of about 100 Courlanders arrived, the Duke of Courland, godson of James I., having obtained a grant of the island. In 1763 it was ceded by France to England. In 1781 the French captured it. In 1793 General Cuyler, with 2000 men, took the island; and it has ever since been a British possession.

TOBERCERRY, or TUBBERCERRY, county of Sligo, Ireland, a market-town, and the seat of a Poor-Law Union, is situated in 54° 4' N. lat., 8° 39' W. long., distant 21 miles S.S.W. from Sligo, and 128 miles W.N.W. from Dublin by road. The population in 1851 was 755. Tobercurry Poor-Law Union comprises 21 electoral divisions, with an area of 125,773 acres, and a population in 1841 of 87,983; in 1851 of 26,081. The town, a small place in a bleak and craggy district, contains a neat chapel of ease, built in 1830, a Roman Catholic chapel, a court-house, market-house, dispensary, constabulary barracks, and the Union workhouse. Petty sessions are held monthly. Fairs are held seven times a year.

TOBERMORY, the town and port of the island of Mull.

TOBOLSK, Government of. [SIBERIA.]

TOBOLSK, the capital of the government of Tobolsk, in Asiatic Russia, is situated in 58° 12' N. lat., 68° 15' E. long., at the junction of the Tobol with the Irtysh, 582 feet above the level of the Caspian Sea. It is divided into the upper and the lower town: the former built on a hill on the east bank of the Irtysh; the latter, which is the larger, occupies the interval between the ridge and the river, and is exposed to inundations. The communication between the upper and lower town is by a gently rising causeway laid with planks, which is practicable for carriages. At the foot of the ridge some springs issue, with temperatures varying from 41° 45' to 42° 35'; this temperature is however much higher than the mean temperature of the earth, which is here only 35° 05' Fahr.

Tobolsk is the see of a Russian archbishop, the metropolitan of all Siberia, and has a theological seminary, an establishment for the education of schoolmasters, a gymnasium, and several other schools; some printing-offices, and a theatre. The only manufactures of importance are of Russia leather; the Russian and Tartar women make linen, carpets, and woollen-cloth. There are in all twenty-three churches, two mosques, and two convents. Among the other buildings are the cathedral, which is surmounted by five domes; the archbishop's palace, the palace of the governor of western Siberia, the prison, and the monument of the Cossak hero Yermak, who conquered this part of Siberia for Russia in the 16th century. The population amounts to 20,000, exclusive of the soldiers, the clergy, and the exiles, for whom there is a house of correction. The bulk of the population is composed of Russians, Tartars, and Germans. The Tartars inhabit the lower town, which is defended by a ditch and palisade. The upper town, or city proper, is surrounded by a strong brick wall. The style of living and the manners of the upper classes of society are not very different from those of Europe. The inhabitants are distinguished for their hospitality to strangers. Game is so extremely abundant in the vicinity of the city, that partridges and grouse are the daily and almost necessary food of all classes. The capercazie, or cock of the wood, is found in great numbers near the city only in winter, but it is brought from the country of the Ostiaks to the north, all the year round, as well as the black cock and other game.

Though Tobolsk has no manufactures, it has a very considerable transit-trade between European Russia and China. The European traders arrive in the spring with the goods destined for the Chinese, and at the end of summer the boats return with their cargoes for Moscow and St. Petersburg. The merchants from Tartary and Bokhara arrive at the beginning of the winter, and remain at Tobolsk till the spring. All the sums collected as tribute from the wandering tribes of the immense deserts are brought to Tobolsk, where there are extensive magazines for the deposition of the various descriptions of goods.

TOCANTINS, RIO. [BRASIL.]

TOCCO. [ABRUZZO.]

TODDINGTON. [BEDFORDSHIRE.]

TODI. [PERUGIA.]

TODMORDEN, Lancashire, a market-town and the seat of a Poor-Law Union, in the parish of Rochdale, is situated in 53° 48' N. lat., 2° 6' W. long., distant 53 miles W.S.W. from Lancaster, 202 miles N.W. by N. from London by road, and 210 miles by the North-Western and Lancashire railways. The population of the town of Todmorden in 1851 was 4632. The living is a perpetual curacy, in the archdeaconry and diocese of Manchester. Todmorden Poor-Law Union contains six townships, with an area of 84,994 acres, and a population in 1851 of 29,727.

Todmorden is situated chiefly on the left bank of the Calder River, which here divides Lancashire from Yorkshire. The town is lighted with gas. The manufactures of the town are important. There are several large cotton-spinning and manufacturing establishments, with powerful machinery; silk, woollen, and worsted works; and manufactories of steam-engines and machinery. Coal-works, chemical-

works, corn-mills, and iron- and brass-foundries, afford considerable employment. The old church is now only used for reading the burial service in. There are a modern church, and chapels for Independents, Baptists, Wesleyan, Primitive, New Connexion, and Association Methodists, Inghamites, Quakers, and Unitarians. There are a Grammar school, National schools, an Odd Fellows' hall, and a Rechabites' hall. A county court is held in the town. A market for corn is held on Thursday, and one for meat and vegetables on Saturday; also a monthly cattle-market. Fairs are held on the Thursday before Easter and on September 27th.

TOGGENBURG. [GALL, ST.]

TOKAT, or TOCAT, an open town of Asia Minor, situated in 40° 16' N. lat., 36° 45' E. long., is inclosed by hills on three sides, the only opening being to the north-east. A small stream runs through the town in the same direction, which joins the Tokat-Su (ancient Iris) a little below the city. The houses are built in some instances with unburnt bricks, but the greater part are merely wooden sheds, all are covered with tiles, and none of the roofs are flat. The streets are paved, but filthy, narrow, and, from the eaves of the houses nearly meeting overhead, very gloomy. Still some of the edifices are of good size, and parts of the town are tolerably neat for a Turkish city. Fires are frequent in Tokat. The luxuriant vegetation of the gardens in and near the town, the filthiness of the streets, and the abundance of fruit, occasion malignant fevers in summer and autumn. Tokat is under the Bey of Sivas. It contains about 8730 families, chiefly Musulmans and Armenians. An Armenian bishop resides here, who has under him 7 churches and 80 priests. The place has lost much of its former commercial importance, and the import trade is now limited to supplying the local consumption of the neighbouring villages. There are extensive cotton-dyeing and printing establishments; the cloths are partly those of the country, partly British calicoes and muslins. Copper from the mines of Arghana is brought to Tokat to be refined; and there are manufactures of the raw silk brought from Amasia and other places.

TOKAY, an ill-built town in Upper Hungary, on the river Bodrog, at its confluence with the Theis, contains 4500 inhabitants. It is situated in 48° 7' N. lat., 21° 25' E. long., at the foot of the Hegyalla, a chain of hills which is about 80 miles in length, and about 700 feet above the level of the sea. The whole of it, to the height of 250 feet, is planted with vines, which Bela IV. had brought to Hungary by Italian colonists. At the foot of the several vineyards of the Hegyalla the places are situated, the inhabitants of which are employed in the cultivation of the vine: the wines of Tallya, Tarczal, Zombor, Tolsva, and Mad, all which are in the neighbourhood of Tokay, are considered as the best. The whole annual produce is estimated at three to four millions of wine gallons. All these wines of the Hegyalla are comprehended under the name of Tokay.

Tokay, though a small town, is a place of considerable trade, not only as being the centre of the wine trade, but likewise having great magazines of salt, which is exported to all parts of the kingdom. The annual fairs are much frequented.

TOLEDO, Province of. [CASTILLA LA NUEVA.]

TOLEDO, a city of Spain, capital of the modern province of Toledo, in Castilla la Nueva, is situated on the north bank of the Tagus, in 39° 52' N. lat., 4° W. long., 42 miles S.S.W. from the city of Madrid. It is the see of an archbishop, who is primate of all Spain. The population in 1845 was 13,431.

The city of Toledo stands on a rocky eminence, nearly surrounded by the deep and narrow channel in which the Tagus flows, and is protected by a Moorish wall on the north or land side. The Tagus is here crossed by two fine stone bridges. The bridge of Alcantara was built by the Moors, and is a noble work, consisting of a single arch, which spans the whole stream, and affords a fine view of the river flowing far below, and of the castle, which stands on an eminence above. The streets are very narrow and crooked. The houses, which are mostly built in the Moorish style, have generally only one or two stories, and the apartments are arranged round a court. In this court, which is frequently ornamented with a fountain and flowers, and over which an awning is thrown, the family usually sit in summertime. The principal square is planted with trees and furnished with seats, and is much frequented as a promenade. The environs of the city are bare and unproductive, but the neighbouring mountains contain some green valleys, where the wealthy inhabitants have their country-houses.

The cathedral is one of the largest and finest in Spain. It stands on the site of the Moorish mosque, and the foundations were laid in 1258 by Fernando III. of Castilla, and Rodrigo Ximenez, at that time archbishop of Toledo. It consists of five naves, and measures 404 feet in length and 204 feet in width. The naves are supported by 84 colossal pillars, and the whole church is paved with white and blue marble. The architecture is of different periods and of different styles, but is for the most part of early gothic. The double clerestories produce an effect of singular lightness and elegance, and every window is filled with painted glass of the richest colours. Several of the chapels are exceedingly beautiful, and contain interesting monuments of kings and queens and other distinguished persons. The cathedral of Toledo was formerly celebrated for its jewels and its silver and gold ornaments, but most of them disappeared during the Peninsular

War, and the rest have since been disposed of by the government. Annexed to the cathedral is the archbishop's palace, which contains a very fine library rich in old manuscripts.

Besides the cathedral, there are several churches and conventual buildings of fine gothic architecture; and there are also some interesting structures of Moorish architecture. The convent and church of San Juan de los Reyes was built in 1476 by Fernando and Isabel, in commemoration of the victory gained over the Portuguese at Toro in that year. At a later period, the chains and fetters which had been worn by the Christian captives of Ronda and Granada were, after the taking of the latter city in 1492, suspended to the outside walls of this building, where they are still to be seen. The church and the cloister, built in the richest gothic, are particularly admired. The founding hospital of Santa Cruz, founded by Cardinal Mendoza in 1304—that of St. John the Baptist, called also El Hospital de Afuera, because it stands outside the city walls, built and richly endowed by Cardinal Tavera—San Juan de la Penitencia, which is a foundation of Cardinal Ximenez—are all well worthy of inspection. La Iglesia del Tránsito, which was formerly a Jewish synagogue, built during the reign of Pedro the Cruel, at the expense of his treasurer, Sammel Levi, is a curious specimen of Saracenic architecture. The church called Santa Maria la Blanca was once a Moorish mosque.

The Alcazar, or royal palace, stands on an eminence, at the foot of which flows the Tagus. It was built by Alfonso X. on the site of the Moorish palace, and was almost entirely rebuilt by Carlos V., who employed the best Spanish architects of his time. His son, Felipe II., made also considerable additions to it, which were principally directed by his chief architect Herrera. At present it is in a very dilapidated state. The court-yard, with its pillars and vaulted corridors, and the double staircase, are in a ruinous and neglected condition. The view from the top is very extensive, showing the whole of the city, the course of the river, and the brown waste of undulating ground which surrounds the city.

Toledo has a university, four colleges, several hospitals and asylums, a town-hall, and a mint. The Fabrica de Armas, where the famous swords of Toledo were and are still manufactured, is on the bank of the Tagus, about 2 miles S.W. from the city. Only some 70 or 80 workmen are now employed, but the fine temper, polish, and elasticity of the blades, are as perfect as in the times of their highest reputation. Other manufactures are coarse woollens, paper, guitar-strings, common glass, and leather.

Toledo is a very ancient city. It was the *Toletum* of the Romans, and portions of walls and an amphitheatre built by them still remain. It was taken by the Goths in the year 467, and by the Moors in 714. Under the Moors it became a city of the first class, second only to Cordova, the capital of the Mohammedan empire. It was taken by Alfonso VI., king of Castilla and Leon, in May 1085. It became afterwards a very flourishing city, and had at one time a population of 200,000, and contained, besides the cathedral, 20 parish churches, 6 other churches, 9 chapels, 3 colleges, 14 convents, 23 nunneries, and 10 hospitals.

(Madox, *Diccionario Geographico de España*; Ford, *Handbook of Spain*.)

TOLEDO, U.S. [OHIO.]

TOLENTINO. [MACERATA.]

TOLLESBURY. [ESSEX.]

TOLLESHUNT D'ARCY. [ESSEX.]

TOLOSA. [BASQUE PROVINCES.]

TOLUCA. [MEXICO.]

TOMASZOW. [POLAND.]

TOMBIGBEE, RIVER. [ALABAMA.]

TOMSK. [SIBERIA.]

TONGUE, KYLE OF. [SUTHERLANDSHIRE.]

TONBRIDGE, or TUNBRIDGE, Kent, a market-town and the seat of a Poor-Law Union, in the parish of Tonbridge, is situated chiefly on the left bank of the river Medway, in 51° 12' N. lat., 0° 16' E. long., distant 13 miles S.W. from Maidstone, 30 miles S.E. from London by road, and 41 miles by the London and South-Eastern railway. The population of the town of Tonbridge in 1851 was 4539. The living is a vicarage in the archdeaconry of Maidstone and diocese of Canterbury. Tonbridge Poor-Law Union contains 10 parishes and townships, with an area of 46,179 acres, and a population in 1851 of 28,545.

In the time of the Conqueror a castle was built at this place by Richard Fitz-Gilbert, afterwards earl of Clare; and the town rose under the protection of the castle. In the civil troubles of the reign of Henry III. the castle was besieged and taken from its owner, Gilbert Rufus, earl of Clare, Gloucester, and Hertford, by Prince Edward. During the siege the garrison burnt the town. There was a priory at Tonbridge, founded by Richard de Clare, first earl of Hertford, for canons of St. Augustine. The town consists chiefly of one street, which is broad, and lighted with gas. There are several bridges over the Medway, which is navigable for barges up to this point, and is here divided into various arms. Near the principal bridge is a wharf, whence the timber brought from the Weald is sent down the Medway. The church is a large and handsome fabric, in various styles of architecture. The Independents, Baptists, and Wesleyan Methodists have places of worship. There are a well-endowed Free Grammar school,

in the management of the Skinners' Company; National and Infant schools; a mechanics institute; a literary and scientific institution, with reading-room and library; a savings bank; and some almshouses. The town-hall and the market-house are good buildings. The market is held on the first and third Tuesdays in each month, and a fair on October 11th. The trade of the town is in coal and timber brought from Maidstone for the supply of the neighbourhood; gunpowder and fancy wooden wares (called Tonbridge wares, from the town) are made to a small extent. The ruins of the castle, which are near one of the bridges, consist of the gate-house, flanked with round towers, and tolerably perfect, and of the artificial mound on which the keep stood: the outer walls inclosed an area of six acres.

TONBRIDGE (or TUNBRIDGE) WELLS, Kent, a fashionable watering-place and market-town, is situated in 51° 7' N. lat., 0° 15' E. long., distant 18 miles S.W. by S. from Maidstone, 36 miles S.S.W. from London by road, and 46 miles by the Hastings branch of the London and South-Eastern railway. The population of the town in 1851 was 10,587. The living is a perpetual curacy in the archdeaconry of Maidstone and diocese of Canterbury.

The chalybeate spring, to which the town of Tonbridge Wells owes its origin, was first noticed in the reign of James I., when the wells were sunk and inclosed, but the visitors lodged at Tonbridge town, six miles distant. The soil is dry, and the air of the place is healthy, though somewhat cold. When Henrietta, queen of Charles I., visited the Wells, she and her suite remained under tents. Permanent habitations were subsequently erected in the immediate vicinity of the Wells. After the Restoration the place rapidly increased. A chapel was built at Tonbridge Wells dedicated to King Charles the Martyr; a subscription school was established, and an assembly-room, coffee-house, bowling-greens, and other places of amusement, were erected in the neighbourhood. The Wells, properly so called, are in the centre of the town, and near them are the markets, the chapel, the assembly-rooms, and the public walks or parades. The town-hall is a commodious building. Different groups of houses, forming boundaries of the town, are distinguished by the names of Mount Zion, Mount Ephraim, Mount Pleasant, and Bishop's Down. Trinity church is a handsome stone building, erected in 1829. Christchurch is a new gothic edifice. There is also an Episcopal chapel. The Roman Catholics, Wesleyan Methodists, Baptists, Independents, and the Countess of Huntingdon's Connexion, have places of worship. There are a Church of England Proprietary school; National, British, and Infant schools; a literary and scientific institute; a useful knowledge society; several libraries; an infirmary and dispensary; and a savings bank. A corn and general market is held on Friday. Horse-races are held annually. A horticultural society holds several exhibitions in the course of the year. Tonbridge Wells is famous for toys and small articles turned in holly, plum-tree, cherry-tree, sycamore, and various foreign woods, known as Tonbridge ware.

TONGA ISLANDS. [FRIENDLY ISLANDS.]

TONNEINS. [LOT-ET-GARONNE.]

TONNERRE. [YONNE.]

TONNING. [SCHLESWIG.]

TONQUIN. [COCHIN-CHINA.]

TONSBERG. [AGGERHUUS.]

TOOROOKHANSK. [SIBERIA.]

TOOTING. [SURREY.]

TOPCLIFFE. [YORKSHIRE.]

TÖPLITZ, a town in Bohemia, celebrated for its warm sulphureous springs, is situated in 50° 38' N. lat., 13° 50' E. long. The name is Slavonian, and given by the Bohemians and Croats to warm springs in general. This small town, which has not above 2800 inhabitants, is situated on a stream called the Saubach, in a beautiful plain or valley four leagues in length and one league in breadth, formed by the Erzgebirge and the Mittelgebirge. The town forms an irregular quadrangle, is about half a league in circuit, and has three gates. The principal buildings are—1, the palace of Prince Clary, to whom the town belongs, with an extensive garden and park open to the public, in which there is a ball-room and a pretty theatre; 2, the church of St. John the Baptist; 3, the town-hall, built in 1806; 4, the Chapel of the Cross, outside of one of the gates. The town is connected by a row of handsome houses with the village of Schönau. There are several springs both in the town and in Schönau, each of which supplies several public and private baths distributed in different establishments. "The quantity of water which the principal spring yields," says Dr. Granville, "is one million one hundred and eighty-nine thousand six hundred and seventy cubic inches in an hour." The temperature of these springs is 113° to 119° Fahrenheit in Töplitz; in Schönau 101° to 104°. The hot springs of Töplitz are very beneficial in cases of suppressed gout, chronic rheumatism, diseases of the joints, contracted limbs, old wounds, obstinate cutaneous eruptions, and paralytic affections. The waters have been used almost exclusively for bathing; of late they have been recommended and used internally. There are about 90 bathing establishments, many of which are fine buildings. The Austrian and Prussian governments have erected military hospitals. Between 10,000 and 20,000 visitors, including sometimes imperial and royal personages, visit Töplitz in the autumn. Gaming in Töplitz is wholly prohibited.

TOPPERSFIELD. [ESSEX.]

TOPSHAM, Devonshire, a market-town and seaport, in the parish of Topsham, is situated on the left bank of the river Ex, at the junction of the Clist, in 50° 41' N. lat., 8° 28' W. long., distant about 3 miles S.E. from Exeter, and 170 miles W.S.W. from London by road. The population of the town of Topsham in 1851 was 2717. The living is a perpetual curacy in the archdeaconry and diocese of Exeter.

Topsham was anciently called Apsam, or Apsom. The town extends about a mile along the bank of the Ex, with a quay at the lower end. The parish church is situated in the middle of the town, on a lofty cliff which rises abruptly from the river. In the church are monuments by Chantrey in memory of Admiral Sir J. T. Duckworth, and of his son, Colonel George Duckworth. The Wesleyan Methodists, Independents, and Unitarians have places of worship. There are National schools partly endowed. Topsham has a small coasting-trade, and likewise imports Baltic and American timber. Ship-building, and the manufacture of anchors, cables, and cordage, are carried on. The market is held on Saturday; and a fair on the first Wednesday in August.

TORBAY. [DEVONSHIRE; TORQUAY.]

TORGAU. [MERSEBURG.]

TORIGNY. [MANCHE.]

TORINO, an administrative division of Piedmont, is bounded N. by the province of Ivrea, W. by the Cottian Alps which divide it from France, S. by the provinces of Saluzzo and Alba, and E. by those of Asti and Vercelli. The division comprises the province of Torino, Pignerol, and Susa, the area and population of which are as follows:—

Provinces.	Area in Square Miles.	Population in 1848.
Torino	1,117	411,959
Pignerol	593	133,233
Susa	539	81,634
Total	2,249	627,026

The province of Torino extends on both banks of the Po, and along the watercourses of the Dora Ripuaria, the Sangone, the lesser Stura, the Oro, and other streams which come from the Alps and flow into the Po. The valley of Lanzo, north-west of Turin, which is drained by the lesser Stura, and reaches to the foot of Mount Iscran, which divides it from Savoy, is one of the finest and most picturesque districts in Piedmont. It supplies Turin with cattle and the produce of the dairy. It has also mines of iron and other minerals.

The principal towns, besides the capital, are the following:—*Chieri*, a well-built town of 12,000 inhabitants, situated on the hills of Monferrato, 6 miles E. from Turin, has several churches and convents with good paintings, and some noblemen's palaces, and a very fruitful territory. It is one of the chief markets for silk in Piedmont. *Moncalieri*, on the right bank of the Po, S. of Turin, on the high road to Alexandria and Genoa, has a royal palace, and 7300 inhabitants. *Carignano*, a town of 7000 inhabitants, in a fertile plain on the left bank of the Po, 11 miles S. from Turin, on the high road to Nice. *Carmagnola*, on the right bank of the Po, has 12,000 inhabitants, and is a great market for silk. *Chivasso*, a town of 7000 inhabitants, on the left bank of the Po, near the confluence of the river Orco, 12 miles N.E. from Turin, on the high road to Milan, in a plain abounding with corn and cattle. *Rivarolo*, in the valley of the Orco, has 5000 inhabitants. *Poirino*, on the road to Alexandria, has 5600 inhabitants. The province of Turin is very fertile and thickly inhabited. It is traversed by several railroads which connect the capital with Genoa, Cuneo, Pignerol, and Susa.

The province of Pignerol comprises the south-western part of the division, and lies between the Po and the Cottian Alps, branches of which also bound it on the north and south. In the south-east of the province are some level plains, but the greater part of the surface presents deep valleys screened by lofty ridges, covered partly with fine forest timber. The chief products are wheat, maize, fruit, good wine, chestnuts, and silk. Horned-cattle are numerous and of good breed. The province is traversed by the Clusone, a feeder of the Po; their confluence is on the eastern border between Villa-Franca and Carmagnola. The chief town, *Pignerol*, or *Pinerolo*, is situated on the Clusone, at the foot of the Alps, about 20 miles S.W. from Turin, with which it is connected by railway. It is a walled-town with a noble square, a fine cathedral, several churches and convents, large barracks, and a population of about 8000. The principal manufactures are broadcloth, paper, leather, iron, and silk.

The province of Susa is noticed under **SUSA**.

Biella, which has been referred to Torino, forms part of the administrative division of **VERCELLI**.

TORINO, **TURIN**, the capital of Piedmont, residence of the King of Sardinia, and place of meeting of the national parliament, is situated in 45° 5' N. lat., 7° 44' E. long., on the left bank of the Po (which here runs in a northern direction), and at the confluence of the Dora Ripuaria, in a wide and fertile valley, between the lower offsets of the Cottian Alps on the west, and the hills of Monferrato, which

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rise immediately above the right bank of the Po. The valley opens to the north-east into the wide plain of Lombardy. The population of the city is about 140,000.

Turin is one of the most regularly-built towns in Europe; most of the streets being in straight lines and intersecting each other at right angles, and the squares being also of a regular form. The streets are washed during the night by water drawn from the Dora. The buildings, though massive and lofty, are, generally speaking, plain, chiefly built of brick, and their appearance is uniform and monotonous. The town is about one mile and a quarter in length, and little more than half a mile in its greatest breadth; it was formerly surrounded by ramparts, which have been razed of late years, and additional buildings and promenades have been constructed in their place, and the city is still extending beyond its former limits. The citadel, which is regularly constructed, and one of the strongest in Italy, lies outside of the town to the westward. The principal streets of Turin are those leading to the four entrances of the town, which are—*Porta del Po*, on the road to Alexandria and Genoa; *Porta Susina*, on the western or *Mont Cenis* road; *Porta Nova*, on the southern road to Saluzzo and Nice; and *Porta Vittoria*, leading to Ivrea, Vercelli, Novara, and the other northern provinces. Several of the principal streets and squares are lined with arcades.

The principal square is the *Piazza Castello*, in the centre of the town, so called from an old castle, or palace, which stands in the middle of it, and which was formerly the residence of the dukes of Savoy. It has a handsome façade, ornamented with sculptures. The northern side of the square is formed by the modern royal palace, a vast structure, with gardens at the back of it: the apartments are handsome, and contain a rich collection of Flemish and Italian paintings and a library. Adjoining to the palace is the cathedral of San Giovanni Battista, with the annexed handsome *rotonda* chapel, *Del Sudario*, cased with black marble, and adorned with gilt bronzes. On the eastern side of the square is the great theatre, one of the largest and finest in Italy, constructed by the architect *Alfieri*. Another remarkable building of Turin is the University, built by king Victor Amadeus at the beginning of the 18th century. It is a fine building, with a spacious court, surrounded by arcades, which are lined with ancient bassi-relievi, and inscriptions fixed in the walls. The library of the university contains above 112,000 volumes and about 2000 manuscripts. The Gallery of ancient Statues contains many remarkable objects of ancient art. The Cabinet of Medals, one of the richest in Europe, contains 30,000 pieces. The Egyptian Museum, which is in the building of the Royal Academy of Sciences, is one of the richest collections of the kind in Europe. It contains among others the colossal statue of *Ozymandias*, 15 feet high; those of *Thothmes II.* and of *Amunoph II.*: and that of *Remeses II.*, or *Sesostris*, which is considered one of the handsomest specimens of Egyptian sculpture; a collection of Egyptian paintings on stone, a quantity of utensils, articles of dress and ornaments, numerous mummies, and a vast collection of papyri and manuscripts on linen, found in the catacombs of Thebes: among others, a funeral ritual, 60 feet in length; and the fragments of a chronological table of the dynasties of the kings of Egypt previous to the 18th dynasty.

The University consists of five faculties—divinity, law, medicine, surgery, and arts. There are also belonging to the University a museum of natural history, a museum of anatomy, a chemical laboratory and hydraulic apparatus, and a rich botanical garden at the *Valentino*, outside of the town, near the banks of the Po. The Royal Academy of Sciences consists of forty members, besides non-resident and corresponding members: it is divided into two classes, mathematical and physical sciences, and moral, historical, and philological sciences. The academy, which was instituted in 1783, has published many volumes of memoirs.

Turin has also an observatory, an academy of the fine arts, a philharmonic academy, a royal agricultural society, and a military college. There are communal schools, divided into classes, in each district of the town; and also schools for drawing applied to the mechanical arts; and schools for the deaf and dumb and the blind. Turin has also a great number of well managed charitable institutions, and a *monte-di-pietà*, which lends money to the poor without interest upon pledge.

Turin is an archbishop's see, whose province extends over the sees of Alba, Acqui, Asti, Cuneo, Fossano, Mondovì, Ivrea, Pinerolo, Saluzzo, and Susa. The metropolitan diocese contains the chapters of Turin, Moncalieri, Rivoli, Chieri, Carmagnola, Sandalmazzo, Giaveno, and Savigliano; and the clerical seminaries, or colleges of Turin, Giaveno, Erà, and Chieri. The archbishop formerly had a court for ecclesiastical suits; but by recent legislation these institutions have been suppressed in Piedmont, and the clergy made amenable to the common law tribunals of the country.

Turin contains a great number of churches, few of which are remarkable for their external architecture. The most worthy of notice are those of San Filippo Neri; the *Consolata*; the *Corpus Domini*, which is very richly decorated; *Santa Teresa*; *Santa Cristina*; *La Trinità*; and *San Carlo Borromeo*. There are numerous convents and nunneries; but these by a recent law have been all suppressed, with the exception of those belonging to orders such as the Brothers of the Christian Schools, the Sisters of Charity, and a few others,

whose inmates are engaged in works of active benevolence. In the suburb, on the right bank of the Po, facing the bridge, is the fine church Della Gran Madre di Dio, raised by the municipality of Turin, in memory of the restoration of the dynasty of Savoy, in 1814. It is an imitation of the Pantheon of Rome: it is cased with marble, and adorned with marble pillars. Higher up on the hill is the Capuchin church and convent Del Monte, beautifully situated, and enjoying a splendid view of the plain of Turin, the town, and the river, and of the crescent of the snow-capped Alps, from the lofty pyramid of Mont Viso on the west, to the picturesque group of Monte Rosa on the north-east. On a higher hill on the same side of the Po, but farther north, about 2000 feet above the sea, and 5 miles from Turin, is the Royal Basilica of La Superga (super terga montium), containing the tombs of the princes of the house of Savoy. It is a handsome structure; its lofty dome is seen at a great distance, and is the first object that strikes the traveller on approaching Turin. Every year, on the 8th of September, a great festival takes place at Superga: high mass is performed, at which the court generally attends, and multitudes from Turin and the country around repair to the spot. A handsome Protestant church has been recently opened in Turin.

The manufactures of Turin consist chiefly of woollens, silks, hosiery, leather, paper, chinaware, carriages, arms, and tapestry.

Turin has several theatres, besides the royal theatre already mentioned: the theatre of Carignano, for the opera; the theatre d'Angennes, for dramatic pieces unaccompanied by music; and the new theatre. The coffee-houses of Turin are numerous. Besides the buildings already mentioned may be named as worthy of notice the palace of Carignano, the palace Birago di Borgaro, and that of the Marquis de Prié. The royal country-house, called Vigna della Regina is a pretty villa finely situated on the hill on the right bank of the Po. The royal hunting palace and park of Stupinigi, 4 miles from Turin, are very fine; the palace was begun by Giuvara, and enlarged by Alfieri, the architect. At La Venaria, once a royal residence, about 8 miles north of Turin, is the royal riding-school, stud, and veterinary college. The King of Sardinia has also palaces at Moncalieri, on the south side of the Po, about 5 miles from Turin, and at Rivoli, 10 miles from the capital, on the high road to Susa and Mont Cenis; besides the royal palaces of Chambery and Gance, which he uses when he visits those parts of his dominions.

Turin is connected by railways with Genoa, Alessandria, Novara, Cuneo, Pignerol, and Susa; and by electro-telegraphic wires with all the chief towns of Europa. Diligences and post-coaches, called velociferi, run between the capital and the provincial towns that do not lie on any of the railway lines. The common language of conversation among the natives is the harsh Piedmontese dialect; but Italian is the written and official language, and educated people speak both Italian and French. The climate of Turin is colder in winter than that of Genoa or Rome.

The ancient Taurini were a tribe of the Ligures, who inhabited the country between the Po and the Cottian Alps. They were the first people whom Hannibal met after descending the Alps, and he took their town by force previous to advancing to the Ticinus. (Livy, xxi. 39.) They and the other Ligurians north of the Apennines were subdued by the Romans about B.C. 166. Augustus sent a Roman colony to the town of the Taurini, which then took the name of *Augusta Taurinorum*. Under the Longobards Turin was the head town of a duchy: under the Carlovingians it gave name to a county of considerable extent and importance. In the 10th century Odelric Manfredi was count of Turin, as marquis of Italy. His daughter the marchioness Adelaide married Oddo, count of Maurienne, and from this marriage the house of Savoy derives its origin. [SARDINIAN STATES.] During the war of the investitures Turin gained a kind of independence, but in the early part of the 12th century the emperor Lotharius reduced it again to subjection; and appointed a count for its political governor. The emperor Frederick I. made over, in 1159, to Charles, bishop of Turin, all his imperial rights over that town and the territory for ten miles round. The bishops and commune of Turin remained for about a century after this independent of, often at variance with, the counts of Savoy, who at last asserted again their suzerainty over the town and the right of appointing its chief magistrates. From that time the history of Turin is merged into that of the dynasty of Savoy, whose permanent residence it became ultimately. [SARDINIAN STATES.]

TORNEA. [FINLAND.]

TORNEA-ELF. [BOTENIA.]

TORO. [LEON.]

TORONTO, province of Canada, North America, an incorporated city and the capital of Canada West, is situated in the Home District, about 40 miles from the head of Lake Ontario, on its northern shore, in 43° 35' N. lat., 79° 20' W. long., distant 399 miles S.W. by W. from Montreal, 560 miles S.W. from Quebec. The city is governed by ten aldermen and ten councillors, one of whom is mayor; and returns two members to the provincial parliament. The population was 1200 in 1817; in 1836 it was 9652; in 1851 it was 30,775.

The city of Toronto occupies a low and gently-rising site, fronting a fine bay, and extends nearly three miles along shore, and above a

mile inland, the streets intersecting each other at right angles. Many of the houses are neat frame buildings, the greater number are of brick, and there are some superior stone structures. The streets are well paved and lighted with gas, and there is a plentiful supply of good water from wells. The cathedral church of St. George was destroyed by fire in 1849, and has been rebuilt. Trinity church is a spacious structure of brick, erected by means of a donation from an English gentleman, in order to provide free sittings for the poor. St. Paul's church is a handsome gothic structure with a lofty slender spire. The Roman Catholic cathedral is a vast and richly-finished brick pile, having attached a handsome residence for the bishop. The Endowed Scotch church is a small well-built structure, with a turret; the Free Scotch church is a fine brick edifice, with a lofty well-proportioned spire; the United Presbyterian church, built in 1849, at a cost of 2500*l.*, is a handsome gothic structure of brick, with a tower and octagonal turret 80 feet high. There are two Independent and two Methodist churches; one Reformed Presbyterian, one Baptist, one Primitive Methodist, and one African Methodist church. The educational institutions are—the University of Toronto; the Upper Canada College, an excellent classical seminary, supplementary to the district Grammar schools; the Normal and Model schools and education offices for Upper Canada; the Episcopal college; the Free church college for general tuition and theological training; the United Presbyterian and Independent Divinity halls; and the common schools of the city districts. There is a mechanics institute in the city. The government house is a handsome brick mansion, in a well-planted enclosure; the halls of the Legislative Council and Legislative Assembly, a brick edifice, consisting of a centre and wings, occupy a terrace fronting the bay; the court-house is a plain building in the centre of the town; an elegant stone structure, containing the town-hall and assembly-rooms, has been recently erected on the site of one destroyed by fire; Osgood Hall, comprising law-courts and lecture-rooms, is a handsome Grecian structure of stone, occupying a spacious square adjoining the University grounds; the jail is a substantial building of granite on the radiating plan; the hospital, the market, the mechanics hall, and the custom-house are respectable brick buildings. The old barracks are at the west end of the town on the shore of the bay, and about a mile farther the new barracks, or garrison, form an extensive group of buildings at a point where a regular battery has been constructed to command the entrance to the harbour. At a short distance inland from the garrison is the Provincial Lunatic Asylum.

The harbour of Toronto is formed by a long flat strip of land called the Island, extending from the east side of the town in a south-westerly direction about six miles, and terminating in Gibraltar Point, on which there is a lighthouse. The bay, which is about a mile and a half wide, is entered by a channel near the northern shore. There are several wharfs and landing piers, lined in some places with extensive storehouses. Toronto is the centre of the wholesale trade to an extensive back country, from which a large proportion of the exported grain and flour is shipped at the harbour. Schooners, sloops, and propellers ply between the port and Oswego, Rochester, Niagara, Hamilton, and the other places on Lake Ontario, and ascend to the upper lakes. Propellers convey great quantities of flour to Montreal, and some proceed as far as Halifax or Nova Scotia. Mail and passenger steamers sail daily across the lake, up to Hamilton and down the St. Lawrence to Montreal. There are in the city a brewery, a foundry, and a considerable establishment for the manufacture of furniture by machinery. Extensive nurseries are in the neighbourhood, and some flour-mills are on the Don, a small river which flows from the north, and has a marshy outlet at the head of the bay.

Toronto has been since 1849, alternately with Quebec, for a period of four years, the residency of the governor of the province and the seat of the legislature. It contains the supreme courts of law for Canada West, the courts of Queen's Bench, of Common Pleas, and Chancery, besides the assize courts for the district, and mayor and police courts. The city is for the most part remarkably healthy, and the extremes of temperature are seldom oppressive. The mean temperature of summer is 63.8° Fahr., of winter 26.4°, of the whole year 44.4°. The town was founded by Governor Simcoe in 1794, under the name of York, which name it retained till 1824, when it was incorporated by Sir John Colborne, who gave it the name of the district—Toronto.

TORPHICHEN. [LINLITHGOWSHIRE.]

TORPOINT. [CORNWALL.]

TORQUAY, Devonshire, a small sea-port and watering-place on the coast of the English Channel, in the parish of Tor-Moham, or Tor-Moham, and hundred of Haytor, is situated in 50° 28' N. lat., 3° 33' W. long., distant about 80 miles S. from Exeter, 194 miles W.S.W. from London by road, and 219 miles by the Great Western and South Devon railways. The population of the town of Torquay in 1851 was 7903. The living is a perpetual curacy in the archdeaconry of Totnes and diocese of Exeter.

About fifty years ago Torquay consisted only of a few mean huts inhabited by fishermen. The mildness of the climate, and the favourable position and picturesque character of Torquay, induced many eminent physicians to recommend it as a winter residence for invalids. The abundance of building stone, which is found in the vicinity, pre-

sents great facilities for building. The town has consequently very much increased. Torquay lies in a small sheltered recess at the north-eastern extremity of Torbay. On all sides landward it is inclosed by lofty hills, on the sides of which the houses are built. The town is lighted with gas and paved, but the supply of water is insufficient. There are two chapels of the Establishment, a Free Episcopal church, chapels for Independents and Baptists, and National schools. Torquay contains assembly-rooms, a club-house, subscription- and reading-rooms, a museum, and baths. The pier, which is used also as a promenade, incloses a small but convenient tidal harbour. The rise of tide at spring-tides is about 18 feet. The imports consist chiefly of American timber, coals and culm, Portland stone, corn, bricks, slates, and general goods; the exports include earthenware, elder, elm and oak timber, and yellow-cobra.

TORRE DELL'ANNUNZIATA. [NAPLES, Province of.]

TORRE DEL GRECO. [NAPLES, Province of.]

TORRES STRAIT was named after the Spanish navigator Luis Vaez de Torres, who was the first to pass through it in 1606. It is situated between the most north-eastern part of Australia and the southern coast of Papua or New Guinea. Properly speaking it does not exceed 80 miles in length from east to west, and is situated between 142° and 142° 40' E. long. The most northern point of Australia, Cape York, is in 10° 42' S. lat., and the opposite coast of Papua is 9° 15' S. lat. Thus the extent of the strait from south to north is about 100 miles. Navigators however give to the strait a much greater extent, as they consider it to begin on the east with the Pandora Entrance, situated between extensive reefs near 144° 40' E. long., so that, according to them, Torres Strait extends from 142° to 144° 40' E. long., or 180 statute miles from east to west. The navigation of Torres Strait though practicable is rendered dangerous and tedious by innumerable shoals, ledges, coral reefs, and islands. Among the islands the principal groups are the Prince of Wales Islands, Mulgrave Islands, and Banks Islands. The strait can only be navigated between March and September, during the south-east monsoon; in the other six months of the year, or during the period of the north-west monsoon, the fogs prevail in the strait to such an extent, that no vessel can venture to enter among its almost innumerable reefs and rocks.

Two different routes are taken by vessels in sailing to Torres Strait, and in passing through it. They are distinguished as the Inner and Outer route. The Inner route lies along the coast of Australia, and between it and the Great Barrier Reefs, which begin, according to Flinders, in 22° 50' S. lat., 152° 40' E. long., and extend nearly parallel to the coast of Australia to Torres Strait, through 14 degrees of latitude and 9 degrees of longitude, and are as to length not equalled in any part of the world. Their breadth is about 50 or 60 miles in their southern part, but diminishes to the northward. The arm of the sea inclosed between the barrier and the coast is from 60 to 80 miles wide towards the south, but it contracts gradually to 20 miles near the great opening, and is still narrower farther north. Numerous islands are scattered in this inclosed space, but no other coral-banks occur except those which surround some of the islands. Being sheltered from the strong swell of the Pacific by the barrier, the water is smooth, and it also offers the advantage of regular soundings, its depth not being very unequal, and varying only from 60 fathoms at the southern end to 80 fathoms at the great opening, and to 20 fathoms at Cape Tribulation. This was the common route of communication between Sydney and Port Essington. Vessels sailing by this track pass through Torres Strait by sailing round Cape York and through Endeavour Strait. The last-mentioned strait is formed by the mainland of Australia and some of the islets belonging to the Prince of Wales Islands, and constitutes the southern part of Torres Strait. It is about 80 miles long, and from two to six miles wide, and offers a safe passage for vessels of good size.

The Outer route, which lies through the Corallian Sea, is dangerous, owing to the great number of reefs which are dispersed over it north of the southern tropic. After passing through Pandora Entrance the vessels enter Torres Strait by sailing north of the long reef, situated at the entrance of the strait (144° E. long.), to Murray Islands, and traverse the strait by sailing west-south-west between innumerable low islands, shoals, and rocks. They do not enter Endeavour Strait, but keep at the distance of about 20 miles from it to the northward, until they have passed on the north of Wednesday and Good's Islands, when they leave the strait and enter the Indian Sea.

TORRES VEDRAS. [ESTREMADEIRA, Portuguese.]

TORRINGTON, or GREAT TORRINGTON, Devonshire, a market-town, municipal borough, and the seat of a Poor-Law Union, in the parish of Great Torrington, is situated on a hill on the right bank of the river Torridge, in 50° 57' N. lat., 4° 10' W. long., distant 85 miles S.W. from Exeter and 194 miles W. by S. from London. The population in 1851 was 3308. The borough is governed by 4 aldermen and 12 councillors, of whom one is mayor. The living is a perpetual curacy in the archdeaconry of Barnstaple and diocese of Exeter. Torrington Poor-Law Union contains 23 parishes and townships, with an area of 81,472 acres, and a population in 1851 of 17,491.

Torrington is a town of some antiquity. A castle formerly stood on its south side; the site is now a bowling-green. The town is lighted with gas. The church is perpendicular in its general style, with some

traces of decorated character. The Wesleyan Methodists, Independents, and Baptists have places of worship. There are National schools. A county court is held in the town. The chief manufacture is that of gloves, which are made of Lisle thread, silk, and kid; some cloth is made. The market-day is Saturday. Several fairs are held in the course of the year.

TORRISDALSL-ELF. [NORWAY.]

TORSCHOK. [TWEE.]

TORTOLA. [VIRGIN ISLANDS.]

TORTONA, a province of Piedmont in the administrative division of Alessandria, is bounded N. by the Po, which divides it from the province of Mortara; E. by the provinces of Voghera and Bobbio; S. by the Ligurian Apennines, which separate it from the duchy of Genoa; and W. by the province of Alessandria. The rivers of torrents, Scrivia and Curone, both affluents of the Po, rise in the Ligurian Apennines, and cross the province of Tortona from south to north. The surface is generally level except towards the south, which is covered by branches of the Apennines. The soil is fertile, and yields rice, wheat, flax, hemp, fruits, wine, silk, &c. The province contains 257 square miles, with a population of 58,858. The head town, Tortona, built upon an eminence near the right bank of the Scrivia, 12 miles E. from Alessandria, is a bishop's see, and has about 9000 inhabitants, several churches and convents, and a royal college. The citadel of Tortona was built by King Victor Amadeus III., and destroyed by the French in the revolutionary wars. West of Tortona, in the direction of Alessandria, is the plain of Marengo, with the villages of Marengo and San Giuliano, where Bonaparte defeated the Austrians in June, 1800. Tortona was anciently a town of the Ligurians, and was called Derton or Dertona. After the Roman conquest it became a colony (Pliny, 'Hist.' iii. 7), and was a place of importance, being situated on the road leading from the banks of the Po to the coast of Liguria and Southern Gaul. The other towns of the province of Tortona are—*Osténeso di Sorivia*, a town of 5500 inhabitants, north of Tortona, and near the confluence of the Scrivia and the Po, and *Sala*, a town of 4000 inhabitants, near the confluence of the Bormida and the Po. In these Apennine districts in the south of the province the inhabitants are mostly shepherds and goatherds, and their cheese is an article of exportation, as likewise are the mushrooms which grow abundantly here, and are dried and exported chiefly to Genoa.

TORTOSA. [CATALUÑA.]

TORTUGA. [ANTILLES, *Venezuela*.]

TORTUGAS. [FLORIDA.]

TOTANA. [MURCIA.]

TOTHAM, GREAT. [ESSEX.]

TOTNES, or TOTNESS, Devonshire, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parish of Totnes, is pleasantly situated on the slope of a hill on the left bank of the river Dart, in 50° 25' N. lat., 8° 41' W. long., distant 23 miles S. by W. from Exeter, 196 miles W.S.W. from London by road, and 223 miles by the Great Western railway. The population of the borough in 1851 was 4419. The borough is governed by 4 aldermen and 12 councillors, one of whom is mayor; and returns two members to the Imperial Parliament. Totnes Poor-Law Union contains 28 parishes and townships, with an area of 98,842 acres, and a population in 1851 of 34,022.

Totnes is mentioned in the Exon Domesday as held by Jubal de Toteneis, who founded here a Clunian priory, and erected a castle. A handsome modern bridge of three arches over the river Dart connects Totnes with the small suburb of Bridgetown. Totnes is lighted with gas. The principal street runs down the hill to the bridge, and is paved; several of the houses are ancient, with upper stories projecting over the footpath, and supported by pillars. In the main street is an ancient gateway, which was purchased a few years ago by Lord Seymour (now the Duke of Somerset) for 1000*l.* and presented to the town for the use of a literary institute and library. On an artificial mound, commanding a fine view of the town and the surrounding country, is the circular keep of the ancient castle. The Church Walk, or Exchange, consists of a large room with ten windows fronting the street, supported by granite pillars: underneath is a colonnade for the merchants. The church is a handsome structure of late perpendicular, having a well-proportioned tower with pinnacles at the west end. There are chapels for Independents and Wesleyan Methodists. There are a Grammar school; an endowed Blue-Coat Charity school; National, British, and Infant schools; and a mechanics institute with a library. There are a guildhall and a small jail, a handsome and spacious market-house, a small theatre, and an assembly-room. An island in the river Dart, just below the bridge, is laid out in an ornamental manner as a garden with walks. The extensive grounds around the castle are open to the public. Totnes has some trade in corn, coal, and culm, which are imported, and in cider, which is exported. There is a salmon fishery in the river above the town. The market is held on Saturday; a great cattle-market monthly; fairs are held on May 12th and October 28th. Races are held yearly. Totnes has sent two members to Parliament from the 23rd of Edward I.

TOTONICAPAN. [GUATEMALA.]

TOTTENHAM. [MIDDLESEX.]

TOUL. [MEURTHE.]
TOULE. [FINISTÈRE.]

TOULON, a seaport-town and naval harbour in France, on the coast of the Mediterranean, capital of the fourth arrondissement in the department of Var, 428 miles in a direct line S.S.E. from Paris, is situated in 43° 7' 18" N. lat., 5° 56' E. long., and has 45,570 inhabitants in the commune, according to the census of 1851.

Toulon existed in the time of the Romans, and is noticed as a harbour in the Itinerary of Antoninus, under the name of *Telo Martius*. The geographer of Ravenna calls it simply Telo; and from the 'Notitia Dignitatum per Gallias,' it appears that the principal government dye-house in Gaul was here. (Bouquet, 'Recueil des Historiens des Gaules et de la France,' tom. i.) A bishopric was established here in the 4th century, which continued till the Revolution: the bishop was a suffragan of the archbishop of Arles.

In the middle ages Toulon was repeatedly ruined by the Saracens, and as often recovered from the disaster. Louis XII., to protect it from the pirates of Barbary, commenced the erection of a large tower, which was completed by François I. In the year 1536 it was taken by the Constable of Bourbon, then commanding the imperial army. Henri IV. strengthened the fortifications of the town, and formed a harbour for merchant vessels. Louis XIV., designing to make it one of the barriers of France on the side of Italy and the Mediterranean, established the royal dockyard, and caused the whole town to be fortified by Vauban. It was attacked without success in 1707 by the Duke of Savoy by land at the head of a formidable army, and by the combined English and Dutch fleets by sea. In 1793 it was occupied by a detachment of marines from the English and Spanish fleets then cruising off the port, and was subsequently garrisoned by a strong force of the English and their allies and of the French royalists. It was soon besieged by the French, the artillery being directed by Napoleon Bonaparte. The capture of General O'Hara, and the taking of Fort Eguillette, on a point of land between the inner and the outer road, obliged the allies to evacuate the town, after burning the arsenal and carrying away or burning nearly all the vessels in the harbour. The town, in consequence of its having been given up to the allies by the townsmen, lost its rank of capital of the department, which has never been restored to it.

Toulon is open on the south side to the harbours and road, but is sheltered on the north by the lofty Mount Pharon, and on the east and west by hills of less elevation: from its position, the heat in summer is very great. The road is an inlet of the Mediterranean, having its opening towards the east; and is divided into two parts, the inner and the outer road, by two headlands, which extend into the road on each side so as to form a narrow strait: on the north side of the inner road are the Old Harbour, or mercantile harbour, on the east, constructed by Henri IV.; and on the west the Naval Harbour, constructed by Louis XIV. North of these two harbours is the town. These two inner harbours are separated from the inner road and from each other by moles or piers: they have each a narrow entrance, passable only by one vessel at a time; and there is a passage communicating between the two with a swing-bridge. The Old Harbour is surrounded by a large and handsome quay, along which, on the north or town side, are a number of good houses. The New or Naval Harbour is surrounded by the various buildings connected with it as a naval port. On the north side are the dockyard and arsenal, containing the various storehouses for the navy; covered slips for building vessels; sailmakers' and other workshops; armouries, in which is a fine collection of ancient arms; the naval school, with a fine library, and a collection of models of vessels of every kind; the school of naval artillery; and, on the north side of the dockyard, the rope manufactory, above 2000 feet long, built of freestone, with a vaulted roof. On the east side of the naval port, and at the eastern extremity of the south side, are the bagne, or convict-house, and the hospital for convicts: they are built on the moles which inclose the harbour, and usually contain from 4000 to 5000 convicts. In the same quarter are three basins for the construction or repair of vessels. The dépôt of artillery is on the west side of the harbour, and is inclosed in one of the bastions of the town. Both town and harbours are surrounded, except towards the road, by a wall strengthened by bastions, and by a ditch. Without the ditch, on the west side, adjacent to the dockyard, is the government bakehouse. At the south-eastern angle of the town new basins, wet docks, and yards for the construction of steamers and sailing-vessels have been formed: this quarter is entered from the quay along the commercial harbour by a new gate.

The town is entered by two gates, the Gate of France on the north-west and the Gate of Italy on the north-east, through which the road from Genoa, Nice, and Fréjus enters. Adjacent to the town, on the north side, is a walled inclosure, called the Entrenched Camp of St. Anne: a great number of detached outworks occupy various positions round the town, and are considered to form so well arranged a system of defence, that the place is regarded as impregnable. The dépôt of artillery for the land service occupies one of the bastions on the north side of the town, and there are handsome barracks. The Champ de Mars, or exercise ground, is on the north-east side, without the walls.

The older part of the town is in the centre, and is surrounded on the north and east by a wide street or boulevard, apparently occupying the site of the old town-wall. The southern part of this boulevard is

called the Cours, which runs from the harbour past the former cathedral into the Rue-la-Fayette, forming a long symmetrical promenade bordered with fine trees. East of the Cours are streets whose regularity indicates their modern origin; and on the west side of the old town, and north of the dockyard, are other new streets regularly laid out. The streets are well paved and the houses well built; there are some squares, but all small, except the Place-d'Armes. Both streets and squares are furnished with fountains.

Toulon has the ex-cathedral of Notre-Dame, now called L'Eglise-Majeure, and three other parish churches—St. Jean, St. Pierre, and St. Louis. Notre-Dame is decorated by several works of the sculptor Puget. The front of the church of St. Louis has a good colonnade. Adjacent to the Eglise-Majeure is the college, which is a good building. There are a marine hospital, a military hospital, a foundling, and another hospital; the ex-episcopal palace; the office of the maritime prefect, forming one side of the Place-d'Armes; a court-house; an exchange; a town-hall on the quay of the old or mercantile port; a theatre; and several bathing establishments. Some of these are outside of the walls of the town. Toulon has a public library of 8000 volumes, a medical library, a museum of natural history, a botanic garden, an observatory established in the naval hospital, a savings bank, a mont-de-piété, and several charitable institutions. The lazaretto is on the south side of the outer road, at some distance from the town.

The business of the place connected with the government establishments is very great. There are also manufactures of soap, coarse woollens, morocco leather, chocolate, vermicelli, and candles. Merchant vessels are built. Trade is carried on in wine, brandy, oil, olives, dried fruits, corn, flour, and other productions of the neighbourhood. The low grounds in the neighbourhood produce excellent vegetables, figs, olives, oranges, grapes, and capers.

Toulon ranks as the second naval port in France, and is the residence of a number of officers connected with the administration of the naval department. It has a tribunal of first instance, a tribunal of commerce, and a marine tribunal. Steamers ply regularly between Toulon and Algiers, Corsica, Italy, and most parts of the Mediterranean.

TOULON-SUR-ARROUX. [SAÔNE-ET-LOIRE.]

TOULOUSE, the ancient *Tolosa*, a city in France, formerly capital of the province of Languedoc, now of the department of Haute-Garonne, is situated at a distance of 363 miles S. from Paris, in 43° 35' 40" N. lat., 1° 26' 35" E. long., and had 85,554 inhabitants in the commune at the census of 1851.

Tolosa belonged to the Volca Tectosages, a Celtic nation. An enormous treasure in gold and silver, deposited in the temples or consecrated places of the city, was seized by the Romans under Cæpio, B.C. 106. (Anlus Gellius, 'Noctes Atticæ,' III. ix.) Toulouse was afterwards subject to the Romans, the Visigoths, and the Franks, and in the middle ages had counts of its own, who were potentates of great importance in the south of France. [LANGUEDOC.] The last historical event of importance connected with it was the battle fought (April 10th, 1814) between the allied army under the Duke of Wellington and the French under Marshal Soult, who was defeated, and obliged to evacuate the town.

Toulouse is situated on the right bank of the Garonne, which, flowing from the south, bends westward, forming a crescent, on the concave side of which the town stands. As the Canal-du-Midi, or Canal-de-Languedoc, which unites the Garonne with the Mediterranean, opens into the river a short distance below the town, and has its course for some distance parallel to the river, the site of the town and its suburbs is a peninsula, inclosed between the Garonne, close to the town, on the west, and the canal at a little distance on the north and east. On the south side, but at some distance, are the heights of Pech-David; and on the east, beyond the canal, and between it and the little river Lers (which flows parallel to the canal, and falls into the Garonne below it), are the heights of Mont Rave, on which the fiercest part of the battle of Toulouse, in 1814, took place.

The town and the suburb of St.-Cyprien, which is on the opposite bank of the river, are inclosed by walls, erected in the middle ages, and are united by a bridge of seven arches, the Pont-Neuf, about 860 feet long, erected under Louis XIV., from the designs of Souffron, which crosses the river in the middle of the bend. The river is lined with handsome quays. The walls, which have nine gates, were in 1814 tolerably entire (Napier, 'Peninsular War'), but are fast disappearing in the progress of improvement. Besides St.-Cyprien, there are several other suburbs. On the south-east side of the town, between the suburbs St.-Etienne and St.-Michel, is the Esplanade, a circular space surrounded by trees, planted so as to form four concentric circles, and having six avenues radiating from it, each with four rows of trees, forming three alleys. The streets of the town are narrow, crooked, ill paved, and dirty; the squares irregular in form; the houses high, built generally of brick in an old rambling style, but many are constructed with planks. Improvements however have been recently effected. Of the squares, the Place-Royale, Place-St.-George, and Place-Angoulême are the handsomest. Numerous detached fountains, some of which are very handsome, and a hundred fountains issuing from walls, serve to cleanse and refresh the streets.

The principal public buildings are the cathedral, the capitol or Hôtel-de-Ville, the ex-archiepiscopal palace, and the church of the Grands

Augustina, now occupied as a museum. The nave and portal of the cathedral are more ancient than the choir. The choir, erected in the 16th century as part of a new edifice designed to replace the older one, is described by the same author as one of the most beautiful in France. The choir is not in a line with the nave; so that the whole structure has a very irregular figure. The town-hall, or capitol, is almost entirely a modern building, erected on the site of a more ancient one. It has a front of about 380 feet long by 128 feet high, and is of most imposing appearance. A gallery termed 'Galerie des Illustres,' is set apart for busts of those persons, natives of the city or connected with it, whom the town has thought worthy of the honour of a place.

The ex-palace of the archbishop, now occupied by the prefect of the department, is the handsomest modern building after the capitol. The museum in the cloister and church of the Grands Augustins contains a number of antiquities, which have been collected in the department. Besides these edifices may be noticed the theatre, the new court-houses, the veterinary school, the church of La-Dorade, built on the site of an ancient heathen temple, and that of St. Saturnin, the interior of which is very impressive; the vast hospitals of the Hôtel-Dieu and St. Joseph-de-la-Grave, the Bazacle and Château corn-mills, the Calvinist chapel, the synagogue, the abattoirs, and the bridge and bas-relief at the junction of the Canal-du-Midi and the Canal-de-Brienne. This latter canal, which is very short, connects the Garonne at the mill of Bazacle, adjacent to the town wall, with the Canal-du-Midi. In the Île-de-Tounis, a small island in the Garonne opposite the town, and indeed forming part of it (for the island is covered with buildings), are the ruins of the Castle of Narbonnais, the former residence of the counts of Toulouse. Toulouse has scarcely any remains of Roman buildings. There are a large public garden, a botanic garden, rich especially in plants from the Pyrenees, and in exotics, where courses on instruction in botany are given; an observatory and a public walk, 'Cours Dillon,' in the Faubourg St.-Cyprien, on the bank of the Garonne.

Toulouse has bell-foundries and copper-mills, a very large manufactory of sickles, files, and other hardwares, and a number of establishments for different branches of the iron-manufacture; printing-offices, oil-mills, brandy-distilleries, breweries, dye-houses, tan-yards, rope-walks, flour-mills; manufactories of wax, wax-candles, paper-hangings, oil-cloth, musical strings, morocco leather, cotton- and woollen-yarn, blankets, counterpanes, printed cottons, hats, straw-hats, earthenware, porcelain, and snuff. Trade is carried on with Spain, with the ports of Bordeaux and Marseille, and with the interior: the Spanish trade is the most important. The chief export is of wheat and flour, the produce of the surrounding country, which was eminent for its productiveness in corn as early as in the time of Cæsar. ('De Bell. Gall.' i. 10.) Toulouse is celebrated also for its duck-liver pies, of which a great number are sent to other parts of France. There are two great markets in the year for flowers and salt-pork; and eight fairs, including four or eight days each, and two of three days; one of the eight-day fairs is an important fair for wool and woollen-cloth. By means of the Canal-du-Midi and the Garonne, Toulouse has ready water communication with the Mediterranean and Atlantic ports of France. A railway in course of construction from Bordeaux to Cette passes through Toulouse.

Toulouse is the chief town of the department; it is the seat of a High Court, whose jurisdiction comprehends the departments of Ariège, Haute-Garonne, Tarn, and Tarn-et-Garonne, and of a University-Academy, the limits of which embrace the departments just named, and also those of Aveyron, Gers, Lot, and Hautes-Pyrénées. It is also the head-quarters of the 13th Military Division, comprehending the departments of Haute-Garonne, Lot, Tarn, and Tarn-et-Garonne. It has an assize-court, a chamber and tribunal of commerce, a tribunal of first instance, a mint, and several fiscal government offices. There are a royal cannon foundry, an arsenal, and an artillery school.

St. Saturninus, the first bishop of Toulouse, suffered martyrdom, A.D. 250; the city did not attain to metropolitan rank till the 14th century. The provinces of Toulouse and Narbonne are under the archbishop of Toulouse and Narbonne. The archdiocese includes the department of Haute-Garonne, and the archbishop's suffragans are the bishops of Montauban, Pamiers, and Carcassonne.

Toulouse possesses many establishments for public instruction; and there are several learned societies which distribute prizes. The most eminent of these is the Académie des Jeux Floraux, or Society of the Floral Games, instituted in 1828. The poetical contests held by the society were either established or revived by Clémence Isaure, a young lady of family, who devoted her property to form a perpetual endowment for these games, which are still kept up. There are an academy of inscriptions, sciences, and belles-lettres; an academy of painting, sculpture, and architecture; an endowed college, a seminary for the priesthood, a secondary school of medicine and surgery, schools of chemistry, and midwifery; and societies of medicine, of the fine arts, and of agriculture. Toulouse has a public library containing about 60,000 volumes, and many printing and publishing offices, a botanic garden, a departmental nursery, a mont-de-piété, two hospitals, an orphan asylum, and an observatory, where courses of instruction on astronomy are given.

TOURCOING. [NORD.]

TOURNAY (*Doornik*), an important town in the province of Hainault, in the kingdom of Belgium, 160 miles by railway S.W. from Brussels, and 47 miles S. from Ghent. This town was called *Tornacous* in the 5th century, when it was seized by the barbarians who overran Gaul. It was among the early acquisitions of the Franks, and was for a while the capital of Clovia. It was besieged and taken (1513) by the English under Henry VIII. Having reverted to the French, it was again taken (1521) by the count of Nassau, one of the generals of the emperor Charles V. and ceded by the treaty of Madrid (1525) to the emperor. During the religious troubles of the Netherlands, the Protestants committed great disorders here (1566); and the town, having joined in the revolt against Spain, was taken (1581) by the Duke of Parma, and remained under the dominion of Spain. It was taken by Louis XIV. (1687) and ceded to France by the peace of Aix-la-Chapelle (1688); but having been again taken (1709) by the allies under Marlborough and Eugene, it was at the peace of Utrecht (1713) ceded with the rest of the Spanish Netherlands to Austria. It was taken (1745) by the French under Louis XV., but restored at the peace of Aix-la-Chapelle, 1748. It was repeatedly taken (1792-94) in the early part of the war of the French revolution.

Tournay is situated on the Schelde, which divides the town into two parts, the old town on the left bank and the new town on the right: the old town occupies the site of the Tornacous of the ancients; the new town is of later origin, and is distinguished from the old by the neatness and straightness of its streets, by its wall-built houses, and by its handsome quay planted with trees, which forms the most frequented promenade of the city. The cathedral in the old town is a large and fine gothic building with several towers, surmounted with spires. The interior of the church is adorned with some of the paintings of Rubens, several fine marble sculptures, and a profusion of finely executed ornamental carvings. The tomb of the Frankish king Childéric I. was discovered nearly two centuries ago, in demolishing an old house, near the cathedral. The church of St.-Martin, the episcopal palace, the town-hall, the bell-tower, and the hospital for old clergymen, are among the other principal edifices. The town is fortified, and is entered by seven gates: it has several suburbs.

The population of Tournay is about 40,000. The manufactures of the town are important, and comprehend woollen-stuffs, cotton-yarn, printed cottons, dimities and other cotton goods, carpets, hosiery, linen, swanakin, paper, hats, leather, earthenware, porcelain, oil, liqueurs, bronze, &c. There are dye-houses and lime-kilns, and several large flour-mills. Considerable trade is carried on. Vessels of 150 tons reach the town by the Schelde, and it is connected by railways with all the important towns of Belgium and the north of France. The town has a commercial court, a chamber of commerce, an exchange, a theatre, an academy of drawing, sculpture, and architecture, an orphan-house, five hospitals, several churches, and a public library of 22,000 volumes. Tournay is the seat of a bishopric which dates from the 5th century; the bishop is a suffragan of the archbishop of Mechelen or Malines.

TOURNON. [LOT-ET-GARONNE.]

TOURNUS. [SAÛNE-ET-LOIRE.]

TOURS. [INDRE-ET-LOIRE.]

TOW-LAW. [DURHAM.]

TOWCESTER, Northamptonshire, a market-town and the seat of a Poor-Law Union, in the parish of Towcester, is situated on the right bank of the river Tow, in 52° 8' N. lat., 0° 59' W. long., distant 8 miles S.S.W. from Northampton, 60 miles N.W. from London by road. The population of the town in 1851 was 2478. The living is a vicarage in the archdeaconry of Northampton and diocese of Peterborough. Towcester Poor-Law Union contains 23 parishes and townships, with an area of 42,218 acres, and a population in 1851 of 12,806.

Towcester appears to have been the Roman station, *Lactodorum*. The town contains some well-built houses and shops, and is lighted with gas. The church is a neat building, with a tower 90 feet high; the nave is early English, the chancel decorated, and the rest of the church perpendicular in style. There are chapels for Wesleyan Methodists, Baptists, and Independents, a Grammar school, and National schools. The manufacture of pillow-lace, and of boots and shoes for exportation, are the chief employments in the town. The market is on Tuesday; fairs are held on May 13th, October 29th, and on Shrove Tuesday. A county court is held in the town.

TOWY, RIVER. [CAERMARTHENSHIRE.]

TOWYN. [MERIONETHSHIRE.]

TRAJANO'POLI, a small town in European Turkey, situated on the Maritza between Adrianople and Enos, and a place of no importance except that it marks the site of the ancient *Trajanopolis*. The ancient town was most probably built and adorned with beautiful buildings by the emperor Trajan. Trajanopolis was situated on the Hebrus, at a little distance north of the pass which is formed by this river through the range of Mount Rhodope, and about 40 miles from its mouth. In the 4th century A.D. Trajanopolis was still a considerable town, and so it was in the time of Constantine Porphyrogenitus. An ancient aqueduct still remains near Trajanopoli.

TRAJANO'POLIS, or SELINUS, was the most western town of Cilicia. The emperor Trajanus having died at Selinus, this town was for some time called Trajanopolis. It was situated at the mouth

the river Selinus, on a steep rock, surrounded on three sides by the sea, and it was renowned for its commerce and navigation. Its present name is *Selenus*.

Hamilton discovered the ruins of a large ancient city (which he gives strong reason to believe was called *Trajanopolis*) about 20 miles S.W. from the Morad-Dagh, the ancient Dindymene, and near the source of the Banas-Chai, a feeder of the Mendereh. Its site is marked by the modern Abat-Kieui, situated near the northern extremity of the Bourgas-Dagh, and a little west of 80° E. long. Ptolemy mentions a *Trajanopolis* in Mysia, the site of which could never be fixed, in consequence of an error in his longitude. Cellarius's conjecture that it was not in Mysia but farther east in Phrygia Major seems verified by Hamilton's discovery.

(Hamilton, *Researches in Asia Minor*, vol. i. pp. 118-116.)

TRALEE, Ireland, the chief town of Kerry, a market-town and seaport, a parliamentary borough, and the seat of a Poor-Law Union, is situated on the river Lea, in 52° 15' N. lat., 9° 48' W. long., distant by road 62 miles S.W. by W. from Limerick, 181½ miles W.S.W. from Dublin. The borough returns one member to the Imperial Parliament. The population was 9957 in 1851. The borough is under the management of a board of 21 commissioners. Tralee Poor-Law Union comprises 39 electoral divisions, with an area of 221,845 acres, and a population in 1841 of 71,626; in 1851 of 58,645.

The town consists of several streets, four of which meet in a small square. The main streets are spacious and well built, and the whole place has been much improved of late years. The castle grounds, on the south side of the town, have been laid out as a promenade for the inhabitants. The parish church is a large and handsome building, with a square tower. There are two spacious Roman Catholic chapels, a presentation nunnery, chapels for Presbyterians, Independents, and Wesleyan Methodists, several Free schools, the county court-house, the county jail, barracks, the county club and news-room, a market-house, a county infirmary, a fever hospital, a neat row of almshouses, and the Union workhouse.

At the west end of the town is a basin, which vessels of 300 tons burden reach by a ship-canal from the bay. The custom-house is at Blennerville. The port carries on an extensive trade in grain, flour, bacon, and other exports. The chief article of import from Great Britain is coal; the foreign imports are mainly timber, deals, and staves. In 1853 there were registered as belonging to the port 18 vessels of 790 tons. During 1853 there entered the port 243 sailing-vessels of 14,536 tons, and 6 steam-vessels of 1248 tons; and there cleared 178 sailing-vessels of 14,112 tons, and 6 steam-vessels of 1040 tons. Tralee carries on an extensive retail trade with the surrounding district. It has three breweries and a distillery. The markets are well supplied with fish. The county assizes and quarter sessions are held in the town, and petty sessions every Wednesday. Fairs are held on May 8rd, August 4th, October 9th, November 7th, and December 18th. Tuesday and Saturday are the market-days. Races are held near the town, and a yearly regatta in the bay.

A Dominican friary was founded at Tralee in 1213 by John Fitz-Thomas, one of the great Geraldine family. The knights of St. John of Jerusalem had a commandery in the neighbourhood. The Earl of Desmond had a castle here, which having come, on the forfeiture of the earl, into the hands of Sir Edward Denny, served as a place of refuge for the English families resident in and about the town when Tralee was entered by the insurgents in the great rebellion of 1641. The castle held out for six months, but was at last obliged to surrender. The town was soon after burned. Tralee Castle is on the south-east of the town.

TRALLEE. [KARIA.]

TRAMORE. [WATERFORD.]

TRANCOSO. [BEIRA.]

TRANENT. [HADDINGTONSHIRE.]

TRANI. [BARI, TERRA DL.]

TRANQUÉBAR. [CARNATIC.]

TRANSYLVANIA, a crownland of the Austrian empire, lies between 45° 12' and 47° 42' N. lat., 22° 15' and 26° 20' E. long. Its greatest length from north-west to south-east is 194 miles, and its greatest breadth from west to east is 184 miles. It is bounded N. by Hungary, E. by Bukowina and Moldavia, S. by Wallachia, and W. by the Woiwodeschaft of Servia and the Temesvar Banat. The area is 23,335 square miles, and the population, according to an official return for 1854, amounted to 2,074,202.

Transylvania is the western part of the Roman Dacia. It was so named by the Hungarians, from the circumstance of its lying 'beyond' or on the eastern side of the 'wooded' mountains that separate it from Hungary. The German name is Siebenbürgen.

Mountains.—The range of the Carpathian Mountains, which inclose Transylvania on the east and south, are described under CARPATHIAN MOUNTAINS. The passes by which the range is crossed are of great military importance, being the only ways of communication between Transylvania on one side, and Moldavia and Wallachia on the other side. The following lead to Wallachia:—1. The pass of Zaikan in the valley of the Hatzeg. This pass is called the 'Iron Door,' on account of the high and steep rocks by which it is bounded. 2. The pass of Valkan, near the village of Krivadia, famous for the bloody defeats which the Turks have suffered there in different wars. 3. The

pass of the Rothen-Thurm, or the 'Red Tower,' the most remarkable of all. Formed by the narrow valley of the Alt, it begins near the village of Boitza, or Ochaenkopf in Transylvania, and it ends near the convent of Kosia in Wallachia. The length of this pass is 11 leagues, and the greater part of the road is hewn in the rock. 4. The pass of Fortschwar, or Teraburg, in the district of Kronstadt. 5. The pass of Tomosch, south of Kronstadt, formed by the valley of the river Tomosch. 6. The pass of Bosau, in the district of Kronstadt. The passes of Oytosch, Gymesch, and Paritsch, or Bereczk, lead into Moldavia, and the Borgo pass makes the communication with Bukowina.

Transylvania is a table-land bounded on the east and the south by the principal range of the Carpathians; on the north by a branch of the Carpathians, which beginning at Mount Gallatz, stretches westward as far as Mount Pleaska, and thence to the north-west as far as Mount Pretrossa in Hungary; and on the west by an extensive system of mountains which is composed of three large groups. The first or southern group begins near Mount Kosstara, in 46° 18' N. lat., 22° 40' E. long., stretching to the north as far as the river Maros: the centre of this group, Mount Ruuka-Poyana, is 9300 feet, or perhaps 9900 feet high. The second group lies between the Maros in the south, and 47° N. lat. in the north, sending out lofty and extensive branches to the east and to the west. The third group begins in 47° N. lat., and stretches as far as 47° 35' N. lat.; the southern part of it is called the Reuss Mountains, and the northern part known by the German name of the Buch-gebirge. Between the northern slopes of the Buch-gebirge and Mount Pleaska in the east, lies the valley of the Szamos, which is one of the few larger passes between Transylvania and Hungary, another being formed by the valley of the river Maros. The middle of Transylvania is traversed by several parallel ranges of mountains, which, being links between the Carpathians in the east, and the mountains on the west frontier, give to the country the aspect of a gigantic gridiron. The direction of these ranges is generally from north-east to south-west; the elevation of the summits is less than that of the Carpathians, and in many districts they are mere hills. The first or northern of these ranges begins at Mount Bistriksora in the east, and joins the western system in 46° 30' N. lat.; it is not interrupted by any river or plain, and separates the valley of the Szamos, or the northernmost part of the country, from the valley of the Maros. The second lies between the Maros and the river Little Kockel; the third is between the Little Kockel and the Great Kockel; and the fourth forms a barrier between the Great Kockel and the Alt. Plains are rare in Transylvania. Extensive tracts of the hilly and mountainous parts are covered with forests, the largest of which are those of Rioka, Hargit, Parayde, Mikoane, and Zeidna.

Rivers.—All the rivers of Transylvania are tributaries of the Danube, either flowing directly into this river, or joining the Theiss; a few, of little importance, join other affluents of the Danube. The *Maros* (Maros) has its sources on the eastern frontier at the foot of Mount Tarko, or Tatarrhago. It runs first north-west and west for about 46 miles, and afterwards south-west, west, and south-south-west for upwards of 100 miles till it reaches Karlsburg; from this town to its junction with the Theiss at Szegedin it has a generally west course. The whole length of this river is above 300 miles, but its course within Transylvania is only from 180 to 190 miles. The mouth of the Maros at Szegedin is 600 feet wide, and it becomes navigable for boats at Karlsburg: it contains abundance of fish, and it brings down particles of gold. The most important of its southern tributary rivers is the *Great Kockel*, which receives the *Little Kockel*. On its northern side the Maros receives the *Aranyos*, which has its sources in the west on the frontiers of Hungary, and which flows eastward in a direction opposite to that of the Maros. The lower part of the Aranyos is navigable.

The *Szamos* (Szamos) is formed by the junction of the Great and the Little Szamos. The *Great Szamos* comes from Mount Kaliberg, or Gallatz, in the district of Bistritz, in the north-eastern corner of Transylvania, and runs south-west as far as Dees, where it is joined by the Little Szamos, the sources of which are at the foot of Mount Kalata, in the district of Klausenburg, on the frontiers of Hungary. The direction of the Little Szamos is north-east. From Dees the united stream first runs north-west, then south-west, and at last north, till it reaches the frontiers of Hungary a little above Szada: it joins the Theiss at the village of Apati. The whole length of the Szamos is upwards of 200 miles, and three-fourths of its length are within Transylvania. The *ALT* (Aluta), which forms the subject of a separate article, rises in the Carpathians, near the sources of the Great Szamos. Its length is about 250 miles, and about 134 miles are within Transylvania. The navigation on the Alt within Transylvania has many obstacles, the bed of the river being full of rocks, part of which however have been blown up by order of the Austrian government. This river affords a natural communication between southern Transylvania and Wallachia and the Danube, and is therefore of great importance for commerce, especially as the valley of the Alt is the most fertile and the most civilized part of Transylvania, being almost entirely inhabited by German colonists. The whole Wallachian part of the river however is still in a state of primitive wildness. There are some lakes of importance. The Lake of Hados in the county of Doboka is 15 miles long; the Lake of St. Anna near Lazarfalva in the country of the Szeklers is 10 miles long and as many broad; the Lake of Piritch in

the Carpathians is renowned for the gas which its surface exhales, and which suffocates birds that fly over it: the Holt-Maros is a lake formed by the Maros near Karlsburg.

Climate.—The temperature is generally very variable. The summer is very hot, but even then in the western and southern parts of the country, the nights are cold; in winter the cold is almost insupportable. Cold winds prevail in the spring and autumn, and they blow with great regularity. Dreadful storms followed by severe cold are frequent; they have given the name to a district called Burzenland, or 'the country of the storms.'

Soil, Productions, and Commerce.—The southern and western parts are intersected by hills which contain pleasant valleys, and the soil is of great fertility: the eastern and northern parts and a narrow tract along the western frontier are covered with forests, and the soil is stony in many districts; but even the stony surface is covered with a layer of soil which renders it fit for agriculture. The chief minerals are iron, lead, copper, quicksilver, sulphur, silver, gold, and rock-salt. Salt is made from 112 salines. Near the foot of the Carpathians are many mineral and warm springs, and caverns filled with carbonic acid gas. There are serpentine, topazes, chrysolites, emeralds, and amethysts in the high mountains; agates, opals, chalcedony, and carnelians in the hills and rivers. Besides enormous quantities of timber, Transylvania produces wheat, barley, corn, oats, millet, and maize; apples, pears, and other fruits in abundance; wine and tobacco, especially in the valley of the Alt, both of excellent quality. Horned cattle are bred in great numbers. Sheep are numerous, and their flesh has that aromatic taste which distinguishes the sheep that feed on the mountainous pasture-grounds of southern Europe. There are fish, wild and tame fowl, and game of all sorts, in abundance; wolves are frequent in the Carpathians, and even bears and lynxes appear. The horses are of small size, but swift. Manufactures scarcely exist, except in the valley of the Alt, where the Germans produce some fine dyed cloths and cotton, felt hats, leather ware, and a considerable quantity of linen. The commerce with Wallachia, Moldavia, and Turkey is of some importance.

Divisions and Population.—The crownland is divided into 10 circles, which, with their subdivisions and population, are as follows:—

Circles.	Arrondissements.	Population.
Hermannstadt	13	320,268
Kronstadt	10	274,709
Udvarhely	6	174,127
Maros-Vasarhely	6	194,888
Bistrizs	10	178,844
Dees	6	198,783
Szilagy	6	174,088
Klausenburg	6	178,891
Karlsburg	6	172,345
Broos	9	213,118
Total	79	2,074,202

Of the population, with regard to race, rather more than five-eighths are Wallachs and Moldavians, who are the modern representatives of the ancient Dacians; about two-eighths are Magyars; and one-eighth Germans. There are mixed with these, about 8500 Serbs and other slaves, 9000 Armenians, 60,000 Gipsies, and 7000 Jews. With regard to religion, the population is divided in round numbers as follows:—221,400 Roman and 608,300 Greek Catholics, all of whom acknowledge the supremacy of the Pope; 725,700 Schismatic Greeks; 220,000 Lutherans; 858,000 Calvinists, 44,000 Unitarians, and 7000 Jews.

The former and still popular division of Transylvania was threefold:—1. The Country of the Hungarians; 2. The Country of the Szeklers; 3. The Country of the Saxons.

1. The Country of the Hungarians occupies the northern, middle, and south-western parts of Transylvania. The principal towns in it are—*Klausenburg* [CLAUSENBURG], *Karlsburg*, or *Weissenburg*, a strongly-fortified town, with 12,000 inhabitants, on the Maros. It has a mint, observatory, public library, and is the seat of the Roman Catholic bishop of Transylvania. The citadel is built on a height above the town. In the environs are the richest gold-mines of Europe. *Nagy-Enyed*, with 6000 inhabitants and a Calvinist college. *Varhely* (*Gredistye*) is in the beautiful valley of Hatzeq, on the site of Zarmice-Gethusa, the capital of the ancient Dacians, and the Ulpia Trajana of the Romans. [DACIA.] The environs are full of Roman antiquities, among which the most remarkable are the remains of an amphitheatre, and the foundation of a Roman house containing the pavement of two rooms, which are in fine mosaic, representing scenes from the Greek mythology. This house was discovered in 1823. *Thorenburg* (*Thorda*), on the Aranyos, is a large market-town, with about 8000 inhabitants, and rich mines of rock-salt. *Dees*, a market-town, with about 6000 inhabitants, is situated at the confluence of the Great and Little Szamos. There are salt-works and mines near it. *Szilagy-Szeg*, a fortified town, further defended by a castle, is situated in the north of the Country of the Hungarians, on the river Szilagy, a feeder of the Szamos: population about 5000.

2. The Country of the Szeklers (*Parv Siculorum*) is bounded on the north and north-west by part of the country of the Hungarians, and

extends from it to the Carpathians, when it borders upon Moldavia and Wallachia. The principal town is *Neumarkt*, or *Maros-Vasarhely*, with 10,000 inhabitants: it contains the chief seat of justice of the country of the Szeklers, a Roman Catholic gymnasium, a Calvinist college, a mineralogical museum, and a public library, the largest and best in Transylvania. *Udvarhely*, also called *Szekely*, and by the Germans *Ober Hellyen*, has a handsome town-hall, a Calvinist church and college, two Catholic churches, a convent, Catholic seminary, and 6000 inhabitants, many of whom are tanners and shoemakers. The town is situated on the left bank of the Great Kockel, 40 miles E.S.E. from Neumarkt.

3. The Country of the Saxons. The main or southern part of it is bounded on the east and north-east by the country of the Szeklers; on the north and west by the country of the Hungarians; and on the south by Wallachia. Another smaller part, the district of Bistrizs, lies in the north-eastern corner of Transylvania, on the frontier of Bukowina. [BISTRITZ.] The country of the Saxons is popularly divided as follows:—1, *Weinland*, with the capital *Schäasburg*; 2, *Altland*, with the capital *Hermannstadt*; 3, *Land vor dem Walde*, with the capital *Mühlenbach*; 4, *Burzenland*, with the capital *Kronstadt*.

The principal towns of the Country of the Saxons are the following:—*HERMANNSTADT*, the capital of Transylvania. The village of *Hellas*, near *Hermannstadt*, is renowned for the gigantic size of its inhabitants. *Mühlenbach*, about 80 miles N.W. from *Hermannstadt*, and about 6 miles S. from *Karlsburg*, is a walled free town, with about 5000 inhabitants, who have several breweries. The town stands on the right bank of the *Mühlenbach*, a feeder of the *Marosch*. *Kronstadt*. [KRONSTADT.] *Schäasburg* (*Segesvar*), on the Great Kockel, in a beautiful valley, with 6000 inhabitants, has manufactories of cotton and cloth; wine is made in the environs. *Bistrizs* is the subject of a separate article. [BISTRITZ.] *Broos*, or *Sas-Zvaros*, a well-built town, with a large castle and about 9000 inhabitants, is situated on the left bank of a small feeder of the *Marosch*, in 45° 49' 46" N. lat., 23° 13' 38" E. long., 45 miles W. from *Hermannstadt*.

That tract of Transylvania which lies on the frontier of Moldavia and Wallachia belongs to the Austrian Military Frontier, and has a separate administration with regard to military affairs.

History.—The early history of Transylvania has been given under DACIA. From the 5th century it was successively occupied by the Goths and Huns, and remained at last in the hands of the Polovzians, or Petshegues, who were a Turkish tribe. When the Magyars conquered the country between the Carpathians and Germany, they also settled in Transylvania, and subdued or drove out the Petshegues; however, Transylvania became independent of Hungary until it was conquered by king Stephen I. in 1004. John Zapolya, disputing the crown of Hungary with Ferdinand I. of Austria, was supported by the Turks, and he at last compelled Ferdinand to allow him to possess Transylvania as an independent principality. But Zapolya was forced in his turn to acknowledge himself a vassal of the Osmanlis. During 150 years Transylvania was governed by princes of the houses of Zapolya and Bathori; and some of her princes, especially *Betlan Gabor* and *George Ragozi*, were dangerous enemies of the houses of Austria. *Leopold I.* conquered Transylvania in 1687, and the Porte was obliged to renounce her supremacy over it by the peace of *Carlowitz* in 1699. Transylvania however became only a vassal state of Austria until the death of her last prince, *Michael Apafi II.*, who died in 1713. In 1765 the empress *Maria Theresa* erected Transylvania into a grand principality.

After the conquest of Transylvania by Stephen I., the country was almost entirely depopulated, but it was gradually re-peopled by German and other foreign colonists. The first arrival of the German colonists is generally said to have taken place in 1148 from Westphalia, the Lower Rhine, and the Low Countries, some also from Lower Saxony. The Szeklers are said to be descendants of the Turkish Petshegues, who were allowed by the Magyars to remain in the country on condition of guarding the frontier against the invasions of the eastern barbarians.

TRAPANI, a province of Sicily, comprises the western extremity of that island, and is bounded N.E. by the provinces of Palermo and Girgenti, being separated from the latter by the river Belice, the ancient Hypsa. The area is 1858 square miles, and the population 182,809. [SICILY.]

The province is divided into three districts, *Trapani*, *Mazara*, and *Alcamo*, and 21 communes. *Trapani*, the capital, is noticed in the next article [TRAPANI]. *ALCAMO* and *MAZARA* are also subjects of separate articles. *Mazara* and *Salemi* are noticed under SICILY (vol. iv., col. 562). *Castel Vetrano*, about 12 miles E. from *Mazara*, inland, is an old-looking town, built on a hill, in a fertile country, producing good wine and abounding with cattle. It has several churches and convents, an old castle, and several palaces. Six miles S. from *Castel Vetrano* is the site of the ancient *Selinus*, on the sea-coast, with the ruins of several temples, consisting of extensive heaps of broken columns, capitals, and other fragments. Fragments of marble, alti-rilievi of curious workmanship, were discovered in 1822, among the ruins. East of *Salemi*, in the mountains, is *Gibellina*, with a castle and 5000 inhabitants. Farther north is *Calatani*, a town of 10,000 inhabitants, with several fine churches. The best cheese in

Sicily is made in its territory. A few miles west of Alcamo, in the midst of a solitude, are the remains of *Segesta*, consisting of a fine Doric temple in good preservation, the ruins of a theatre, and part of the city walls. *Partanna*, an inland town east of Castel Vetrano, has about 10,000 inhabitants. Near Trapani is the town of *San Giuliano*, on the top of Mount Eryx (2184 feet high), with about 9000 inhabitants. San Giuliano has grown up round the site of the famous temple of Venus Erycina, which is now occupied by a castle used as a prison. The temple was strongly fortified in ancient times. The city of Eryx was situated about half-way up the mountain.

The islands of Favignana, Levanzo, and Maretimo, as well as the smaller group of the *Ægades*, and the small islands near Cape Lilybæum, one of which is the ancient Motya, early colonised by the Phœnicians, and subsequently a stronghold of the Carthaginians, an early Phœnician colony, belong to the administrative province of Trapani. [SICILY.]

TRAPANI, a town on the north-west coast of Sicily, built on the site of the ancient Drepanum, on a point of land projecting into the sea, and facing the island of Levanzo, which is 10 miles west from it. The port of Drepanum was a place of traffic from the oldest times on record, and its Greek name, 'Drepanon' (a scythe), is expressive of the form of the promontory on which it stands. There are however no remains of antiquity at Trapani. On an insulated rock which stands at the entrance of the harbour is a small fort called Columbara. The harbour of Trapani is formed by nature, being an inlet of the sea between the promontory and the mainland, protected on the west by the rock above mentioned, but open to the south-west wind. Trapani is one of the principal ports of Sicily, and carries on a considerable trade. One of the chief articles of export is salt, which is obtained by the evaporation of the sea-water in the extensive salterns along the coast. Great numbers of tunny fish are caught in May and June; the fish is pickled and largely exported to Italy. The coral fishery is another branch of trade. Boats from Trapani gather the coral along the coast of Barbary, after which it is worked in the town for export. Great quantities of anchovies are also caught along the coast in February, March, and April, and cured for export. Sumach is also exported. Trapani has a collegiate church, numerous other churches and convents, among which those of the Jesuits and Carmelites are most worthy of notice; a handsome town-house, with a fine façade adorned with the statues of Philip V. of Spain and of Victor Amadeus of Savoy, both kings of Sicily; several palaces of the nobility, a royal college, an orphan asylum, several hospitals, a monte-di-pieta, and about 24,000 inhabitants. The town is inclosed by walls, and is defended by a fortress. The streets are wide and well-paved.

TRAPANI ISLANDS. [SICILY.]

TRAPEZUS. [TREBIZOND.]

TRAS-OS-MONTES, a province of Portugal, situated between 41° 4' and 41° 57' N. lat., 6° 13' and 8° 7' W. long., is bounded E. and N.E. by the Spanish province of Leon, N. by that of Galicia, W. by the Portuguese province of Entre Douro e Minho, and S. by that of Beira. The greatest length from east to west is about 90 miles; the greatest width from north to south is about 60 miles. The area is 4020 square miles. The population in 1852 was 311,406. The province is divided into two districts as follows:—

Districts.	Area in Square Miles.	Population in 1852.
Bragança . . .	2,374	126,627
Villa Real . . .	1,646	184,779
Total . . .	4,020	311,406

The districts are subdivided into 11 comarcas, or judiciary divisions, 44 concelhos, or communal divisions, and 560 parishes, as follows:—

Districts.	Comarcas.	Concelhos.	Parishes.
Bragança . . .	5	19	399
Villa Real . . .	6	25	261
Total . . .	11	44	560

Surface.—The great offset from the Cantabrian mountain-chain which forms the main boundary between Galicia and Portugal, throws off several ridges into Tras-os-Montes. These ridges have a general direction from north to south, the Serras of Geres, Santa Catarina, and Marão, separating this province from that of Entre Douro e Minho, whence the name 'tras os montes,' 'beyond the mountains.' The northern and western parts of the province consist entirely of mountains with narrow valleys between them. Towards the south the mountains diminish in height and extent, and the valleys have a greater width.

Rivers.—The Douro, changing its direction above Miranda from west to south-south-west, forms the greater part of the boundary on the east between this province and Spain. It afterwards flows westward, forming the line of separation on the south between Tras-os-Montes and Beira. All the other rivers have a southern course, and

enter the Douro by the northern bank. The Sabor rises in the north-eastern part of the province, and having been joined by the Macas and the Azibo, enters the Douro below the town of Torre de Moncorvo. The Tua originates from several streams, all of which rise among the mountains which separate this province from Galicia. The Corgo rises in the mountains of the western side of the province. The Tamega enters this province from Galicia, and flowing in a south-west direction, afterwards enters the province of Entre Douro e Minho.

Soil and Productions.—The valleys of the Sabor, the Tua, the Corgo, and the Tamega, are very fertile, and produce abundantly wheat, rye, maize, beans, and fruits. In those parts which are sheltered from the northern winds olive-trees and mulberry-trees are cultivated. On the well-sheltered banks of the principal rivers, and especially on the right bank of the Douro abundance of grapes are grown, which supply the finest of the red wines shipped from Oporto. Cattle, sheep, horses, and mules are pastured on the slopes of the mountains, and large numbers of hogs are fattened on the produce of the chestnut-trees. Game is very abundant, and the streams contain plenty of fish. There are manufactures of woollens, linens, and silk.

Towns.—*Bragança*, the capital of the province and the see of a bishop, is situated in 41° 52' N. lat., 6° 40' W. long., on the Fervença, an affluent of the Sabor. It was formerly surrounded by walls, which are now in ruins, and it has an old castle of some strength. It contains two churches and a college, and has manufactures of velvet and other silk fabrics. The population is about 5000. It was erected into a duchy in 1442. In 1640 João II., eighth duke of Bragança, became King of Portugal, and from him the sovereigns of that country have since descended. *Chaves*, 48 miles W. from Bragança, stands on a rocky eminence, and is irregularly fortified, but the works are now in a ruinous state. It has a small citadel in somewhat better repair. The river is crossed by a Roman bridge of 18 arches. There are hot sulphureous springs and baths in the vicinity, which are well frequented. The population of the town is about 6000. *Miranda de Douro*, 28 miles S.E. from Bragança, stands on the west bank of the Douro, which is here very narrow and rapid, with deep banks almost perpendicular: the population is about 5000. There is no bridge here; but about two miles higher up the river is passed by means of a barge, forming a communication with the roads of Zamora and Salamanca. *Mirandella*, 37 miles S.W. from Bragança, stands on the east bank of the Tua, over which there is a stone bridge of 19 arches and 200 yards in length. It is surrounded by old walls, and contains a population of 1700. *Torre de Moncorvo*, 50 miles S. by W. from Bragança, is situated near the eastern bank of the Sabor, about 7 miles above its confluence with the Douro. It is defended by ramparts, and has a square citadel. It contains a handsome church, and has a population of about 2000. *Villa Real*, 65 miles S.W. from Bragança, is situated on a steep hill, near the west bank of the Corgo, which is here crossed by a stone bridge. The town is partly surrounded by an old wall, and contains two churches. The population is about 4500.

TRASYMENUS, LAKE. [PERUGIA.]

TRAU. [DALMATIA.]

TRAUN, RIVER. [AUSTRIA.]

TRAVANCORE. [HINDUSTAN.]

TRAVE, RIVER. [HOLSTEIN.]

TRAVEMÜNDE. [LÜBECK.]

TRAVNIK, TRAUNIK, TRAWNİK, or TRAWNITZ, a town in Turkish Bosnia, residence of the pasha of the province, and the military capital of Bosnia, is situated in a narrow valley screened by high hills on the left bank of the Laschwa, a feeder of the Bosnia, and has a permanent population of about 10,000 inhabitants. It is defended by a castle flanked with towers, which serves also for a prison. The town is ill built; the streets are narrow, gloomy, crooked, and dirty. The houses are built of wood; and the pasha's residence, and the mansions of the rich proprietors, are distinguished from ordinary dwellings only by their greater size. There are several mosques and bazaars, and two or three khans. Travnik is famous for the manufacture of sabres of good temper; it is also a place of some commercial importance. The environs are covered with orchards and gardens. The inhabitants are almost all Mussulmans; there are however a few resident Jews. Besides the permanent population there is usually a large body of troops quartered in Travnik, for whom several new fortified barracks have been recently erected.

TREBBIA. [Po.]

TREBES. [AUDE.]

TREBIZOND, the ancient *Trapezus*, a town situated on the Pontus Euxinus, in the eastern corner of Pontus in Asia Minor. Trapezus was a colony of Sinope, a town founded by the Milesians. Xenophon with his 10,000 Greeks came to Trebizond in his retreat ('Anabasis,' iv. 8). During the wars between the Romans and Mithridates, Trebizond fell into the hands of the Romans, and henceforth belonged to the Roman empire. Hadrian ordered the port to be secured by a mole. Trebizond was a free town and had its own coins: on some of these there is on one side an anchor, and on the other the prow of a ship, two emblems which seem to prove the importance of the commerce of this town. During the reign of Valerian, Trebizond was a large and opulent town, but it was taken, plundered, and partly destroyed by the barbarians. During a long period Trebizond seems

to have been only the shadow of its former splendour; but it recovered during the wars with the Persians in the reign of Justinian. This emperor ordered the public buildings to be restored by him (*Ibid.*, p. 234). Trebizond afterwards became the capital of a province which contained the ancient country of Pontus, and sometimes also some adjacent tracts of Armenia. The Genoese repaired Hadrian's mole, which is now destroyed, with the exception of the foundations.

At present Trebizond belongs to the Turkish empire; its Turkish name is Tharabesun or Trabesun. It is the capital of the eyalet of Trebizond [*ARMENIA*, vol. i., 506-7], the seat of a pasha, and of a Greek archbishop. Its population is variously estimated from 24,000 to 50,000, chiefly Mohammedans, with about 4000 Greeks, and 2000 Armenians. The Christian part of the population lives without the walls. Among the public buildings the most remarkable are, the castle or citadel, partly of ancient, partly of modern construction, situated in the middle of the town on a steep rock, the summit of which is flat as a table (*Ἰσπερ*, hence the name of the town); the bazaar; public bath-houses of marble, and of a beautiful architecture; the ruins of a temple of Apollo, part of which has been converted into a Greek church. The commerce of Trebizond has much increased since the navigation of the Black Sea has been opened to all nations. The town has regular communication by steam-boats with Constantinople, Odessa, and the Danube; and it may now be said to be the first commercial port on the Black Sea; however, the ancient port is almost filled up with sand, and larger vessels are obliged to cast anchor in the road. The commerce of Trebizond with Armenia, Persia, and Georgia is very extensive. The exports from these countries, consisting of silk, wool, tobacco, wax, gall-nuts, oil, opium, drugs, honey, timber, carpets, shawls, saffron, cotton, &c., amount to about a million sterling a year. The imports are composed of European manufactures, such as cotton fabrics, hardware, glass, fire-arms, &c.; together with iron, corn, wine, tin, salts, spices, and colonial produce. The value of the imports is nearly two millions sterling; the greater part is sent to Persia. Surrounded by a range of high and woody mountains, the town presents a beautiful appearance from the sea. Trebizond is the birthplace of Cardinal Bessarion, who was born here in 1395. [*ARMENIA.*]

TRECASTLE. [*BRECKNOCKSHIRE.*]

TRECASTLE. [*NOVARA.*]

TREDEGAR. [*MONMOUTHSHIRE.*]

TREFFORT. [*AIN.*]

TREGARON, Cardiganshire, a market-town and the seat of a Poor-Law Union, in the parish of Caron-ys-Clawdd, is situated on the right bank of the river Berwyn, in 52° 13' N. lat., 3° 55' W. long., distant 38 miles E.N.E. from Cardigan, and 204 miles W.N.W. from London. The population of the township in which Tregaron is situated was 839 in 1851. The living is a vicarage in the archdeaconry of Cardigan and diocese of St. Davids. Tregaron Poor-Law Union contains 22 parishes and townships, with an area of 122,050 acres, and a population in 1851 of 10,404. The town, which is picturesquely seated among mountains, is much frequented by anglers. The parish church is an old building, with a good tower. The market is held on Tuesday; fairs are held on March 15th, and on the first Tuesday of May.

TREGONY. [*CORNWALL.*]

TREGUIER. [*CÔTES-DU-NORD.*]

TREIGNAC. [*CORREZE.*]

TRELON. [*NORD.*]

TREMADOC. [*CARNARVONSHIRE.*]

TREMBOWLA. [*GALICIA, AUSTRIAN.*]

TREMITI ISLANDS. [*CAPITANATA.*]

TRENT. [*TYROL.*]

TRENT AND HUMBER, a river flowing through the central parts of England. Although the Trent and Humber are commonly spoken of as distinct, they are strictly parts of the same river. The Humber is simply the estuary formed by the junction of several streams, and is therefore to be regarded as a part of that one of its affluents which for length and importance stands first in the system.

Basin.—If we consider the mouth of the Humber as defined by Spurn Head in Yorkshire and Donna Nook in Lincolnshire, and all the waters flowing into it within those limits as belonging to the system of which it is the outlet, the limits of its basin are as follows:—On the north-east it is bounded by the uplands which, rising from the alluvial district of Holderness, form the cliffs which skirt with some intervals the Yorkshire coast between Spurn Head and Hornsea. All this part of the basin is alluvial; but near Bridlington Quay the Yorkshire Wolds, which consist of an insulated range of chalk hills, rise above the alluvium. The Yorkshire Wolds encroach upon the basin of the Humber, extending southward in the form of a crescent more than 30 miles between its extremities, from Flamborough Head near Bridlington almost to the banks of the Humber, about 8 or 10 miles above Hull, and separating the sub-basin of the Hull from that of the Derwent. The northern part of the Wolds is drained by a stream which flows through a valley in the chalk, and falls into the sea at Bridlington Quay. North-west of Flamborough Head the basin of the Humber extends to the coast, for the source of the Hartford, a feeder of the Derwent, is as near the shore at Filey Bay as that of the

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Hull at Bridlington Bay; nor is the head of the Derwent itself more than two or three miles distant from Robin Hood's Bay, which is the north-eastern extremity of the basin.

From the western end of the Eastern Moorlands, a range of colliery hills, which extend inland from Robin Hood's Bay, the basin is bounded still on the north side by a lateral branch or offset of the great Pennine chain, which branch separates the basin of the Humber from those of the Tees and the Eden. The branches which the Pennine chain throws off toward the east, and which constitute the western moorlands of Yorkshire, are separated from each other by long narrow valleys, in which the Swale, the Yore, the Wharfe, the Aire, and the Calder, all directly or indirectly tributaries of the Ouse, have their course. At the southern end of the Pennine chain the western boundary is formed by the highlands of the Peak of Derbyshire and the moorlands of Northern Staffordshire. The western boundary from Staffordshire southward separates the basin of the Trent and Humber from that of the Severn. The southern limit, commencing at the head of the river Rea, runs eastward through Worcestershire and Warwickshire, past the head of the Blythe, 5 miles north-west from Henley-in-Arden, to Wroxhall, 4 miles north-west from Warwick; it then proceeds by Meriden and Nuneaton to Bulkington (4 miles north-east of Coventry), and turning north-east is defined by the hills which run through Leicestershire and Rutlandshire past Lutterworth, Kibworth, Billesdon, to Burleigh, the south-eastern limit of the basin. The eastern boundary is formed by the uplands on the border of Lincolnshire and Nottinghamshire, which separate the valleys of the Witham and the Trent, passing Newark and extending to Gainsborough. The eastern boundary separates the basin of the Trent from those of the Glen, the Witham, and the Steeping, all flowing into the Wash. These limits comprehend some important manufacturing districts: as the great seat of the woollen manufacture in Yorkshire; of the hosiery and lace manufacture in Nottinghamshire and Leicestershire; of the cotton and silk manufacture of Derbyshire; and of the iron manufacture of Staffordshire and Warwickshire. The entire area of the basin is probably about 9100 square miles, which makes it by far the largest in Great Britain; that of the Severn and Wye being only 5900 square miles; and that of the Thames and Medway 6500 square miles, little more than two-thirds of that of the Trent and Humber.

Course and Affluents.—The Trent rises in the hills of North Staffordshire, near the Cheshire border. It is formed by the confluence of several streams in an extensive pond or reservoir near Knipersley or Knypersley Hall, and flows south, through the Pottery district, by Hanley and Stoke-upon-Trent, to the junction of the little river Lyme (about five miles long) from Newcastle; and thence through Trentham Park, where it expands into a noble pool of 80 acres. After passing through Trentham Park it flows past Stone to the junction of the Sow, at the village of Great Haywood. From the junction of the Sow the Trent flows south-east, turning gradually towards the east, and receiving the Blythe on the left bank, to the junction of the Tame, which joins the Trent on the right bank a little below Alrewas; and with its feeders, the Anker, the Blythe (which is not to be confounded with the river of the same name just mentioned), and the Rea, drains the south-western part of the basin, the seat of the great iron and hardware manufacture. From the junction of the Tame the Trent turns northward, and flows by Burton-on-Trent to the junction of the Dove. It then flows eastward to the junction of the Derwent, which joins it on the left bank. From the junction of the Derwent the Trent flows to the junction of the Soar, on its right bank, and thence to the junction of the Erewash, on its left bank. The course of the Trent gradually changes from an eastern to a north-eastern direction; the change commences above the junction of the Derwent, and becomes more decided near the junction of the Erewash. After the junction of the Erewash the Trent receives several important tributaries, including the Deven or Devon, and the Lene, and passing Gainsborough and Burton-upon-Strather, is joined by the Ouse on its left bank. In Lincolnshire it receives on the left bank the Idle, which joins the Trent by an ancient cut, called 'Byker's Dyke,' at West Stookwith, below Gainsborough. A navigable cut, called 'the new river Idle,' joins the Trent at Keadby considerably lower down.

The Yorkshire rivers which form the system of the Ouse are described under YORKSHIRE. It is sufficient to notice here that the length of the Ouse is from 130 to 135 miles; and that from the importance of this river and its tributaries it may dispute with the Trent the pre-eminence among the rivers which flow into the Humber. From the confluence of the Trent and Ouse the river (or rather estuary, for the tide flows up both rivers above their junction) assumes the name of Humber, and takes an eastward direction. It expands in some places to the width of a mile, and below Barton Ferry acquires a permanent breadth of more than a mile. The channel is however occupied by shoals, or by the mud or sand-banks which line the shore, so that the low-water channel is narrow. A little below the town and port of Hull, the Humber turns south-east, and gradually increasing in width till it acquires, below Patrington, a breadth of 4 or 5 miles at high water, and 2½ to 3 miles at low-water, enters the German Ocean at Spurn Head, where, on what would be an island, were it not connected with the mainland by a narrow causeway a mile and a half long, are two lighthouses. The projection of Spurn Head narrows the high-water channel of the river from about

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six miles to less than four miles; the low-water channel is also contracted by it, but not in so great a proportion to its whole width. The length of the Humber, from the junction of the Trent and the Ouse to the sea, is about 42 miles.

The Humber receives on the left, or Yorkshire bank, the Hull River, at the town of Hull, to which it gives name. On the right, or Lincolnshire bank, it receives the Anholme, or Ancholme, which joins the Humber above Barton; and some other streams of smaller importance.

The whole length of the Trent is about 148 miles, of the Humber 42 miles, in all 190 miles. The Trent and Humber yields in length to the SEVERN, which is estimated at 200 miles, and to the THAMES, which is estimated at 220 miles. But, with the exception of these two, no river in Great Britain can compare with it.

The feeders of the Trent and Humber, with their tributaries, are more particularly described elsewhere:—the Sow, the Blythe, and the Tame, under STAFFORDSHIRE; the Dove, the Derwent, and the Erewash, under DERBYSHIRE; the Soar, under LEICESTERSHIRE; the Deven and the Idle, under NOTTINGHAMSHIRE; the Ouse, with its tributaries, and the Hull, under YORKSHIRE; and the Anholme, under LINCOLNSHIRE. Different portions of the Trent, or Humber, are also described in the same articles.

Navigation.—The navigation of the Trent commences at Burton-upon-Trent, in Staffordshire, where a cut from the Grank Trunk, or Trent and Mersey Canal, joins it, and opens a communication with the complicated canal system of the Midland counties, and ultimately with the Mersey, the Severn, and the Thames. This canal follows the valley of the Trent from the junction of the little river Lyne in the Staffordshire Potteries, and it continues to follow the course of the valley below Burton, till it finally joins the Trent at Wilden Ferry, at the junction of the Derwent. Nearly midway between Burton and Wilden Ferry the Derby Canal opens into the Trent, and communicates with the town of Derby, and (by a railway) with the collieries near Belper. The river Derwent is also navigable up to Derby, but the navigation of it has been in a great degree superseded by the Derby Canal. The Soar is navigable by the help of some artificial cuts beyond Leicester, and is connected with the Leicester Union Canal and the Grand Junction Canal, and so with the metropolis. The river Wreak, or the Melton Mowbray Navigation, and the Oakham Canal, connect the eastern part of Leicestershire and the county of Rutland with the navigation of the Soar and the Trent. Nearly opposite to the outfall of the Soar, the Erewash Canal opens into the Trent. This and the Nottingham Canal (which opens into the Trent near Nottingham) convey to the Trent the produce of the coal- and iron-district of the valley of the Erewash, as well as the manufactures of the town of Nottingham. The Cromford Canal, which joins the Erewash and Nottingham canals, and the Cromford and High Peak railway, open a communication between the Trent and the great manufacturing district of Southern Lancashire. The Grantham Canal connects the town of Grantham and the adjacent agricultural district with the Trent, into which the canal opens just opposite to the Nottingham Canal; and the ancient Fosse Dyke connects the Trent with the Witham, and so with the agricultural districts of central Lincolnshire. The Idle is navigable to East Retford; it joins the Trent at West Stockwith, where also the Chesterfield Canal opens into the Trent, and brings down the produce of the coal- and iron-works of Chesterfield and its neighbourhood. The Stainforth and Keadby Canal, which connects the Don below Doncaster with the Trent, joins that river still lower down, at Keadby tide-lock.

The navigation of the Yorkshire rivers and their connected canals is described under YORKSHIRE. The navigation of the Anholme, which extends upward nearly to Market-Rasen; and the Louth Navigation, which commences at the town of Louth, and opens into the Humber just within Donna Nook, belong to Lincolnshire.

The value of the Trent and Humber as a means of inland communication is very great. The tide flows up the Trent as far as Gainsborough, to which town seaborne vessels of considerable size can ascend. The lowest bridge over the Trent is at Gainsborough. The whole length of the Trent navigation from Burton to the junction of the Ouse is about 100 miles, that of the Humber 42 miles: together 142 miles.

TRENT, RIVER. [CANADA.]
TRENTHAM. [STAFFORDSHIRE.]
TRENTON. [NEW JERSEY.]
TREPTOW. [STETTIN.]
TRETOWER. [BRECKNOCKSHIRE.]
TRETS. [BOUCHES-DU-RHÔNE.]
TREVENNA. [BOSSINEY.]
TREVES. [TRIER.]

TREVI'GLI, or TRÉVISO, a province of Austrian Italy, formerly included in the Venetian territory, is bounded N. by the province of Belluno, E. by Friuli, W. by the province of Vicenza, and S. by the provinces of Padua and Venice. It has an area of 929 square miles, is divided into 12 districts and 204 communes, and reckons 286,199 inhabitants. Two-thirds of the province consist of a fine plain, which is one of the most fertile parts of the Venetian territory; the other third, which lies northward of the town of Treviso, is hilly. The river Piave, coming from Belluno, crosses the province of Treviso

from north-west to south-east, and enters the Adriatic north of the lagoons. Farther north, in a direction nearly parallel to the Piave, flows the river Livensa. Both the Piave and the Livensa are navigable for large boats to the sea. The principal productions of the province are corn, wine, fruit, wool, silk, cheese, and cattle. There are also manufactories of silks, woollens, and paper. Twelve miles N. from Treviso, where the hills begin to rise, is an extensive forest called Montello, belonging to the crown; it supplies Venice with timber for ship-building. The principal towns of the province are—TRÉVISO: *Asolo*, a very old town, now decayed, contains 3000 inhabitants; it was in the castle of Asolo that Caterina Cornaro, last queen of Cyprus, was kept in a kind of honourable confinement by the Venetian senate from 1489 till her death, which occurred in 1510: *Castelfranco* has 6000 inhabitants, a handsome collegiate church, and considerable traffic; it is the native place of the painter Giorgione: *Conegliano* has 6000 inhabitants: *Ceneda* is a bishop's see, and has 5000 inhabitants: *Oderzo*, an ancient but decayed town, 12 miles N.E. from Treviso, has about 6000 inhabitants: *Porto Buffole*, on the Livensa, where the river becomes navigable for large boats, about 22 miles from the sea, has 3000 inhabitants.

TREVI'GLI, or TRÉVISO, a bishop's see, and the head town of the province of Treviso in Austrian Italy, is situated in a fertile plain on the banks of the river Sile, which is navigable by large boats, and communicates by means of canals with the lagoons of Venice. A small river called Bottega flows through the town and joins the Sile. The town is old; the streets are irregular, mostly lined with arcades, and adorned with several fine buildings. The cathedral, first built by the Longobards, and afterwards restored, but never finished, has some fine paintings by Veronese, Tiziano, and Bordone, the last a native of the place, and the relics of several saints. There are several other churches worthy of notice, as well as the episcopal palace, the town-house, and the palaces of the families Pola, Bressia, and others. Treviso is surrounded by walls and a ditch, and has a circumference of about three miles. It has a spacious hospital, a monte-di-pietà, a public library, a handsome theatre, an academy of sciences and literature, and about 15,000 inhabitants, independently of the suburban parishes which form part of the commune of Treviso, and contain about 6000 inhabitants. A great fair is held here in the month of October, and it lasts a fortnight.

TRÉVOUX. [AIN.]

TRICARICO. [BASILICATA.]

TRICHINOPOLE. [CARNATIC.]

TRIER (*Trèves*) is one of the five governments of Rhenish Prussia. It is bounded N. by the government of Aix-la-Chapelle, E. by that of Coblenz, W. by the principality of Birkenfeld and the Bavarian circle of the Rhine, S. and S.W. by France, and W. by Belgium. It is divided into 12 circles; the area is 2775 square miles, and the population 488,698, of whom 414,698 are Roman Catholics, 68,395 Protestants of different sects, 125 Mennonites, and about 7000 Jews. The face of the country is hilly, with a considerable extent of forest and pasture land, but not much that is adapted to tillage. There are mines of iron, lead, calamine, copper, and coal. Some wine is produced in sheltered situations on the banks of the Moselle. [RHEIN-PROVINZ; EIFEL.]

The chief town, *Trier*, is described in a separate article. [TRIER.] Among the other towns are—*Merzig*, S. of Trèves, on the Saar, population 4000; *Ottweiler*, S.E. of Trèves, near the Bavarian frontier, population 2500; *Prüm* [EIFEL].

Saarbrück, or *Sarrebruck*, is situated on the navigable river Saar, over which there is a stone bridge connecting the town with the suburb of St. John. It is a neat pleasant town, and the houses are all built of stone. It has a gymnasium; a Lutheran, a Calvinist, and a Roman Catholic church; and a synagogue. In this town are the court of justice for the circles of Saarbrück, Saarlouis, Ottweiler, and St. Wendel; a mining-office, a custom-house, and other public offices. The inhabitants, who number about 9000, have manufactories of woollens, linens, tobacco, iron-wire, porcelain, &c. They have also breweries, tanneries, and alum-works, and carry on a thriving trade by means of the river, especially in coals and timber.

Saarlouis, called during the French revolution *Saar-libre*, is the extreme fortress of Prussia on the frontier next to France. It is situated in a plain on the left bank of the Saar, in the government of Trier, in the Rhein-Province. Including the garrison, the population is about 7000. The inhabitants manufacture iron and steel wire, hardwares, fire-arms, and leather. In the neighbourhood there are mines of iron and lead. Saarlouis is the seat of various public offices, has a gymnasium, one Protestant and two Roman Catholic churches, a synagogue, an hospital, an arsenal, and two barracks. The fortress was erected by Vauban in 1680 to defend Lorraine. By the treaty of Ryswick, in 1697, France was left in possession of it. By the treaty of Paris (1815), France was obliged to cede Saarlouis, with three other fortresses, to the allied powers, who assigned it, with the two banks of the Saar above Saarbrück, to Prussia.

TRIER, or TRÉVES, the capital of the government of Trier, in Rhenish Prussia, is situated in 49° 46' N. lat., 6° 38' E. long., on the right bank of the Moselle, over which there is a stone bridge of eight arches, 690 feet long, and 24 feet wide. It lies in a valley of extraordinary fertility, bounded by low hills covered with vines. This city

is undoubtedly one of the oldest in Germany. When Julius Cæsar was in Gaul, the Treviri were a powerful people. The chief city of the Treviri was afterwards called Augusta. In later times it was the residence of the emperors Constantius, Constantine the Great, Julian, Valentinian, Valens, Gratian, and Theodosius; and was so eminent for its commerce, manufactures, wealth, and extent, that Ausonius calls it the second metropolis of the empire. It was nearly annihilated by the Huns, the Goths, and the Vandals, yet subsequently almost recovered its ancient splendour under the archbishops of Treves, some of whom maintained large armies, which they led to the field in person, and greatly enlarged their dominions, so that they obtained considerable political influence in Germany. Treves was taken by the Duke of Marlborough in 1704, and during the wars of the French revolution suffered, like other German cities, by having its churches and convents plundered of their wealth, their buildings being converted into stables or warehouses. It was assigned to Prussia by the congress of Vienna. The population (exclusive of the garrison and the suburbs) is about 17,000. The city is an oblong parallelogram a mile and a half in length, and including within its limits several large gardens. The streets are irregular and for the most part narrow; there are nine suburbs and eleven gates. Treves is the seat of the governor, of a Catholic bishop and chapter, and of several tribunals and public offices. The university, founded in 1454, and greatly extended in 1722, was converted by the French into a central school, and is now called a gymnasium; it has a library of above 70,000 volumes and 2000 manuscripts, among which is a Codex Aureus of the four Gospels. Among the public buildings, the following are the most worthy of notice:—The ancient electoral palace, now converted into barracks; it stands partly on the site of an immense Roman edifice, of which only a fragment now remains, the walls of which are 90 feet high and 10 feet thick. It is said to have been the residence of Constantine. The cathedral of St. Peter and St. Helena, in the earliest Byzantine style, is chiefly remarkable for its altars and its marble gallery. It is believed to have formed part of the basilica, or palace of the empress Helena, who converted her residence into a church. The Liebfrauenkirche (church of Our Lady), built between 1227 and 1248, is one of the finest specimens of the pointed style. But the church of St. Simeon is the most important Roman monument in Germany. It was probably built in the time of Constantine, between 314 and 322. In the 11th century it was consecrated and dedicated to St. Simeon by Archbishop Poppo. The double gateway, or portal, formed the entrance to the city, and was called Porta Martia, and also Porta Nigra, and is now called the Roman Gate. Since Treves has been in the possession of Prussia, all the additions by which the Roman Gate was deformed have been cleared away, and it is restored as far as possible to its original form. Few cities are so rich in Roman antiquities. Among other Roman remains are the baths, the amphitheatre, now nearly destroyed, and the bridge over the Moselle. The village of Igel, about 6 miles from Treves, is remarkable for a Roman obelisk 72 feet high, presumed to be the monument of the family of the Secundini. It is the most richly-ornamented Roman monument in all Germany. Treves, though not a manufacturing town, properly speaking, has however some manufactures of cloth, woollens, porcelain, hats, tobacco, paper-hangings, soap, several breweries and distilleries, and a very considerable trade in wine, timber, coals, and corn.

The archbishop of Treves was archchancellor of the holy Roman empire, and had the bishops of Metz, Toul, and Verdun as his suffragans. He was the second in rank among the electors, and gave the first vote at the election of the emperors. From Eucherius to the last archbishop there were 114 bishops and archbishops. When France, by the treaty of Lunéville, obtained the greater part of the country, the archbishopric, with the electorate, was abolished. Clemens Wenceslaus, of the house of Saxony, the last elector, received as an indemnity an annuity of 300,000 florins, and the episcopal palace at Augsburg, where he died in 1812.

TRIESTE, a circle of the Maritime Crownland, or Illyrian Littoral, on the Adriatic, in Austria, consists of the immediate territory of the city of Trieste, the rest of the crownland being distributed between the circles of Görz and Istria. The area is about 84 square miles, and the population about 100,000.

TRIESTE, or TRIEST, once a Roman colony (called by Pliny and Pomponius Mela *Tergeste*), is now a flourishing commercial city and sea-port, the capital of the Austrian Littoral. It is situated in 45° 48' N. lat., 13° 38' E. long., at the north-western extremity of the Gulf of Venice. It consists of two parts: the old town, standing on a hill with a castle on the summit, and the new town, called *Theresienstadt*, which is built on level ground extending to the sea-side. Between the two parts is a spacious thoroughfare called the *Corso*, which opens upon several handsome squares, one of which is adorned with a column surmounted by a statue of the emperor Charles VI. The old town has narrow, crooked, dirty streets, especially in the old Jews' quarter; the new town however forms a regular square with broad streets crossing each other at right angles, and some canals, one of which, called the Great Canal, presents a very animated appearance. There are 31 squares, or market-places, of which the *Theresienplatz* and *Joseph's Platz* in the new town are the handsomest. There are 9 churches, among which are 1 Lutheran, 1 Calvinist, 1 Greek, 1 Oriental

Greek, and 1 Servian; besides other great public buildings, such as St. Peter's church, the ancient cathedral, the synagogue, and the noble exchange, the city contains many very large and handsome private houses. In the year 1719 the emperor Charles VI. declared Trieste a free port, which it still continues to be. At that time there were scarcely 8000 inhabitants. The privileges of the place were extended by the empress Maria Theresa, so that all goods, with very few exceptions, can be imported duty free. The consequence has been that the population has increased very rapidly, and the town, including its immediate territory, has about 95,000 inhabitants. Trieste is now the most important and wealthy commercial city and the chief sea-port in the Austrian dominions. Foreign consuls reside in it. The commerce of Trieste was much increased by the institution of the Austrian Lloyd's, which is supported by the government, and has above 30 steamers, which ply to all parts of the Adriatic, the Mediterranean, and the Black Sea. Of large merchantmen there arrive at Trieste about 1500 of all nations, and the number of arrivals of coasting vessels is not less than 8000. Steamers ply between Trieste and Venice, and others to Greece, Constantinople, Trebizond, and Egypt. The harbour, which is small but secure, is defended by a strong battery on the new mole; it is bordered by a wide stone quay, close to which vessels of 800 tons can ride at anchor. By the Maria Theresa Canal, which partially intersects the city, vessels can load and unload at the doors of the warehouses. There are two lazarettos near the harbour, where ships from suspected places perform quarantine. Among the manufactures are soap, leather, rosoglio, wax, liqueurs, wax-lights, refined sugar, spirits, pottery, &c.

Trieste is a sea-port for a very large tract of country, comprising the Austrian territories from the Tyrol to Transylvania. Among the exports are—metals, linens, tobacco, woollens, printed calicoes, wax, hemp, wool, skins, furs, timber, corn, rice, wine, oil, and shumac. The imports are—cotton, hides, raisins, silks, rice and oil, wheat from Odessa, and all kinds of tropical and colonial produce from the West Indies and Brazil. Goods from the Black Sea coasts, from Turkey and Egypt, are warehoused in Trieste. Ship-building is carried on to a great extent, and the ship-builders of Trieste are much esteemed for their skill. A railway to Vienna through Laybach is all but completed.

Trieste gives title to a Catholic bishop. It has an imperial academy, a scientific and nautical school with 16 professors a town library containing 24,000 volumes, a gymnasium, many banking establishments, and insurance offices. The hills surrounding the city are adorned with beautiful country seats and gardens. These hills were formerly naked and desolate, but in the latter half of the 18th century mould was brought at a great expense by sea from Istria, and this barren tract was gradually transformed into a paradise. After the Treaty of Vienna in 1809, Trieste with its territory was annexed by Napoleon I. to Illyria. In 1814 it returned to the dominion of Austria.

TRIM, Ireland, the county town of Meath, a market-town and the seat of a Poor-Law Union, is situated on the river Boyne, in 53° 34' N. lat., 6° 45' W. long., distant 11 miles S.W. from Navan, and 27 miles N.W. from Dublin by road. The population in 1851 was 1905, besides 707 inmates of the workhouse, and 233 in the jail. Trim Poor-Law Union comprises 20 electoral divisions, with an area of 119,519 acres, and a population in 1841 of 35,293; in 1851 of 29,604.

The town contains many well-built houses. The streets are paved. The parish church, of which the ancient tower still stands, was rebuilt in 1802. There is a spacious and handsome Roman Catholic chapel. There are a school of the Incorporated Society of Dublin, a National school, and a Workhouse school. In Trim are the county court-house, the county jail, fever hospital, Union workhouse, an infantry and a constabulary barracks. At the south-western extremity of the town is a handsome Corinthian column, erected in 1817, and surmounted with a statue of the Duke of Wellington, who received part of his education in the town. Near the jail are the remains of Trim Castle. The Yellow Tower, a part of St. Mary's abbey, rebuilt by the De Lacy's in the 18th century, stands on the left bank of the river. Trim has little trade. It has a tannery, brewery, and extensive flour-mills. The county assizes and quarter and petty sessions are held in the town. Fairs are held five times a year. Saturday is the market-day.

TRINCOMALEE. [CEYLON, in SUPPLEMENT.]

TRING, Hertfordshire, a market-town, in the parish of Tring, is situated in 51° 47' N. lat., 0° 41' W. long., distant 29 miles W. from Hertford, 31 miles N.W. from London by road, and 31½ miles by the London and North-Western railway. The population of the town in 1851 was 8218. The living is a perpetual curacy in the archdeaconry of St. Albans and diocese of Rochester. The town is neat, and is lighted with gas. The church is of perpendicular character, with a massive tower, built about 1450. There are chapels for five sections of the Baptist denomination, National schools, and a mechanics institute with a reading-room and library. A large silk factory, several canvass factories, and strawplat and bonnet factories give employment. Friday is the market-day; fairs are held on Easter Monday and Michaelmas-day.

TRINIDAD, one of the British West India islands, is situated on the north-east coast of Colombia, from which it is separated by the Gulf of Paria, and extends between 10° 5' and 10° 50' N. lat., 61° and 62° W. long. The Serpent's Mouth, a passage 7 miles wide, separates it from the delta of the Orinoco at the southern extremity of the

gulf; at the northern extremity it is separated from the peninsula of Paria by the Dragon's Mouth, a passage 13 miles wide, divided into four straits by three small islands. The whole length of the gulf, which affords good anchorage throughout, is 100 miles, with an average breadth of 40 miles. The island, which is of an oblong form, with a projection at each of the angles except the south-east, is 50 miles long from north to south, and 30 miles broad at the centre, where it is slightly compressed. Its area is 2000 square miles, or 1,280,000 acres, of which almost 43,000 acres are waste, and 200,000 acres are private property. About 60,000 acres are under cultivation. The population in 1834 was 43,678; in 1845 it was 59,815; in 1851 it was 68,600, of whom 727 were natives of Great Britain and Ireland. Three ranges of hills, corresponding to those on the adjacent coast of Venezuela, cross the island from west to east; the highest runs close to the northern coast, over a breadth of about 10 miles, and is broken in many places into deep valleys and rugged peaks, with an extreme elevation of 3000 feet. The second range occupies the centre of the island in a series of flat or round-topped hills from 600 to 1000 feet in height, and a range of nearly the same elevation extends along the southern coast. By these ranges the surface of the island is divided into two extensive valleys, which unite on the western coast in a low sandy plain, interspersed with occasional swamps. In other parts they are diversified by level and undulating tracts, and in some places, especially towards the south, are considerably broken. The northern valley is watered by two navigable rivers, one of which, the Caroni, flows westward into the gulf of Paria, receiving several tributaries from the hills to the north. The Oropuche, which flows eastward to the Atlantic, rises not far from the Caroni. In the same valley, the Lebranche falls into the Atlantic to the south of the Oropuche, and the southern valley is drained towards the same coast by the Nariva and the Ortoire, which collects numerous tributaries from the centre of the island. A number of small streams fall into the Gulf of Paria.

A great part of the island is alluvial and seems to have been formed by the mud of the Orinoco, opposite to which the coast is receiving constant accretions. The mountains, like those on the mainland, consist chiefly of the clay-slate and mica-slate formations. Among the minerals found in the island are milky quartz, pyrites, arsenic, alum, sulphate of copper, plumbago, and sulphur. The most abundant is asphaltum, which in Lake Brea, or Pitch Lake, in a volcanic district on the west coast, occupies an area of 150 acres in extent, and of unknown depth. At the inner edge it is cold and firm and rent into shallow chasms from 8 to 30 feet wide; nearer the sea it is heated and liquid, continuing in a state of slow ebullition with strong exhalations of bitumen and sulphur. It requires too much oil to be profitably applied to the ordinary uses of pitch or tar, but has been employed with advantage in the formation of roads. Volcanic traces appear in various parts of the island. Bitumen is thrown up by the sea at a spot on the south side of Point Brea, and there is an active mud volcano at the extremity of the southern promontory.

The climate is hot, but is free from the destructive droughts which visit the other islands. At Port of Spain, the capital, the temperature ranges from 74° to 86° in the hottest months, and from 70° to 81° in the coldest. The nights are generally cool and pleasant, and in some parts of the interior the temperature is mild and the air elastic all the year round. The dry season extends from December to May. The heat increases till June. In June and July showers are frequent, and in the three following months the rains are heavy and attended by violent storms. The fall of rain is about 65 inches during the year. Slight shocks of earthquakes are occasionally felt, but the island is beyond the range of hurricanes. Fevers and dysentery are frequently fatal, especially among the white population.

The higher portions of the island are covered with dense forests and underwood. The soil is for the most part exceedingly fertile. The most important productions of Trinidad are the sugar-cane, coffee, and cocoa. Indigo, tobacco, and cotton are raised in small quantities. The nutmeg, cinnamon, and cloves have been introduced, and succeed remarkably well; and vines from France and Spain grow in great perfection. The wild animals are, two species of small deer, the paria, an animal a little larger than a hare, the opossum, armadillo, porcupine, ant-bear, sloth, musk-rat, tiger-cat, peccary, water-dog, monkeys in great numbers, and two species of lizards. The shores abound in fish, among which are some varieties of the shark.

Besides the anchorage of the gulf, in which vessels of all sizes may ride securely, Trinidad has three excellent harbours: Puerta d'España, within the northern promontory, on the west coast, and on the south coast Chaguaramas, near its western extremity, and Guaya-guayara, protected by Point Galeota, at the eastern extremity. The ports of Cumana, Rio Grande, and Toco on the north-east coast, and Maqueribe and Las Cuevas on the north coast, are inferior. Las Cuevas is defended by a fort.

The settled parts of the island, which occupy chiefly the north-west coast and the adjacent valley of the Caroni, with some detached spots along the south-west coast, are divided into 8 counties. Along the principal road, which extends eastward from Port of Spain along the north side of the Caroni, are the towns of San Juan, San Joseph and Arima, of which San Joseph, population 307 in 1851, is the most considerable. San Fernando, another principal town, population 2877 in 1851, stands above 20 miles S. from Port of Spain, on the

shore of the gulf. Port of Spain, one of the finest towns in the West Indies, is situated near the mouth of the Caroni, on the shore of a bay environed with hills, and consists of wide and well-kept streets, regularly laid out, and some of them shaded with rows of trees. The houses are built of stone or brick. It contains an English and a Roman Catholic church, both handsome buildings; a United Presbyterian and a Methodist church; a Church of England boys school; three Infant schools; two Roman Catholic schools; the government-house; the court-house; the royal jail and lunatic asylum; the colonial hospital; an excellent market-house of stone; and numerous stores. In the neighbourhood are the botanic gardens, St. James's barracks, and Fort George, which rises in a series of batteries on a height, commanding the valley, and forming the principal defence of the island. The population in 1851 was 17,563.

The affairs of the island are administered by a governor and a council of 12 members, acting under the orders of the imperial government. The members of council, of whom six are official and six are chosen from among the inhabitants, are removable at the pleasure of the crown. The laws are partly English and partly Spanish, and are administered by a chief justice, two puisne judges, and six stipendiary justices, including a Coolie magistrate. The Church of England has 11 clergy in the island, including the archdeacon and several rectors, who are subject to the Bishop of Barbadoes. According to the Return of the Census, taken on 1st July, 1851, it appears that the following is the state of the population in reference to religious profession:—Church of Rome, 43,605; Church of England, 16,246; Gentoo, 2649; Wesleyan, 2508; Presbyterian, 1017; Mohammedan, 1016; Heathen, 880; Baptist, 148; Independent, 133. The amount of revenue for the year 1852 was 107,311*l.*; the expenditure was 110,944*l.* The value of imports for the year 1852 was 493,274*l.*, of exports 458,851*l.*

Trinidad was discovered by Columbus in 1498, when it contained a numerous aboriginal population. It was first colonised in 1538, by the Spaniards; in 1676 it was taken by the French, but almost immediately restored, and in 1797 it was taken by the British, in whose possession it has since remained.

TRINIDAD DE CUBA. [CUBA.]

TRIORA. [NICÆ.]

TRIPLOW. [CAMBRIDGESHIRE.]

TRIPOLI, a country in Northern Africa, which extends along the southern shores of the Mediterranean, from 11° to 25° E. long. In this direction alone the boundary-line of the country is tolerably well determined; on all other sides it is surrounded by countries which form portions of the Sahara, or Great Desert, or are unfit for cultivation. Though Fezzan, which lies south of Tripoli, is governed by its own chief, he is really dependent on the Basha of Tripoli, as he pays regularly an annual tribute.

About the middle of the coast-line of Tripoli is a wide and open gulf, which the ancients called the Greater Syrtis, and is now the Gulf of Sidra, or of Sert. The Beduin Arabs who inhabit the coast call it Giun-el-Kebrit, or the Gulf of Sulphur. Cape Mesurata is on the west side of it, and the town of Bengasi on the east; the distance between these places is 282 miles. The circumference of the gulf is 438 miles. Where it extends farthest to the south, its depth does not much exceed 120 miles. [SYRTIS.]

Coast-line and Harbours.—West of the town of Tripoli the coast is low and sandy, and contains no harbour except that of Old Tripoli, which is almost choked up with sand. Tripoli itself is a good harbour, having from 4 to 6 fathoms water, and being sheltered by a chain of rocks which project from the north-east angle of the town, north-eastward, and by a shoal lying on the eastern side of the entrance. The low and sandy coast continues eastward of the town as far as Cape Sciarra, and contains no harbour. Eastward of Cape Sciarra the coast is higher, and consists of rocky points and capes, with sandy bays between them, a few of which afford shelter for small vessels. The port of Lebda (the ancient Leptis Magna) is now filled up, but there is a small place, called Mersa Ligatah, a mile and a half to the west of the ruins of Lebda, where small vessels find a shelter, except when the wind is from the east. Near Zeliten Point, which is rocky, is a small cove called Mersa Zeliten. East of Zeliten the coast is rocky and at times rises into cliffs. Along this coast are several reefs of rocks which form Mersa Zoraig and Mersa Guaser, small harbours which do not afford shelter for shipping. Near Cape Mesurata is a line of high rocky coast, forming three projecting cliffs, of which the eastern is Cape Mesurata, the Cephalus Promontorium of Strabo. But the entrance of the Gulf of Sidra is formed by a low rocky point, and a mile south of it is the Bay of Bushaifa, which has good anchorage in 6 fathoms water.

The west coast of the Gulf of Sidra, south of the Bay of Bushaifa and as far as Mersa Zafferan, runs in an unbroken line south, south-east, and east for nearly 150 miles. It is very low and sandy, and a low ridge of sand-hills extends parallel to the shores at the distance of from one to three miles from them. Some parts of this coast are strewn with wrecks, masts, and yards, &c., which shows that there must be a great set of the sea from the north-east upon it, as none of them are seen on the eastern shore of the gulf. Mersa Zafferan is a small port, in which boats may find shelter with all winds. A few miles east of it the coast rises into cliffs. The high coast continues for

nearly thirty miles, when it again sinks nearly to the level of the sea, but has sand-hills a short distance from it. There are here several small bays, and one in particular at Hammah, in which boats may find shelter. Five miles eastward of Hammah the coast is hilly, but soon declines again to the low sandy beach which continues to Ras How-y-er, having a range of hills about two or three miles from the coast. Ras How-y-er is a bluff rock, which stands at the entrance of a spacious bay, formed between it and a bold rocky promontory called Bengerwad. In this bay ships may find shelter from east to west-north-west, and boats may land in the sandy bay with almost all winds. Bengerwad is about 60 feet high, but east of it the coast gets low, and small sandy bays are formed between very low rocky flats, some of which project a mile into the sea, and are not more than a foot above water. Towards the most southern extremity is a low rocky islet called Busbaifa. Sachrin, at the bottom of the gulf, is in 30° 16' N. lat.; and hence the coast trends to the north-east. From Sachrin to Gartúbbah is a sandy beach, but the general appearance of the coast is hilly. Near Gartúbbah is Mersa Braiga, the only place in the Gulf of Sidra that is entitled to the name of a port; and here the protection is made by breakers. A rocky point runs into the sea, and within this point there is always safe landing. From Braiga the coast trends north-east by east, is rocky and slightly indented, and the shore generally speaking is high and hilly. Ras Tabilba is a bold promontory with a sandy bay on each side of it. The high rocky coast terminates opposite the rock of Ishaifa, from which some reefs extend to the island of Gara, which is small, but tolerably high and steep. The low coast, which begins near Ishaifa, trends north-east to Shawhan, and thence to the west of north to Carcora: it is sandy, and does not offer a place of refuge even for a boat; but the coast near Carcora is much indented, and there are two small places somewhat sheltered by projecting points, which offer protection for boats with northerly or easterly winds. From Carcora to Bengazi the shore is low and sandy, but it rises as it recedes from the coast, and is covered with vegetation.

Bengazi, which is situated at the entrance of the Gulf of Sidra, has a safe port, which however is fast filling up with sand. [BENGAZI.] The coast north of that port trends in general to the east-north-east as far as Cape Ras Sem, and is low and sandy, with the exception of a few small hills. This coast has no harbour, except east of a rocky promontory near the ruins of the town of Tolmeta, where a small bay offers a convenient landing for boats, except with the wind on shore. A few miles east of Tolmeta the mountains, which extend over the interior of Barca, come close up to the shore of the Mediterranean in steep precipices from 600 to 800 feet high. This part of the coast, extending about 30 miles in length, is inaccessible both by sea and land, and terminates at Cape Ras Sem. Between this cape and that called Ras-el-Hilal is a large open bay, in which is a small indentation called Mersa Susa Hammám, near which are the ruins of the ancient town of Apollonia. It has at present no harbour, but boats find some shelter behind the islet that lies off the town. On the east side of Ras-el-Hilal is a bay about three-quarters of a mile deep, in which vessels may ride with the wind any way from the southward to westward. The coast between Ras-el-Hilal and Cape Bujebára is also very high and rocky, but the mountains do not run in an unbroken line, as they do west of Ras Sem, being broken by deep chasms, which extend far inland. Still the landing is very bad, except in a small sandy nook two miles west of Cape Bujebára. From Cape Bujebára the same rocky coast continues, but the ravines are few, and the mountains somewhat farther removed from the coast. At Derna is a good roadstead, about a mile and a half off shore, and some shelter for small craft close in shore with the wind from north-north-west to north-east. Cape Razat, or Razatu, which is east of Derna, is a vast promontory rising to a considerable elevation: farther east the coast grows lower, but continues rocky; it recedes to the south so as to form a wide bay, called the Bay of Bombah, which is said to contain good anchoring-ground. The boundary-line between Tripoli and Egypt is considered to be east of the Bay of Bombah.

The coast-line of Tripoli probably exceeds 1000 miles, and hardly contains three or four harbours in which vessels of moderate size can find tolerable shelter. There is perhaps no other coast-line on the globe of equal extent which is so little favourable to intercourse with countries by sea.

Surface and Soil.—We are very imperfectly acquainted with the interior of Tripoli. The western districts, or those which are situated west of the Gulf of Sidra, are known in a few directions; but of the country surrounding the gulf nothing is known except the districts contiguous to the sea-shore; and as to the countries east of the Gulf of Sidra our knowledge extends hardly anywhere farther than about 20 miles inland, if we except two oases, which are situated far to the south, in the Desert.

Western Region.—Two ranges of mountains traverse this part of Tripoli from west-north-west to east-south-east, running nearly parallel to the sea. The northern of these two ranges is called the Ghurian, Gharian, or Wahryan range, and is visible from the sea, being only from 15 to 20 miles distant from it. The southern range is supposed to be about 30 miles farther to the south, and is called the Sudah, or Black Mountains, where it is traversed by the road leading from Tripoli to Fezzan. The commercial town of Ghadamis is situated

within this range, and rather on its southern declivity. The name 'Black Mountains' is derived from the colour, as nearly the whole of the range is covered with lava and basalt. The Ghurian Mountains, south of the town of Tripoli, seem to have a considerable elevation, probably however not exceeding 4000 feet above the sea-level. In proceeding farther east the range lowers considerably, and its most eastern offsets, which occur about five or six miles south-west of the town of Meurata, terminate only in high hills. Several minor ridges branch off from the eastern portion of this range on its northern side, and approach close to the Mediterranean between Cape Sciarra and the ruins of the town of Lebda. The most western of these minor branches is called the Tarhoona Mountains: it hardly attains a thousand feet above the sea.

The country which is inclosed on the east by the Tarhoona Mountains extends southward to the base of the Ghurian range, and on the west reaches the boundary of Tunis: it is a low and level plain, about 60 miles long and 16 miles on an average width. It is by nature divided into two sections, the fertile district and the Desert. The fertile district, called Mesheea, occupies only about 15 miles along the sea-coast, and the greater part of it is to the east of the town of Tripoli; its width nowhere exceeds five miles. Though the soil is light and contains a great portion of sand, and is destitute of rivers and springs, it possesses a high degree of fertility, which, by means of irrigation derived exclusively from tanks and cisterns, produces rich crops of wheat, barley, dhurra, and Indian corn. The whole of the Mesheea is planted with palm-trees arranged in long rows, which are kept in the finest order. Their number is stated to exceed ten millions, and the annual value of the produce of each tree is estimated at a Spanish dollar. The plantations of olive-trees are also extensive, and the oil is considered superior to the best oils of Italy. There are several kinds of oranges, of which the sweet orange is reckoned finer than that of China. The pomegranates, lemons, limes, figs, and Indian figs are highly prized. There are two kinds of apricots, several sorts of fine plums, and some very high-flavoured sweet grapes and peaches. Water-melons are particularly excellent and plentiful. From November to March the country is refreshed by abundant rains, which fill the numerous tanks and cisterns; and in this season the thermometer descends frequently to 40° and even to the freezing-point in the night-time, whilst in the day it sometimes rises to 70° and even higher. In the remainder of the year, and especially from the middle of May to September, rain occurs rarely, and sometimes not a drop falls for several months. The heat is then so intense that even the hardy Arab, inured to the climate, at ten in the morning retires from his work, and all his beasts of labour are put under the shade. A sudden cool breeze arises from the sea regularly every afternoon during these intense heats; but the air brought by it from the sea is so damp that it rusts all sort of steel-work, even in the pocket, and wets a person's dress entirely through in a few minutes. The Moors then retire to the terraces on the top of their houses, where they sleep for hours. In this season of the year a strong land-wind sometimes blows incessantly for several days, and as it blows over the heated sands of the Desert, which lie south of the Mesheea, the heat of the atmosphere is increased to such a degree that respiration is rendered difficult, and death sometimes occurs. The air is at the same time filled with burning sand, which darkens the sky, and the natives wear a silk handkerchief tied over the face when they walk the streets. In spite of this disadvantage the climate is very healthy; no kind of disease except ophthalmia is common, and many people are said to reach the age of 110 and 130 years. The Mesheea is very thickly peopled, so that the population of this district is said to amount to 300,000. They live dispersed over the country in isolated dwellings or in villages.

The Mesheea is surrounded on all sides, except the sea, by a desert, whose surface consists of loose sand. This long sandy tract begins on the east on the banks of a small river called Wady'm Seyd, and thence stretches westward to the Ghurian Mountains, occupying nearly the whole of the space between the mountains and the sea west of the town of Tripoli. Its western portion has no springs nor running water. Where it borders on the Mesheea, and at the distance of several miles from it, the sand rises in irregular hills, and is totally barren. But in approaching the mountains small spots covered with shrubs and grass occur, which afford pasture to the flocks of the Beduins, and near the base of the mountains the pasture-grounds are nearly contiguous, and frequently interspersed with corn-fields. The eastern districts of the Desert, or those near the Tarhoona range, are also covered with high sand-hills, which reach to the base of the mountains, but they are traversed by two small perennial streams, called Wady Ramleh and Wady'm Seyd, which run in rather narrow valleys, considerably depressed below the general level of the Desert. These valleys are covered with bushes, and between them corn-fields often occur. Barley and dhurra are cultivated.

The Ghurian Mountains, south of Tripoli, occupy a tract 12 or 15 miles in width. The northern declivity appears to be very irregular, several hills of basalt being dispersed over their base. The mountains rise with a rather steep ascent, but on the top they spread out in plains of moderate extent, which are divided from one another by hills, many of which have a conical form. The plains are in a high state of cultivation. They are covered with corn and saffron fields,

interspersed with olive-trees, but the elevated situation prevents the cultivation of the palms. The sides of the hills, which are too steep for the growth of corn, are planted with almonds, figs, apples, olives, and vines. A considerable portion of this tract however is used as pasture-grounds. The inhabitants of the Ghurian Mountains live mostly underground, in caves which have been dug for the purpose.

Farther to the east, and where the Tarhouna Mountains branch off, the mountain region sinks much lower and assumes a different character. It is a table-land about 80 miles in width, which runs towards Cape Mesurata, and only on its edges assumes the aspect of high hills or mountains, especially towards the Desert which lies north of it. The greatest part of the surface of this table-land is a plain, nearly level, whose soil is very stony, or covered with gravel, and completely barren. But in the vicinity of the higher grounds which inclose it on the north, it is furrowed by depressions, or wadies, which are partly cultivated, and yield good crops of corn, and the level grounds separating them are covered with fine grass for sheep and camels.

The eastern portion of this table-land, in approaching the Gulf of Sidra, splits into several short ranges of hills, which fill up the space between Cape Sciarra and the town of Mesurata, and in many places come close up to the sea. Thus a hilly tract is formed, which extends about 60 miles from west to east, along the seashore, and from 5 to 6 miles inland, where it terminates on the plain of the table-land. This tract is the best-watered district in Tripoli, as several small streams which descend from the table-land run through its valleys, and reach the sea after a course of 6 to 8 miles, but there is always water in them. The western district consists of a succession of hill and dale. They possess a considerable degree of fertility, and produce wheat, barley, and dhurra. In the eastern districts the hills are separated from the sea by a level plain about two miles wide, which in two places is interrupted by ranges of low hills, so as to be divided into three plains of moderate extent, which are known as the plains of Lebda, Zeliten, and Mesurata. The hills south of them are mostly pasture-grounds, between which some corn-fields are found; but the plains themselves, which slope gently towards the sea, are well cultivated. Thick groves of olives and date-trees rise above the numerous villages, which are scattered over their surface, and the intermediate spaces are either covered with the most luxuriant turf or rich with abundant crops of grain. The plains of Lebda and Mesurata especially are distinguished by their rich crops of corn, and large quantities of it are sold to the wandering tribes living east of them or exported by sea. The cultivated grounds in the plain of Mesurata extend along the shores of the Gulf of Sidra as far as Bushaifa. A ridge of low sand-hills separates the plains from the sea.

The country south of the table-land, extending to the Sudah Mountains, contains a much smaller portion of cultivated ground than that north of it; the greater part of it is a complete desert. According to the scanty information which we possess, it appears that its surface presents a succession of several wide depressions, running from west to east, and terminating on the east in the low grounds which extend along the western shores of the Gulf of Sidra. From each of these wide valleys smaller valleys branch off, and penetrate a few miles into the higher grounds, which inclose them. These higher grounds are many miles wide, and rise rather steep above the valley to an elevation of 400 to 500 feet. A large portion of them is probably 1000 feet above the sea-level. Their surface is neither level nor yet hilly. It presents everywhere a useless waste, though it greatly varies in aspect. At some places it is what the natives call a 'sahár,' or a level plain consisting of loose sand, without either stones, rocks, water, or vegetation. Other tracts, called 'sereer,' are gravelly plains from which the sand has been swept by the winds. The gravel is generally small, and in some instances rounded as pebbles on the sea-beach; in others sharp and pointed, as if recently broken; and a third kind, which sometimes covers spaces of many miles in extent, is mostly composed of small stones which have a shining exterior. In the sereers alone sand-hills are found. A third kind of desert is called 'warr;' it presents a rough plain covered with large detached stones lying in confusion, and very difficult to pass over, as its surface is much broken and interspersed with numerous rocks and small hillocks. A few spots in these deserts are covered with bushes. The few wells which are found are generally above 100 or even 200 feet deep, and yet their water is bitter and brackish. The habitable portion of this region is limited to the depressions above mentioned, where several villages are found close together, whilst all the other parts are uninhabited. But even in those districts which are far from the villages a few fields are cultivated, and produce barley and dhurra. The inhabitants of the villages cultivate them, but do not venture to form agricultural settlements on them for fear of the wandering tribes of the adjacent desert. These valleys have generally a watercourse in the middle, in which however water is found only for a few weeks in the year, as the rains south of the Ghurian Mountains and the table-land are far from being so abundant as north of them. The greater part of the depressions is overgrown with shrubs, and supply only pastures for camels, sheep, and goats; the most fertile of them is that of Benioloed, which is situated on the south of the table-land south of the Tarhouna Mountains. The 'warr' which borders on the south of the valley of Benioloed is covered with lava and columnar greenstone, and is of great extent.

Country on the West and South of the Gulf of Sidra.—The region just noticed does not reach the western shores of the Gulf of Sidra, being separated from it by a tract of very low country, or rather by a marsh. This marsh begins at Bushaifa, about 4 miles S.E. from Mesurata, and extends along the sea-shore as far as Giraf, a distance exceeding 100 miles. It reaches however the beach only in two places, being separated from it by a narrow tract of more elevated ground, which consists of small but irregular heaps of sand, with occasionally a little vegetation on it. The marsh is widest in its most northern part, between Mesurata and Sooleb, which are 40 miles from one another. In these parts it is from 9 and 10 to 15 miles wide. In approaching Sooleb it contracts to 2 or 3 miles, but widens again farther south to 4 and 5 miles. At the end of the rainy season, in March, nearly the whole surface of this marsh is covered with water. At the end of the dry season by far the greater part of it is dry, but interspersed with numerous pools of water. Many of these pools are some miles in extent. The surface of the marsh consists of alternate layers of incrustations of salt and of an alluvial deposit, and is entirely destitute of vegetation. In some parts small shells cover the surface, which renders it probable that the sea at times inundates the marsh. In the most level part of the marsh many places occur in which a solid crust, sometimes not more than two inches or an inch and a half in thickness, covers deep hollows, the lowest parts of which contain bitter and stinking water several feet deep. This circumstance renders the traversing of the marsh very dangerous. In this extensive tract of country the habitable ground is limited to two or three low hills, which rise within the marsh, and on which date-groves are met with, and to three or four places where the narrow tract along the sea is somewhat wide, and consists of high ground covered with grass and bushes, which afford pasture to sheep and camels. This is the worst part of Tripoli bordering on the sea.

Though the Gulf of Sidra is inclosed by countries entirely barren and sandy, the tract which is found farther east, and which extends from Giraf (16° 30' E. long.) to Hudia (18° 30' E. long.), a distance of more than 100 miles, has a different character. Its surface in general is undulating, in a few places even rising into hills. The hills are mostly covered with shrubs and grass, affording good pasture-ground for camels, sheep, and goats. In some of the lower tracts are fields on which the Beduins, the inhabitants of this coast, cultivate barley and dhurra. But there are no trees in all the tracts surrounding the Gulf of Sidra. In a few places there are lagoons near the sea, but they are not of great extent, and the only marshes which are met with in this region are on the banks of these lagoons.

The country occupying the bottom of the Gulf is of a much worse description. It extends from Hudia to Braiga (19° 40' E. long.), a distance of more than 60 miles. The shores of the sea are lined with low sand-hills, which have been accumulated by the northern wind from the sand thrown up by the sea. Behind them, marshes frequently occur, or the ground is a rough stony plain, nearly without vegetation. In a few spots only bushes and grass are met with, and in these parts a few families of Beduins wander about with a small number of camels, sheep, and goats. A continuous ridge of hills extends at a little distance from the shore, rising to an elevation of between 400 and 500 feet above the sea-level. The nature of the country south of these hills is not known.

Respecting the climate of this region, it is observed that in winter the atmosphere after sunset is always very chilly, and that there is usually a heavy deposit of dew. In summer however the weather is said to be excessively sultry.

Country East of the Gulf of Sidra.—This part of Tripoli is commonly called Barca [BARCA], and was known to the ancients under the name of Cyrenaica. It comprehends the country which, between 20° and 28° E. long., projects into the Mediterranean nearly in the form of a semicircle, and the countries lying south of it as far as about 29° N. lat. It is supposed that the greater portion of it is mountainous. This part of Tripoli is described under BARCA and CYRENAICA.

The interior of the mountain region, as already observed, is not known. The authority of the Basha of Tripoli however extends much farther south, as the oasis of Augila is within the country governed by him or his deputies. The mountain range which lies to the north of this oasis runs in an unbroken line east and west. It rises from the level ground at its base abruptly, and consists of bare rocks without the least covering of soil. The Oasis of Augila, to the south of this mountain range, is said to consist of three oases, Augila, Ialoo, and Leshkerreh, of which the two last-mentioned are a short distance to the east and north-east of Augila itself. All three, taken together, contain a population of about 10,000. These oases are only forests of palm-trees, surrounded by an immense plain of red sand. The wells are more than 20 feet deep, and the water brackish. Dhurra and barley and a little wheat are cultivated, but provisions, consisting of corn, butter, and cattle, are imported from Bengazi. The exports consist especially of dates and ostrich feathers. Ostriches are numerous in the adjacent desert. Three smaller oases occur between Augila and the southern extremity of the Gulf of Sidra, nearly equally distant from these places. The most western and largest is called Maradeh. They are forests of palm-trees, surrounded by hills of shifting sand. As they are too small to afford sustenance to a popula-

tion sufficiently numerous to resist the attacks of the nomadic tribes of the desert, these oases are uninhabited, but some families living in the plain of Bengasi resort annually to them to gather the dates. A considerable oasis, called Fughha, is situated (it is said) south of the most southern part of the Gulf of Sidra. It seems to be situated in the basalt mountains called Harutsh, which extend westward to the very boundary-line of Fezzan.

Productions.—Besides the different articles of agricultural produce before mentioned, some bushes grow in desert wadies bearing small black berries of a very sweet and agreeable taste; a kind of wild artichoke is met with; prickly-pears and aloes are abundant in several places. The wild trees and bushes are only used to make charcoal. Where charcoal is not to be had, camel's dung is used as fuel.

Cattle are numerous in Barca, where great numbers are found on the table-land, whence they are sent to Bengazi to be shipped for Malta and other places. The domestic animals are horses, camels, sheep, goats, dogs, and poultry. The horses are of a fine breed. Camels are the only animals used as beasts of burden. The common dogs of the country are white, and resemble wolves in form: they are fierce, and defend the herds against the attacks of the hyenas and jackals. The most common wild animals of prey are wolves, foxes, hyenas, and jackals. There are antelopes, gazelles, the jerboa dipus, hares, rabbits, hedgehogs, and a small animal, resembling the guinea-pig in form, called gundy.

Ostriches are found only in the deserts. The other wild birds are bustards, cranes, plovers, quails, ducks, snipes, curlews, pigeons, partridges, and flamingoes. Swarms of locusts frequently proceed from the deserts to the cultivated ground, whence they are frightened away, and then they fall into the hands of the poor, who eat them roasted or salt them. Salted locusts appear to be a considerable article of inland trade. Bees abound in the hilly and mountainous tracts of the country, and honey is an important article of inland trade. Small quantities of honey are exported. Salt and sulphur are the only minerals found and worked.

Population and Inhabitants.—The population is estimated at about two millions. In the country it consists of Arabs and Jews; in the towns, mostly of Moors and Jews: there is a small number of Turks, Mamelukes, Christians, and Arabs. Black slaves are numerous in the towns.

The Arabs of Tripoli, who compose the bulk of the people, are of the same stock as the Beduins of Arabia, whom they resemble in feature, form, and language. Their language generally is not much different from the Arabic, though in some districts it is intermixed with a great number of words derived from other languages. There are two kinds of Arabs in Tripoli; one wanderers, the other fixed residents in villages and small towns. Many of those who live in villages also travel about the country, but always return to what they consider their home. The wanderers have no permanent place of abode, but remove their tents as pasturage or circumstances require. There are large tracts in the deserts which are partially covered with grass and bushes, and afford pasture for their sheep, goats, and camels. These wandering Arabs cultivate some small tracts with barley or durrha. These fields are usually at a great distance from the places to which they go with their flocks, but they are respected by other wanderers, and the corn is rarely stolen. When it is ripe, the proprietors come to gather it. They prepare the soil by turning up the earth with a rude plough, or more generally with a hoe. When the date season commences, many families come and pitch their tents in the Meshees of Tripoli, in order to purchase dates for their future subsistence. These they deprive of their stones, and, when kneaded together, keep them in skins, so as to preserve them from insects or wet: these dates form their chief support, with the milk of their sheep and camels. A great article of commerce is furnished by the fat of sheep. It is boiled until it bears some resemblance to the grease used by tallow-chandlers: it is then poured into skins, and is fit for use. It is put into almost every article of food by the Arabs, and also extensively used in Tripoli and other towns. From the wool of their sheep the women make strong barracans, carpets, shirts, and turbans. Their tents are also made of wool and goats'-hair, and also the sacks which are used for the carrying of corn and merchandises on their camels. Mats and ornaments of palm-leaves or grass are neatly made. Their dyes are generally brilliant, black, blue, red, and orange. As in Western Asia the Arabs are divided into tribes, each governed by a sheikh. In religion they are Moslems, very bigoted and superstitious.

The Jews are numerous in the towns and in the villages of the Arabs. In the towns, though much oppressed, and paying large sums as tribute, they have succeeded in monopolising several branches of commerce. Among the Arabs, where they are much better treated, they apply themselves to several mechanical arts and trades. In Tripoli and the large towns they have several synagogues.

The Moors are most numerous in the towns and in the Meshees of Tripoli. They are either landed proprietors or merchants. As merchants they are mostly engaged in the kafilas which go to Fezzan and Bornou. They resemble exactly the Moors of Morocco, but are less instructed than the Moghrebins, having no colleges, though there are several schools in which the children are taught reading and writing. They are less bigoted than the Arabs.

The number of Turks and Mamelukes has increased since the country has again become dependent on Constantinople. They are either officers of government or serve as soldiers. Christians are only found in the town of Tripoli, where they are better treated than in any other place in the Turkish dominions. They are permitted to build churches. The greater part of them are Maltese, but there are natives of Italy. The black slaves, who are mostly kept by the Moors, are nearly all natives of Soodan.

Government.—The bashalic of Tripoli, like the other Barbary states, is a sordid despotism; and, whether ruled by a Turkish or Moorish chief, is held for the sole purpose of exacting a revenue, without any regard to the wellbeing of the people or the prosperity of the country. A considerable sum was formerly drawn from the plunder obtained by her corsairs, and a very lucrative branch of it was derived from the traffic in European slaves. To supply this deficiency, caused by the abolition of these sources of profit, the country was burdened with monopolies, and the people were ground down with new taxes. The distant beys of Bengasi and Derna, holding their office at the pleasure of the basha, make the most of their uncertain tenure by arbitrary exactions for themselves, as well as to enable them to comply with their master's demands; while the sheiks of Barca and Sert pay likewise a tribute, in return for which their power is acknowledged in the Desert. Thus the system throughout is one of extortion.

History.—The early history of this country will be found under the heads AFRICA, BARBARY, BARCA, and CYRENAICA. After the destruction of Carthage it became a Roman province, and the three flourishing cities of Oea, Leptis, and Sabrata, constituted a kind of federal union under the name of Tripolis. On the conquest of Northern Africa by the Vandals in the 5th century, it passed into the hands of those barbarians, from whom it was rescued in the reign of Justinian, by Belisarius, in 534. About a hundred years afterwards Tripoli, after an obstinate contest, in which the prefect Gregory was slain, the town was forced to yield to the conquering khalifa. After the Arabian conquerors had consolidated their power in Northern Africa, and detached themselves from the khalifa of Egypt, Tripoli was generally governed by the Arabian dynasties settled at Cairoan. [TUNIS.] It was besieged by the Egyptians in 877 and in 1054. In 1146 it was seized by Roger II., king of Sicily, who held it however but a short time; for in 1184 its walls were raised by Yakub, and it followed the political condition of Tunis and was subject to its kings. From this time until its conquest, about 1510, by the Spaniards, Tripoli is scarcely mentioned by historical writers. In 1580 the emperor Charles V. ceded it, with the island of Malta, to the Knights of St. John of Jerusalem, after their expulsion from Rhodes. Its only strength was then a castle, which they engaged to keep and to hold in defence of Christendom; but in 1551 it was wrested from them by Simon Basha, sent to the attack by their inveterate enemy the sultan Solyman, who appointed the famous corsair Dragut (whose forces formed part of the expedition) its first governor; and about this time its present walls were built, and the tract of country now composing the regency was first made a Turkish pashalic. Tripoli now became one of those systematic piratical powers which for centuries attacked the commerce of Christian nations, making slaves of their prisoners. In 1683 the town was bombarded by a French fleet, when the pasha sent an humble submission to Louis XIV. Nevertheless, the Tripolitan cruisers seldom allowed a ship at sea to escape them if they thought they could make a prize of her with impunity; and it was not until 1816 that slavery and piracy were abolished. Previous to the attack in that year on Algiers, a British naval force appeared off Tripoli, and the pasha bound himself to treat all prisoners in future according to the usage of European nations.

For the last 300 years Tripoli, like the other Barbary states, has been considered a dependency of the Ottoman Porte; but the allegiance of these states principally arose from the sultan being the chief of the Mohammedan religion. Yet, as has been seen, they made separate and distinct treaties with other powers, and were so far independent. At first the governors or bashas of Tripoli were sent from Constantinople, supported by a garrison of Turks, who kept the Moors in subjection; and being liable to be recalled, they generally purchased the continuance of their appointment by remitting a handsome tribute to the supreme government, and exacting as much as possible for themselves. But in 1718, Hamet Caramanli, a Moorish chief, and second in command, headed a well-concerted rebellion, and was proclaimed basha by the people. After murdering the Turkish officers and garrison he contrived to render the government hereditary in the family, which continued so until 1832, when the last basha of the family, Yussuf, after a tyrannical reign of forty years, was obliged to abdicate, and the Porte established again the old policy of governing the country under a chief appointed from Constantinople. The interior of the country however enjoys no settled government. The chiefs of Aujilah and Ghadamis keep on terms of friendship with the basha only because the situation of their territories requires an outlet for their commerce. The Arab chiefs frequently break out into actual hostilities against the Turkish rule: as lately as July 1855 headed by a chief named Gourmah, the Arabs, after defeating a large Turkish force, were reported to be approaching the very gates of the city of Tripoli.

The foreign trade of Tripoli is carried on chiefly with Malta, Tunis,

and the Levant, whither the produce of the country and goods brought from the interior of Africa by caravans (which convey slaves, ivory, gold-dust, senna, natron, &c.) are sent in exchange for European and other manufactured goods. Tripoli has at present no marine of its own. She never had a standing army beyond the three or four hundred Mamluk guards of the basha; but the town is now garrisoned by 4000 Turkish troops.

Antiquities.—Most of the towns in the regency possess interesting remains, particularly in the Pentapolis, where innumerable chambers are hewn out of the rocky hills throughout: some of them with architectural elevations, sculpture, and inscriptions. The ruins of temples, theatres, and aqueducts of Roman construction, are particularly traceable at Ghrenna (Cyrene), Tauchira (Arsinoë), Tolmeta (Ptolemais), and Marsa Susa (Apollonia). Lebida (Leptis Magna) seems to have been completely ravaged, and what ruins there are, are deeply buried in sand. In the city of Tripoli stands a fine Roman arch, whose solidity of construction has preserved it from ruin. It was built in the 2nd century; the inscription is perfect, but the sculptures are almost wholly effaced. At Tripoli Vecchia there is an amphitheatre of Roman construction still entire of 148 feet in diameter, with five rows of seats; and in the same direction still exists the remnant of one of the great Roman ways, on the borders of which are observable the ruins of ancient buildings in stone. Money, coins, and precious stones and gems, mostly intaglios, for which the people of Cyrene were once famed, have been found on the site of the ancient Berenice.

Ghadamis.—The oases of Aujilah, Fezzan, and Ghadamis are generally dependent on Tripoli. [AUJILAH; FEZZAN.] Ghadamis is situated to the south-west of Tripoli, in 30° 40' N. lat., 10° 25' E. long., distant from it about fifteen days' journey, and as many from the town of Gabes, in the kingdom of Tunisia. The inhabitants, amounting to about 6000 or 7000, are a quiet trading people, and seldom take part in the political vicissitudes of Tripoli. The town, which contains the ruins of Roman buildings, is said to have been a Roman establishment, the Cydamum of Pliny. ('Nat. Hist.,' v. 5.) Its importance arises from the four commercial roads which from this point strike into the interior regions of Africa. The first passes through Mezda and Sockna, takes a southern course to Mourzouk, and so on to Bourrou and the Lake Tchad, and its neighbouring countries of Kanem and Beghermi; the second, or direct southern road, leads to the city of Graat and across the desert of Soudan, passing through Agadez to Houssa and Kaseena; the third, crossing the Great Desert, and passing through Ainel-Salah and Akabli, in the country of Tuat, leads directly to Timbuctoo, where some of the people of Ghadamis are settled; the fourth is the western road, which, passing to the south of the great chain of Mount Atlas, directs its course towards Morocco by Taffilett.

TRIPOLI, a city and port of the Mediterranean, on the northern coast of Africa, which gives its name to one of the regencies of Barbary. Its castle is in 32° 53' 56" N. lat., 13° 10' 53" E. long. It is the capital of the state of Tripoli and the residence of the basha. The city is built upon the site of the ancient Oea, which, with the cities of Leptis Magna and Sabrata, formed the province called Tripolis under the Roman emperors; and being the only one of the three which is still an inhabited town, has preserved the name of the district or province.

The town is built upon a rocky promontory which stretches a short distance into the sea, which washes it to the northward on two sides, while the south and west sides are bounded by a sandy plain which is partly cultivated. It is defended by a castle, whose walls are unusually high, and which, being situated at the south-east angle connects the line of batteries on the sea-front with a high wall that defends the town on the land side, and this is strengthened by six bastions. The town has two gates; one towards the sea, the other opening to the south-east on the plain. The extreme length of the town, which is very irregular in shape, is about 1360 yards, and its breadth about 1000 yards.

The streets are for the most part like narrow lanes; and the whole town is so uneven with accumulated rubbish, on which the houses are in fact sometimes built, without regard to a general level, that those who are unaccustomed to the indifference of the Moors and Turks in such matters, might imagine they had wandered to some deserted and ruinous part of the town, when in reality they were traversing its best streets. The houses are built of irregular stones and mud formed into a mass, and whitewashed. They seldom have an upper story, and an aperture is rarely seen in the exterior walls, the rooms being entered and lighted from a spacious square yard in the centre of the building. Tripoli contains six mosques of the first order with a number of tall minarets, besides many smaller mosques. The exterior of the great mosque, built by the Caramauli family, which stands in the main street, is extremely handsome and majestic; the roof, composed of many small cupolas, is supported upon sixteen Doric marble columns, said to have belonged to a Christian temple. The floor is laid with rich carpets, and the subdued light and richness of the ornaments create an imposing effect. The Jews have their synagogues, and the Christians enjoy the free exercise of their religion, an endowed convent of Franciscan friars being under the protection of the Roman Catholic powers. The bazaars are extensive: one contains the shops of the traders, which are ranged on each side, and are very small; the other is appropriated to slave-dealing. The slaves are brought with other

articles of trade from the interior of Africa by the kafilas, or caravans. The shops in the town are miserable-looking hovels, although some of them contain diamonds, pearls, gold ornaments, rich gems, and scarce drugs. These are principally in the hands of the Jews, who have a quarter allotted to themselves, in which they are confined every evening; but notwithstanding this apparent persecution they engross the greatest part of the trade, and are intrusted with employments of accountability and profit. The Roman arch, mentioned in the preceding article, stands near the sea-gate. Several fondooks, or caravanserais, receive merchants and their goods from distant parts. The baths make a considerable show by their picturesque clusters of cupolas; some of them are chiefly of marble, and are crowded with bathers. The winter rain furnishes the inhabitants with water for the summer, during which not a drop falls for months together. It is collected from the flat roofs of the houses, and carefully conducted by channels into a reservoir beneath the courtyard, where the water is preserved pure and clear. Water however for common purposes is easily found on the plain near the surface, but it is brackish.

There are a few schools, at which the reading of the Koran and sometimes writing is taught. The people apply themselves principally to commerce, which they conduct upon the footing of barter, and seldom by ready money transactions, so that a little arithmetic suffices them. There are however several regular European houses of business, chiefly French, Italian, and Maltese, whose principals, together with the European consuls, form the only educated class of the community. The inhabitants spend their time in the Turkish bazaar, smoking and drinking coffee, and gossiping upon the events of the day. A corrupt Italian is generally spoken by the people of the town. The basha, whether Moor or Turk, generally confers the offices of state upon some of his own family, or upon renegades. Justice is administered and executed for heinous crimes with great promptitude and little form. The common people are bigots in their religion, but they do not possess the Mussulman virtue of sobriety—wine-shops, which yield a great revenue to the government, being public, and intoxication very common. The population is estimated at 15,000 to 20,000, of whom about 2000 are Jews. The Christians fluctuate in numbers; they are principally Maltese, and may amount to about 2000. The great bulk of the inhabitants are of Turkish descent.

Outside of the town are the burying-places; and as great respect is paid to the dead, the tombs are decent and numerous. The basha has several country palaces in the surrounding district, where some of the European consuls (many of whom reside here), and other persons of note also have country-houses and gardens. The Arabs may not enter the town without leave, and their chief is answerable to the basha for their good conduct. There are good weekly markets outside the town, and others at a distance of five or ten miles, well supplied with cattle of all sorts, poultry, game, vegetables, and fruit, the produce of the cultivated districts. Fish, taken on the coast by Maltese fishermen, is abundant and good.

The harbour is formed by a long reef of rocks running out from the northern point of the town into the sea in a north-easterly direction, and by other reefs at some distance to the eastward of these, which together form a tolerably good shelter. The western side is protected by the projection of land on which the town stands. In the deepest part however there is not more than five or six fathoms water. Ships of war are consequently obliged to anchor in the outer roads, where there is good holding-ground in sixteen and eighteen fathoms; but the anchorage is exposed to northerly winds. Two batteries, erected on commanding points of the reefs, and two others situated on the beach, defend the entrance of the harbour. The white square buildings, intermixed with cupolas and minarets, and with Indian fig- and date-trees growing among them, give to the city a very pleasing appearance from the sea.

The foreign commerce is liable to much variation. The government reserves to itself certain monopolies of the produce of the country; while other monopolies, both of imports and exports, are farmed out to the Jews, according to circumstances, and to raise money. But the measure most ruinous to trade is the power assumed of coining and fixing the value of a debased currency, which has sometimes been made to lose 15 or 20 per cent. in a week. Arms and warlike stores, and timber, as well as all sorts of grain and pulse, are generally admitted free of duty; and articles for the use and consumption of the Christians established in the regency are similarly privileged.

From the nature of its port the trade of Tripoli is carried on in small vessels, seldom larger than brigs, few of which are now owned in the country. It has an indirect trade with England through Malta, Marseille, Leghorn, Trieste, and the commercial towns of the Levant likewise trade with Tripoli. The imports from Europe are woollen-cloths of all sorts, coarse linens, printed and striped cottons, silk-stuffs of various colours and descriptions, common white muslins and calicoes, earthenware, common writing-paper, gold and silver tissues, cotton, cotton twist, beads, common looking-glasses, sword-blades, hardware, and fire-arms of all sorts, gunpowder, shot, lead, tin, tin-plates, sugar, coffee, spices, common wines, and spirits. The exports consist of some articles of produce, and commodities brought from Central Africa by the caravans, such as morocco leather, wool, hides, goats' and sheep's skins, soda, salt, oil, sal-nitron, madder

roots, wax, saffron, senna and other drugs, ostrich feathers, gold-dust, ivory, gum, dates, horned-cattle, sheep, poultry, and butter. Among the exports are black male and female slaves, brought from Fezzan and Ghadamis, and generally shipped to Tunis, Egypt, and the Turkish ports of the Levant, in vessels of those countries or of Tripoli.

The trade of Tripoli profits once or twice a year from the passage of the pilgrims from western Barbary on their way to Mecca. Formerly these caravans amounted sometimes to 3000 persons, and half as many camels and horses, with their goods and merchandise. But since the suppression of piracy in the Levant, devout Moslems prefer the passage by sea to Alexandria, as less fatiguing and less dangerous. This has worked a change for the worse in the traffic of the place, and the caravans which stop there now seldom amount to more than a few hundred people and animals. The kafilas, or small caravans, from Fezzan and Ghadamis, are now the principal medium of inland trade. These people exchange their merchandise for that of Europe, and pay the balance in gold-dust.

TRIPOLITZA, one of the chief towns in the Morea, is situated in a plain in Arcadia, 3000 feet above the sea, in which the ancient towns of Mantinea, Tegea, and Pallantium formerly stood. The name points to its having been formed from a union of three cities; and the current tradition in Greece is, that these cities were Mukhli, Tegea, and Mantinea. Mukhli is said by the Greeks to have been a settlement from Amyclæ in Laconia, and it appears in the middle ages to have been one of the chief places in this part of the Morea. It was taken by Mohammed II., in 1458, and it is not improbable that Tripolitza was built soon after this event, when Mukhli declined in importance. The bishop who resides at Tripolitza is still called Bishop of Mukhli.

Before the Greek revolution Tripolitza had a population of 15,000 to 20,000, and was the residence of the Pasha of the Morea. It was taken in 1822 by the Greeks, who put to the sword 8000 male Turks. Ibrahim Pasha took the town in 1828 and razed every house it contained. It has been since partially rebuilt.

There are several remains of ancient art in Tripolitza, as the ruins of Tegea have been plundered for the purpose of building the mosques and other edifices. The climate is cold in winter, and snow often lies very thick upon the plain.

TRISTAN DA CUNHA, a group of islands in the Southern Atlantic, lying S.S.E. of St. Helena. The largest and central island lies about the point 37° 6' N. lat., 12° 2' W. long. The islands are three in number: the largest, to which the name of Tristan da Cunha properly belongs, is between 19 and 20 miles in circumference; of the two smaller, that which is named Nightingale Island is to the south of the principal island, and that named Inaccessible Island to the south-west. The two smaller islands, from the steep and craggy nature of their shores, can only be approached in a calm. The north side of the largest island is very striking; an extensive plain stretches along the base of a mountain, the sides of which are clothed with thick brushwood, and which towers abruptly to the height of 8326 feet. In 1816 a company of artillery was stationed on this island: it was withdrawn after the death of Napoleon. Water is good and abundant in the island, and vessels which touch there can easily procure supplies of fresh provisions. Off the coast is great abundance of seals, and whales, both black and white. These islands were discovered in 1506, by the fleet under Tristan da Cunha, whose name has been given to them.

TRIVANDRUM. [HINDUSTAN.]

TRIVENTO. [SANNIO.]

TRIVIER, ST. [AIN.]

TROAD. [TROY.]

TROIS RIVIERES. [CANADA.]

TROITZK. [OBENBURG.]

TROJA. [CAPITANATA.]

TROLLHÄTTEN CANAL. [SWEDEN.]

TROMSÖE. [TRONDJEM.]

TROND. ST. [LIMBURG.]

TRONDJEM, or DRONTHEIM, is the most northern of the provinces of Norway, extending from 62° to 71° 10' N. lat., and from 5° to 31° E. long. Near its southern boundary it extends more than 200 miles from west to east, but between 65° and 69° N. lat. its width hardly ever exceeds 60 miles. North of 69° N. lat. however it grows wider, and in some places the width amounts to 150 miles. On the west and north it is bounded by the sea, on the east are Russia and Sweden, and on the south the Norwegian province of Christiania and Bergen. Its area is about 57,600 square miles. [NORWAY.]

Trondhjem comprehends the countries situated on the northern declivity of the Norraka-fjellen, and those which lie on the western and steeper slope of the Kiölen Mountains: the greater part of it is exceedingly mountainous, and very little fit for agricultural purposes. This circumstance, united to the severity of the climate, must be considered as the cause of its very small population, amounting to only 265,349. Trondhjem is divided into three sections, Proper Trondhjem, Nordland, and Finmarken.

Trondhjem Proper comprehends the countries inclosing the Bay of Trondhjem, or Trondhjem-fjord. Among the numerous inlets by which the rocky coast of this country is indented the Trondhjem-fjord

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is the most important. Its entrance from the sea is near 63° 30' N. lat., and it runs about 60 miles inland, measured in a straight line; but as it forms as it were the section of a circle, its whole length is near 90 miles. Towards its eastern extremity it is divided into three arms by an island (Ytteröe) and a peninsula, and these arms are called, from south to north, Verdals-fjord, Ytteröe-fjord, and Beitstad-fjord. Beitstad-fjord is united to Trondhjems-fjord by a narrow channel about 5 miles in length. The width of Trondhjems-fjord varies in general between 3 and 5 miles, exceeding these dimensions only where short arms branch off from the main body of the fjord.

The country south of Trondhjems-fjord, or *South Trondhjem*, lies on the northern declivity of the Lang-field and Dovre-field, which are portions of the Norraka-fjellen. [NORRKA-FIELLEN.] The coast-line extends from Cape Stadland, the most southern extremity of the province, to the entrance of Trondhjems-fjord, nearly due north-east. It is more than any other part of the Norwegian coast intersected by arms of the sea, which extend in different directions, so that a portion of the country near the sea is converted by them into islands, whilst the remainder forms numerous peninsulas. The largest of the islands thus formed are Froyen, Hitteren, and Smölen. Hitteren is nearly 30 miles long, and on an average 10 miles wide. These islands are rocky and high, but not mountainous, the heights on them rising only to the elevation of hills. Their soil is indifferent, and agriculture is limited; but they are partly covered with woods, in which deer are common. The islands which lie farther south and nearer the coast are much more elevated, and the summit of that of Tusteren, south of Smölen, probably exceeds 4000 feet above the sea-level, as it is hardly ever free from snow. The coast of the mainland is high, and usually rises with a steep precipice from the sea to an elevation of a few hundred feet. Along the whole of the outer coast no tracts of cultivable land of any extent are met with, and the few hamlets which occur are inhabited by fishermen. The rocks are mostly bare, and in a few places only are there small woods of stunted trees, or rather bushes. The fish taken along this coast are chiefly lobsters, cod, ling, and herring. The fjords themselves penetrate to the distance of 50 miles from the open sea. Their average width varies between one and two miles, and they are very deep, but much exposed to sudden gales from the mountains, which, though of short duration, are extremely violent. Along the shores of these inlets tracts of cultivable land occur, but they are of moderate extent. They are cultivated, and yield most kinds of grain, except wheat, and several kinds of vegetables. The mountains and high hills which separate the fjords from each other descend with a gentle declivity, which is partly covered with woods of birch, elm, fir, and pine, among which however forest-trees are not common, and is partly used as pasture-ground.

The interior of the country is occupied by the mountain region of the Norraka-fjellen. The highest part of it lies along the southern boundary-line of Trondhjem, where the Sneehätten rises to 7489 feet above the sea-level. The base on which the Sneehätten and other lofty peaks near it stand is a mountain plain, from 3000 to 4000 feet above the sea. It is partially free from snow during two or three months of the year, and a portion of it is then used as pasture-ground. In some parts are small woods of stunted birch and willows, but in general it is destitute of wood. On the west the table-land is furrowed by a few valleys of considerable length, whose width however never exceeds a mile. These valleys are in their lower districts from 2000 to 4000 feet below the adjacent mountains. They have the advantage of a very hot but short summer, and the greatest part of them is cultivated with much care, and yields abundant crops of rye, barley, potatoes, and flax. The largest of these valleys are, from south to north—Romsdalen, which is famous for its picturesque beauty; Eikidalen; and Drivdalen. As this country does not offer anything to the foreign market, except fish and some timber, it has only two small towns, Christiansund and Molde. *Christiansund* lies south-west of the elevated island of Tusteren, and is built on three small islands, inclosing a narrow arm of the sea, which constitutes its harbour. It contains about 3000 inhabitants. *Molde*, south-south-west of Christiansund, has only 1500 inhabitants. The inhabitants are partly engaged in commerce, but the greater number in the fishery of the Lofoden, to which these towns send a number of small vessels. Their commercial relations are almost exclusively with Spain, to which country the produce of the fisheries is sent.

The country along the southern shores of Trondhjems-fjord contains a much greater portion of arable land, and is more extensively cultivated and more populous. It is watered by four rivers, which from west to east are called Oerkef, Guul, Nid, and Stor-elf. From the shores of the fjord to the Dovrefield the country rises in three terraces, whose lines of separation are marked by the Lake Salbøe, which is about 520 feet above the sea, and the course of the river Guul, where it runs from east to west. Each of the terraces occupies about 20 miles in width. The lowest terrace, along the shores of the fjord, is an undulating plain about 9 or 10 miles in width, which is however intersected with a few steep rocks. A large portion of it is cultivated, though the soil is not fertile. Near the lake of Salbøe, and in general about 10 miles from the fjord, the country becomes hilly, and the soil is stony. Only a small portion of it is under cultivation, and the remainder is indifferent pasture-ground. The second terrace is broken in all its extent, with the exception of the river valleys, which are

from 1 to 3 miles wide, of considerable fertility, and well cultivated. The high hills and mountains which lie between the valleys are almost overgrown with pine, fir, birch, and other trees, and in some parts contain excellent pasture. The third terrace rises by degrees from 1500 to 3000 feet, and partly resembles the table-land above-mentioned, which lies farther west, but its surface is broken by numerous rivers which descend from the Dovrefield, and in some of the narrow valleys along their banks cultivation is carried on to some extent, whilst the adjacent mountains afford good pasture for several months of the year. [NORRKA-FIELLEN.]

The small district of Røraas lies on the Dovrefield, close to the boundary of Sweden, and comprehends the country in which the Glommen-elf originates. It is so much elevated above the level of the sea that the country is unfit for agricultural purposes on account of the cold of the climate; the frost sometimes even in June kills the animals on the pastures. In this tract three copper-mines are worked with success. The ore from them is brought to the town of Røraas, where the smelting-houses are built. This town contains a population of about 1500 individuals, all of whom are employed in the mines or smelting-houses. The copper is carried to Trondhjem, where it is shipped. In the most elevated part of this tract are a few families of Laplanders, who live on the produce of their herds of rein-deer.

Country North of the Trondhjem-fjord.—An immense mass of high rocks extends along the sea from the shores of the fjords to the mouth of the Namsen-elf. A great part of it rises above the line of trees, and it is considered as the most elevated mountain of Scandinavia in this parallel; for the great range which divides Norway from Sweden is here interrupted by the remarkable depression which is noticed in NORRKA-FIELLEN. East of it is a wide depression called Nummedalen, a part of which is cultivated, but the greater portion of it is covered with a forest of fine timber-trees. The same description applies to the valley of the Namsen-elf, which is contiguous to Nummedalen on the north. The forests covering this country are the most northern large forest of timber-trees in Norway, and from Namsen-fjord all the countries lying farther north are supplied with logs and deals. The Namsen-elf is too rapid for navigation, but timber is floated down. Along the whole coast of Trondhjem Proper the rocks, partly above and partly below water, are so numerous that the navigation of this sea is extremely dangerous.

Nordland comprehends all the countries lying between the parallel of the island of Leköe and the Quänanger-fjord. The southern part is called Helgeland, the central district Salten, and the northern portion Tromsøe. The islands of Lofoden and of Senyen are also included in it.

Helgeland extends from the parallel of the island of Leköe to Cape Kunnen. The Kiölen range is in these parts not more than 60 miles distant from the sea. The coast here also is rocky, but of moderate elevation, much lower than farther south or north. It has likewise numerous inlets, but they are short, only a few exceeding 10 miles in length. Numerous islands, islets, and rocks line the shores. Some of the islands rise to a great elevation, and are inhabited only by a few fishermen. Other islands are low, and have some farms for breeding cattle rather than for cultivation. Among these is Tiötöe, which is mostly under cultivation, and on which the small town of Alstahong is built. The interior of Helgeland is filled up by mountains rising from 1000 to 1500 feet, between which occur numerous narrow valleys and depressions, which in general are well wooded, though the trees rarely attain the size of timber-trees. There is however a moderate portion of land which could be cultivated; but in this tract agriculture is neglected for the herring and other fisheries. Near the polar circle and north of the valley of Ranen an extensive and elevated mountain-mass lies across the country, and terminates on the sea with Cape Kunnen, which rises from the edge of the water with perpendicular precipices to more than 1000 feet above the sea, and in a course of four or five miles inland it attains more than 4000 feet. The more elevated portion is always covered with snow and ice.

Salten comprehends the country between Cape Kunnen and Ofoden-fjord (68° 30' N. lat.). The Kiölen range here approaches nearer to the sea, being hardly in any part 40 miles distant from the shore. At the same time it rises in elevation, for in this interval occur the group of Sulitelma, the highest part of the Kiölen Mountains. [NORRKA-FIELLEN.] The space between the Kiölen and the sea is filled up by peninsulas, and wide and deep inlets. The peninsulas are formed by high ridges of rocks rising with frightful precipices on both sides, and terminating at the top with a sharp ridge, in most places scarcely sufficient to afford a resting-place for a bird. The inlets penetrate so far into the land, that most of them wash the very base of the mountain range. Salten is the most desolate part of Norway. The steep sides of the mountains are nearly bare of vegetation. The small depressions which occur here and there are partly filled with swamps, and partly overgrown with stunted birch, pine, and fir. The pastures are small in extent, and the cattle of very diminutive size. The inhabitants derive their subsistence almost exclusively from the fishery on the Lofoden Islands.

Lofoden Islands lie opposite the coast of Salten, and are divided from it by an arm of the sea called West Forden, which at its southern extremity is nearly 100 miles wide, but narrows in advancing

northward, until, at its most northern extremity between the continent and the island of Hindöen, it terminates in a strait hardly 2 miles across. The Lofoden Islands constitute a rocky chain, which near the continent runs nearly due west, but farther to the west declines to the south-west. The islands and islets of which this chain is composed are separated from one another by narrow straits, through which the sea flows during the tides with a rapidity resembling a torrent. In some parts it forms very deep and extensive eddies, among which the whirlpool called the *Malström*, and which is found between the islands of Moskenäsöe and Mosköe, has obtained celebrity, as it is impossible to navigate it during the strength of the tides, and it has caused much loss of life. All the islands are rocky, with high shores: those however which lie most to the westward rise only to a moderate elevation. The largest of them are Varöe, Moskenäsöe, Flagstadöe, and West Wagöe. East Wagöe rises to 3000 feet above the snow-line, and Hindöe to 3200 feet. The mountains however in summer furnish pasture for a few cattle and sheep of diminutive size. In winter these animals live on fish, and on different kinds of sea-plants.

Tromsøe extends from Ofoden-fjord to Quänanger-fjord (70° N. lat.). Opposite the termination of the Lofoden Islands, the chain of the Kiölen, forming the water-shed, recedes farther inland, and runs nearly east. In these parts this chain grows much lower, and it does not appear that any portion of it is above the snow-line. The highest mountains are some distance from the range on the shores of the sea and of the fjords. The Faxfield (near 69° N. lat.) rises to 4260 feet; and the mountains inclosing Malanger, the Storhorn near Tromsøe, and the ranges on Lyngen-fjord, are nearly as high. The last mentioned are the highest mountains between 69° and 72° N. lat. Large tracts of them are always covered with snow, and glaciers descend down on their sides. The deep and extensive fjords by which this country is indented have level tracts on their shores, which are of some extent near the innermost recesses of the inlets; and though the climate is very severe, some barley and potatoes are raised. A part of the mountains is covered with woods, which contain a few timber-trees, so that logs and deals are exported. The pastures are much more extensive and richer than in Salten, and cattle and sheep are more numerous. Near 69° 30' N. lat., the town of Tromsøe has been built on an island situated in the strait between the continent and the island of Hvalöe (Whale Island). The island on which the town stands is from 4 to 5 miles in length, and rises to the height of about 600 feet. The town contains about 800 inhabitants; it has some good houses, a saw-mill, and wooden quays along the harbour. It is a thriving place. The mean annual temperature does not exceed 32°. Cod, halibut, and smelts are taken in large quantities along the coast.

Finmarken comprehends the most northern portion of Trondhjem, extending from Quänanger-fjord to the Tana-elf and Varanger-fjord. Along its western side, between Quänanger-fjord and Alten-fjord, extends a mountain range, which terminates near the sea in the isolated Yakulsfield, rising 3700 feet above the sea, the most northern glacier (70° N. lat.). The country east of this range contains a more elevated and a lower region, of which the former lies to the north and the second to the south. The highest mountains of the elevated region are found at the most northern extremities of the long peninsulas that lie between the gulfs, or fjords, of Alten, Porsanger, Laxa, and Tana. They stand mostly isolated, and are divided from each other by valleys, which are filled up by an alluvial soil, so that it appears the mountains formerly constituted islands and the valleys straits. On the mainland itself, the highest portion of the elevated region lies near the inner extremities of the inlets, whence it extends on the whole as a plain, which insensibly grows lower as it proceeds southward. On the north the plain is in general from 2500 to 3000 feet above the sea, but towards the south and east it sinks to 1500 feet. No trees are found on it except birch and mountain-ash, which do not attain their full height. This plain is visited in summer by the Laplanders, as it produces excellent pasture for their rein-deer.

On the fjords the scanty population subsists by fishing; but on the Alten-elf there are a considerable number of agriculturists, who cultivate barley and potatoes, this being the most northern point of the globe where cultivation is carried on with success. There are numerous cattle, and the Finlanders, called Quäns in this part, have dairies. There are also some copper-mines, which are worked by an English company. The ore is shipped to Swansea to be smelted.

The lower region is in general a plain, which in its highest point, near the sources of the Alten-elf, is about 1200 feet high, but gradually decreases in height as it proceeds north and north-east. On this plain a few isolated mountains rise to a height of between 3000 and 4000 feet. From the last mountain a lower chain extends between the Laxa-fjord and Tana-fjord, which terminates north of 71° N. lat., with Cape Nordkyn, the most northern promontory of the European continent. The surface of the plain is interspersed with innumerable lakes, but most of it is covered with rein-deer moss. It is therefore used by the Laplanders as winter pasture. The more elevated parts of the plain are overgrown with stunted birch. On this plain rises the Alten-elf. [ALTEN.] The Tana-elf, which is much larger, running about 150 miles, is less rapid, and might be navigated, if the inhabitants of the country through which it flows had any occasion

for it. An immense quantity of salmon is annually taken in this river, which are considered the finest in all Norway.

Several large islands lie along the coast of Finnmarken, west of the Porsanger-fjord. The largest of them, Seyland and Sorøe, rise to a great elevation, and are inhabited by a few fishermen. On Qualøe is a commercial place, *Hammerfest*, which has about 500 inhabitants. The harbour, being safe, is much visited by foreign vessels. Russian vessels from Kola and other places come for fish, and bring hemp, flax and tow, sailcloth, linen, tar, nails and ironmongery, and sometimes considerable quantities of corn. Steamers ply from Christiania to Hammerfest in summer. The most northern island is Magerøe, a bare rock, which towards the north terminates in the North Cape, a huge mass of rocks rising to 1500 feet above the sea. At the eastern extremity of Finnmarken is the small island of Wardøe.

Particulars on the climate of Trondhjem are found in the article NORWAY.

TRONDHJEM, the capital of the province of Trondhjem in Norway, is built on the southern shore of Trondhjem-fjord, at the mouth of the Nid-elf, and has about 13,000 inhabitants. It has regular and wide streets, with water-cisterns at their intersections. The houses are generally of two stories, and built of wood, hardly half a dozen of them being of brick. The cathedral is a gothic building, a part of which was erected as far back as 1033. In the fjord, and at a distance of about a mile, is a small rocky island, Munkholm, on which a fortress is built. The roadstead for shipping is exposed to a heavy swell from the north and north-west, and has a loose ground in 20 fathoms. There are a society of arts, a grammar school, an hospital, a workhouse, a public library, and a museum. The commerce is considerable. The exports consist of fish, fish-oil, timber, tar, copper brought from Røraas, and millstones. The town employs many vessels in the foreign and coasting trade and in the fisheries.

TROON. [ATYSHIRE.]

TROPEA. [CALABRIA.]

TROPFAU. [MORAVIA.]

TROWBRIDGE, Wiltshire, a market-town, in the parish of Trowbridge, is chiefly situated on a rocky eminence on the right bank of the river Were, in 51° 18' N. lat., 2° 11' W. long., distant 13 miles W. by S. from Devizes, 99 miles W. by S. from London by road, and 105 miles by the Great Western railway. The population of the town of Trowbridge in 1851 was 10,157. The living is a rectory in the archdeaconry of Wilts and diocese of Salisbury.

Trowbridge had a fortress in the reign of Stephen. The castle was in ruins in Leland's time; the site is now covered with buildings. The houses in the town are chiefly of stone, and generally old and of mean appearance. The parish church is a spacious edifice, with a nave, chancel, two aisles with chapels attached, and a large western tower and spire. There are places of worship for Baptists, Wesleyan Methodists, and Independents; National schools; an infant school; and a savings bank. The principal branch of industry at Trowbridge is the manufacture of kerseymer and broadcloth. Markets are held on Tuesday, Thursday, and Saturday; a fair is held on August 5th. Petty sessions are held monthly, and there is a county court.

TROY, the name both of the country in which the city of Troy was situated and of the city itself. The country of Troy, more commonly called Troas, formed the north-western part of Mysia in Asia Minor. It was bounded W. and N.W. by the Ægean Sea and the Hellespont, the extent of its coast being from the promontory of Lectum on the south to the river Rhodius, which falls into the Hellespont below Abydos on the north. Its eastern boundary was a ridge of Mount Ida, extending from the source of the Rhodius to the sea-coast near the promontory of Lectum.

The inhabitants of the Troad were most probably of Thracian origin. At the time of the Trojan war they had reached a higher state of prosperity and civilisation than their opponents the Achæans. There seems however to have been no considerable town in the district except the capital, Ilium or Troy. The cities mentioned by Homer would seem, from the ease with which they were taken, to have been nothing more than villages. ('Il.,' ix. 328, &c.)

The whole of the Troad is intersected by the branches of Mount Ida. Two of its summits, which bore special names, were Cotylus and Gargara. ('Il.,' viii. 46, &c.)

The following were the principal places in the Troad at the time of Strabo.—Near the promontory of Lectum were the villages of *Hama-zitus* and *Chrysa*. At the latter, which stood on the coast, was the temple of Apollo Smintheus ('Il.,' i. 37), which was still standing in the time of Pliny. *Skepzia* was so called from its having been first built on the highest summit of Ida, whence, according to Strabo, it was afterwards removed to a spot 60 stadia lower. Aristotle collected a library at *Skepzia*, which was ultimately removed by Sulla to Athens. *Alexandria Troas* was on the coast, a little to the north of *Chrysa*. [ALEXANDRIA, Troas.] From Alexandria to the promontory *Sigeum* (*Yenisehr*) the coast was called *Achaïum*. The promontory of *Sigeum* formed the southern side of the entrance to the Hellespont, and near it was a town of the same name. Near *Sigeum* also was the *Achilleum*, a mound of earth supposed to be the grave of Achilles. Not far to the east of *Sigeum* was *Rhætium*, and near it the *Æantium*, or monument of the Telamonian Ajax. The coast between *Sigeum* and

Rhætium was, according to Strabo, the naval station of the Greeks during the siege of Troy. Here is the mouth of the united rivers of Simois and Scamander or Xanthus. The principal city in Troas was *Troy*, in ancient times more commonly called *Ilium*, which exercised a kind of sovereignty over the other towns of the country. Its site, which has been the subject of so much discussion in modern times, is placed by some upon the western branch of a range of hills extending from the river Simois into the plain towards the river Scamander. Its citadel lay on the south-eastern side of the city. Others have traced its site a little farther north in the modern Turkish village of Bunar-Bashi. Others again have denied the existence of ancient Troy altogether, or have declared it to be a useless task to investigate its site, since it was totally destroyed by the Greeks, and abandoned by its inhabitants. Homer however clearly suggests, that, after the calamity that befell Troy in the reign of Priam, it continued, at least for some time, to be ruled over by the *Æneads*, a branch of the house of Priam. The city of Troy which Xerxes (Herod., vii. 42, &c.) and afterwards Alexander the Great visited, may have been of later origin, but it is nevertheless attested that it was built on the site of the ancient Troy. This town appears to have gradually decayed after the time of Alexander, and a new town of the same name was built somewhat below the spot where the Simois is joined by the Scamander. (Strab., xiii. p. 597.) In the times of the Romans this Troy was regarded and treated as the genuine ancient Troy from which they derived their descent.

The first king in Troas is said to have been Teucer, whence the Trojans are also called Teucricians. Dardanus, one of the neighbouring chiefs, married a daughter of Teucer, by whom he had two sons, Ilius and Erichthonius: the latter became the father of Troas, from whom the names Troy and Troas are derived. He had three sons, one of whom, Ilius, founded the town of Ilium or Troy, which became the capital of the country of Troas. In the reign of his successor, Laomedon, the city was said to have been fortified with walls by the assistance of Poseidon (Neptune) and Apollo. Soon after this Troy was taken by Hercules, but was restored to Priam, son of Laomedon, who reigned for a long time in peace and prosperity, until his kingdom was attacked by the united forces of the Greeks, in consequence of his son Paris having carried off Helen, the wife of Menelaus. After a siege of nine years the Greeks took and destroyed the city of Troy. This event is usually placed about the year B.C. 1184.

The most important among the remaining towns of the Troad were Dardanus, Thebe, and Thymbra.

(Upon the topography of Troy and its neighbourhood, the reader may consult the earlier works of Pococke, Le Chevalier, Choiseul Gouffier, Spon, Wood, Wheeler, and others; Leake, *Travels in Asia Minor*; *Journal of the Geographical Society of London*, vol. xii.; Lord Carliana, *Travels in the East*.)

TROY. [NEW YORK, State of.]

TROYES, a city in France, capital of the department of Aube, is situated in the middle of a vast and fertile plain on the left bank of the Seine, 112 miles by railway S.E. from Paris, in 48° 18' N. lat., 4° 5' E. long., at an elevation of 361 feet above the level of the English Channel, and had a population of 25,656 in the commune at the census of 1851. It occupies the site of the ancient *Augustobona*, or *Augustobana*, the chief town of the Tricasses, a Celtic nation, whose name it afterwards took, and from this by corruption the modern name has been derived. It was plundered by the Normans A.D. 889, and in the feudal period was the capital of the important county of Champagne. Troyes was taken by the Duke of Bourgogne in 1415; and here, in 1420, the marriage of Henry V. of England with Catherine of France was concluded, and the treaty arranged by which Henry was appointed to succeed Charles VI. on the throne. Troyes was retaken from the English by Charles VII. in 1429.

The Seine flows on the northern and eastern sides of the town, which is surrounded by walls, and entered by six gates. The ramparts are planted with trees, and there are other trees at their foot, so that the town is surrounded by a double alley of trees: the ditch also is laid out as a garden. There are five faubourgs, or suburbs. The streets are irregularly laid out, and are with some exceptions narrow and crooked; the houses, many of which are of wood, are generally ill-built: the gables towards the streets are built of wood painted or plastered, and are frequently adorned with carving, and have dark penthouses, which overhang the shops. These old structures however are gradually giving way to modern and more solidly-constructed buildings. The neighbourhood of the town is pleasant.

There are three parish churches, namely, the cathedral of St. Pierre, St. Jean, and La Sainte-Madelaine; and five succursal churches, or chapels of ease, namely, St. Nicolas, St. Pantaléon, St. Remi, St. Urbain, and St. Nizier. The cathedral of St. Pierre is a fine specimen of gothic architecture: the height and width of the nave, the beautiful stained-glass windows which adorn the aisles, three beautiful rose windows, and the handsome pavement of the choir, are among the features which attract the greatest notice. The church has never been completed: there were to have been two western towers, but only one, 205 feet high, has been erected. The church of St. Jean is remarkable for the narrowness of the nave: it contains a fine tabernacle, sculptured by Girardon; and a fine painting of the baptism of Christ, by Mignard. The church of St. Remi contains a figure of Christ in

bronze by Girardon. The churches of La Sainte-Madeleine and St. Urbain are considered as very beautiful, and St. Nicolas has a handsome front. All the churches of Troyes are more or less rich in painted windows. Of the other public buildings, the Hôtel-Dieu, or hospital, is a handsome building of the last century; the town-hall has a handsome stone front, the work of Mansard, adorned with columns of black marble; the gate of St. Jacques, or St. James, which is flanked by two towers, and surmounted by a light spire, is sometimes ascribed to Cæsar. There are besides these the theatre, the episcopal palace, the wine mart, the abattoirs, the gaol, and house of correction.

The manufactures of Troyes are important, and are promoted by the distribution of the waters of the Seine through the town by means of numerous canals. The chief products are cotton and woollen yarn, hosiery, printed cottons, dimities, tapes, and other cotton goods; blankets, flannel, cloth, and other woollen goods; linens, printing paper, playing cards, chamois and other leather, gloves, hats, wool-cards and combs, spinning-wheels, knitting-needles, agricultural implements, furniture, musical strings, leaden utensils and wares, and whitening. There are dye-houses, bleach-grounds, bleaching-houses for wax, and tan-mills. There are five fairs, two of eight days each. Several important roads converge at Troyes; the Seine is navigable below the town, which is joined to Paris by railway. These numerous means of communication greatly facilitate the trade of the town, which is very considerable in the industrial products above named, and in corn, wine, brandy, pulse, colonial produce, raw cotton, wool, hemp, iron, lead, zinc, timber, &c.

Troyes is the seat of a bishop, whose diocese comprehends the department of Aube. The town has a tribunal of first instance, a tribunal of commerce, a chamber of commerce, and a council of prud'hommes. Printing was established at Troyes about the middle of the 15th century, and the trade still flourishes there. The public library contains 55,000 volumes and 5000 manuscripts: it is kept in a spacious hall 164 feet long, 32 feet wide, and 22 feet high. Troyes has several learned societies; two seminaries for the priesthood; a college; and four hospitals, or asylums. Troyes was the native place of Pope Urban IV.

TRUJILLO. [ESTREMADURA, Spanish; VENEZUELA.]

TRÜLAU. [MORAVIA.]

TRUMPINGTON. [CAMBRIDGESHIRE.]

TRURO, Cornwall, a municipal and parliamentary borough, a market-town, and the seat of a Poor-Law Union, is situated at the head of Truro Creek, in 50° 16' N. lat., 5° 2' W. long., distant 21 miles S.W. from Bodmin, and 255 miles W.S.W. from London by road. The population of the borough was 10,733 in 1851. The borough is governed by 6 aldermen and 18 councillors, one of whom is mayor, and returns two members to the Imperial Parliament. The livings are in the archdeaconry of Cornwall and diocese of Exeter. Truro Poor-Law Union contains 24 parishes and townships, with an area of 92,211 acres, and a population in 1851 of 42,270.

The earliest mention of Truro appears to be about the year 1175, under the name of Triueru. It is first found under the form Truro in the reign of Henry VII. Its market is held by prescription. Elizabeth granted it a charter in 1589. Truro is the nearest town in Cornwall. The houses are well built; the streets are partially paved and lighted. St. Mary's, the parish church, is a handsome building, with a spire 125 feet high. In the town are a chapel of ease, and chapels for Wesleyan and Primitive Methodists, Baptists, and Independents. There are a Grammar school, and National and British schools. The Royal Cornwall Institution holds its meetings in Truro: its museum contains a rich collection of Cornish minerals, birds, and antiquities. The county library and the Cornish Horticultural Society are established in the town. There are assembly-rooms, a county infirmary, and a jail. The town-hall is a handsome new building in the Italian style: the court of the Vice-Warden of the Stannaries is held in it.

Truro has a considerable trade, and is the residence of several of the gentry of the county. East Huel Rose, one of the largest lead-mines in the county, is near the town. Some tin is smelted, and tin and copper are exported. The imports are iron, coal, and timber. Markets for meat, fish, and other provisions are held on Wednesday and Saturday; the Wednesday market is also for corn. There are four yearly cattle-fairs. Truro is one of the coinage towns (for the coinage of the tin): the process is carried on only here and at Penzance. The mound and a few other vestiges of Truro Castle remain.

TRURO. [NOVA SCOTIA.]

TRUXILLO. [HONDURAS; PERU.]

TSCHERKASK. [DON COSSAKS.]

TSCHERNIGOF. [CZERNIGOF.]

TSCHERNO-YA. [ASTRAKHAN.]

TSCHUGUJEW. [CHARKOF.]

TUAM, Galway county, Ireland, a market-town and episcopal city, and the seat of a Poor-Law Union, is situated on the Harrow, a branch of the river Clare, in 53° 32' N. lat., 8° 50' W. long., distant 20 miles N.N.E. by road from Galway, and 125 miles W. from Dublin. It is governed by a sovereign and 12 burgesses. The population in 1851 was 4938, besides 2381 in public institutions. Tuam Poor-Law Union comprises 34 electoral divisions, with an area of 190,649 acres, and a population in 1841 of 69,326, in 1851 of 51,194.

Tuam occupies a low and nearly level site on both sides of the river, which is crossed by a bridge. It consists of several streets radiating from the market-place. St. Mary's Cathedral, which is also the parish church, stands on the west side of the town. It is a small structure, and is of mixed Norman and gothic architecture. The Roman Catholic cathedral, which occupies a raised site on the east side of the town, is one of the finest ecclesiastical structures in the island; it is a cruciform edifice of gothic architecture with a lofty tower at the west end. There are in the town another place of worship for Roman Catholics, a convent of presentation nuns, a Franciscan monastery, and St. Jarlath's College, a seminary for general and ecclesiastical education. The Tuam Diocesan Education Society has a Free Model school in the town, and there are three National schools. The bishop's palace is a plain mansion, situated on extensive grounds on the north-east verge of the town. The residence of the Roman Catholic archbishop adjoins his cathedral. The other principal buildings of the town are the market-house, a neat court-house, the globe-house, dispensary, bridewell, and Union workhouse. The stone-cross, although much decayed, is a remarkable specimen of its class. Tuam has an extensive grain-market, a large brewery, several tanneries and flour-mills, and a small manufacture of canvass and coarse linens. Quarter and petty sessions are held. Fairs are held May 10th, July 4th, October 20th, and December 15th. Thursday is the market-day.

The diocese of Tuam is the largest in Ireland, and comprehends the greater part of the county of Galway, a considerable portion of Mayo, and a small part of Roscommon. It includes 33 benefices. The chapter consists of a dean, provost, archdeacon, and eight prebendaries. The income of the bishop is 4600*l.* By the Church Temporalities Act the sees of Killala and Achonry were annexed to it in 1835. Tuam was an archbishopric from the 12th century till 1839, when the archbishopric became extinct, and the province was united to that of Armagh.

TÜBINGEN, a walled city of Würtemberg, in the circle of Schwarzwald, is situated in 48° 32' N. lat., 9° 4' E. long., on the Neckar, over which there is a stone bridge, at its confluence with the Ammer, about 20 miles S. from Stuttgart. The town is irregularly built in the old style. The most regular portions are the two suburbs, one of which, on the right bank of the Neckar, contains the handsomest houses. The inhabitants, in number about 9000, are partly employed in the manufacture of woollen cloths; but Tübingen is chiefly interesting on account of its university, which was founded in 1477: Reuchlin and Melancthon were among its professors. After the Reformation it remained entirely Protestant till 1803, when Roman Catholic students were admitted at Tübingen. The university has faculties of medicine, jurisprudence, philosophy, Protestant and Roman Catholic divinity, and political economy, above 60 professors and teachers, and above 800 students yearly. The university has a library which numbers, it is said, 200,000 volumes of printed books; a good collection of natural history, a cabinet of medals, a collection of mathematical, astronomical, and philosophical instruments, an observatory, and botanic garden. There are a Protestant and a Roman Catholic seminary, and an anatomical theatre. The library and many of the collections of the university are in an ancient palace or castle called Hohen-Tübingen, which was formerly strongly fortified. Among the principal public edifices, besides the university, are St. George's church; the town-hall, built in 1435; the two seminaries; the museum; the court-house; the city hospital; the infirmary and lying-in hospital. The town has several printing-offices, dyeing-houses, breweries, and manufactures of woollen-cloth.

TUCHAN. [AUDE.]

TUCUMAN, one of the provinces of the Argentine Confederation, South America, lies between 25° 30' and 27° 30' S. lat., 62° and 66° 30' W. long. It is bounded S. by the province of Santiago del Estero; E. by the desert Indian country called El Gran Chaco; N. by the province of Salta; and W. by that of Catamarca. The area is about 42,500 square miles; the population is about 45,000.

The province of Tucuman comprehends the greater part of the slightly-inclined plain which extends from the base of the Sierra de Aconquija towards the Rio Salado, but does not reach its banks, being separated from them by a broad tract of waste land. The surface, &c., of the country is described under ARGENTINE CONFEDERATION. The Rio Salado divides the province from the nomadic tribes of the Gran Chaco, the Rio Tala from the province of Salta, and the Sierra de Aconquija from that of Catamarca. It unites great fertility of soil with abundance of water, and is not only the most fertile but also the best cultivated state in the Argentine republic; well deserving its appellation of the 'Garden of the United Provinces.' The climate though hot is dry and salubrious. Rice, wheat, maize, and tobacco are raised and exported. The sugar-cane grows naturally in the low lands, but it is not cultivated. There are extensive groves of orange and orange-trees. The declivities of the mountains contain noble timber-trees, and afford excellent pasturage. The cattle are larger and the horses finer than in any other province. In the mountains gold, silver, copper, and lead are said to exist, but no mines are worked at present. The people are a hardy and warlike race, proud of their country, and always ready to take up arms in its defence. The men generally prefer greatly those pursuits which allow them to be much on horseback. There are in the province a great many Indians, who speak the Quichua language. Like the other provinces Tucuman is a

federal state, owning a qualified dependence upon the central government. The executive power is vested in a governor elected by the junta, or provincial assembly.

San Miguel de Tucuman, the capital of the province, occupies a remarkably pleasant site on an elevated and well-wooded plain, in 27° 10' S. lat., 65° 20' W. long.; it contains about 7000 inhabitants, and is a place of some trade. It was at Tucuman that the declaration of the independence of the provinces of the Rio de la Plata was formally made in 1810 by the congress of deputies from the several provinces.

TUDELA. [NAVARRA.]

TULA, a government of European Russia, is situated between 52° 53' and 54° 56' N. lat., 35° 54' and 38° 50' E. long. It is bounded N. by Moscow, E. by Riasan and Tambow, S. by Orel, and W. by Kaluga. The area is 11,744 square miles, and the population 1,227,000.

This country is a uniform undulating plain, where hardly anything is to be seen but boundless cornfields or meadows, traversed by low hills, with little wood, and no remarkable natural scenery. The province is one of the best cultivated and most populous in the empire. The soil is dry, and generally poor, and owes its fertility to skilful cultivation. The principal river is the Oka, which comes from Kaluga, and partly forms the boundary towards Moscow and Kaluga. The Don, which rises in Lake Ivanof, near the frontiers of Riasan, is little more than a brook in its short course in this government before it enters that of Riasan. There is however no want of water, there being above 200 small rivers.

The bishop of Tula and Bjelew is at the head of the clergy; he has 857 parishes under him. The government is divided into twelve circles. Except in the capital there are no manufactories; woollen and linen fabrics are manufactured for their own use by the country-people.

The most considerable town next to the capital, TULA, is *Bjelew*, or *Bjeleff*, situated on the Oka, in the western part of the government. It is a large old town, with a rampart and moat: it has fifteen churches; a monastery; a nunnery; and several public buildings. The population exceeds 7000. There are several tanneries, breweries, tallow-melting houses, and manufactories of hardware, especially knives, which are highly esteemed all over Russia. The inhabitants carry on a considerable trade. *Wenew*, on the *Wenewka*, 32 miles N.W. from Tula, has eight churches, 3500 inhabitants, a silk-mill, a soap-manufactory, and some breweries. *Odojew*, on the *Upa*, has seven churches and 3300 inhabitants, who derive subsistence from agriculture, mechanical trades, and a considerable commerce in hemp and corn with Kaluga. *Jefremow*, on the *Metscha*, has seven churches and 3000 inhabitants.

TULA, the capital of the government of Tula in European Russia, situated in 54° 15' N. lat., 37° 25' E. long., at the confluence of the *Tulitza* and the *Upa*, is an important commercial and manufacturing town. It has 51,000 inhabitants, 28 churches, two monasteries, with a seminary and a gymnasium, a theatre, a foundling hospital, and a house of correction: there is likewise an institution, called the *Alexandrium*, for the education of children of noble families. The imperial manufactory of arms, founded by Peter the Great in 1712, is the most extensive and important in the empire. Cutlery of various kinds is also manufactured here. There are in Tula numerous tanneries and breweries, manufactories of Russian leather, candles, soap, beet-root, sugar, and great tallow-melting houses, besides manufactories of woollens, linen, sealing-wax, paint, and Prussian blue. There is a very great trade in all these articles, as well as in corn and hemp. The two annual fairs are much frequented.

TULLA, or TULLAGH, Clare county, Ireland, a market-town, and the seat of a Poor-Law Union, is situated on an eminence, in 52° 52' N. lat., 8° 43' W. long., distant by road 12½ miles E. by N. from Eunis, 140 miles W.S.W. from Dublin. The population in 1851 was 1215, besides 659 in public institutions. Tulla Poor-Law Union comprises 18 electoral divisions, with an area of 84,723 acres, and a population in 1841 of 28,703, in 1851 of 19,248. The town contains a small plain church, a neat Roman Catholic chapel, a Church Education school, National schools, a glebe-house, court-house, dispensary, bride-well, and Union workhouse. Quarter and petty sessions are held in the town. Fairs are held May 13th, September 4th, and October 1st.

TULLAMORE, Ireland, the chief town of King's County, a market-town, and the seat of a Poor-Law Union, is situated on the Grand Canal, in 53° 17' N. lat., 7° 26' W. long., distant 59 miles W. by S. from Dublin by road. The population in 1851 was 4630, besides 2234 in public institutions. Tullamore Poor-Law Union comprises 29 electoral divisions, with an area of 155,395 acres, and a population in 1841 of 53,861, in 1851 of 41,158.

The town stands in a small fertile district near the centre of the Bog of Allen, from the moors of which it took its name. The opening of the Grand Canal, and its subsequent extension to the Shannon, and the county business, which was transferred from Philipstown about the year 1830, have given increasing importance to the town. It is a neat, clean, well-arranged place. The Tullamore River, which passes through the town, is crossed by a neat bridge. The parish church, which occupies an eminence a quarter of a mile from the town, is a handsome building, with a pinnacled tower. There are a Roman Catholic chapel, a convent of the sisters of mercy, two chapels for Methodists, two Free schools, National schools, and a savings bank.

The town possesses a handsome court-house of Grecian architecture, the county jail, a castellated building on the radiating plan, the town-hall and market-house, constabulary and military barracks, canal stores, the county infirmary, and the Union workhouse. Large sales of grain are made at the weekly markets. By the Grand Canal barges for goods and swift passenger-boats ply daily to and from Dublin. There are two breweries, a large distillery, and two tanneries in the place. The assizes for the county and quarter and petty sessions are held in the town. Fairs are held six times a year.

TULLE. [CORRÈZE.]

TULLIBODY. [CLACKMANNANSHIRE.]

TULLINS. [ISERE.]

TULLOW. [CARLOW, County of.]

TUNBRIDGE. [TONBRIDGE.]

TUNIS, one of the Barbary States, situated in the central part of the northern coast of Africa, and forming a province of the Turkish empire, is bounded N. and E. by the Mediterranean, W. by French Africa, and S. by the Beled-el-Jerid. Its greatest length from north to south is about 300 miles, while its breadth from west to east varies from 65 to 140 miles. The area is about 30,000 square miles. In this estimate the country south of 33° N. lat., which is part of the Sahara, is not included.

Occupying the countries formerly known as *Zougitana* and *Byzacium*, and projecting towards the centre of the Mediterranean to within 80 miles of Sicily, Tunis is important, not only on account of its position, but for the ports it possesses on a coast measuring about 400 miles. These advantages made its inhabitants a warlike and commercial people in the time of the Carthaginians, the strength of the barbarians and the Saracens against Southern Europe in the middle ages, and an unceasing annoyance to the Christian states after it fell into the hands of the Moalem pirates in the 16th century.

That portion of the country which is situated north of 36° N. lat., is in general hilly, in parts mountainous, but there are also several plains of some extent. The southern districts however, which comprehend more than three-fourths of the area, are level; such ridges as occur are neither extensive nor elevated, with the exception of the *Jebel Usalat*.

Sea-Coast.—The northern coast, from the boundary-line of Tunis and Algiers to *Ras Sidi Ali-el-Mekki*, or *Cape Farina*, is rocky and high. The western part of it, as far as *Ras-al-Mun-Shikhar*, or *Cape Serat*, is steep, and the mountains near it rise to a considerable elevation: it is also mostly wooded, but east of that promontory the coast is much lower, and in many parts considerable tracts of barren sand extend from the summits of the hills to the water's edge. The most eastern portion, which lies east of *Ras Sidi Booshusha*, or *Cape Zibeeb*, contains only hills, most of which are covered with large plantations of olives, between which there are a few tracts of yellow sand.

The coast here takes a sudden direction to the southward into the Bay of Biserta, so called from the former town of that name (now *Bensart*), the *Hippo-Zaryus* of the ancients, situated upon a narrow channel which connects the waters of two magnificent lakes with the sea. It was formerly the safest seaport of Northern Africa, and was a great naval station of the Barbary corsairs; but the channel is now choked up by neglect, and the town, although governed by an agha, and containing 10,000 or 12,000 people, presents the miserable remains of a place which flourished at no very remote period. Farther to the east, about 10 miles, is the headland called *Ras Zibeeb*; and 14 miles beyond this *Cape Farina* (sometimes called *Capo di Guardia*), the Promontorium Apollinis of the ancients, forms the western limit of the great Gulf of Tunis: its Moorish name is *Ras Sidi Ali-el-Mekki*.

The coast of the Bay of Tunis, from *Ras Sidi Ali-el-Mekki* to *Ras Ghamart*, is low and generally swampy. But along that projecting tract on which the ruins of Carthage are found the coast is rocky, though in general slightly elevated above the sea. [CARTHAGE.] The shores of the innermost recess of the Bay of Tunis are low, and in many parts marshy. From *Ras Zafran* to *Ras Addar*, or *Cape Bon*, and thence to *Ras Mustapha*, the coast is alternately rocky and high, and low and swampy.

A few miles within *Ras Sidi Ali-el-Mekki* the river *Mejerdah*, the ancient *Bagradas*, falls into the sea through a lagoon, commonly called *Port Farina*, upon which stands the once populous town of *Ghar-el-Milah*, with its ports, moles, dockyard, and arsenal; where, at the beginning of the present century, large frigates rode at anchor: but the decline of the Moorish power and the filling up of the port by the alluvium of the river have left it a deserted place, more wretched than *Biserta*. At the eastern limit of the Gulf of Tunis and beyond the two small islands of *Zembra*, or *Zowamores*, which lie at the entrance of the gulf, is *Cape Bon* (*Ras Addar*), the Promontorium *Mercurii* of the ancients. The coast here takes a sudden direction to the south, as far as *Ras-el-Zargias*, the frontier of the kingdom of Tripoli.

From *Ras Mustapha* to *Ras-el-Mahmoor* the coast is low and generally swampy, being formed by the alluvial deposit brought down from the adjacent hills by numerous torrents. A tract of low and rocky coast extends from *Ras-el-Mahmoor* to *Hammamet*, and it is followed by a low sandy coast, which occupies the interior of the

Bay of Hammamet, and terminates near Susa. There is a considerable lagoon connected with the sea near Hercla. From Susa to Ras Capoodia (the ancient Caput Vada), and thence to the town of Sfakkur, the shores are in general rocky, but not high; in a few places they are low and sandy. Between Lambta and Tobulba is another 'sibha,' or lagoon, which is not connected with the sea. It is three miles long and half a mile wide. Salt is collected there to a large amount.

Hammamet, which gives its name to the gulf, is a town of about 4000 inhabitants, the cleanest and neatest in the regency. It is the capital of an agricultural district of 15,000 souls. Not far from it stands *Hercla*, the *Heraclea* of the lower empire. *Susa* was the ancient *Adrumetum*, and the capital of the rich and fertile region of Byzacium. With its battlements, castles, and mosques, Susa still presents from the sea a pleasing appearance, and is a place of considerable commerce, and one of the wealthy cities of the Tunisian state, being the chief mart for oil, linen, and soap: it has about 6000 inhabitants. The ruins of the ancient harbour are clearly traceable under water, and at the present day it has a mole, and good anchorage in seven, nine, and ten fathoms, secure from all winds except the north-east. The castle appears to be kept in good order. *Mistis*, further along the gulf, which is a walled and fortified town, but has no safe anchorage, and the village of *Lampia*, the *Leptis Parva* of antiquity, now an insignificant place, and Cape Demas, the southern limit of the Gulf of Hammamet. Here are the remains of the once large and powerful town of *Thapsus*, whose solid mole is yet partly in existence. *Mahadesah*, called also Africa by the moderns, and *Turris Hannibalis* by the ancients, stands on a point of land about 9 miles to the southward of Cape Demas. It was a place of great strength and importance in the 16th century, when it was taken by Charles V., who demolished its fortifications, the remains of which show that they were of great solidity. The inner harbour, which was within the fortifications, is now quite dry. About 21 miles farther to the south, bounded by Cape Capoodia, the Caput Vada of Procopius, on the north, and the island of Gerba on the south, opens the Gulf of Khabs, or *Cabes* (the Little Syrtis). Among the towns on its shores is *Sfax*, or *Sfakus*, the ancient *Taphra*, or *Taphura*, where there is a mole, and good anchorage, although the approach to it is intricate, by reason of the Karkenna Islands and innumerable low rocks which run for miles along this coast. It was formerly a great nest for pirates, but is now a mart for inland produce and European as well as Eastern merchandise, in which it carries on a brisk commerce; the inhabitants, amounting to 12,000, are a thriving and rich people. Farther to the south, on the bank of a small river, is the town and small port of *Gabs*, *Khabs*, or *Cabes*, from which the gulf takes its modern name. The town stands about a mile from the sea. *Gerba*, or *Jerba*, the *Memix* of Strabo and Pliny, is a considerable, fertile, and populous island. Its greatest curiosity is a tower constructed of human skulls, said to be those of 1400 Christians who fell in battle here with the Turks in 1588. The inhabitants of Gerba manufacture shawls of brilliant colours, fabrics of a beautiful texture made of silk and fine wool, bournous, and a sort of woollen blanket.

The Gulf of Khabs seems to have undergone great changes, and by no means resembles the Minor Syrtis of the ancients. [SYRTIS.] The dangers of the Minor Syrtis arose from the variations and uncertainty of the tides on a flat shelvy coast. From Caput Vada to the island of Gerba lie a number of little flat islands, banks of sand, oozy bottoms, and small depths of water, which make its navigation intricate and difficult to strangers, but easy to the natives who know its channels and innumerable windings. The gulf is not more than 75 miles in extent from its northern to its southern point, and it penetrates into the mainland about 60 miles. Rennell is of opinion that the gulf at one time entered deeper into the land, and formed a junction with the Lake Lowdesah, called also the Lake of Marks, the Tritonis Palus of the ancients. Shaw describes the land also to have gained and to be still gaining on the sea at Khabs, where the ancient town of Tacape is left half a mile inland. Nothing appears more probable than that such a change should have taken place in a situation where the continued operation of the sea is depositing sand on a flat coast where there is no backwater to sweep it into the sea again. If the lake and the gulf were separated from each other by a bar of sand only, the perils of the Syrtis would naturally be deemed by the ancients greater than they are at present.

Interior.—The north-western portion of Tunis, between the boundary-line of Algiers and the valley of the Mejerdah, on the south and east, is very mountainous. A range of mountains enters Tunis near 36° 30' N. lat., 8° 40' E. long., and spreads over the whole district. The most elevated part of this range is at the distance of a few miles from the banks of the river Mejerdah, where it runs from west to east, and is called the Frigean range, from a district called Frigea, in which it is situated, and which is one of the most fertile and populous districts of the regency. The mountains probably do not exceed 4000 or 5000 feet above the sea, and their sides are generally covered with fine trees. The lower hills, which surround the more elevated portion of the range, are partly cultivated and partly covered with olive-plantations, more especially in the upper valley of the Wady Zain, where the mountains which lie east of it contain rich lead-mines. Near 9° 20' E. long. the Frigean range turns

to the north, and forms a wide-spread mass of rocks of moderate elevation, which is divided into two parts by a small river that falls into the Lake of Benzart, and drains a narrow valley. West of this valley is a table-land, which descends with rather a steep declivity towards the Mediterranean. It is called Mogody, and its upper part is covered with shrubs and brushwood, and is without cultivation; but where it declines towards the Lake of Benzart it is well wooded, and near its base planted with olive-trees. The Lake, or rather Lakes, of Benzart (for the lake is divided into two parts by a projecting promontory), extend from north-east to south-west 28 miles; the greatest breadth is 14 miles. The lakes are connected with the sea by a channel about 10 miles long, which near the town of Benzart is little more than a fathom deep, but above it increases in depth to 6 and 10 fathoms. The depth of the northern lake varies from 10 to 60 fathoms of water. It abounds in several kinds of fish, among which is the gray mullet, from the roe of which is made the famous botarga of Benzart. The lakes are surrounded by a level tract one or two miles in width, partly cultivated, but chiefly planted with olive- and fruit-trees. The peaches of Benzart are in great repute. That part of the Frigean Mountains which lies east of the valley and lakes of Benzart rises only into hills. It contains a portion of cultivable land and many olive-plantations.

The river Mejerdah rises within the territories of Algiers, where it is formed by the junction of the waters of the Wady Serrat and those of the Wady Khamees or Hamis. [MEJERDAH.] As far as the Mejerdah runs eastward the valley is of moderate extent, and frequently interrupted by spurs from the adjacent hills and mountains, but soon after it has begun to run north-north-east it emerges from the hills and runs through a plain of considerable width. It flows in a deep bed in a light sandy soil, and is constantly changing its direction when the waters are high. Unless swelled by rains, its lower course is sluggish, not exceeding a mile an hour; and it probably could be navigated by boats for the greater part of the year. Near the mouth of the river is a wide plain, partly occupied by lakes, which have been formed by the inundations of the river. This plain, along the lower part of its course, is of moderate fertility, and only partially cultivated.

An elevated tract of ground traverses the country in a diagonal line between 35° and 37° N. lat., beginning on the south-west on the boundary-line of Algiers, west of the town of Kasareen, and terminating on the north-east in the peninsula of Dakhul and Ras-Addar. This tract appears in most places to attain only a moderate elevation above its base, but it rises to a considerable height in the Jebel-Truzza, Jebel-Ussalat, Jebel-Zunghar, and Jebel-Zaghwan. Parts of these mountains are covered with pine-forests, and a large quantity of tar and pitch is made. Another chain of heights, called Jebel-al-Kaff, runs across the country from west to east, near 36° N. lat., beginning west of Al-Kaff, and joining the former range at Mount Zunghar, near a point where the parallel of 36° N. lat. is cut by 10° E. long. This chain appears to consist of single mountain masses, frequently separated by deep depressions or valleys, through which some of the tributaries of the Mejerdah flow to the principal river. Some of its summits towards the west are very high. It is in many parts well wooded, especially on the lower declivities and in the valleys.

Between the valley of the Lower Mejerdah and that portion of the first-mentioned mountain range which extends from Jebel-Zunghar to Ras-Addar, lies the plain of Tunis, which extends 20 miles on the north and west side of the town, but to double that distance towards the south. In several places there are extensive rocky tracts upon it 300 or 400 feet above the sea-level. In other parts there are short isolated ranges. This plain is not distinguished by fertility, but it is better cultivated than any other part of the country, and more populous, owing to a large commercial and populous town being situated nearly in its centre.

The Dakhul, or the peninsula which lies east of the Bay of Tunis, is nearly occupied by the range which extends from Jebel-Zaghwan to Ras-Addar. In this range occur two deep depressions of inconsiderable width. Through the southern depressions the road is made which leads from Tunis to Nabal and Hammamet. The northern depression occurs near the northern extremity of the peninsula, where a low plain unites the large and elevated masses forming Ras-Addar with the continent. The eastern side of the Dakhul is noted for its fertility; but the interior appears to consist of naked rocky masses with little vegetation on them. The soil of the fertile part of it consists of alluvium, deposited at the base of the highlands over a tract two or three miles wide. This tract is well cultivated, and produces abundant crops of grain, and the fields are interspersed with villages surrounded by groves of olive-trees and orchards, in which fig-trees are common. The adjacent hills have excellent pasture for cattle, which are numerous. The dairies are well attended to. The western shores of the Dakhul are far from being fertile. North of the Jebel-Zaghwan there are some lead-mines.

The countries hitherto noticed may be considered as the agricultural part of Tunis. The greater part of the inhabitants are chiefly engaged in cultivating the ground and in planting olive-trees and orchards. In some parts these occupations are united with the rearing of cattle and attending to the dairy. They all live in fixed habitations, with the exception of a few families of Arabs. In the countries farther to the

south however the bulk of the population consists of wandering tribes, who only occasionally cultivate a few patches of ground.

The region which is separated on the north from the upper valley of the Mejerdah by the Al-Kaff Mountains, and extends southward to 35° N. lat., and eastward to Jebel-Ussalat (10° E. long.), seems to consist of an alternation of hills and plains of considerable extent. Some of the hills are connected so as to form long ridges; others are isolated. Part of them are wooded, especially in the valleys and glens which intersect them, and these valleys contain the small tracts which are cultivated by the Arabs. The plains are entirely without cultivation, and serve only as pasture-grounds for sheep and camels. The Arabs who frequent it live in dowars, or clusters of tents. The numerous ruins of large towns which are dispersed over it show that a considerable portion of this tract was once cultivated. This country must be considerably elevated above the sea-level, as frost appears to be common in winter.

To the east of this region lies the plain of Kerwan, which extends from the innermost recesses of the Gulf of Hammamet to the town of Sfax. Nearly in the middle of this plain, which is more than 100 miles in length and about 30 miles in width, the town is situated from which its name is derived. The degree of cold which is experienced in the town of Kerwan proves that this place must be considerably above the sea. The plain is destitute of trees, and nearly without cultivation, except in the immediate vicinity of the town, where a large tract is sown with several kinds of grain. The Arab tribes who wander about over it appear to be much more wealthy than the other Arab tribes in Tunisia.

The plain of Kerwan reaches to the shores of the sea between Hammamet and Susa, but farther south it is separated from the sea by hilly tracts, which extend from the town of Susa southward to a point opposite the islands of Karkenah. This tract may be about 24 miles in width in the widest part, as it approaches on the west the ruins called Al-Jem. The interior of this region is composed of a succession of sterile hills; but the eastern border, and the low tract which lies between it and the sea-shore, are tolerably fertile, though the soil is stony. It is chiefly planted with olive-trees, which frequently form forests many miles long and from two to three miles wide. This coast has several sea-ports, from which oil, wool, and wax are exported: the two last-mentioned articles are brought by the Arabs from the interior. At the most southern extremity of this region is the town of Sfax, whose olive-plantations extend 10 or 12 miles along the sea and from 5 to 6 miles inland, and are intermingled with groves of pistachio-nuts, and fields of rye, barley, maize, and lentils.

The country which lies to the south of the three last-mentioned regions, and which contains the larger part of the country called by the ancients Byzacium, once noted for its fertility, is at present almost a desert. Along the sea-shore extends a plain, whose surface is varied only by some swelling grounds and a few low hills. A few mountain summits occasionally appear rising far to the west. Along the sea-shore the soil consists of sand, but farther inland it is composed of more compact materials. The whole however is without cultivation, but it supplies pasture to some tribes of Arabs, who have large herds of camels, horses, cattle, and sheep. In one or two places on the sea-coast indigo is cultivated to a small extent; the whole plain is destitute of trees, and even bushes are rare. The western districts, or those contiguous to the boundary-line of Algiers, consist of a long valley, which extends nearly 100 miles, from 35° N. lat. to some distance south of 34° N. lat. Its soil is dry, and only a few small rivers are met with, the waters of which are soon exhausted by irrigation: these are the only spots in the valley which are cultivated. The ridges which inclose the valley are destitute of trees, and nearly without vegetation. Towards the northern extremity of the valley water is more abundant, and there are large tracts of pasture-ground for the wandering tribes.

The southern portion of Tunisia is called the Jerid, or Beled-al-Jerid (the country of date-palms). It extends from about 34° N. lat. southward to the parallel of the southern extremity of the great salt lake Al-Sibbah, and on the south is contiguous to the Sahara. This lake is 70 miles long from south-west to north-east, and about 26 miles wide on an average. In summer it is dry, with the exception of the southern part, where there is always a considerable sheet of water. When dry, the central part, for 15 or 18 miles, is covered with a layer of salt, which is not so strong as sea-salt, and not adapted for preserving provisions; but it has an agreeable flavour. Between this layer of salt and the banks of the lake is a tract whose surface is sandy, or partially overgrown with bushes. In winter the whole surface is covered with water to a depth of two or three feet. It may however be passed even in this season along a track which is marked by stones, trunks of trees, skulls of animals, and sticks. The country which extends from the eastern shores of the salt-lake to the Gulf of Gabs consists of a succession of hills. It contains a great number of springs and small watercourses, to which circumstance its fertility is owing: the water is employed in irrigating the adjacent fields until it is exhausted. It is particularly employed in irrigating the plantations of date-trees, which in some places cover several square miles. In other parts the country is studded with numerous little oases of palm-trees, each of them surrounding a village; but between these cultivated

spots there are large tracts that exhibit no sign of vegetation. In this tract considerable quantities of henna are cultivated. Great care is taken in cultivating these grounds, and manure is applied to them. Some of the gardens are extensive, and contain a great variety of fruit-trees, as the peach, apricot, vine, almond, orange, lotus, pomegranate, and fig. Melons and onions are grown in considerable quantities. On the west of the Sibbah occurs a similar tract, which extends from the southern extremity of the salt-lake to its middle, and is of superior quality. The dates which are collected in these plantations are of an exquisite flavour, and considered superior to any in Barbary. The inhabitants of this tract are wealthy, and live in well-constructed houses of stone.

Climate.—The climate is generally healthy. The plague is known only when introduced from other parts. In all other respects the climate and seasons resemble those of Tripoli. The summer heats are moderated by sea-breezes along the coast, and the winters resemble our spring. Although the habits of the people are far from cleanly, and vermin are plentiful, yet fevers are not frequent, and epidemic maladies are scarcely known. During the summer and autumn rain is very rare: it usually falls in November, and continues at intervals until the month of April. The mean temperature at the town of Tunis, deduced from a series of meteorological observations, is found to be as follows:—Winter, 55·9°; spring, 71·0°; summer, 83·9°; autumn, 64·0°. The mean annual temperature is 69·2°.

Government.—The ruler of the territory of Tunis at present bears the title of Bey, and in state documents he is called the Basha-Bey of Tunis, because he is invested with the rank of pasha (which in the dialect of Barbary is basha) by the Grand Sultan, to whom he sends tribute as often as his political circumstances require the Sultan's favour or protection. But the Porte has little control over him, and he is the sovereign of the country, with whom the states of Europe enter into treaties, and to whom they send their consuls; and he is represented by ambassadors at the chief courts of Europe. Although he is nominally elected by a divan, yet (the members of this body being chosen by himself) he easily obtains their suffrages for the nomination of his successor in the person of one of his own family; and thus the sovereignty has remained in the same dynasty for nearly a century. His power is despotic, for the divan is only formally assembled to confirm the will of its master. The country is not divided into provinces, but the whole is under the direct control of the Bey. As his revenue depends greatly upon the tribute which he exacts from the Arab tribes in the interior, he is obliged to keep up a standing force, which he annually sends to scour the country and extort payment. The regular troops amount to about 8000; they have been trained in European tactics under French officers, and wear the new Turkish uniform. The contingent furnished by the Arab tribes, amounting to 40,000 men, chiefly cavalry, receive no pay, but are exempt from tribute. The tribute is estimated and collected in a most arbitrary manner. The collector goes into a field whilst the crop is still green, and values it according to his caprice. The owner is then obliged to pay a tithe on this supposed value of his future crop, although when the harvest arrives he may find that it perhaps does not exceed the fourth part of the sum at which it was estimated. The same is the case with olives and dates, in which consist the principal resources of the country. All sorts of animals, including horses, are also similarly taxed at pleasure. Those who have the art to conceal their herds and flocks are made to pay in money, which is often extorted by the bastinado. The Bey draws other revenues from the customs; from the sale of permits to export grain and other produce, and to import wine and spirits; from monopolies of various sorts; from a tax on the Jews; and from his own lands. He has also some sources of revenue of a casual nature, such as the wealth of his rich subjects who die; his profits in trade, which are considerable; and his extortions from those who have money whenever a public pretext furnishes him with an excuse to draw upon their hoards. The Tunisians formerly had a powerful fleet, and were desperate pirates; but their navy is reduced to insignificance since 1816, as well by gales on their own shores as by the total loss of the Bey's contingent in the battle of Navarino. At present his force consists of a few corvettes, brigs, schooners, and gun-boats, for which he has no real use. The Bey is the chief of the religion of the state in Tunis, and is himself the first judge in his kingdom. He sits in the hall of justice almost daily, and his decisions, which are summary, are immediately put into execution. The kaidas administer justice in the same manner in the interior towns. The kaidas judge only in matters of religion.

Commerce.—The foreign commerce of Tunis is not confined to the capital, but is also carried on briskly from the ports of the eastern coast. Among the manufactured articles of export are—soap, marocco leather, Gerba shawls, red skull-caps, wheat, barley, olive-oil, wool, hides, bees'-wax, dates, almonds, sponges, and orchilla-seed: these are the principal articles of produce exported. From the interior of Africa are received and exported—ivory, gold-dust, ostrich-feathers, senna, and madder-roots. The imports are woollen-cloths, cotton-prints, calicoes, muslins, coarse linens, damasks, raw and wrought silks, fine wool, gold and silver tissues, coffee, sugar, spices, alum, vitriol, cochineal, vermilion, gum-lac, iron, tin, lead, hardware, cutlery, ammunition and arms of all sorts, earthenware, glass-beads, paper, wine, spirits, and tobacco. The European trade is entirely with

France, Italy, Trieste, and Malta. As ports of loading those of Sfax and Susa are preferred to Tunis, in consequence of the distance and delay of transporting merchandise in lighters across the lake to the Goletta, where ships generally lie; the commerce of the country is consequently best carried on in vessels under 150 tons burden. The trade with Central Africa passes through Gadamia. [TRIPOLI.] The caravans arrive at Tozer, Cabes, and Sfax about twice in the year, and barter their merchandise, which is thence introduced in various directions into Tunis. Besides the articles already mentioned they bring black slaves, and they take in return dates, woollen-cloths, maulins, silks, colonial produce, skull-caps, arms, and such like.

Towns.—The next city in rank and importance after TUNIS is *Cairoan*, or *Kairwan*, which was the principal station of the first Arabian conquerors. It was founded by the Arabs about A.D. 669. It is situated about 70 miles to the south of the capital, and about 24 miles west of Susa. The town is large and has good houses, and is surrounded by a crenelated wall with four gates. The great mosque, which is esteemed the most sacred as well as the most magnificent in all Barbary, is supported by many marble or granite pillars, said to amount to 500; but no Christian has ever been allowed to see them. Cairoan is the holy city of Africa, and strangers are obliged to pass through it in deep silence. Its kaid is almost independent of the Bey, his will being absolute in his own district; and he commands no less than 30,000 Arabs, besides governing the 50,000 inhabitants which the town is supposed to contain. The inhabitants are famed for the beauty of their yellow marocco boots and slippers.

Kaff is the third city in riches and strength, and is the key of Tunis on the western frontier. Its walls are kept in good repair, and the fortress mounts 132 pieces of cannon. Standing in a fertile country, on the declivity of a rocky range of mountains, the view from it is very fine. The town is not populous, but the kaid commands a district containing 50,000 males.

The towns and villages are more numerous, and the population is greater in the northern parts of the state. The Dakhul, besides being an agricultural district, abounds in game; is the seat of a large fishery; and has several small rivers running into the sea, which fertilise the country. At *Hamman Leuf* the bey has a palace, and at *Hamman Ghorbus* are mineral baths famous for curing rheumatism and cutaneous disorders. Beyond these is *Lowhareah*, where there are extensive marble-quarries, which are said to have furnished the materials for the building of Carthage and Utica. *Zowan*, or *Zagwan*, a flourishing town built upon the skirts of a very high mountain of the same name, about 30 miles S. from the city of Tunis, supplied water to the city of Carthage by an aqueduct 52 miles long, some parts of which are still standing. The stream is now employed in dyeing the woollen-scarlet caps worn throughout Turkey and the Levant; and this mountain, as well as that of *Kaff*, furnishes ice for the Bey's use in summer. The site of Carthage is unoccupied, and on that of Utica there are only a few miserable huts, known by the name of *Booshater*, standing almost in a marsh. The banks of the Mejerdah are covered with the sites of ancient places.

The lion, the panther, the ounce, the lynx, the wolf, and the wild boar, are the principal ferocious animals that inhabit the western parts of Tunis; for to the eastward of the meridian of Tabarca the forests cease, and the country is less woody. Flies, noxious vermin, mosquitoes, gnats, ants, and the scorpion are the torment of Europeans in all parts of the country.

Inhabitants.—The Tunisians are a mixed race of Turks, Moors, and Jews, in the towns, interspersed with a few Christians and renegades; while the people of the country are Arabs and Kabyles of different tribes. The Moors of Northern Africa are a white race. Whether from a mixture with the Spaniards during their abode in Spain, or with the Turks, who were afterwards their masters, or from the blood of renegades and female slaves taken during three centuries of warfare with European nations, they are in Tunis a comely people, and many of their women would be reckoned handsome in any part of the world. Although the people of this country are more civilised than those of the other nations of Barbary, it being the principal seat of refuge to which the Moors fled who were driven out of Spain, some of whose manufactures have thriven amongst them, yet they are very ignorant: their most instructed men have only a knowledge of reading the Koran, writing, and a little arithmetic. The language is a dialect of Arabic, but the *Lingua Franca*, a bastard Italian, used in all the trading places of the Levant, is spoken in the ports. The inhabitants are strict Mohammedans. The Arab inhabitants of Tunis resemble the Beduins of Arabia in the way of life; but they are rude and unkind to strangers. Any attempt to manage them by mild means would be vain. The idea of the Bey's power is so rooted among them by the annual excursion of his troops through the country, that his firman or mandate and the appearance of a few soldiers never meet with a direct opposition. The Kabyles live in the mountains, in villages made of hurdles and clay. Like the Arabs, they are simple and abstemious, subsisting on bread, milk, and dates. [ALGERIE.] As to that part of the country situated on the frontiers of Algiers, the Kabyles and Arabs who live there acknowledge no obedience to either government; and when they have committed a crime, they have only to pass from one country to the other to place themselves in safety. The use of arms is universal: the traveller,

the shepherd, the labourer, the camel-driver, the rich and poor, are all prepared with dagger, gun, or pistol, to repel attacks, and sometimes to make them. Although their country lies within two days' sail of the continent of Europe, the people have made little or no advance in civilisation for 1000 years. The total eradication of Christianity may in some degree account for this. The number of churches which formerly existed in Barbary is almost incredible. In the 'Notitia Episcopatum Ecclesie Africanae,' are the names of 132 episcopal sees, in the proconsular province alone. Never however was a religion and its symbol so completely eradicated from any country as that of the cross from Barbary. Egypt in its Coptic population, and Turkey in its Armenian, Greek, and Maronite subjects, still preserve remnants of it, but Barbary has none.

The number of inhabitants of the state of Tunis is supposed to amount to about two millions and a half; amongst whom there may be 7000 Turks, about 9000 Christians (principally Roman Catholics and Greeks), and perhaps 100,000 Jews. In its former prosperity this country must have contained double this number, if we may judge from the numerous sites of towns of ancient times and of the middle ages which are now uninhabited.

Produce.—All sorts of grain, except oats, are grown, as well as maize, beans, garbanzos, lentils, the cicor, or chick-pea, and the like. The sugar-cane is easily reared, but the people have not learned to extract the sugar. Tobacco, coffee, and cotton flourish, and might be turned to profitable account, yet they are imported in large quantities. Olive-oil is the great staple produce, and is of excellent quality. All the vegetables of Europe are easily raised. The artichoke and the gourd, or calabash, are the common food of the people; and the coriander and tomato are grown in great quantities, and serve as a necessary relish in Moorish cookery. Among fruits the first is the produce of the palm- or date-tree. The date is the principal food of the Arabs of the Sahara and the Atlas. Most European fruits, as well as those of warm climates, such as the orange, the pomegranate, the jujube, the prickly-pear, the fig, the melon, and the grape, are common. The oleander and the geranium, roses, bulbs of various sorts, pinks, and a number of aromatic herbs and rare plants, which render the Tunisians renowned for distilled waters and honey, grow luxuriantly. Game is plentiful, as well as all sorts of poultry. Wool is produced in great quantities. The breed of horses, formerly so celebrated, is now entirely neglected. An extensive tunny fishery is carried on by Sicilians off Capes Farina, Monastir, and Bon. The Genoese, Neapolitans, and sometimes the French, fish for coral on the northern coast near Tabarca. It is asserted that the mountains near the capital contain ores of silver, copper, and lead.

Antiquities.—There are no vestiges of antiquity in the capital, although ancient columns and capitals may be found in some of its buildings. The ancient sites on the banks of the Mejerdah abound in ruins, particularly at *Dukkah* (the ancient *Thugga*), consisting of temples, an arch, a number of cisterns, baths, barracks, gates, theatres, an aqueduct, and many inscriptions. At *Ayedrah* is a handsome triumphal arch dedicated to the emperor Septimius Severus, and columns of various beautiful marbles. The walls of the town retain their original height in some places, and have three gates; yet antiquaries have not been able to assign to the place its ancient name. At *Kaff* (Sicca), which, like *Ayedrah*, is on the western frontier, is still to be seen a paved street like those of Pompeii, and here likewise capitals, columns, and trizees are numerous. But the most stupendous monument of ancient times is on the site of *Tydrus*, now called *El-Jem*, a village situated midway between Susa and Sfax, and about 20 miles from the eastern coast. Here rises in its pristine majesty an amphitheatre, which is one of the most perfect, vast, and beautiful remains of former times that is known to exist. Its extreme length measures 429 feet and its breadth 368 feet. Of the fourth or uppermost story little remains, and one of the entrances was destroyed about 100 years ago: but with these exceptions it is in a complete state of preservation, with its seats, arenas, and vomitories, and retains almost the freshness of a modern erection. *Sufetula*, now called *Sbeitla*, about 120 miles S. from Tunis, is the most remarkable place in Barbary for the extent no less than the magnificence of its ruins. It stands in a large plain totally abandoned by man. The principal ruins consist of three contiguous temples, whose ornaments are very rich and of excellent execution, two triumphal arches, another temple, and an aqueduct which spans the clear stream on which the town stood. *Kazareem* (the ancient *Colonia Scillitana*), distant only a few leagues from Sbeitla, has also the remains of an arch and other ruins of minor interest. The great aqueduct which conveyed the water from the mountain of Zagwan to Carthage, 52 miles in length, may yet be traced by masses of stone and cement, which lie, like the vertebrae of a huge winding serpent, along the whole of this distance; and in its preserved portions it is still a mighty construction, rising in some places to 98 feet. [CARTHAGE.]

History.—The town of Tunis, once known by the name of *Tunes* or *Tuneta*, is of great antiquity. But whether it was founded by a Phœnician colony or by the native Africans seems to be an undecided point. It was taken and retaken several times during the Punic wars. In A.D. 439 it fell into the hands of the Vandals; but in 533 was rescued from them by Belisarius. It continued to be subject to the Greek emperors until the irresistible arms of the kalifs overran Northern

Africa, towards the end of the 7th century, when the conqueror Okbah, or Akbah, with a view to secure the country for them, founded the city of Cairoan, or Kairwan, as a place of refuge against the accidents of war. It was here that the Arabians began to consolidate their power in Africa, and they became so thoroughly intermixed with the natives, that Christianity was extinguished, and the Africans have remained a Moslem people to the present day. The Arabian viceroys, at first under the name of Ameer, were in fact kalifs of Africa, and established an independent government at Cairoan, which became the capital of the country which now constitutes the regency of Tunisia. Here the Aglabite dynasty took its rise in the 9th century. The Aglabites were succeeded by the Zeirides; and these were in their turn obliged to yield to the Almoravides, who established themselves in Morocco, and soon extended their power over all the provinces of Barbary, including Tunisia. But in 1206, Abu-Ferez, who held the delegated government of Tunisia, assumed an independent authority, and from him sprung the race denominated Lasis, who are considered the first kings of Tunisia, being the first who established a court in the town of Tunisia. Their dominion soon spread itself over Constantina, Bona, and Tripoli; and their vessels infested the Mediterranean, and intercepted the succours sent to the Christians in the Holy Land. Louis IX. of France undertook, in 1270, his chivalric expedition against this new power, which ended in his own death, and the destruction of his troops by disease among the ruins of Carthage. Muley-Hassem was the last of these kings. He was deprived by stratagem of his throne in 1531, by the pirate Khairadeen, commonly called Barbarossa II., who had been lately acknowledged as chief of Algiers by the Turkish Sultan. Muley-Hassem was restored to his throne as a tributary prince by Charles V. in 1535. But in 1574 the Sultan Selim sent an expedition of 40,000 men from Constantinople, under the command of Sinau Pasha, who made the country a dependency of the Ottoman Porte. At first a Turkish Basha was appointed as governor, aided by a divan, or council of military men, and by a body of Janissaries; but the rapacity of the latter disgusted the Moors, and they obtained permission to elect a Dey from among themselves.

It was in Tunisia and its territory that Aroodge, the first Barbarossa, organised his maritime expeditions before he got possession of Algiers; and even after Algiers was established as the first piratical power, the Algerines moored and refitted their vessels in the ports and roadsteads of Tunisia. Her northern and eastern sea-fronts offered a convenient refuge to the corsairs of all these states, whence they sailed forth in every direction, plundering the ships of Christian nations, and making slaves of their crews. This horrid warfare was at one time carried on so successfully, that a Genoese renegade who commanded the galleys of Biserta is said to have reduced no less than 20,000 persons to slavery. The Tunisian corsairs continued their excursions at sea until 1655, when Admiral Blake, with a powerful English squadron, destroyed the castles of Porto Farina and the Goletta with his artillery, and compelled the Bey to promise that his piratical subjects should not commit further depredations on the English. France and Holland soon followed the same course. These promises were afterwards often renewed, but were never faithfully observed. At length, in 1816, in consequence of an agreement between the European powers, Tunisia renounced for ever Christian slavery, under the threat of that punishment which Lord Exmouth with a naval force inflicted upon Algiers.

Of twenty-three Deys who reigned at Tunisia all were strangled or otherwise assassinated, with the exception of five. Since the accession of the present family in the person of Hassan ben Ali (the grandson of a renegade Greek), who died in 1753, there have been few revolutions in Tunisia. His grandson Hammoodah, the fourth of his race, came to the throne in 1782, and died in 1815. This prince was a man of great talents, and his long reign is distinguished among those of the Moorish dynasty by many acts directed to the public good. His brother Othman reigned only three months, and was put to death. Othman was succeeded by his cousin Mahmood, who died in 1825, leaving the power in the hands of his son Hussain, who died in 1835. Hussain was succeeded by his brother Mustapha, who was followed by his son Achmet, a man full of energy and intelligence, and an acute politician, who has done much for the advancement of his country.

TUNIS, a large and flourishing city and port in north Africa, the capital of the regency of Tunisia, situated on the coast of the Mediterranean, in 36° 48' N. lat., 10° 11' E. long., in a beautiful and vast plain, bounded at a distance of about 30 miles by an amphitheatre of high mountains. It stands on the western side of a lagoon of an oval shape, about 20 miles in circumference, which by a narrow outlet, called the Goletta, defended by a castle, opens into the extensive Bay and Gulf of Tunisia. The city is encircled by a high wall with six gates, around which is another wall encompassing the suburbs, having eleven gates or passes into the country, and measuring about five miles in circumference. The town contains about 12,000 houses, and from 130,000 to 200,000 inhabitants, comprising Moors, Arabs, Turks, negroes, probably 25,000 Jews, and about 8000 Christians. Although each house has its cistern of rain-water collected from the flat roofs, the town is well supplied also with water from a neighbouring spring, conveyed by an aqueduct, which was built when the country was subject to the emperor Charles V.; and no place enjoys by nature a greater plenty of the necessaries of life. But the streets are narrow, irregular, and filthy in the extreme, becoming after a few hours' rain

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a perfect marsh, and in summer still more intolerable from their dust, rubbish, and vermin, and from the effluvia of the open drains. Contagious diseases nevertheless are not prevalent. There are five principal and many smaller mosques. The houses in general, according to Moorish custom, are only one story high, with a court in the centre, and usually without windows to the street. In the middle of the city is an open space of no great extent, surrounded by shops for the sale of manufactures. A mosque built in the reign of Hammooda Bey, whose minister Yusuf brought columns and marbles from the ruins in the interior, to decorate it, is the finest building in the city. The Bey's palace is a modern building in the Saracenic style; although situated in a narrow street, it is a handsome edifice, with marble courts and galleries. In different parts of the town are five extensive barracks, built also by Hammooda Bey; but the finest building is the new barracks, erected by his successor Hussein, near the citadel. It is a quadrangle of two stories, each comprising 134 rooms, and will easily accommodate 4000 men. Tunisia has a theatre, at which Italian operas are sometimes acted.

The chief manufactures of this city are linen and woollen cloths, and embroidery, red woollen caps, famous all over western Asia for colour, fineness, and strength. The bazaars and shops offer for sale also essences of musk, rose, and jasmine, as well as spices, gold ornaments, precious stones, silver articles, marocco slippers, burnouses, wearing apparel, horse accoutrements, shawls, silk kerchiefs interwoven with gold, embroidery of all kinds, straw mats, carpets, fire-arms, daggers, and swords. Slaves from the interior of Africa are brought to Tunisia, but the practice of selling them openly in the market-place is now discontinued, and they are no longer exported, but individuals are still permitted to keep slaves. The Bey Achmet emancipated all his slaves in 1841, and his example has had great influence throughout the regency, so that there is a considerable number of free blacks among the population. In the suburbs vegetables, fruit, butter, oil, meat, charcoal, wood, and skins are exposed to sale, as well as all sorts of cattle, horses, and poultry; on all of which duties are collected by officers of the bay. The town presents considerable bustle. From sunrise to sunset, when the Moors retire to rest, the streets are filled with people, among whom are women muffled up from head to foot to conceal their persons. A crier or broker walks before each shop, calling out the value of an article held in his hand, and inviting the passers-by to purchase it. Valuable articles are thus exposed in the most unreserved manner.

Being more given to commerce, the government and people of Tunisia are more civilised and more civil to foreigners than those of the other towns of Barbary. They are very tolerant in matters of religion: the Jews have their synagogues, the Greeks and Roman Catholics have several places of worship, and the French government was permitted in 1841 to erect a chapel among the ruins of Carthage, on the spot where their king St. Louis died. The Maltese are the only British subjects resident here; they are under the care of a few Capuchin friars who have a convent in the city. At the principal Moorish college the studies are almost confined to theology and jurisprudence; the operations requiring mathematical or philosophical knowledge, as well as the profession of physic, being mostly in the hands of Europeans or Jews. The Jews manage the monetary affairs of the government. There are a few minor schools for boys, at which they are taught reading and writing, and to repeat passages from the Koran. The women, even of the upper classes, receive no education. The old Turkish costume of the men has been laid aside for the unbecoming blue jacket and European trowsers; but the splendid trappings of their horses are still preserved.

Of the defences of Tunisia little need be said. The gates in its ruined walls are closed every night, and for two hours on every Friday in the middle of the day, in consequence of a prophecy, that the Christians will take possession of the city on that day of the week, and in those hours. The citadel, called the Kasbah, is of great extent, but in a ruinous condition. The Bardo is a fortified palace of the Bey, situated about 2 miles W. from the town. It is surrounded by a high wall and a ditch, and is flanked with towers. Being the usual residence of the court, it is fitted up with great luxury, and even grandeur, and is said to contain upwards of 4000 inhabitants. The lagoon, upon the banks of which the town is built, forms the access from seaward to Tunisia; but as there is not more than six or seven feet of water within it, the town can only be closely approached by boats. Even merchant-ships loading and unloading lie outside the Goletta forts, which guard the narrow entrance from the bay to the lagoon, and their cargoes are conveyed to and from the town in lighters. The Goletta castle is strongly fortified towards the sea, and defends likewise the anchorage and the artificial harbour cut in the isthmus which separates the lagoon from the bay, where there is a dock and basin, in which the ships of war are built.

The Gulf of Tunisia comprehends a coast of 80 miles between Cape Farina and Cape Bon, which are 39 miles asunder; while the two inner promontories, called Cape Carthage and Cape Zaphran, approach each other within 12 miles, and form an inner bay, which is almost circular, and has from 10 to 20 fathoms depth in the centre, gradually decreasing towards the shore. The ground within this bay, which is sometimes called the Bay of Carthage, holds well.

TUNJA. [NEW GRANADA.]

TUNSTALL. [STAFFORDSHIRE.]

TUNSTEAD, a hundred in the county of Norfolk, which, with the adjoining hundred of Happing has been constituted a Poor-Law Union. The two hundreds comprise 43 parishes, with an area of 66,859 acres, and a population in 1851 of 18,525. Tunstead and Happing Poor-Law Union contains 41 parishes, with an area of 62,607 acres, and a population in 1851 of 15,614.

TURENNE. [CORREZE.]

TURKEY, TURKS. Turkey is an empire situated in Europe, Asia, and Africa. The several portions of which it consists have been described under the heads ANATOLIA, ARMENIA, BAGHDAD, BULGARIA, CANDIA, EGYPT, RUM-ILI, SYRIA, &c. Besides those extensive provinces which are under the immediate sovereignty of the Sultan, this empire contains the following vassal states:—MOLDAVIA; WALLACHIA; SERBIA; EGYPT; TUNIS; TRIPOLI. These vassal states have also been treated under their several heads.

The Turkish empire is divided into eyalets or general governments each administered by a pasha, who is generally styled Vali, or viceroy. The eyalets are divided into Livas, governed by Kaimakans, or lieutenant-governors. The Livas are subdivided into Cazas, or districts, and these again into Nahiges, or communes, containing villages and hamlets.

Turkey in Europe contains 15 Eyalets divided into 43 Livas, and 376 Cazas. Turkey in Asia is divided into 18 Eyalets, 78 Livas, and 858 Cazas; Turkey in Africa into 3 Eyalets, 17 Livas, and 86 Cazas. The following table gives the names of the Eyalets, with the chief town of each, extracted from M. Ubcini's recent work upon Turkey:—

TURKEY IN EUROPE.		TURKEY IN ASIA (continued).	
Eyalets.	Capitals.	Eyalets.	Capitals.
Edirné . . .	Adrianople	Karaman . . .	Koniah
Silistré . . .	Silistria	Adana . . .	Adana
Boghdan, or Moldavia . . .	Jassy	Bozoq . . .	Angora
Elak, or Wallachia . . .	Bucharest	Sivas . . .	Sivas
Widdin . . .	Widdin	Tharaberun . . .	Trebizond
Nich . . .	Nissa	Ers-rum . . .	Ers-rum
Uskup . . .	Uskup	Mosul . . .	Mosul
Syry (Serbia) . . .	Belgrade	Kurdistan . . .	Van
Belgrade fortress . . .		Khastrount . . .	Kharput
Boenia . . .	Serajevo	Haleb . . .	Aleppo
Rumill . . .	Monastir	Saida . . .	Beirout
Yania . . .	Janina	Sham . . .	Damascus
Belanik . . .	Saloniki	Baghdad . . .	Baghdad
Jizair (Islands) . . .	Rhodes	Habesh . . .	Jidda
Cryt or Crete . . .	Candia	Haremi-Nahevi . . .	Medina
TURKEY IN ASIA.		TURKEY IN AFRICA.	
Kastamuni . . .	Kastamuni	Misr, or Egypt . . .	Cairo
Quadavendigular . . .	Brussa	Tarabloni Gharb, or African Tripoli . . .	Tripoli
Aydin . . .	Smyrna	Tunis . . .	Tunis

A general estimate of the population in 1844 made the inhabitants amount in round numbers to 35,350,000, distributed as follows among the great popular divisions of the empire:—

TURKEY IN EUROPE.		TURKEY IN ASIA.	
Thrace . . .	1,800,000	Asia Minor . . .	10,700,000
Bulgaria . . .	3,000,000	Syria . . .	4,450,000
Moldavia . . .	1,400,000	Mesopotamia . . .	
Wallachia . . .	2,600,000	Kurdistan . . .	
Boenia . . .	1,100,000	Arabia . . .	900,000
Rumill . . .	2,700,000	TURKEY IN AFRICA.	
Albania . . .	1,300,000	Egypt . . .	2,000,000
Serbia . . .	1,000,000	Tripoli, Fes, Tunis . . .	1,800,000
Islands . . .	700,000		

The numbers of the different races of which the population is composed are given as follows:—

Races.	In Europe.	In Asia.	In Africa.	Total.
Ottomans . . .	2,100,000	10,700,000	—	12,800,000
Greeks . . .	1,000,000	1,000,000	—	2,000,000
Armenians . . .	400,000	2,000,000	—	2,400,000
Jews . . .	70,000	80,000	—	150,000
Slaves . . .	6,200,000	—	—	6,200,000
Rumani . . .	4,000,000	—	—	4,000,000
Albanians . . .	1,500,000	—	—	1,500,000
Tartars . . .	16,000	20,000	—	36,000
Arabs . . .	—	900,000	3,800,000	4,700,000
Syrians . . .	—	235,000	—	235,000
Druses . . .	—	30,000	—	30,000
Kurds . . .	—	1,000,000	—	1,000,000
Turkomans . . .	—	85,000	—	85,000
Gipsies . . .	314,000	—	—	314,000
Total . . .	15,600,000	16,080,000	3,800,000	35,350,000

With regard to religion the classification is as follows:—

Religion.	In Europe.	In Asia.	In Africa.	Total.
Musulmans . . .	4,550,000	12,650,000	3,800,000	21,000,000
Greek Church . . .	10,000,000	3,000,000	—	13,000,000
Catholics . . .	640,000	260,000	—	900,000
Jews . . .	70,000	80,000	—	150,000
Different Sects . . .	—	—	—	300,000
Total . . .	15,260,000	15,990,000	3,800,000	35,350,000

The total area of the Ottoman empire, including the tributary provinces, is estimated at 1,220,000 square miles, of which about 300,000 are in Europe, 560,000 in Asia, and 360,000 are in Africa.

With regard to the administrative division of the empire it must be observed, that neither the eyalets nor the sanjaks, or livas, have such invariable limits as provinces in Europe usually have; and with regard to the population, it is clear that, deducting the numbers placed opposite the tributary but almost independent states of Serbia, Moldavia, Wallachia, Egypt, Tripoli, and Tunis, the inhabitants subject to the Porte do not much exceed 26 millions.

Government.—The Sultan of Turkey is absolute in this sense, that there is no political body in the empire which has any recognised power to check his will: but he is obliged to reign conformably to the religious, political, and civil principles contained in the Korán; conformably to the Sunna, or the words of Mohammed preserved by tradition; and to the unanimous decision of the assembly of the ulemas (wise men), in which the mufti presides; and conformably to the Kanun-námé. The Kanun-námé is a kind of code containing decisions and institutions which have been made since the beginning of the empire, and conformably to the Korán. This legislation is also called 'Urfi,' or the arbitrary legislation, because it treats of such matters as have only been decided in a general way by Mohammed. However, as the principles of absolute monarchy contained in the Korán are very large, and the Sultan is the chief of the Mohammedan religion as successor of the kalifs, his power is less checked by law than it is by custom, by public opinion, and by the rebellious spirit of his subjects.

The civil and religious law having only one source, the Korán, the highest dignitary is the Mufti, or Sheik-ul-Islam, who is the supreme authority with regard to the legality of religious, civil, and political acts: he is the patriarch and the high chancellor of the empire. The Sultan does not declare war nor conclude peace: nor does he undertake anything of importance without previously asking the mufti and his ulemas 'if it is conformable to the law;' and the mufti decides the matter by a fetwa. Ulema is the general name of theologians and jurists, who are bound to aid the mufti with their advice when he summons them to his assemblies.

State dignities are of two classes—Dignities of the Pen and Dignities of the Sword. Dignities of the Pen are divided into three classes, namely, Rijál, Khojá, and Agha. The members of the class Rijál form the Sublime Porte of the grand-vizir, or the state ministry and state council, the president of which is the grand-vizir. Under him are the kiaya-bey, or minister for home affairs; the reis-efendi, or foreign minister; the chaush-bashi, or minister of the executive power.—The members of the class Khojá form the porte of the defterdar, or the ministry of finance, the director of which is the first defterdar. Under him are the second and the third defterdar; the nishanji-bashi, or secretary of state for the Sultan's signature (seal-keeper); and the defter-emini, or the superintendent of the office of finance, who have the rank of ministers. The ministers have the title of Vizir, and their assembly is called the Diwan.—To the class of Agha belong, or belonged, several military and civil officers, such as the bostanji-bashi, or commander of the guard of the gardens within the seraglio; the topji-bashi, or commander of the artillery; the miri-alem, or bearer of the standard of the prophet; the ihtisab-agma, or prefect of the public markets; the kapijiler-kiayazi, or great chamberlain; and others. Several of these functions have been abolished.

To the class of Dignities of the Sword belong the governors of the eyalets, or heylar-bey, who are pashas of two tails; the governors of the sanjaks, or livas, who are pashas of one tail; and the governors of subdivisions of the livas, who are not pashas, but only beya. The vizirs are pashas of three tails, and so is the serasker, or general-field-marshal; but the rank of a vizir is often given to the governors of eyalets, and the governors of the sanjaks are very often pashas of two tails. The governor of an eyalet has always a sanjak, or sometimes several, of which he is also the governor; and he has little authority over the subordinate governors. The pashas combine the functions of military commanders, of judges, and of receivers of the taxes.

The late sultan, Mahmud II., made great changes with regard to the high functions of the empire. A considerable number of subordinate places, especially in the porte of the defterdar (finance) was abolished, and important changes were made concerning the rank of the different functionaries, who all wear a kind of European uniform. The changes in the army were radical: the Janissaries were exterminated, and the regular troops received a European organisation. The general-field-marshal has still the name of Serasker, or Serasker-Pasha. The second in rank is now the Beyler-Bey Vizir, or the commander of the Sultan's

life-guard. The beyler-bey vizir has been substituted for the bostanj-bashi, a dignity which was abolished, like that of the miri-alem mentioned above. The army, foot as well as horse, is divided into 'ferik,' or divisions commanded by a ferik-pasha. Each ferik is divided into 'liwa,' or brigades commanded by a miri-liwa-pasha; a liwa contains two 'álai,' or regiments commanded by a miri-álai-bey, or colonel; an álai is composed of four 'tabur,' or battalions, commanded by a bin-bashi, or major; each tabur has eight 'buluk,' or companies, commanded by a yúz-bashi, or captain; and a buluk is composed of eight 'on,' or sections, each commanded by an on-bashi, or corporal. The military force of the porte, according to its new organization, consists of 80 regiments composing the active army, which numbers 178,680 men; and a reserve (redif) of 148,680 men, making a total of 327,360 men, including infantry, cavalry, and all grades. This number however, does not include the contingents of the tributary provinces, or of those parts of the empire that are not yet subject to the regular recruiting law; neither does it comprise the irregular troops or occasional auxiliaries raised in emergencies of the empire.

At the beginning of 1858 the Turkish navy was composed of 6 men-of-war carrying 130 to 74 guns each; 10 frigates, with 60 to 40 guns each; 6 corvettes, with 26 to 22 guns each; 14 brigs, carrying 20 to 12 guns each; 16 cutters, schooners, &c., with 12 to 4 guns each; 6 steam-frigates, of 800 to 450 horse-power; and 12 corvettes and smaller vessels—in all 70 vessels, manned by 3400 sailors and 4000 marines. Several of these vessels however were destroyed by the Russian fleet, under Admiral Nachimoff, off Sinope, November 30, 1853.

All the officers, attendants, soldiers, and servants employed in the seraglio amounted in former times to 12,000 'swords,' that is, 'men,' besides the females: the number of 'swords' has been in recent times greatly diminished. The first officer of the harem (a word which signifies 'the apartment of the women'), and of the whole seraglio of the Sultan, is the Kialar-Agha ('the master of the girls'), who is also called Babes-Seadet-Agha, or 'master of the door of happiness.' He has under him many subordinate officers. The women of the harem are divided into five classes:—1, Kádin, or 'wives of the sultan,' in number from four to seven; 2, Gedikli, or 'chamber-maids,' among whom the Sultan usually chooses his kádin. Those who are preferred by the Sultan are called Ikbál, or 'children of happiness,' and Khaas-odalik, or 'private women of the sultan.' In Europe they are generally called Odalik, which is not correct. 3, Ustá, or 'mistresses,' generally called Khalísh, or 'attendants,' divided into 'takim,' or companies of thirty women each; 4, Shagird, or 'apprentices'; 5, Jariyeh, or 'slaves.'

Mahmud II. also introduced many remarkable changes into the system of scientific education. He improved the school for engineers founded by Selim III., and he founded a school for architects, and another for students of medicine: the latter are taught Turkish, Arabic, and French; anatomy, physiology, materia medica, and therapeutics; physics and chemistry.

The ordinary revenue of Turkey, according to M. Ubicini, is 6,724,400*l.* sterling, derived from tithes, land-tax, poll-tax, customs duties, indirect taxes, 276,000*l.* from the Egyptian tribute, 18,400*l.* from Wallachia, the same amount from Servia, and 9,200*l.* of tribute from Moldavia. The ordinary expenditure is stated at 6,922,000*l.*, composed of the following sums:—Civil list of the Sultan, 700,000*l.*; allowances to the Sultan's mother and sisters, 67,280*l.*; army, 2,760,000*l.*; navy, 345,000*l.*; artillery, fortresses, &c., 276,000*l.*; public functionaries, 1,794,000*l.*; grants for works of public utility, 92,000*l.*; religious establishments, 115,000*l.*; subvention to the Ottoman bank, 276,000*l.*; life-annuities in compensation of fiefs, 404,800*l.*

Inhabitants.—The inhabitants are divided into two great classes—the Turks, or, more correctly, Turks-Osmanlis, who are the ruling race; and the Rayas, that is, 'the flock,' who are the ancient inhabitants of the countries conquered by the Turks-Osmanlis. The Rayas, who are Christians, except some pagan tribes, are subject to the capitation or poll-tax, which the Osmanlis do not pay: they have the exercise of their religion with some restrictions, and they are dressed in a different way from the Turks. In general the Rayas, although they form communities and have their local authorities, are entirely in the position and have all the disadvantages of a subdued race. The Rayas are far more numerous than the Turks, especially in Europe: they belong to different nations. Several nations which have an origin different from that of the Turks-Osmanlis are nevertheless not reckoned among the Rayas, because they have adopted the Mohammedan religion. To this class belong a great number of Kurd, Arabic, and Tartar tribes, the Mohammedan Bosniaks, and the Albanians, the inhabitants of ancient Epirus. Foreigners in Turkey are considered as Rayas, but they are protected by the authority of their ambassadors and consuls. In 1839 an imperial decree was issued, by which great privileges were granted to the Rayas, especially with regard to the administration of justice between them and the Turks, and the payment of taxes. This decree, which introduced the tanzimat or reformed system into the empire, has remained a dead letter in most of the provinces. It is opposed by the Turks, who have so long enjoyed an ascendancy over the Rayas, and who have risen in rebellion in some of the provinces in defence of their old privileges. Since the outbreak of the war with Russia, the Sultan and his government have given repeated orders for the strict execution of the tanzimat, which, if

carried fairly out, will put an end to all the grievances of which the Christians have long and justly complained. By a special decree in 1855, the Sultan ordered the reception of the evidence of Christians by the tribunals.

History.—The Turks-Osmanlis are a branch of the Asiatic Turks, who are thinly spread over an immense extent of Asia, from the desert of Gobi to the shores of the Mediterranean, and from the northern part of Siberia to the Persian Gulf. In some parts, as in South Siberia, in Turkistan, and in the greater part of Asia Minor, they form a compact population; in others, as in Syria, Armenia, and Mesopotamia, they are much less numerous than the original inhabitants. In Europe the Turkish population is compact in Rúm-ili, and in the government of Kazan and some adjacent tracts in Eastern Russia. In Africa there are only a few Turks-Osmanlis.

Herodotus (iv. 22) mentions a nation by the name of Iurcæ ('Iúrcæ), which probably lived south-west of the present town of Kiew. A nation which lived in the same country is named Turcæ, or Turks, by Pliny ('Hist. Nat.,' vi. 7) and Pomponius Mela (i. 19). Some have proposed in the above-mentioned passage of Herodotus to read Túrca, instead of 'Iúrcæ. But the names are the same, and Yürük, or Yuruk, is still the well-known name of all nomadic Turks in Asia Minor and Persia. Strabo mentions a nation called Urgi ('Oúργoi); which occupied nearly the same tract as the Iurcæ and Turcæ.

The general opinion is, that the Turks became first known to the Europeans through the Byzantines, in the 4th or 5th century; they were known to the Chinese however several centuries before there was an historian in Europe.

The Turks have been divided from the remotest times into a number of different tribes, the most remarkable of which in connection with the Turks-Osmanlis were the Oghuzes, the Seljuks, and the Osmanlis.

1. **Oghuzes.**—Tradition says that Oghuz-khan, the son of Kárá-khan, a descendant of Turk, who is the common ancestor of all the Turks, was a mighty king in the time of Abraham. His empire was the country called Turkistan [TURKISTAN], known to the Persians by the name of Turán. Under his successors the empire was divided: three khans, 'the three arrows,' ruled over the eastern Oghuzes, and extended their dominions towards China; three other khans, 'the three breakers,' were masters over the western Oghuzes, around the Oxus and the Jaxartes. The first of these 'three breakers' was the 'khan of the mountains': he is the ancestor of the younger Oghuzes, or that part of the Oghuzes which preserved their name in later times, and of the Turkomans. The second was the 'khan of the sea,' the ancestor of the Seljuks; and the third was the 'khan of the heaven,' the ancestor of the tribe Kayi, from which are descended the Osmanlis. For many centuries the Oghuzes were perpetually at war with the Persians, and afterwards with the Arabs, who (A.D. 711) conquered Bokhara and Samaraand. Boghra-khan Harún extended his dominions as far as China (999). His empire was broken up by civil troubles during the 11th century, and became a prey to the Seljuks.

2. **Seljuks.**—Their ancestor Seljuk was a mighty under-khan of the Oghuzes, and lived towards the end of the 10th century. The influence of his family increased during the civil troubles by which the empire of the Oghuzes was shaken after the death of Boghra-khan Harún. Toghrol-Bey, his grandson, who lived in the middle of the 11th century, was an independent Mohammedan prince. His power was felt at Baghdad, whose kalif, Al Kayim, he saved from the ambitious designs of his son Basairi, who was put to death by order of the kalif of the Seljuks. The kalif rewarded his liberator with the title and power of the Amiru-l-omra, or 'prince of the princes': he married a sister of the khan, and Toghrol-Bey married a daughter of the kalif. In 1069 Toghrol-Bey was succeeded by his nephew Alp-Aralán, who also married a daughter of the kalif Al-Káyim. Alp-Aralán conquered a large part of Turkistan, the north-western part of Persia, Armenia, Georgia, Mesopotamia, and Syria. He was involved in long wars with the Greeks, which he terminated successfully, 1071, by a victory over the emperor Romanus, who became a captive of the Turks. Alp-Aralán's son and successor, Melek-Shah, conquered the greater part of Asia Minor. His successors were the masters of Asia Minor, Syria, Mesopotamia, Armenia, part of Persia, and Western Turkistan, during 180 years. Towards the end of the 13th century, their power was broken by civil dissensions. Mesud, who died in 1297, was only the shadow of a king. 'Alá-ed-din II., his successor, was the last Sultan of the empire of the Seljuks. He was killed by the Mongols in 1307, and the Seljukian monarchy was divided into the following states, all, except one, governed by princes of the tribe of the Seljuks.

Kárái became master of Mysia; Sarú-khan and Aidin reigned each in a part of Lydia; Mentashe in Caria; Teke in Lycia and Pamphylia; Hamid in Pisidia and Isauria; Kárámán, the most powerful of all, was Lord of Lycaonia, and reigned as Sultan in the city of Koniah, once the capital of the Seljukian empire; Kermián founded a petty state in northern Phrygia; Ghasi Chelebi, the only one among these princes who was descended from the reigning dynasty of the Seljuks, led the life of a pirate at Sinope and Heraclea on the Black Sea. Another tribe, which had lately arrived in these western countries, had subdued Galatia and Bithynia; this was the tribe of the Turks-Osmanlis.

Turks-Osmanlis.—Soliman-Shah, the son of Kay-alp, the chief of

the tribe of the Káyi, lived in the environs of Mahán in Khorásán in the beginning of the 13th century. He fled before the approach of Genghis-khan, in 1234, and settled with 50,000 of his men in Erzenján and Akhláth in Armenia. Seven years later, after Khorásán and Khováresm had been conquered by 'Alá-ed-dín, the Sultan of the Seljuks in Koniah, Soliman commenced his return to the steppes of his native country. Crossing the Euphrates near Ja'ber, he was drowned in that river, and his tribe erected a tomb to his memory, which still exists. One part of his tribe continued their march to Khorásán; another, commanded by Ertoghrl, one of the four sons of Soliman, resolved to remain in the western countries, and to settle there under the protection of 'Alá-ed-dín, the Sultan of Koniah. On their march to the west, they saw in a plain two armies preparing for battle; one of them was numerous, the other feeble, but of warlike appearance. Ertoghrl resolved to assist the feeble. It was the army of 'Alá-ed-dín going to fight with the Mongols; and with Ertoghrl's assistance the Seljuks gained the day. 'Alá-ed-dín rewarded Ertoghrl with a dress of honour, and gave him and his tribe the fertile pasture-grounds near Angora. Ertoghrl assisted the Sultan in all his wars with the Greeks and the Mongols, and afterwards received the district of Sultan-óné, on the frontiers of the dominions of 'Alá-ed-dín and the Byzantine empire, as a fief, on condition of defending the frontiers against the invasions of the Byzantines. Ertoghrl died in 1288. His successor as chief of the tribe was his son Osman.

[1288-1326.] Osman was the founder of the Turkish empire; he is the ancestor of the reigning dynasty; and he has given his name to a numerous and powerful nation. During the life of his father, Osman had signalled himself as an intrepid warrior. His power grew gradually by conquests from the Greeks, and after the death of 'Alá-ed-dín, who was killed by the Mongols in 1307, from some petty Seljukian princes of Asia Minor. Ten years afterwards he made the conquest of Brusa. In 1321 the first Turks-Osmanlis crossed the Bosphorus and appeared in sight of Constantinople. At his death, which took place in 1326, he left to his successor, Urkhan, a state which comprehended a considerable part of Bithynia in the north, Galatia in the east, and Phrygia in the south, the western frontiers of which were the river Sangarius and its southern tributary the Thyabria.

[1326-1359.] Urkhan was the successor and eldest son of Osman. His reign was signalled by conquests, and by some political and military institutions which have been the groundwork of the Turkish constitution until our days. By advice of his brother, 'Alá-ed-dín (the first grand vizir mentioned in the Turkish annals), Urkhan coined money, and ordered the public prayer to be said in his name, which had formerly been pronounced in the name of the Sultan of Koniah; and thus assumed two prerogatives which, according to the Islám, constitute the privilege of majesty. His vassalage to Koniah was abolished, and the state of the Turks-Osmanlis became an independent empire. To secure the rising power of his brother 'Alá-ed-dín, assisted by the high judge Kára Khalil Chendereli, he established a standing army long before any such thing was known in Europe. This was the famous body of the Janissaries, a word mutilated by Europeans from the Turkish *Yeni-cheri*, or 'the new troop.' The new troops decided the victory in the battle of Philoere, where the emperor Andronicus the younger was entirely defeated by Urkhan and 'Alá-ed-dín (1330). The conquest of Nicsea was the fruit of this victory; and six years afterwards the rest of Bithynia and the greater part of Mysia fell into the hands of the Turks. Nicsea became the residence of Urkhan. By the first peace concluded between the Osmanlis and the Greeks (1333), the emperor Andronicus surrendered his provinces in Asia which had been conquered by Urkhan. But in 1337 a strong body of Osmanlis again crossed the Bosphorus, commanded by Urkhan, who was the first Turkish sultan that ever put his foot on the soil of Europe. He repeated his predatory expeditions in the following years, till at last the emperor John Cantacuzenus tried to reconcile Urkhan by giving him his daughter in marriage (1346). Hostilities were continued however, and Urkhan's son Soliman, in 1354, crossed the Dardanelles and surprised the castle of Tzympe, now Chini, near Gallipoli, which from that time remained in the hands of the Turks, who were thus settled in Europe. During the civil troubles between the emperor John Cantacuzenus and his son-in-law John Palæologus, Urkhan seized the castle of Gallipoli, the key of the Dardanelles. Urkhan died in 1359, at the age of 75 years. His empire was divided into several provinces, which were governed by pashas, a title derived from the Persian 'pal-shah,' which means the foot or chief supporter of the shah. (Xen., 'Cyrop.,' viii. c. 2, 10.)

[1359-1389.] Urkhan was succeeded by his younger son Múrad, the elder, Soliman, having lost his life by a fall from his horse. No sooner was Múrad on the throne than he formed the plan of conquering the remaining part of the Byzantine empire in Europe, and of subduing the Seljukian princes in Asia Minor. In 1361 he took Adrianople, which he afterwards chose for his residence. In the following year he conquered Philippoli. The kings of Hungary, Bosnia, Servia, and the prince of Wallachia, formed a league against Múrad; but they were totally defeated by the Turks in 1363. After this victory, the greater part of Thrace, Bulgaria, and parts of Macedonia, Thessaly, and Epirus fell into the hands of the victors. In 1386 Múrad carried his arms into Asia, and defeated 'Alá-ed-dín, the

Seljukian prince of Karamania, who was compelled to take the oath of vassalage. Meanwhile Lazarus, the kral or king of Servia, who had recovered from his defeat, prepared an attack on the Turkish dominions, assisted by strong bodies of Bosniak, Bulgarian, Hungarian, Polish, and Wallachian auxiliaries. Although his army was twice as numerous as that of the Turks, he was attacked by Múrad near Kosova, in the southern corner of Servia, in 1389. The allies were routed with dreadful slaughter, and Lazarus was made a prisoner. Múrad received the principal captives in his tent. Miloah Kobilowich, a noble Servian, prostrated himself before the throne, and kissed the feet of the victor; but suddenly he seized a dagger, which was hidden under his clothes, and stabbed Múrad to the heart. Múrad ordered King Lazarus to be beheaded in his presence, and then expired on his throne. Servia was now added to the empire of the Turks.

[1389-1403.] Bayazid I., the eldest son of Múrad I., was the first chief of the Osmanlis who assumed the title of Sultan. His first act was an order by which his youngest brother Yakub was put to death. Already known as a general, and surnamed from the rapidity of his manoeuvres and the impetuosity of his charges Ilderim (lightning), Bayazid successfully pursued the career of conquests opened by his ancestors. He laid siege to Constantinople, the first siege of this city by the Turks, in 1391; but a fleet with a body of French knights, commanded by Boucicault, reached Constantinople, and saved the capital. The siege however was changed into a blockade, which lasted for seven years. In Asia Minor, Bayazid conquered Karamania and several of the Seljukian principalities. Meanwhile Sigismund, king of Hungary, levied a strong army, with the view of driving the Turks back to Asia, and he was reinforced by a body of French troops, commanded by John of Burgundy, count of Nevers, and the flower of the French chivalry. But this powerful host was annihilated by Bayazid in the battle of Nikipoli in 1396, in which however 60,000 Turks were slain. King Sigismund was pursued by the victorious Turks, and Bayazid, leaving the prosecution of the Hungarian war to his generals, turned his arms against Greece, which he overran in one campaign in 1397. He was preparing an invasion of Hungary, when he was compelled to defend Asia against Timur, or Tamerlane, by whom he was defeated and taken prisoner in the battle of Angora in 1402. Bayazid died the following year in the Tartar camp at Ak-Shehr, in Pisidia.

[1403-1413.] After the battle of Angora, Timur reinstated the Seljukian princes of Karamania, Aidin, Mentese, Tekke, and Kermian, who soon after Timur's death, in 1405, began to quarrel with one another. The succession to the throne of Osman also was disputed among three of his sons, Soliman, Isa, and Mohammed. Soliman, from the moment of the death of his father, was independent in Europe; and Isa and Mohammed found adherents enough to defeat the Seljukian princes, and to recover each a part of the vast dominions of their father. Thus Isa became independent at Brusa, and Mohammed at Amasia. Thrice defeated by his brother Mohammed, Isa fled to Karamania, and was heard of no more. Another son of Bayazid, Musa, who until then had not aimed at independence, was appointed by Mohammed to attack Soliman, who was acknowledged by the Byzantine court as the only legitimate sultan. Musa crossed the Dardanelles in 1406, and surprised Soliman in 1410. Soliman, forsaken by his officers, fled to Constantinople, but was killed on his way in the village of Dugunji, and Musa became master of the Turks in Europe. War now broke out between Musa and Mohammed, who, having allied himself with Stephen, the vassal king of Servia, crossed the Dardanelles. On the plain of Chámurlí, near the sources of the Kára-Su, towards the southern frontiers of Servia, Musa, forsaken by his best troops and generals, was entirely defeated in 1413. In consequence of this victory, Mohammed became sole sultan.

[1413-1421.] Mohammed I., gifted by nature with beauty, strength, courage, and talents, commenced his reign by ordering the murder of his nephew, the son of his late brother Soliman. From the field of Chámurlí he hastened to Asia, and in two years expelled the Seljukian princes from their possessions. The Venetian admiral Loredano destroyed a Turkish fleet off Gallipoli in 1416; but peace was soon concluded, and a Turkish ambassador appeared at Venice. In 1418 a Turkish army, which had made an expedition into Germany, was destroyed at Radkersburg, in Syria, by the Austrians under the archduke Ernest. In 1421 the Sultan paid a visit to the emperor Manuel in Constantinople, where he was received with extraordinary splendour. He died in the same year, and left the empire to his son, Múrad II.

[1421-1451.] Múrad II., the third son of Mohammed I., was a youth of eighteen when he ascended the throne. Immediately after the death of Mohammed he was called upon to defend his throne against Mustapha, supposed to be a son of Bayazid, who had disappeared after the battle of Angora. Múrad defeated and killed his rival with the assistance of Adorno, doge of Venice, and commander of the Venetian fleet then assembled in the Sea of Marmara. In 1442 Múrad was involved in a war with Ladislaus, king of Hungary, whose general, John Hunyad, defeated the Turks at Nissa in the following year, and penetrated as far as Philippopoli, whence, laden with booty, he led his army back to Hungary. A peace with Hungary having been sworn with solemn oaths, the Sultan was persuaded that there was no danger on the side of Hungary; and the state of Asia being satisfactory,

Mürad, who was a lover of peace and of philosophical studies, retired into Asia, renouncing the throne in favour of his son Mohammed, then a child. Ten weeks after the treaty had been sworn, the Hungarian army re-entered Turkey. Upon this news Mürad left his solitude, and with 40,000 men crossed the Bosphorus in 1444. At Varna he met the enemy. The Hungarians were entirely defeated; Hunyad saved himself by a hasty flight, but King Ladislaus, Cardinal Julian Cesarini, and several other Christians of high rank, were killed. After this victory Mürad renounced the throne a second time, but was again obliged to take the reins of government by a mutiny of the Janissaries, which however he soon quelled. The latter years of his reign were as glorious as the beginning. Corinth and Patras were conquered, and Hunyad, having again invaded Turkey, was routed at Kossova in 1448. Mürad was less fortunate against the famous Scanderbeg, the prince of Epirus, who maintained himself in his principality in spite of all the efforts of the Sultan.

[1451-1481.] Mohammed II., the son of Mürad II., was twenty-one when he ascended the throne. His reign is memorable for the siege and capture of Constantinople, which he entered as a conqueror on the 29th of May, 1453. Mohammed now began a series of victories and conquests by which his empire became one of the most powerful states in the world. Servia, formerly a vassal state, became a Turkish province; the Peloponnesus was conquered, but it was afterwards lost; Trebizond, the last remnant of Greek independence, was also taken; Kaffa was captured; and the khans of the Crimea took the oath of vassalage. In Asia the frontiers of Turkey were extended by the victories obtained over several petty Seljukian princes, and Europe was alarmed at the incursions of the Turks into Wallachia, Moldavia, Transylvania, Hungary, and Germany, and especially by the fall of Otranto in Italy, which was taken by Ahmed Kedük in 1479. Scanderbeg was defeated, and his dominions, Epirus and the Herzegovina, were united with Turkey. During the reign of Mohammed II. great numbers of Turks settled in Europe, where they received lands which had been taken from the Greeks. Mohammed was very active in the administration of his empire. His criminal laws imposed a money fine payable to himself for injuries to the person, and sanctioned his assumption of power to put his brothers to death on the plea of preventing troubles. He established schools and academies for the study of theology, jurisprudence, mathematics, and philosophy.

[1481-1512.] Bayazid II., the son of Mohammed II., having only one brother, Jem, or Zizime, did not avail himself of his power to put him to death; the consequence was a rebellion of Jem, who disputed the crown with his brother: after a long civil war, Jem was at last obliged to fly to Rhodes. The Knights of St. John sent him a prisoner to France, whence he went to Rome under the protection of the Pope. Pope Alexander VI. again put him into the hands of Charles VIII., and eight days afterwards Zizime died, 1494. Besides these civil commotions the reign of Bayazid was troubled by wars with Egypt, Venice, Hungary, Poland, and Austria. In 1495 the first Russian ambassador appeared at Constantinople. Bayazid towards the end of his life experienced the bitterness of a civil war with his youngest son, Selim, which ended in Bayazid being compelled by Selim to abdicate, and he died soon afterwards, in 1512.

[1512-1520.] The reign of the cruel, but most active and gallant Sultan Selim I., though short, is one of the most glorious in Turkish history. Immediately on his accession he put to death his brother Korkud and five of his nephews. He then marched against his brother Ahmed, whom he defeated, seized, and murdered in 1513. In a war with Persia, Selim, after having routed Shah Isma'ül in a decisive battle, took Tabris in 1514. After this victory he attacked 'Alá-ed-dewlet, who reigned over the extensive country between Armenia, Kurdistan, Syria, and Karamania. 'Alá-ed-dewlet was defeated, and lost his life in 1515: his dominions were united to Turkey. The third and most important conquest was that of Egypt and Syria (1516-17). Al-mutawakkel, the last kalif of Cairo, was deposed from his rank as Chief of the Believers, and Selim was acknowledged as his successor by Mohammed Abú-l-Berekiat, the Sherif of Mecca, who presented him with the keys of the Ka'bah. Selim returned to Constantinople in 1517 with 1000 camels laden with the spoil of Egypt. He died in 1520, in consequence of his passion for taking opium. One of his last acts was the creation of a powerful navy. Selim, a zealous Sunnite, persecuted to death great numbers of the heretical Shiites who lived in his empire. He also resolved to kill all the Christians who would not adopt the Mohammedan religion; but he was prevented by his ministers, who besought him not to violate the Korán, which commands toleration of non-believers who pay the capitation-tax.

[1520-1566.] Soliman, or Suleiman I., surnamed the Great, the son of Selim I., is the greatest sultan of the Osmanli, and his reign is the most important period of Turkish history. In the first year of his reign he took Belgrade, and Rhodes, which was defended by the Knights of St. John; and he made Radul, the prince of Wallachia, his vassal. In 1526 Louis, king of Hungary, lost his life in the battle of Mohacs against Soliman, who overran Hungary in one campaign; took the capital, Buda; and received Zapolya, the waiwode of Transylvania, into vassalage. Soliman penetrated into Germany, and laid siege to Vienna in September, 1529; but he was compelled to raise the siege in 1533. From Hungary Soliman proceeded to Persia, then governed by Shah Thamasp, who had protected Sherif-Bey, the khan

of Bedlis, who had revolted against the Sultan. This war lasted till 1554; and although the Turks took Baghdad, Soliman gave up his conquests on condition of the Shah not aiding the rebellious subjects of the Sultan.

While one Turkish army was thus occupied against Persia, another, supported by a fleet, made war against the Venetians, who lost several of their islands in the Archipelago. Zapolya having died in 1539, Ferdinand of Austria seized the kingdom of Hungary, whereupon the Sultan invaded Hungary in 1541. In this war Soliman was victorious, and Ferdinand was compelled to cede to Soliman the greater part of Hungary, with the capital, Buda or Ofen, in 1547. In two years fresh hostilities broke out, and after a long war, a new peace was concluded in 1562, by which Soliman maintained possession of his conquests, and Ferdinand promised to pay an annual tribute for Upper Hungary. Previously to this, Selim and Bayazid, sons of Soliman, disputed the future succession to the throne. After the loss of the battle of Koniah, Bayazid with his four sons fled to Persia, and Soliman having declared himself for Selim, the Shah delivered the fugitives to the messengers of the Sultan. Bayazid and his sons were put to death in 1561.

During the reign of Soliman the Turkish navy was the first in the world, and became the scourge of the Mediterranean. His admirals ravaged the coasts of Italy, Spain, and Africa: they took Reggio, Sorrento, Bujia, Oran, and the island of Majorca; and in 1580 Piale defeated the united fleets of Spain and Italy off Jerba. Another Turkish fleet swept the coasts of the Red Sea and the Persian Gulf from Suez to Basrah, and fought several times with the Portuguese in the Indian Ocean. After the victory at Jerba, Soliman resolved upon the conquest of Malta, and a powerful fleet left Constantinople for that purpose in the beginning of 1565, but the expedition failed after a siege of five months. During this time the war with Austria was renewed. Soliman, notwithstanding his old age, took the command of his army and hastened to Hungary. He died there in his camp in September 1566, whilst besieging Saiget, a small fortress west of Fünfkirchen.

[1566-1574.] Selim II., son of Soliman the Great, immediately after his accession, quelled a dangerous mutiny of the Janissaries, whereupon he concluded peace with the emperor Maximilian II., by which each remained in possession of his share of Hungary as fixed by the peace of 1562. Turkey was increased by the province of Yemen in Arabia, which was conquered in 1570; by the addition of Cyprus, taken from the Venetians in the same year, and by the acquisition of Tunis, which was taken from the Spaniards in 1574. The Turkish navy, commanded by 'Ali Mozzin, was almost annihilated by Don Juan of Austria, in the battle of Lepanto, in 1572.

[1574-1595.] Mürad or Amürad III., succeeded his father Selim II. A war having broken out with Persia, the Turks, after a victory at Childir, conquered Eriwán, Georgia, and Daghistán. From this country, Osman Pasha, the commander of a part of the Turkish army, proceeded northward, crossed the Caucasus in order to relieve the khan of the Crimea, who had been attacked by the Russians; and in 1584 returned to Constantinople by way of Bessarabia. The following years of Mürad's reign were signalised by a fresh war with Persia, and by dangerous troubles among the Druses in Mount Lebanon, in Egypt, and in Arabia. Transylvania, Moldavia, and Wallachia refused to pay the annual tribute, and war was declared against Austria, but Mürad died before it was concluded. During his reign, Turkey had diplomatic relations with almost all the nations of Europe; and the first commercial treaty with England was concluded.

[1595-1603.] Mohammed III., son of Mürad III., secured his succession by putting to death his nineteen brothers, and seven female slaves of his father who were pregnant. The war with Austria continued during his whole reign with no signal success on either side. Sigismund, prince of Transylvania, who had taken arms against the Porte, submitted to the Sultan, and was invested with his principality as a vassal of Turkey. Towards the end of this reign, Deli-Husein rebelled in Asia.

[1603-1617.] Ahmed I., son of Mohammed III., ascended the throne when only fourteen. The rebels in Asia having been supported by Shah Abbás the Great, of Persia, a war broke out between him and the Sultan, which lasted till 1613. In this war the Turks were worsted, and Ahmed was compelled to cede to the victor Daghistán, Georgia, and Eriwán. The Turkish commanders in Hungary were less unfortunate. The emperor Rudolph II., assisted by the princes of the empire, defeated the Turks in several bloody battles, and Ahmed was obliged to conclude the peace of Sitvatorok (1606). By this peace the Sultan recognised the emperor as his equal, and the tribute which Austria had paid for her part of Hungary was abolished. Ahmed concluded a commercial treaty with the United States of the Netherlands. During his reign a body of Cossaks descended the Don in a fleet of boats, crossed the Black Sea, and surprised the town of Sinope, which they plundered and destroyed. Turkey was still a powerful state, but her gradual dissolution became apparent during the reign of a weak prince who was governed by favourites and women.

Mustapha I., the brother of Ahmed, ascended the throne in 1617, but was deposed in six months in consequence of a revolution in the seraglio, and shut up in prison.

[1618-1622.] Osman II., son of Ahmed I., succeeded. A short but unhappy war with Poland was the most remarkable event of the reign of this prince, who soon incurred the hatred of the nation. In violation of the law which declares that the Sultan shall have no women in his harem, except slaves, Osman chose three wives among the daughters of his first officers; and he conceived the fantastic plan of making a pilgrimage to Mecca: the Janissaries, being informed of this, rose in open rebellion, and put the question to the Mufti, if it was legal to kill those who gave bad advice to the Sultan and urge him to innovations. The answer of the Mufti was affirmative. Osman, having refused to deliver up his counsellors, was deposed and put in prison, where he was strangled. His counsellors were likewise put to death. His uncle, the deposed Mustapha, was delivered from his captivity, and again proclaimed Sultan. During his second reign Mustapha showed symptoms of insanity, and he was again deposed by the Janissaries.

[1623-1640.] Mürad or Amürad IV., brother of Osman II., and son of Ahmed I., a child of twelve years, was raised to the throne. For the first ten years he reigned under the guardianship of his mother. During the last seven years of his reign, he evinced the character of a cruel but active and enterprising tyrant. Soon after his accession a rebellion, which broke out in Asia, headed first by Bekir, pasha of Baghdad, and after his death by Abazah Pasha, led to a long series of misfortunes and defeats, with the temporary loss of several of the Asiatic provinces, and Baghdad fell into the hands of the Persians. A rebellion broke out also among the Tartars of the Crimea, who in 1624 defeated the troops of the Kapudan Pasha. In the same year 150 long barks, manned each with 70 Cossaks, appeared in sight of Constantinople, and ravaged the shores of the Bosphorus. The Janissaries, exasperated by all these disasters, set fire to a quarter of Constantinople, and Mürad heard their cries, "The only means to save the empire is thy sword!" This encouraged the young Sultan: he left the seraglio and presented himself to the troops, who received him with shouts of joy (1633). Two years afterwards Mürad, at the head of a strong army, marched to the rescue of his Asiatic provinces. In his first campaign he took Ers-rum, Eriwán, and Tabris; the people in the rebellious provinces were burnt, together with their villages and towns, and the least fault of his officers was punished with torture and death. He returned to Constantinople, and in 1638 opened a fresh campaign for the deliverance of Baghdad. He took one of the great military roads across Asia Minor and Mesopotamia, and arrived before Baghdad on the 197th day after leaving Scutari. Baghdad was taken by storm (Dec. 25, 1638). According to some historians the number of the killed was 80,000, including 30,000 Persian Shiites, inhabitants of Baghdad, who were massacred some days after the storm. Of the Persian garrison of 30,000 men, 10,000 fell during the siege, and the remainder were massacred during and after the storm. A peace was concluded with Persia in 1639, the Persians retained Eriwán, but Baghdad and its extensive territory was ceded to the Porte. Mürad IV. died soon after his triumphal entrance into Constantinople in 1640.

[1640-1648.] Ibráhim I., youngest brother of Mürad IV., and son of Ahmed I., succeeded. The conquest of Azof from the Cossaks, and a war with Venice, which resulted in the temporary conquest of a part of Candia, were the most remarkable events of the short reign of Ibráhim I. He spent his time in luxury and debauchery: and frequent rebellions characterised his reign. Ibráhim perished in consequence of a revolt of the Janissaries.

[1648-1687.] Mohammed IV., son of Ibráhim, a boy of seven years of age, began his reign under the guardianship of his grandmother, the widow of Ahmed I. A long series of disasters marks the minority of this sultan. An expedition against Candia failed, and in two battles off Chios and at the outer entrance of the Dardanelles the Venetians destroyed a considerable part of the Turkish navy. The pages of the Sultan revolted; the troops in Candia mutinied; the Janissaries ravaged the environs of Constantinople; bands of robbers ravaged the best provinces of Asia; from 1648 to 1656 there were fifteen grand-vizirs, making as many changes of ministry; and in consequence of a revolution in the seraglio, the old Sultana Mah-peiker was strangled (1651). At last Mohammed Köprili became grand-vizir in 1656, and under his and his successor's administration Turkey recovered from her depression.

Ragotzi, the vassal prince of Transylvania, having ceded a considerable territory to Austria, war ensued between the Sultan and the emperor Leopold I. (1660). Ahmed Köprili, the son and successor of Mohammed Köprili, conducted this war with great energy, and the Turkish arms were signalised by the conquest of Neu-häusel, Leutra, Lewenz, and Novigrad. The auxiliaries of the Tartar khan penetrated into Moravia and Silesia. But in 1664 the grand-vizir was routed by the Austrians at St-Gotthard. Some days after his defeat Ahmed Köprili concluded the peace of Vasvár, by which the Turks were compelled to evacuate Transylvania, and to cede to Austria that part of Hungary which is situated between the Danube and the Theiss. This loss was compensated by the conquest of Candia by Ahmed Köprili in 1669. In a war with Poland the Turks were at first beaten at Choczim; but they afterwards took this important fortress, as well as the country between the Dniester and the Dnieper, and encamped under the walls of Lemberg (1675). There they were

routed by John Sobieski, king of Poland; but their power was still so great that, by the peace of Zurawna (1676), they acquired Podolia and the fortress Kaminiac Podolski. The rebellion of Emmerich Tököli in Hungary, who was supported by the Turks, led to a renewal of the war with Austria in 1682. Kára Mustapha Pasha, the grand-vizir, commanded the Turkish army as serasker, or general-field-marshal; and the Sultan, preceded by the standard of the Prophet, left Constantinople and accompanied his army to Hungary (1683). Few Austrian troops were in Hungary to detain the Turks, and on the 14th of July 1683, Kára Mustapha, with 200,000 men, encamped under the walls of Vienna. The heroic resistance of the citizens and the feeble garrison, commanded by Count Starbemberg, saved Vienna from the fate of Constantinople. On the 12th of September Kára Mustapha was attacked by an army composed of the Austrian troops, commanded by the Duke of Lorraine; of the troops of the empire, commanded by Maximilian-Emanuel, elector of Bavaria; and by a body of Polish auxiliaries, commanded by their gallant king, John Sobieski. [POLAND.] The Turks were completely defeated: the victory was mainly due to the military talents of the king of Poland. Kára Mustapha, abandoning his camp, fled to Hungary with the remnant of his army: 6000 men, 11,000 women, 14,000 girls, and 50,000 children had been carried off by the Turks into slavery. The imperial troops pursued the Turks, and in three years took the capital and the most important fortresses of Hungary, and drove the enemy across the Danube. The Venetians acceded to the league against Turkey, and captured Santa Maura and several places in Epirus and Greece, and at last Morosini took Athens from the Turks, and forced them to evacuate Greece. So much disgrace after so many triumphs made the Turks despair. The Janissaries revolted, and Mohammed IV. exchanged his throne for a prison in the seraglio.

[1687-1691.] Soliman II., brother of Mohammed IV., and son of Ibráhim I.

[1691-1695.] Ahmed II., brother of Soliman II. The Austrians continued their victories; they took Belgrade, and routed the Turks at Sankamen, whereupon the fortress of Grand-Waradin surrendered to Leopold I. The Venetians conquered Chios. The internal state of the empire was deplorable; there was rebellion in all the provinces.

[1695-1703.] Mustapha II., son of Sultan Mohammed IV. Under this reign the Turks gained some advantages over the Venetians by recovering Chios; and the Tartars ravaged part of Poland. But in Hungary the Austrians were still victorious, and a strong body of them crossed the Danube and penetrated as far as the foot of the Balkan. In 1696 Peter the Great concluded an alliance with Austria against Turkey, and took Azof. In the following year the Venetian fleet was defeated by the Turks at Mitylene, but Prince Eugene defeated the grand-vizir in the battle of Zenta. These events led to the peace of Carlowitz in 1699. Venice was confirmed in the possession of the Morea as far as the isthmus of Corinth, and of Dalmatia; Russia made only a truce for two years; Poland received Podolia, the Porte renouncing this conquest, and the fortress of Kaminiac Podolski; Austria received all Hungary, except the Banat of Temesvár, and the protectorship of Transylvania, which country, as well as Hungary, ceased to be vassal states of Turkey. The Osmanlis felt the decline of their power with deep regret. An insurrection was prepared; the rebels marched to Constantinople, and Mustapha was deposed in 1703.

[1703-1730.] Ahmed III., brother of Mustapha II., and son of Mohammed IV., succeeded. He was at first unable to quell those disorders which were the cause of his accession, and in fifteen years he had fourteen grand-vizirs. In his reign Charles XII. of Sweden took refuge in Turkey. The Sultan, after trying in vain to get rid of the king, at last declared war in his behalf against Russia, and but for the treason of Baltáji Mohammed, Peter the Great would have been obliged to surrender to the Turks with his whole army. The empress Catherine, who was with him in the camp, saved him by bribing the grand-vizir. The peace of the Pruth was concluded in 1711, and the czar was allowed to retire to his empire after having ceded the fortress of Azof. Charles XII. left Turkey in 1713. In 1714 the Sultan led his army into Greece, and the grand-vizir, Damah 'Ali Pasha, wrested the Morea from Venice in one campaign. Upon this the emperor Charles VI. concluded an alliance with Venice, and Turkey became involved in a war, the result of which was to lessen her influence in Europe. Defeated by Prince Eugene at Peterwaradin in 1716, and at Belgrade in 1717, the Turks were disbanded; and in 1718 the Sultan concluded the peace of Passarowitz, by which he ceded to Austria the Banat of Temesvár, and the western part of Wallachia and Servia, with Belgrade; he also restored his Venetian conquests, except the Morea, which was ceded to Turkey. A war against Persia soon followed, in which the Turks were allies of Peter the Great, and acquired a considerable part of north-western Persia, which was afterwards (1726) ceded to the Sultan. In 1730 Shah-Tahmásp suddenly recommenced hostilities, and recovered the ceded provinces. When the news of this invasion reached Constantinople, the Janissaries revolted, and the Sultan was deposed. During the reign of Ahmed III. the first printing-office was established in Constantinople under the patronage of the grand-vizir Ibráhim.

[1730-1754.] Mahmud I., the son of Mustapha II., next mounted the throne. His serasker, 'Ali Hekim-Zade, defeated the Persians at

Hamadan, and conquered Tabris; the divan then concluded a peace with Tahmasp, which dissatisfied the nation. A revolt ensued, and the brave 'Ali Hekim-Zade was appointed grand-vizir. Shortly after this, Nadir-Khuli-Khan usurped the throne of Persia, and renewed the war with the Turks, who, though at first victorious, were entirely defeated under 'Abd-Allah Köprülü, and compelled to renounce the provinces which had been ceded to them during the reign of Ahmed III. (1736). Previously to this peace differences had arisen between the Porte and Russia. Feth-Ghiray, the khan of the Crimea, had received orders from Constantinople to march across the steppe of the Kuban, to cross the Caucasus, and to attack the Persians in Georgia. The territory in his line of march was in part claimed by Russia, whose commander in Daghestán, the Prince of Hesse Homburg, declared to the khan that he considered his march through the Kabarda as a violation of the Russian territory; and as the khan continued his march in spite of his menaces, he attacked the Tartars as soon as they had crossed the range of the Caucasus, and approached the river Samur, near the frontiers of Daghestán. Feth-Ghiray defended himself until orders came from Constantinople to return to the Crimea. In 1737 Austria concluded an offensive and defensive alliance with Russia, and declared war against the Porte. The Austrians, defeated in several pitched battles, concluded peace with the Porte at Belgrade (1739), and ceded to Turkey the western part of Wallachia, and Servia, with Belgrade. But the Russians overran part of the Crimea, took Choczim by storm, and conquered Moldavia.

The latter years of the reign of Mahmud I. were troubled by a short war with Persia; by troubles in Egypt and at Baghdad, and by the disturbances produced in Arabia by the Wahabites. Mahmud I. died a natural death in 1754.

[1754-1757.] The short reign of Osman III., brother of Mahmud I. is not remarkable for any events of importance, except some diplomatic transactions with Persia.

[1757-1773.] He was succeeded by Mustapha III., son of Ahmed III. This prince took an active share in the administration. The increasing power of Russia induced him to declare war against the empress Catherine II. The pretext for this war was to save Poland from ruin through Russian interference in her civil troubles. The first idea of dismembering Poland however was formed by the same Sultan, Mustapha III., at whose order the Reis Efendi İsmail Râfî proposed to the Austrian ambassador, Baron Thugut, in a secret conference, to divide Poland between the Sultan and the emperor Joseph II. This proposition, rejected by Austria, was made ten months before Prince Henry of Prussia, who is generally believed to be the first author of that project, suggested the partition of Poland to Catherine.

War was declared in 1768. It was glorious for Russia and most disastrous for Turkey. The Russian field-marshal Rumanzow took all the fortresses between the Danube and the Dnieper, and the whole country between these two rivers fell into the hands of the Russians. They overran the Crimea, and after having conquered the island of Taman, crossed the strait and took Kertch, Yenikale, and Kaffa in 1771. The khan Maksud-Ghiray abandoned his capital Bakje-Seral, and fled to Constantinople, and the Russians had Shahin-Ghiray elected in his place. In the beginning of the war, a Russian fleet, commanded by Spiritow, Alexis Orlov, and Elphinstone, left Kronstadt for the Mediterranean, proclaimed the independence of the Greeks, and in 1770 destroyed the Turkish fleet in the bay of Chesme, the greatest disaster which had befallen the navy of Turkey since the battle of Lepanto. A truce followed at the interposition of Austria, and congresses took place at Fokshan and Bukarest; but the negotiations proved abortive, and hostilities recommenced in 1773. The Turks were again beaten at Rujuk and Kalnarji, and although the serasker Osman-Pasha obtained considerable advantages over the Russians at Silistria, Rumanzow defeated him in his turn at Kárásu in Bulgaria. Shortly afterwards Sultan Mustapha III. died (Dec. 24, 1773).

[1773-1789.] 'Abdu-l-Hamid I., or Ahmed IV., son of Ahmed III., succeeded. Field-Marshal Rumanzow continued his victories: his generals, Kamenski and Suwarow, defeated the Turks at Basarjik and Koelje, and in the month of July Kamenski entering the passes of the Balkan besieged the grand-vizir Musa Oghli. The Porte now yielded to the propositions of Russia, and peace was concluded in July, 1774, at Kuchuk-Kainarji. By this peace Russia obtained the Great and the Little Kabarda, the fortresses of Azof, Kilburun, Kertch, and Yenikale; the country between the Bog and the Dnieper; the free navigation of the Black Sea, and a free passage through the Bosphorus and the Dardanelles; the co-protectorship over Moldavia and Wallachia; and the protectorship over all the Greek churches within the Turkish empire. The khanat of the Crimea was declared independent, but it soon became a prey to Russia. Three years afterwards the Porte was obliged to cede the Bukowina to Austria.

After Catherine had united the Crimea with her empire, immense preparations for war with Russia were made throughout the Turkish empire, and Catherine in her turn concluded an alliance with Austria. The Porte declared war in 1787. Her armies obtained some advantages against the Austrians, but the Russians defeated the Turks and took Ocsakow by storm in 1788. Sultan 'Abdu-l-Hamid died soon after.

[1789-1807.] Selim III., son of Mustapha III., and nephew of 'Abdu-l-Hamid, who succeeded, was one of the most enlightened men

of the east, but his enlightenment did not ward off heavy disasters from his country. The war continued: the Turks were beaten at Martinestie by the united Austrians and Russians; the Austrians took Belgrade; the Russians, Bender and İsmail; and Turkey would have been overrun, but for the intervention of England, Prussia, and Sweden. Thus peace was concluded in 1791 at Ssistowa with Austria, which restored her conquests to Turkey; and with Russia in 1792 at Jassy. By the peace of Jassy the Porte consented to the incorporation of the Crimea with Russia, and the Dniester became the frontier between the two empires. Sultan Selim now began his work of reformation, but during a long period his efforts were checked by troubles in Syria and Egypt: by the rebellion of Paswán Oghlu, pasha of Widdin; and by the increasing power of 'Ali Pasha of Janina. The conquest of Egypt by Bonaparte led to a war with France. The grand-vizir, Yúsuf Pasha, was routed in the battle of Abukir, and his army was completely destroyed by the French, but Egypt was taken by the English, who restored it to the Porte in 1803. Previously to this, Selim had concluded an alliance with Russia, Naples, and England, in consequence of which a united Turkish and Russian fleet took possession of the Ionian Islands, which, conformably to a treaty concluded between Selim and the emperor Paul, were constituted into a republic (1800). Selim acquired the protectorship of this new republic on condition of consenting to the incorporation of the kingdom of Georgia with Russia. Peace with France was concluded in 1802, France acquiring the free navigation on the Black Sea, a privilege which was soon afterwards granted to England and to several other European powers. Selim at last began his reforms. He put his forces on a footing similar to that of European armies; introduced several changes into the system of taxation, and into the administrative divisions of the empire; he gave a new organisation to the divan; but in order to fill the treasury he debased the money. In the meantime the jealousy of England and Russia was excited by the increasing influence of the French ambassador, Count Sebastiani; and a war broke out between Turkey and Russia, assisted by England (December, 1806). Admiral Duckworth forced the passage of the Dardanelles, and threatened to bombard Constantinople, but fearing that his retreat would be cut off, sailed back to the Mediterranean. The Russians, on the other hand, made continual progress on the Danube. The defeats of the army were considered by the people as a consequence of the new organisation; the Janissaries breaking out in rebellion, occupied Pera, and directed their ordnance against the seraglio. The Mufti joined their party, and by a fetwá declared "that Sultan Selim III. had forfeited the throne because he had procreated no heir, and introduced the Nizam Jedid and several other innovations." Thus Selim III. was deposed, and confined to the seraglio.

[1807-1808.] Mustapha IV., son of 'Abdu-l-Hamid I., succeeding, immediately abolished the reforms of his predecessor. The Turkish fleet was entirely defeated by the Russians off Lemnos, and terror spread over Constantinople. Mustapha Bairaktar, pasha of Ruestschuk, appeared suddenly with an army before the capital, and demanded the deposition of Mustapha. The murder of Selim, by order of Mustapha IV., was the first consequence of this bold step; but the pasha entered Constantinople, and Mustapha was deposed.

[1808-1840.] Mahmud II., the son of 'Abdu-l-Hamid I., and the brother of Mustapha IV., was instructed for sometime before his accession by the deposed Sultan Selim III., in the principles of reform necessary for Turkey. He was indebted for his accession to Mustapha Bairaktar, who, after having been appointed grand-vizir, re-established the Nizam Jedid. The Janissaries again revolted, and they stormed the seraglio and the barracks of the new troops (Seymen). To save the empire, Mustapha Bairaktar put to death the deposed Sultan, Mustapha IV., and then blew himself up, together with crowds of the Janissaries. Mahmud owed his life to the circumstance of his being the only adult descendant of Osman; and to secure himself on his throne, he put to death the infant son of Mustapha IV., and ordered four pregnant slaves of the deposed Sultan to be drowned in the Bosphorus. Compelled to yield to the claims of the Janissaries, he abolished the Nizam Jedid. He concluded peace with England in 1809, and continued the war against the Russians, who were forced to retire beyond the Danube. Internal troubles divided the forces of the Sultan. The Servians however, commanded by Czerny George, and supported by Russia, shook off the Turkish yoke; the pashas of Widdin, of Damascus, of St. Jean d'Acre, of Trebizond, of Halep, of Baghdad, of Latakia, and several others, were in revolt; 'Ali, pasha of Janina, was independent in Epirus, and aimed at the possession of Greece; and Mahemet Ali in Egypt was laying the foundation of a hereditary and all but independent power. Under these circumstances the Sultan concluded with Russia the peace of Bukarest (1812), by which the Porte ceded the country east of the Pruth, Bessarabia, with the principal mouth of the Danube, and part of the eyalet of Childir in the Caucasus. During the ensuing years the Sultan effected several radical reforms, which have rendered his name famous in Europe. The destruction of the power of 'Ali, pasha of Janina, was a great triumph, but the insurrection of the Greeks and their final deliverance was a fatal blow to Turkey. Several European powers took the Greeks under their protection. The Turkish navy was destroyed in the battle of Navarino, October 20, 1827, by the combined fleets of England, France, and Russia; and Greece was erected into an independent

kingdom under King Otho, a prince of the house of Bavaria. Subsequently to 1822 (when to quell a turbulent revolt he sacrificed his favourite wife and several of his best officers), Mahmud succeeded in destroying the Janissaries, and with the downfall of this military body, which was once the bulwark of the empire, begins a new era in the history of Turkey. Serious differences with Russia on account of Moldavia and Wallachia were settled by the treaty of Ak-kermán in 1826; but Mahmud, having shortly afterwards succeeded in finishing the reform of his army, declined European intervention in the affairs of Greece, which was then still in insurrection. Thus war broke out with Russia in 1828. In the second campaign, field-marshal Diebitsch defeated the main army of the Turks at Shumla, and took Adrianople. At the same time field-marshal Paskiewicz conquered Erz-rum in Asia. Mahmud concluded the peace of Adrianople (1829), by which Russia acquired parts of the eyalets of Childir and Kars towards the Caucasus, and the fortress of Anapa near the mouth of the Kuban; and the Sultan recognised the independence of Greece; Moldavia and Wallachia acquired an independent administration, guaranteed by Russia; Servia was recognised as a vassal state of the Porte; the Sultan had to pay ten millions of ducats; and the Russians acquired the right of occupying Moldavia, Wallachia, and the town of Siliustria, until the payment of this sum. In 1831 the Sultan attacked Mehemet Ali, pasha of Egypt (who was aiming at establishing his independence of the Porte) in Syria, but his armies were defeated; and in the following year Ibrahim-Pasha advanced as far as Kutayah, about 130 miles distant from Constantinople. Peace was concluded in 1833, at Koniah, by which Mehemet Ali, who had held the eyalet of Candia since the war against the Greeks, acquired all Syria, and Ibrahim-Pasha was invested with Adán as Mutesellim. In this war Constantinople was saved by the intervention of the emperor Nicholas of Russia, and a Russian army was transported by sea to Asia Minor to stop the progress of the victorious Ibrahim. A consequence of this assistance was the treaty of Unkiar Skelessi (1833), by which the Porte engaged herself not to allow the passage of the Dardanelles to any enemy of Russia. In 1835 a Turkish fleet took possession of Tripoli, which thus again became dependent on Turkey. Mahmud II. was next engaged in a new war with Mehemet Ali; his armies were totally defeated at the battle of Nezib by Ibrahim Pasha, June 24th, 1839. Mahmud II. died on the 1st of July following.

Abdu-l-Mejid, son of Mahmud II., ascended the throne of Osman in his 16th year. The loss of the battle of Nezib, the treachery of the Capudan pasha, who deserted to Mehemet Ali with the whole of the Turkish fleet, and the advance of the victorious Ibrahim, seemed to foreshadow the immediate dissolution of the Turkish empire. This disaster was prevented however by the treaty of London (July 16, 1840), in fulfilment of which an Austro-English fleet bombarded and took Acre, Sidon, and several other towns on the coast of Syria, which Ibrahim Pasha was obliged to evacuate. Negotiations for peace soon followed, which terminated in the restoration of Syria to the Porte, and the recognition of Mehemet Ali as hereditary pasha of Egypt and its dependencies, upon payment of an annual tribute.

[1840-1855.] On the death of Mahmud II., the old Turkish party, opposed to all innovations, and especially to all imitations of the polity of Christian states, hoped that no more would be heard of reform. But their hopes were blasted by the appearance of the Hattisharif of Gulhané, dated Nov. 3, 1839, and countersigned by Reshid Pasha, which contained guarantees for the life, property, and honour of all the subjects of the Sultan, irrespective of person or religion, and promised the abolition of the arbitrary recruiting system, and the introduction of an impartial system of taxation. The issue of this charter threw the empire into commotion; the old Turks, headed by Riss Pasha in the capital (who was accused of being under the influence of Russia), made a formidable opposition to the execution of the decree; the Turkish subjects of the Sultan, brought up in principles of ascendancy and contempt for Christians, rose in insurrection to defend their privileges. The Christians of European Turkey, by far the most numerous class of the subjects of the Sultan in that part of the empire, long groaning under oppression, were accustomed (and taught) to look for protection and deliverance to Russia. France had to interpose frequently (but never offensively to the Porte) to protect the Christians of the east; and the English and Austrian ambassadors at the Sublime Porte embraced every opportunity of keeping up the influence of their several governments. Thus, not only did foreign nations interfere in the internal administration of the empire, but their ambassadors seemed to be a set of players with Turkey for a chessboard. The fair execution and firm establishment of the system mooted in the Hattisharif, would have put an end to this state of things, by giving the Christian subjects of the Porte the protection of law, and depriving them of all excuse and desire for seeking foreign protection. Russia could never coax a people to take shelter behind her shield who lived secure under theegis of law. The Sultan's government it is true has given many indications of perseverance in reform, and has issued many orders in furtherance of the system (among others one in 1855 for the reception of Christian evidence in the courts of justice), but the fact is undeniable, that the central government is not able to enforce the *tanzimat* in the provinces.

A fine instance of the noble generosity that lies at the bottom of

the Turkish character was exhibited to the world in the refusal of the Sultan Abdu-l-Mejid to surrender the Hungarian refugees to the imperious demands of Austria and Russia in 1849. Nevertheless the influence of Russia, however it might diminish at court, was rapidly extending among the Christian population of the Porte. Indeed, from the mere terms of the treaties of Kainarji, Adrianople, and Unkiar-Skelessi, it is clear that Russia was ever drawing the noose of political dependence closer and tighter round the neck of Turkey. The crisis seemed to arrive, when in 1853 the Czar Nicholas, through his minister Menzikoff, demanded openly the protectorate of the Christian subjects of the Sultan, and even the right to adjudicate in certain cases of dispute; and insolently occupied Moldavia and Wallachia, as a 'material guarantee' for compliance with his demands. In consequence of this, a Turkish army under Omar Pasha occupied the Balkan and the fortresses of the Danube; and French and English fleets cast anchor in Besika Bay. In October following the Porte declared war against Russia, and appealed to France and England for aid. In the campaign that followed in Little Wallachia the Russians were on every occasion defeated by the Turks; but in November the Russian fleet, issuing from the harbour of Sevastopol, attacked and utterly destroyed the Turkish fleet in the roads of Sinub. In the following March (1854) the Russians crossed the Danube, and seized the fortresses in the Dobrukscha; and about the same time England and France declared war, and the fleets entered the Black Sea. On the 15th of June the Russians, after great efforts and a vast loss of men, raised the siege of Siliustria (French and English armies now appearing in Turkey, encamped at Varna), and retreated across the Danube. The Turks also crossed the Danube. The Russians were defeated at Giurgevo, and soon after evacuated the principalities, which, in accordance with the terms of a treaty with the Porte, were occupied by Austrian forces. Meanwhile the French and English fleets entered the Black Sea, bombarded Odessa, and forced the Russian fleet to take refuge in the harbour of Sevastopol. An Anglo-French army landed in the Crimea on September 14, 1854, under the command of Marshal St. Arnaud and Lord Raglan. The battle of Alma followed on the 20th, in which the Russians under Prince Menzikoff were utterly defeated by the allies, and the road was open to Sevastopol. To secure ready communication with their fleets however the allied army, by a flank march, seized upon the harbours of Balaklava and Kamiesch, and the southern side of Sevastopol was invested on the 26th of September, the Russians having in the interim, by sinking seven men-of-war at the mouth of the harbour, blocked up the entrance by sea to this great naval and military arsenal. Here, on the dreary heights of Sevastopol, throughout the terrible winter of 1854-5, the allies maintained the hard struggle and obstinate siege against a skilful foe within and a countless Russian army without, humbling the name and prestige of Russia by the victories of Inkermann and Balaklava; and kept the eyes of the world fixed upon the spot where the whole interest of the war was now concentrated throughout the entire spring and summer of 1855, electric agency flashing to all parts of Europe tidings of losses and sufferings often, of defeat never, and of many a brilliant success (not least of which was the victory of Tahernays, August 16, in which the Sardinians, now numbered among the allies, won their spurs); until at last, after a long bombardment, the French captured the Malakoff tower on the 8th of September, and the allies occupied the southern side of Sevastopol.

(Hammer, *Geschichte des Osmanischen Reiches*; *Des Osmanischen Reiches Staatsverfassung*; Knolles; Thornton; Slade; Urquhart, *Turkey and its Resources*; Napier, *The War in Syria*; Maragli, *Stato Militare dell' Imperio Ottomano*; D'Ohason, *Tableau Général de l'Empire Ottoman*; Tott, *Mémoires sur les Turcs et les Tartars*; Ubicini, *Lettres sur la Turquie*; *Official Papers*.)

TURK'S ISLAND. [BAHAMAS.]

TURKISTAN, or *Independent Tartary*, a region of Central Asia, inhabited by many tribes of Tartar race, extends from about 36° to 55° N. lat., and from 52° to 89° E. long. It is bounded N. by Russia, E. by China, S. by Afghanistan and Persia, and W. by the Caspian Sea.

Lake Sir-i-Kol, situated in 37° 27' N. lat., 73° 40' E. long., on the high table-land of Pamir, near the southern frontier of Turkistan, appears to be 15,000 feet above the level of the sea. It is bordered by hills on three sides; those on the south rise to the estimated height of 3500 feet above the level of the lake. [BADAKSHAN; OXUS.] Near Hasrat-Imam, in 69° E. long., the bed of the river is said to be only 500 feet above the level of the sea, and here are its lowest fords. As far as the meridian of 68° E. long., the passes across the mountain range which extends south-west from Sir-i-Kol do not sink lower than 13,000 feet above the level of the sea. Twenty-five miles W. from the lake the bed of the Amu is 1200 feet below its level; 85 miles farther west it is only 10,000 feet above the sea. The village of Robot, on the banks of a southern affluent of the Amu, 60 or 70 miles W. from this latter point, is 8100 feet above the sea. The crest of the pass east of Taliaskan is 6600 feet above the sea.

These elevations indicate that the general level of the land south of the Amu above its lowest fords immediately attains a high level; it is in fact an elevated plain furrowed and intersected by numerous deep narrow valleys down which flow the Kokcha and Kunduz rivers and their affluents. In the low ridge at the east end of Sir-i-Kol the

Yarkand River, which runs to the north of east, has its rise; and from the sources of the Yarkand and Amu rivers the country slopes down on every side except to the south-east. The high ground north of the Amu, at the mouth of the Kokcha, is at a greater distance than that on its south, and does not rise so high. At Kurahi however, two degrees farther north, Sir A. Burnes saw mountains covered with snow in July about 150 miles to the west, which would be nearly in the meridian of the mouth of the Kokcha. Their summits must have been about 18,000 feet above the sea; they continued in sight nearly at the same distance for about seven hours, and appeared connected. The Sir-Deria (Jaxartes) has its rise on the north side of the ridge of hills extending westward from the north side of the Sir-i-Kol, opposite Issar, which is about 70 miles S.W. from the lake. The Zer-Afshan, which flows by Samarcand and Bokhara, is said to have its sources not far distant from those of the Sir-Deria. From the latitude of Kurahi (38° 52' N.) the high land seen by Burnes appears to stretch to the north-east, to beyond the meridian of Samarcand (about 67° E.). North of the Zer-Afshan the high land appears to continue as far west as the meridian of Bokhara (64° 55' E.), and is visible to the north of that town. About the meridian of 68½° E., and the parallel of 41° N., the Sir-Deria, which flows to that point in a direction a little north of west from its source, turns to the north. The high land comes nearly close up to the east bank of the river in this part of its course, but does not appear to continue farther north than the ridge which separates the lake called Isi-Kol from the Balkash Lake (about 42° N. lat.). Yarkand and Kashgar, which appear to have an extensive plain to the east, and are evidently on a much lower level than the country to the west of them, may be assumed as the eastern limit of the high table-land of Pamir. From Kashgar to Kokand the road lies up the Kashgar River to its source, and through the pass of the Terek to the valley of the Sir-Deria. A road leads in winter from the Terek Pass to Sir-i-Kol in two or three days; in summer the road is said to be impassable on account of torrents fed by the melted snow. The high table-land of Pamir slopes down on the north towards Kokand.

At the western base of this enormous table-land is the broad valley of the Oxus. At its eastern base is the plain which extends between the high land of Tibet on the south and the Thian-Shan on the north, as far as Lake Nor; and north of it is the comparatively low country which slopes from the plains of Songaria westward to Lake Aral and the Caspian. These three natural divisions of Turkistan will be described in the order in which they are here enumerated.

Under the designation Plain of the Oxus is embraced the level tract extending from the base of the mountains east of Kurshi (68° E. long.) to the Caspian, and from the shores of the Aral to the south of Balkh. From the junction of the river of Kunduz with the Amu-Deria the latter river maintains a generally north-west direction till it loses itself in the sea or lake called Aral. Below the junction of the Kunduz, the Amu receives no affluents of any magnitude. Woodforded the Amu at Jan-Kila, a short way above its junction with the Kokcha. [BADAKSHAN.] A man on foot could not have forded the river here; and fewer than three horses abreast could with difficulty stem the current. At the ferry between Balkh and Kurahi, Burnes found the Amu about 800 yards across, with an average depth of 20 feet and a current of ¾ miles an hour. At Charjui, on the road from Bokhara to Meshed, he found the river 650 yards broad, and in some places 25 and 29 feet deep. Kunduz is 498 feet above the sea. A barometrical levelling by Russian officers, in the winter of 1825, gives the height of Lake Aral above the Caspian 117 feet. [ARAL; CASPIAN.] From the banks of the Amu to the Elbors on the south-west, and to the snowy mountains east of Kurshi on the east, extends an immense plain, the elevation of which, towards its southern extremity, is at Balkh 1718 feet above the level of the sea, and at Khulm, 1437 feet. At Bokhara its elevation is 1201 feet. The northern boundary of this plain is formed by a ridge of high broken ground north of Bokhara, which extends from the eastern mountains to the Amu above Khiva; west of the Amu it is bounded to the north by the Aral and by the abrupt termination of the Ust-Urt, a high table-land rising precipitously from the shores of the Aral and the Caspian, to an average level of nearly 600 feet above the latter, occupying the whole breadth of 138 miles between the sea, and extending south of the southern termination of the Aral, almost to 41° N. lat. The central plain maintains a considerable elevation from Sherrukhs to the base of the Ust-Urt, and the maximum depression of the level of the basin of the Caspian extends a very little way to the eastward.

The wide tract extending from the shores of the Aral to the Caspian, and the Russian and Chinese frontiers, is known as the Steppe of the Kirghiz Tartars. From Orak to Uralak the course of the Ural River is nearly east and west, and sinks from 582 feet to about 200 feet above the level of the sea. From Orak to Guriev, near the Caspian, the Ural runs nearly south, and sinks to 140 feet above the sea at Kalmukovah, and to nearly 82 feet at Guriev. The steppe on the south bank of the Ural, between Orak and Uralak, appears to rise immediately to an average elevation of 500 to 800 feet. Mount Airuk, 224 miles S.E. from Orenburg, the highest summit of the Mongojar Hills, rises 800 to 1000 feet above the level of the steppe. From this culminating point the ground slopes, still in a south-east direction, gradually down to the level of the Aral, a distance of 300

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miles. To the south-west the ground sinks gradually to the level of the Ust-Urt. The Emba (which flows south-west to the Caspian), the Uil (which flows west till it is lost in the sands east of the Lower Ural), the Khobda and Ileik (which flow to the north of west, and after uniting their streams fall into the Ural midway between Uralak and Orenburg), and the Or (which flowing to the east of north, joins the Ural at Orsk), all rise on the sides of Mount Airuk. The eastern base of the Mongojar range is washed by the Irgbiz, which, rising in an undulating plain south of the sources of the Tobol, nearly in 51° N. lat., flows to the south and loses itself in a chain of lakes called Ak-Sakal, about 60 miles north-east of the north-eastern corner of Lake Aral. From the sources of the Irgbiz and Tobol, about 60° E. long., to those of the Turghai, about 3 degrees to the eastward, there extends a plain considerably elevated above the level of the ocean, but considerably depressed below the hilly countries to the east and west of it, covered with a multitude of salt-lakes, and sending its waters southward to Lake Ak-Sakal, northward to the Tobol and Ishim, both affluents of the Irtish. The numerous streams which unite to form the Turghai rise about 64° E. long., over a range of country extending from about 49° to 52° N. lat., and converging into one main stream flow westward to the Ulkiak, which coming from the north joins the Irgbiz near its termination in Ak-Sakal. The course of the upper rivulets of the Turghai appears to form the western termination of a belt of high land which extends in a north-western direction, parallel to the course of the Irtish, between Ust-Bukhtarminak and Omak, from the high lands between the Nor-Saisan and Tarbagatai, about 85° E. long., to the meridian of 64° E. From its outlying hills on the north, about 100 miles from the banks of the Irtish, to its southern base, this high land must have a horizontal breadth of nearly 180 miles. Its central ridges reach an estimated elevation of at least 5000 to 6000 feet above the sea. To the north it sends out the Ishim (which joins the Irtish), the Nura (south-west of the Ishim), the Selenta, Ulenta, Chanderli, and other rivers to the eastward, which lose themselves in the steppe lakes before they reach the Irtish. To the south this high land sends forth the Ainguz, the Jurgutu, and some other rivers which fall into the Lake Balkash on the Chinese frontier; and the Sari-Su and the Kongur, which meet about 47° N. lat., 67° E. long., and from their point of junction flow south-west till they are lost in brackish lakes about 40 and 50 miles from the Sir-Deria. The Tahui, which is believed to issue from Lake Isi-Kol, at the northern base of the Thian-Shan range, about 42° N. lat., 81° E. long., flows in a north-west direction till it is lost in a salt-lake a little to the south of that which receives the united streams of the Kongur and Sari-Su. The hills south of Isi-Kol extend westward from the meridian of that lake to the Sir-Deria, about 69° E. long. The Sir-Deria flows at their southern base to 69° E. long., then turns and flows past their termination to the north till it reaches within a degree of latitude of the lakes in which the Tahui terminates; hence it bends away to the west and flows to Lake Aral in 61° E. long. The apex of the delta of the Sir-Deria is not less than 5 degrees to the east of the shores of the Aral; the most northerly branch joins that lake not far from its north-east angle, about 46° N. lat., and the most southerly near its south-east angle, about 43½° N. lat. The mountains which intervene between the upper valley of the Sir-Deria and the valley of Samarcand, and the hills which extend from their western termination to the Amu, form the extreme southern boundary of the Kirghiz Steppe, between 42° and 43° N. lat. Humboldt estimates the elevation of Lake Balkash as not more than 800 feet above the ocean. The Aral is about 30 feet above the level of the Black Sea. [CASPIAN.]

The extensive range of country which lies east of the great elevation of Pamir, has been called by recent geographers Chinese Turkistan or Tartary. The Thian-Shan extends along its northern side, from the junction of the range with Pamir to its junction with the high desert plain of the Gobi, and the high land of Tibet along its southern side. Lop-Nor appears to form its eastern boundary. Kashgar and Yarkand stand on a plain much depressed below the level of the highlands to the north, south, and west of them, in 39° 25' N. lat., 73° 56' E. long.; Yarkand in 38° 19' N. lat., 76° 18' E. long. A river flows past Kashgar, formed by two streams, one of which comes from the pass of Karakorum on the road to Ladak; the other from a range of hills at the east end of Sir-i-Kol. A river flows past Yarkand, formed by the junction of two streams, one of which comes from the Terek Pass, on the road to Kokand; the other from a lake on the high plain of Pamir, situated between the Terek Pass and Sir-i-Kol. Ushi is situated among the hills at the base of the Thian-Shan, in 41° 3' N. lat., 78° E. long.; Khotan, at the base of the high land of Tibet, about 37° N. lat., 80° E. long. The rivers of Yarkand and Kashgar unite about 40° N. lat., 80° E. long., and receive near their junction rivers from Ushi and Khotan. The united stream flows eastward to the Lop-Nor (41° N. lat., 89° E. long.), receiving on the way affluents on its north bank from Kulchis (41° 37' N. lat., 82° 50' E. long.), and from Kharashar (42° 10' N. lat., 87° 10' E. long.). The river formed by the union of the rivers of Khotan, Yarkand, Kashgar, and Ushi, flows close to the hills at the base of Thian-Shan. East of Khotan the country is represented as a sand-waste, and the same account is given of the country east of Lop-Nor. The country between Lop-Nor and the upper Hoang-ho attains to a considerable elevation.

So extensive a portion of the earth's surface as Turkistan is, and which varies from an elevation of more than 18,000 feet above the level of the sea to about 82 feet below it, must necessarily present a great variety of climate and geological structure, and, in consequence of that variety, an equal diversity of vegetable and animal life. So small a portion of this region has however been hitherto accessible to scientific research, and the investigations of the few scientific travellers who have visited it have been distracted by so many impediments, that our information on these points is meagre in the extreme.

The line of perpetual snow in the neighbourhood of Sir-i-Kol appears to be above 17,000 feet. In Wakhan on the Amu (8000 to 10,000 feet above the sea) the seed-time is in April, the harvest in July. During winter and spring a strong wind blows steadily down the valley from the north-east, which is unfavourable to vegetation. On the 6th of April, 1838, according to Lieutenant Wood, not a leaf of the mulberry-trees was open at Khulm; the plum-trees had blossomed at Kunduz a month earlier. The harvest at Balkh is 50 days later than at Peshawur, and it is a fortnight later at Bokhara than at Balkh. Between Balkh and Bokhara, Burnes observed that the thermometer in the latter half of June rose to 103° in the day and fell to 60° at night. Fruit-trees begin to blossom at Bokhara about the middle of February; there are heavy rains in March; the summer heat is overwhelming; there are two or three weeks of heavy rains in October; in January the ice is sometimes three or four inches in thickness, and the snow sometimes lies fifteen days. The communication between Khiva and the Caspian is interrupted in summer by the great heats. Snow lies on the Ust-Urt in the winter; the Aral is frozen so that the Kirghiz can pass on the ice from the mouths of the Sir-Deria to the mouths of the Amu. The Amu too is sometimes frozen as high up as Charjui (west of Bokhara), so that caravans can cross on the ice. Along the Russian frontier the weather is more inclement than the latitude and elevation of the country would lead one to expect. The most violent storms come from the north-west.

The vegetation of the upper part of the valley of the Oxus is noticed under **BADAKSHAN**. Groves of tolerably-sized firs occur in the ravines of the Khulm River, south of Kunduz; but there are no timber-trees on the Hindu-Kush. The assafotida plant and the furze of Tartary are the characteristic plants of the mountains south of Balkh. The grass on the pastures around the Sir-i-Kol, and on the high lands west of that lake and south of the Amu, is in general very luxuriant. Large quantities of wheat and other grains are reared round Hasret Imam and Kunduz; and apricots, plums, and other fruits in great abundance and of excellent quality at Kunduz, Kulm, and Balkh. The almond and pistachio nut are natives of the secondary ranges on the north face of the Hindu-Kush. The great plain on both sides of the Amu is in most places a barren waste, or thinly covered with straggling furze. Wherever there is water however its clayey soil is easily rendered fertile by irrigation. In the oases of Khulm, Balkh, Serukha, Merve, Kurahi, Bokhara, and Khiva, and on the banks of the Gurgan, most kinds of fruit, vegetables, and grain are brought to perfection. The mouths of the rivers which fall into the Caspian and Aral, and the borders of the salt lakes in the Kirghiz steppe, which receive considerable rivers, are choked up with gigantic reeds and other aquatic plants. The characteristic plant of these steppes is the sachsaul. In the sands it is a shrub, in clayey soils it assumes the appearance of a tree. It is a dry desert plant, invaluable to the wanderers of the steppe on account of the slowness with which it consumes, and the length of time which it remains burning. On the Upper Ishim there is a considerable extent of forest land.

The most important animals on the highlands of Pamir are the yak, the argali, the markhor, a large species of goat, wolves, foxes, and hares. Eagles are numerous among the inferior ranges; large flocks of the hooded crow frequent the hills in summer, and come down to the plains about Kunduz in winter. House-sparrows, partridges, and pheasants are found on the plains of the Amu, over which also deer and antelopes roam in considerable numbers. In the northern parts of the Kirghiz steppe are found the saiga, a kind of antelope, and a species of small eagle, called berkut, which is trained for the chase. The steppe would seem to be the native country of the *Murida*, which are found there in almost every possible variety. The wild-bear inhabits the reedy margins of the lakes and rivers; and a tiger, supposed to be the same as that of Bengal, frequents the delta of the Sir-Deria. The Upper Turgai swarms with snakes. There is an astonishing quantity of water-snakes in the lower delta of the Ural.

Turkistan, or Tartary, is named from its predominant race, the Turk, or Tartar, for they are the same or a kindred people. The Kirghiz Tartars, properly so called, inhabit the high table-land of Pamir, and its bordering mountains and valleys. They are nomads. They are a people of low stature, with Mongolian countenances, though speaking a Turkish dialect, which differs little from that of the Uzbek Tartars of Kunduz. The tribes called Kirghiz by the Russians, who roam the steppes from the north declivity of Pamir and the southern shore of the Aral to the Russian frontier, and from the Caspian to the Chinese frontier, are divided into the three great hordes. That which ranges the country on the south-east acknowledges the designation

Kirghiz, and appears to resemble in most respects the highlanders of Pamir. The horde on the Siberian frontier, and that which roams from the Ural range to the Ust-Urt, call themselves Kassak, or Cossak. The men of the Middle Horde have less of the Mongolian features than the Kirghiz, and those of the Little Horde, as it is called, still less. The Turkoman tribes range the deserts around the Amu and Caspian, from the Ust-Urt to the frontiers of Persia and Balkh: these tribes appear, from their lineaments as well as from their language, to be more free from any mixture of Mongol blood than those previously mentioned. The Turkish clans possessed of political power in Khiva, Bokhara, Kunduz, and Kokand, are called Usbeks: in their lineaments they bear a considerable resemblance to the Kirghiz, differing from them mainly in those peculiarities which distinguish a people long civilised from one which has scarcely emerged from savage life. A number of tribes of alien lineage and language live intermingled with the Turkish clans. The Afghans, Jews, Hindoos, and other colonists, present no uncommon feature in Asiatic society; but the Persian Tajiks, or agricultural settlers, and the Sarts, or mercantile classes of the same race, who preponderate in Bokhara and some other towns, are remarkable as vestiges of an earlier population which possessed the country previous to the arrival of the Turks. In the cities west of Pamir these Persian tribes are said to preponderate in number; in the cities east of Pamir, on the other hand, the Turkish population would appear to be the most numerous. The predominant religion among all these tribes is the Mohammedan.

The political divisions of independent Tartary are:—The steppes of the Kassaks and Kirghiz; the plain of the Turkomans, between the Amu and the Caspian; the territory subject to the Khan of Khiva; the territory subject to the Mir of Bokhara; the territory subject to the Khan of Kokand; the territory subject to the Mir of Kunduz; and the territory east of Pamir, incorporated into the Chinese empire.

1. The Kirghiz and Kassaks number about 400,000 tents or families; of these 75,000 belong to the Great Horde: they encamp on the rivers Sara-Su and Tshui, on the middle course of the Sir-Deria, and around the lakes on the west side of the Chinese province of Songaria. The Middle Horde numbers 165,000 tents: its families encamp on the streams and lakes north of the sources of the Turgai and Sara-Su. The tents of the Little Horde amount to 160,000, which are scattered over the delta of the Sir-Deria and the country west of the Turgai, between the Russian frontier and the southern termination of the Ust-Urt. Along the Chinese and Russian frontiers an uncertain deference is paid to the injunctions of these governments. 2. The Turkomans number about 366,000 families or tents, including a number of tribes subject-d by the khans of Khiva. 3. **KHIVA**. 4. **BOKHARA**. 5. *Kokand* extends on the north to within 45 miles of the south bank of the Tshui: its most western station is Urutuppah, formerly a frontier town of Bokhara; on the east it is bounded by the Chinese frontier, and on the south all the wandering Kirghiz of the Pamir profess to be subjects of the Khan of Kokand. The government of this state much resembles in its character that of Khiva; it is however less favourably situated for participating in the gains of the Turkoman and Kirghiz slave-trade, and for levying black-mail on caravans, and is therefore less heard of. 6. Chinese Turkistan forms a Chinese province, under the designation of the Country of the New Frontier. Chinese garrisons are placed in all the towns along the base of the Thian-shan, in Kashgar and Yarkand, and lines of pickets keep up the communication between these principal stations. Double rows of custom-houses are placed along the frontier of the province to examine strangers and act as a check upon each other. The administration of justice and the exercise of the local police is left to the Uzbek authorities; the general military and civil authority is vested in Chinese or Mantohu officers. The public revenue is employed to defray the expenses of the provincial administration, and any surplus is sent to Ili. 7. The Mir of Kunduz exercises an authority much of the same kind as that exercised by the khans of Khiva and Kokand. His dominions extend on the west to a station nearly midway between Khulm and Balkh; on the south to Sykan, north of Bamian, and farther west to the crest of Hindu-Kush; on the east to the Chinese frontier. North of the Amu he exercises a precarious authority over all the settlers who are so unfortunate as to live within reach of his shupaco, or predatory incursions. The forces of the Mir consist chiefly of cavalry: he can bring together on a surprisingly short warning 15,000 horsemen inured to predatory warfare. He has raised every hill-fort in his country; the fastnesses on the plain are held by members of his own family. Within his own territories he is strict and impartial in the exercise of justice, and subjugated tribes are on the whole leniently dealt with. Besides these states, there are at least four towns, with their adjoining territory, in Turkistan, which may be considered independent of any external government—Maimanu, Andkho, Shibbergen, and Sir-i-Pul. They are all situated in oases formed by streams from the Hazareh Mountains, south of the plain of the Oxus. The chief of Maimanu can raise 6000 horse among his Turkoman adherents; the chief of Sir-i-Pul can raise 1000 Uzbeks; the chiefs of Andkho and Shibbergen 500 each. The chief of Andkho is an Afshar Turk; the rest are Uzbeks.

Turkistan is formed by nature to be the scene of a transit commerce between the countries which surround it on all sides, rather than of a trade in its own productions. Balkh, Bokhara, and Kokand produce

silk and cotton; the Pamir and Hindu-Kush supply furs, all the oases large quantities of fruit and grain; metals are raised and smelted in various localities; the steppes supply beasts of burden and for food; and at Kokand and Bokhara silk and cotton stuffs are manufactured. The traces of former cultivation which abound in so many places, are proofs of the extent to which this transit-trade was once carried. The present lawless and unsettled state of the greater part of Turkistan is the consequence of the decline of this trade, not its cause. These now deserted sites continued to flourish in the times of Tamerlane and Tshinghis-Khan (Genghis-Khan); they have become waste and desolate since the discovery of the route by sea from Europe to India and China. There is however still a considerable trade carried on in these regions. Caravans from Bokhara to Russia proceed by way of Khiva to the Lower Ural, carrying the products of India, Kashmir, and Tartary, to Nishnei-Novgorod. The trade between Bokhara and Russia is more extensive and valuable than that from the south of Hindu-Kush. Next in importance to the trade with Russia is that carried on with Kashgar. A caravan is annually dispatched by way of Kokand to that city, and here the interchange of commodities with the Chinese is effected. A branch of this trade goes up the valley of the Upper Oxus to Kashgar. Kokand is an entrepôt of the trade between Bokhara and Kashgar, but it is also visited by Russian fur caravans on the Russian frontier. Kundus has little trade: it lies off the direct line of commerce from Bokhara to the Indus, and the difficulty of the road across the high land of Pamir makes merchants prefer the northern pass of Terek in travelling between East and West Turkistan. Kashgar and Yarkand, lying at the intersection of the great lines of traffic which connect Russia with Tibet and Kashmir, and China with West Turkistan and Tibet, and being moreover situated in productive countries, are the centres of an active and lucrative trade. Even the Kirghis and Kassaks of the northern steppes of Turkistan have a considerable barter trade. They exchange camels, oxen, horses, sheep, goats, wool, hides, horns, and furs, for manufactured goods, grain, and flour. Their principal dealings are with the Russians and Chinese; with the former at Uralak, Orenburg, Troitsak, Omsk, Semipolatinak, Ust-Kamenogorsk, and some intermediate frontier forts, from the middle of June to the beginning of November; with the latter at Ili and Tshugutahak or Tarbagatai. They also visit Khiva, Bokhara, Kokand, and Tashkend to exchange their raw material for grain and clothing; and passing caravans keep up a petty traffic with the tribes they meet in crossing the desert, while more adventurous traders make the desert itself the scene of their speculations.

Alexander crossed Western Turkistan from the western termination of the Hindu-Kush by the sites of Balkh, Kurshi, and Samarcand, to the south-west curve of the Sir-Deria. After his death the Grecian dynasty of Bactria appears to have ruled the country as far north as the Aral till about 120 years before the commencement of the Christian era. [BACTRIA.] The Greek power north of Hindu-Kush was then subverted by Scythian invaders from the east, who in their turn were overthrown by the Parthian kings, about the time of the birth of our Saviour. The Parthian kings introduced the worship of fire, of which religion traces are still every where to be met with. The early historians of the Chinese remark that upon reaching the country around Lop-Nor the Mongol tribes are succeeded by a race with long or 'horse-like' faces. The Lop-Nor continues till the present day the south-east frontier of the Turkish race. In 569 the ambassadors of the younger Justinian found the most powerful of the Turkish tribes seated around the Altai, and Turkish hordes had pushed their encampments as far west as the Caspian. When the kalifs succeeded to the Persian throne, they found the frontier of Iran extending beyond Samarcand, and for a time they kept it there. The conquests of the Mongol chiefs who overthrew the kalifate broke down this frontier, and opened the way to successive incursions of nomad hordes from the east. The first princes who inherited the power of Genghis-Khan were Mongols; but the Turkish or Tartar tribes would appear to have predominated in their armies. All the Turkish tribes who have played a conspicuous part in history embraced at an early period the Mohammedan religion. Of the tribes in Turkistan, the Kassaks, who occupy the north-western steppes, are probably the oldest settlers. The Little and Middle Hordes may be descendants of those who wandered in the same regions in the 6th century. The Great Horde, the mountain Kirghis, and the Turks of Chinese Tartary, received a reinforcement from the Siberian Turks, who submitted to Russia in 1606, emigrated from its territories in the beginning of the 18th century, and settled among their independent brethren to the south. The origin of the name Turkoman is difficult to ascertain. The Turkomans are the Turkish tribes who in the 11th and 12th centuries crossed the Amu and invaded Persia; the name is common to those who still inhabit Turkistan with many tribes in Persia and the Ottoman empire. The Uzbeks are a mixture of the descendants of the Uigur and Naiman, Turkish tribes who originally inhabited the country from the north-east of Lop-Nor to Kashgar, and from Ushi to Khotan, and who figure in the annals of China. They crossed the Sir-Deria in the beginning of the 16th century, and spread terror and desolation wherever they came. They are at present masters in Kundus, Kokand, Bokhara, Khiva, and the oases to the west of Balkh. In the seats of an ancient civilisation, such as Bokhara and others, we find the Turks of Turkistan

raised to the average level of Mohammedan civilisation; the nomad tribes appear to be much in the same state that their ancestors were at the time when history first takes notice of them.

- TURNHOUT. [ANTWERP.]
- TURRIERS. [ALPES, BASSES.]
- TURRIFF. [ABERDEENSHIRE.]
- TURSI. [BASILICATA.]
- TURTON. [LANGASHIRE.]
- TURVEY (BEDFORDSHIRE.)
- TUSCALOOSA, RIVER. [ALABAMA.]
- TUSCAN APENNINES. [APENNINES.]

TUSCANY (*Toscana*), a grand-duchy of central Italy, situated between the main ridge of the Apennines and the Mediterranean. It is bounded W. by the sea and the Sardinian territories, N. by the duchies of Parma and Modena, and by the States of the Church, and E. and S. by the States of the Church and the Mediterranean sea.

Tuscany has a breadth of about 95 miles from west to east, from the sea-coast near Leghorn to Borgo San Sepolcro on the banks of the Upper Tiber, which part of the valley of the Tiber belongs to Tuscany. There is also a mountainous tract belonging to Tuscany on the northern slope of the Apennines, extending to within a few miles of Faenza and Forlì. This district, which is styled Romagna Grand-Ducale, contains the sources and upper course of a number of streams which flow towards the Adriatic. With this exception, the waters of the grand-duchy of Tuscany flow southward to the Mediterranean. The principal rivers of Tuscany are, beginning from the north—1, the Magra, which flows through the Tuscan district of Lunigiana, and afterwards enters the Sardinian state; 2, the Serchio, which flows through Garfagnana and Lucca; 3, the Arno, which, with its numerous affluents, including the Chiana, drains more than one-third of Tuscany; 4, the Cecina, which drains the valley of the same name; 5, the Ombrone, the principal river of the province of Siena; 6, the Albegna, which flows for about 36 miles through the southern part of the Maremma, and enters the sea north of Mount Argentaro; 7, the Fiora, which flows through the border district of Santa Fiora, Pitigliano, and Sovana, and then enters the States of the Church.

The territory of Lucca fell to Tuscany in 1847. [LUCCA.] The Grand-Duchy is divided into compartimenti, or provinces, as in the following table:—

Provinces.	Area in Square Miles.	Population in April, 1854.
Florence	2,246	715,701
Lucca	510	265,304
Pisa	1,174	231,473
Siena	1,455	190,159
Arezzo	1,265	221,090
Grosseto	1,710	80,980
Livorno	38	89,420
Isle of Elba	96	21,559
Total	8,494	1,815,686

The surface of Tuscany presents four different regions:—1, the highlands of the Apennines, which skirt the grand-duchy on the north and north-east; 2, the hilly tract, which forms the greater part of the province of Siena, between the valley of the Chiana on one side and that of the Arno on the other, and which slopes on the south-west towards the lowlands of the Maremma. The Ombrone forms the principal drain of this extensive plateau, which is intersected by rather high ridges, some of which are ramifications of the great Apennine Chain, whilst others, like Monte Amiata and the mountain of Radicofani, are of volcanic formation. The lower hills are of the description called 'Subapennine'; 3, the great valley of the Arno, with the lateral valleys of the Chiana, Elsa, Era, and other affluents. This constitutes the finest, most productive, and most densely inhabited part of Tuscany; 4, the maritime plains, or Maremma. These four regions are noticed under ARNO; CHIANA, VAL DI; FLORENCE; GARFAGNANA; LUCCA; MAREMME; PISA; SIENA, &c.

About one-sixth part of the area of Tuscany is planted with vines and olive-trees; another sixth is cultivated as arable land; nearly two-sixths are either forests or plantations of chestnut-trees, which afford food to the population of the mountains; and nearly as much again is pasture land, chiefly natural pasture. There is a class of tenants who hold their tenements by 'livello,' a kind of life-estate for four generations, paying a fixed yearly rent either in money or kind to the owner. When the fourth generation is about to expire, the contract is often renewed by mutual agreement. But the most common way of letting land is on the 'metayer' system, by which the farmer finds the seed and implements, and gives the owner half the produce in kind. The landlord stocks the farm, and a valuation is given to the farmer, who is to make all good on leaving.

Tuscany imports some corn yearly to supply its own consumption. The principal articles of produce are wine, oil, of which a quantity is exported; and silk, which is also an article of export both in its raw and in its manufactured state. The other articles of native produce exported are—fruit of various sorts, lambskins and kidskins, potash, timber, cork, juniper-berries, marble and alabaster, iron from Elba.

borax, sulphur, alum, and anchovies, which are fished off the coast. Nearly the whole trade of Tuscany with other countries is carried on through the port of Leghorn, which is also a great mart or exchange for all kinds of foreign produce. [LIVORNO.] Horned cattle are not very numerous in Tuscany; the sheep are reckoned at 600,000; most of the flocks migrate in the autumn from the highlands to pass the winter in the Maremma. Cheese is made of ewes' as well as goats' milk. The common horse is of an inferior kind; some studs however keep up a superior breed. The asses are strong and fine. Pigs are reared in great number in the woods of the Maremma, where they feed upon acorns. A herd of about 200 camels is kept up on the grand-ducal farm of San Rossore near Pisa, and is said to have been perpetuated there ever since the time of the Crusades. Game of most kinds is abundant.

The mineral products are iron, from the island of Elba, copper, lead, marble, sulphur, rock-salt, alabaster, alum, and sea-salt.

The manufactures of Tuscany consist of woollen-cloths, woollen caps for the Levant; hemp and linen-cloth; thread-silk, and silk-stuffs, paper, glass, leather, wax, coral, which is gathered on the coast of Barbary and worked at Leghorn; iron-ware, alabaster vases and other ornaments, china, and delft-ware. The straw-plat manufacture has greatly declined.

The grand-duchy of Tuscany is divided into compartimenti, or provinces, each administered by a provveditore, or prefect. The provinces are divided into communes. Each commune is presided over by a municipal officer styled gonfaloniere. For the judicial administration there is in every commune a magistrate, called in some places vicario, and in others podestà; there are primary courts for civil and criminal affairs, in each of the principal towns; high courts, or courts of appeal, at Florence and Lucca; and lastly, a supreme court, or court of cassation at Florence, which watches over the whole judiciary administration. In commercial affairs there are tribunals of commerce at Florence and Leghorn. A board at Florence directs the police of the whole grand-duchy; there are commissaries of police in the principal towns, and a police-force (Sbirri) scattered about various points of the country.

The military establishment amounts to about 15,000 men, including the police and frontier and coast-guard. The commercial marine numbered 929 vessels, of all sizes, carrying 50,178 tons, in 1854.

The yearly public revenue of Tuscany amounted in 1854 to 35,307,400 lire, the expenditure to 37,037,500 lire. The income is derived chiefly from customs, land-tax, income-tax, stamps, government monopoly of salt and tobacco, lotteries, and crown demesnes. Provisions on entering the walled towns pay an 'octroi,' or duty, at the gates, as in France.

The grand-duke of Tuscany is an independent sovereign. He is absolute, but he governs according to the established laws, customs, and precedents; he is assisted by a ministry and a council of state, composed of his secretaries of state. He keeps chargés d'affaires at the courts of Austria, France, and the Porte. At the other courts he is represented by the imperial minister of Austria. Tuscan consuls are appointed to all the principal ports of Europe, the Levant, and America.

The Roman Catholic is the established religion of Tuscany, and is professed by all Tuscan subjects, with the exception of the Jewish population, which amounts to about 7000 individuals, chiefly at Leghorn and Florence. Foreigners of other Christian communions are tolerated, but proselytism among the subjects of the grand-duke is punished. The church establishment of Tuscany consists of four archbishops (Florence, Lucca, Pisa, and Siena) and about twenty bishops. There are many collegiate churches, besides cathedrals, about 200 convents and monasteries, and about 60 conservatorj, or houses for female education attached to convents, under the direction of nuns. The regular and secular clergy number about 15,000.

There are grammar schools at Florence, and all the other principal towns. They are kept by the fathers of the Scolopian order (Scholarum Piarum), and are attended by about 2500 students: the instruction is gratuitous. There are besides Collegj Convitti, or schools for boarders, as well as for day students, in most of the towns, and attended by above 1000 students; they are mostly under the direction of the same order, who are the chief instructors of the Tuscan youth. In every diocese there is at least one clerical seminary for those who study for the church, and several of them also admit external or day students. Lastly, the two universities of Pisa and Siena are attended, the former by about 550 students, the latter by about one-half that number. Each of these universities has four faculties—divinity, jurisprudence, medicine and surgery, and the physico-mathematical sciences—and confers degrees in each of these faculties.

Female education is afforded by the Conservatorj, or boarding-schools, which are directed by nuns. There is one or more of these establishments in every town. Several of them have at the same time a charity day-school for poor girls. In Florence and other principal towns there are Educatorj, or houses of education attached to several convents for ladies of the higher classes, who have the assistance of able teachers and professors. That of L'Annunciata at Florence is one of the best: it contains generally about 100 pupils, and the expense of each is about 100*l.* sterling a year. The system of domestic instruction is also common among the rich. For the general education of the

people there is a primary school in every commune of Tuscany; a secondary school in every town with a population of 4000; and lycœums in Florence, Lucca, Leghorn, Pisa, Siena, and Arezzo. Private instruction is free, but subject to government inspection. The public schools are under the care of a minister of instruction; religious teaching is in the hands of the clergy. Among the special schools we must mention the Academy of the Fine Arts at Florence, and the College of Medicine and Surgery attached to the hospital of Santa Maria Nuova in the same city. The education of youths of noble families is generally pursued at the colleges for the nobility, the principal of which is the Collegio Tolomei at Siena, directed by the Scolopian fathers. The Tuscan nobility has produced in all ages men distinguished for learning, and for their patronage of learning. Owing to the diffusion of education, industry, and commerce, and to the thrifty habits of the people, and the subdivision of property, the middle classes are more numerous and have more influence in Tuscany than in other parts of Italy; the mercantile class enjoys great consideration.

Charitable institutions are numerous, including hospitals for the infirm, founding hospitals, orphan asylums, workhouses, monti-di-pietà, infant asylums, and societies of charitable persons who assist the sick poor, relieve prisoners, give portions to poor girls being married, afford instruction to children, distribute clothes and other necessaries to the indigent, and bury the dead. The Jewish population at Leghorn have their own charitable institutions and schools.

The principal states of Europe and America have representatives at Florence, and consuls from all the great commercial nations and cities of the Christian world reside in Leghorn. Railways connect Florence with Pisa—one running through Pistoja and Lucca, the other through Empoli and Pontedera. From Pisa a line runs down the coast to Leghorn, and from Empoli another line runs south-east to Siena. Steamers ply from Leghorn to Naples, Marseille, and other ports of the Mediterranean.

History.—A sketch of the ancient history of the country is given under ETRURIA. After the fall of the Western Empire, Etruria became a province of the kingdom of the Goths, and afterwards of the Longobards. Under the Longobards it was divided into Tuscia Regni, which included the duchies of Lucca, Florence, and Clusium; and Tuscia Longobardorum, which comprised the duchy of Castro, the present papal province of Viterbo. Gradually the name of Tuscia, or Tuscany, became restricted to the former division only. Under Charlemagne and his successors Tuscany was administered by marquises, from whom was descended Matilda, daughter of Count Boniface III, who during a long life was a strenuous supporter of the Holy See against the German emperors, and enriched it by large donations of territory. Matilda died in 1115, leaving no issue, and the series of the marquises of Tuscany ended with her; for though the emperors of Germany as kings of Italy continued for a time to appoint imperial vicars in Tuscany, their authority was little more than nominal, as the republics of Florence, Pisa, Siena, Arezzo, Pistoja, and Lucca divided the country among them. [FLORENCE; PISA; SIENA.] Florence, having conquered Pisa, became the predominant power in Tuscany. After the fall of the republic in 1530, Charles V. appointed Alessandro de' Medici, an illegitimate son of Lorenzo, duke of Urbino, to be duke of Florence. Alessandro was murdered by his cousin Lorenzino de' Medici in January 1537; but the party of the Medici, headed by Guicciardini, the historian, proclaimed Cosmo de' Medici, son of Giovanni. Cosmo was the founder of the grand-ducal dynasty of Tuscany, having united Siena to his other dominions.

1574. Cosmo died, and was succeeded by his son Francis I. 1587. Francis died without issue, and was succeeded by his brother Ferdinand I, who was the great benefactor of Leghorn. 1609. Ferdinand died, and was succeeded by his son Cosmo II, who, in defending the coast against the Barbary corsairs, obtained various successes at sea. 1621. Cosmo II died, and was succeeded by his son Ferdinand II, whose long reign was an age of decline for Tuscany. 1670. Ferdinand was succeeded by his son Cosmo III, under whom the condition of Tuscany continued to decline. 1723. Cosmo was succeeded by his son Gian Gastone, a debauchee, who died without issue, and with him ended the grand-ducal dynasty of Medici. He was succeeded, according to an agreement between the great powers, by Francis, duke of Lorraine and Bar, whose territories were given to Stanislas Lecinski (ex-king of Poland). Francis married the archduchess Maria Theresa, daughter and heiress of Charles VI. of Austria, emperor of Germany. Tuscany was governed by a regency, while Francis and Maria Theresa resided chiefly at Vienna.

1765. Francis II. of Tuscany and I. of Germany died. His eldest son Joseph succeeded him as emperor of Germany, and his second son Leopold succeeded him as grand-duke of Tuscany. The reign of Leopold I. will ever be memorable in the history of Tuscany as a period of revival of industry and prosperity, of improvement in every department of administration, of order, peace, and an enlightened legislation.

1790. Leopold having succeeded his brother Joseph II. as emperor of Germany and sovereign of the Austrian dominions, and his eldest son Francis being thereby hereditary prince of the Austrian monarchy, the grand-ducal crown of Tuscany devolved upon his second son, Ferdinand III., who followed the wise and liberal system of adminis-

tration pursued by his father. In the war of the French revolution he strove to remain neutral, but Bonaparte (1796) disregarded the neutrality of Tuscany. The grand-duke however retained a precarious possession of Tuscany till 1799, when the French Executive Directory ordered the occupation of Tuscany by its troops, and the grand-duke was obliged to withdraw to Germany. By the peace of Luneville (1801), between France and Austria, Ferdinand renounced Tuscany, which Bonaparte gave to Don Ludovico Bourbon, hereditary prince of Parma, with the name of 'kingdom of Etruria.' In 1803 Ludovico died, and his widow, Maria Luisa of Spain, became regent of Tuscany in the name of her son, a minor.

In 1808 Napoleon I. united Tuscany to the French empire, of which it formed three new departments, Arno, Ombrone, and Mediterranée. Napoleon's sister Eliza, the princess Baciocchi, was placed at the head of the administration, with the title of Grand-Duchess. In 1814 however Tuscany was occupied by the allied troops in the name of Ferdinand III., who returned to Florence in September.

1815. The congress of Vienna confirmed the possession of Tuscany to the grand-duke Ferdinand and his successors, and annexed to it the whole of the island of Elba, and some other territories. To Maria Luisa, ex-queen of Etruria, as guardian of her son, was assigned the duchy of Lucca, to revert to Tuscany on the death of the arch-duchess Maria Louisa of Austria. This event took place in 1847, and Lucca has since been incorporated with Tuscany.

Ferdinand, after his restoration, applied himself to the internal improvement of his territories, especially by the drainage of the Val di Chiana and the Val di Nievole. He died in 1824, and was succeeded by his son Leopold II. The new grand-duke continued the system of progressive improvement by draining the marsh of Castiglione and other marshes which corrupted the atmosphere of the Maremma, opening new roads, embanking rivers, extending the privileges of a free port to the suburbs of Leghorn, supplying that important town with wholesome water by means of an aqueduct, and by other measures of like utility. He also reformed the judiciary administration, established new tribunals, encouraged popular education as well as scientific instruction, and issued several useful legislative and economical enactments. Tuscany, under his rule, continued to be the happiest, quietest, and most free country in Italy till 1848. In the anarchical tempest that followed the French revolution of 1848, the grand-duke was obliged to fly from his states, and a republic was established for a time in Florence. In the following year however Ferdinand was restored to his states by the Austrian army, which continued to occupy the country for several years. Since his restoration, the grand-duke Leopold has greatly abridged the political privileges of his subjects.

TUSCULUM. [FRASCATI.]

TUTBURY CASTLE. [STAFFORDSHIRE.]

TUXFORD. [NOTTINGHAMSHIRE.]

TUXTLA. [MEXICO.]

TUY. [GALICIA, Spanish.]

TUZ, LAKE. [ANATOLIA.]

TUZLA. [BOSNIA.]

TWEED. [BERWICKSHIRE.]

TWEEDMOUTH. [BERWICK.]

TWER, a government of Great Russia, is situated between 56° and 58° 47' N. lat., 31° 46' and 38° 20' E. long. It is bounded N. by Novogorod, E. by Yaroslav and Wladimir, S. by Moscow and Smolenak, and W. by Pakow. The area is 25,886 square miles; the population in 1846 amounted to 1,327,700. This government, especially the northern part, is an elevated table-land; there are no mountains, the *Wolkonsky* Forest, which covers the greater part of the circle of Ostuschkow, is but a range of hills, in which however many rivers have their source, among which is the Volga. This chain rests on limestone, and consists almost entirely of an impenetrable forest, in which there are extensive morasses; some offsets extend into the neighbouring country, which are scarcely more elevated than the banks of the river. Besides the Volga, which becomes navigable before it passes into the government of Yaroslav, there are numerous rivers, the chief of which are the Dwina, the Wäuga, the Twerza, the Sestra, the Socha, and the Mologa. The canal of Wysohnei-Wolotchok unites the Volga and the Neva. There are many lakes; the most considerable is the Seliger, which covers an area of 76 square miles. The climate is healthy, but variable. The rivers generally freeze by the beginning of December and thaw towards the end of March. Agriculture and cattle breeding are the general occupations of the inhabitants. The soil is poor, and the produce is scarcely more than sufficient for the home consumption. Rye, barley, and oats are cultivated, but little wheat. Much flax and hemp are grown. Fruit is scarce. Timber is very fine and abundant. Bears, wolves, foxes, badgers, and martens are numerous; fish are very plentiful. The population consists almost wholly of Russians. Except in the towns there are no manufactures. Many hands are employed in the country in the sawing-mills, brick-kilns, ship-building, and in land and water carriage. The transit trade between the southern provinces and the Baltic ports and St. Petersburg is important.

The chief town, Twer, is situated in 56° 52' N. lat., 35° 48' E. long., on the right bank of the Volga, which is here joined by the Twerza and the Tmaka: population 24,000. Twer is surrounded with palisades, which are closed by barriers, and consists of three parts: the fortress

lying between the Volga and the Tmaka, which is surrounded with a rampart; the city, which is divided by the rivers into four parts, united by three bridges; and the suburb. After a great fire in 1763, the empress Catherine II. caused it to be rebuilt in its present regular form. There are in the city a cathedral, 28 churches, 2 convents, a bazaar (which contains 400 shops), a palace, a theatre, a founding asylum, an hospital, and various establishments for education, among which are a gymnasium, a school for 120 young noblemen, and an ecclesiastical seminary for 700 students, who are instructed in the sciences and the classics. The inhabitants manufacture linen, leather, hardware, and candles, and carry on an extensive trade.

Among the other towns are—*Neschew-Wladimir*, population 10,000; *Torschok*, 15,000; *Wischnei-Wolotchok*, 6500; *Ostuschkow*, 6500; and *Kaschia*, 4000.

TWERTON. [SOMERSETSHIRE.]

TWICKENHAM. [MIDDLESEX.]

TYWFORD. [HAMPSHIRE.]

TYLDESLEY. [LANCASHIRE.]

TYNEMOUTH, Northumberland, a village, and the seat of a Poor-Law Union, in the parish of Tynemouth, is situated on the left bank of the river Tyne near its mouth, in 55° 1' N. lat., 1° 25' W. long., distant 8 miles E. by N. from Newcastle, 280 miles N.N.W. from London by road, and 287 miles by the Great Northern and York Newcastle and Berwick railways. The population of the township of Tynemouth in 1851 was 14,493; that of the parliamentary and municipal borough, was 29,170 in 1851. The living of Tynemouth is a vicarage, with the curacy of North Shields annexed, in the arch-deaconry of Northumberland and diocese of Durham. Tynemouth Poor-Law Union contains 24 parishes and townships, with an area of 89,737 acres, and a population in 1851 of 64,248.

Tynemouth Castle occupies a peninsula on the left bank of the mouth of the Tyne. In the time of William the Conqueror, the peninsula was inclosed on the land side by a wall and a ditch; the place was afterwards more completely fortified, and was known as Tynemouth Castle. The castle was taken from the Royalists in 1644, by the Scotch. It was restored and garrisoned by the Parliament, but the garrison having revolted, the place was stormed by a parliamentary force from Newcastle, under Sir Arthur Haselrig. The gateway tower of the castle on the west or land side is in tolerably good condition, and the circuit of the walls appears to be entire. There are considerable remains of the priory church. It was used as the parish church until the time of Charles II., when a new church was built at North Shields, distant a mile to the west. There are also a chapel of ease and a chapel for Wesleyan Methodists. A lighthouse and some other modern buildings are within the area of the castle; and near it is a fort to command the entrance of the river. The village of Tynemouth consists chiefly of one long street. Rope-making is carried on. The place is much resorted to in the bathing season. There are here a Natural History society and a savings bank. A house of correction is at Tynemouth.

TYRE. [TYRUS.]

TYROL, a crownland of Austria, lies between 45° 40' and 47° 44' N. lat., 9° 32' and 12° 55' E. long. On the west of Tyrol there is a portion of Austrian Italy and of Switzerland, from which it is divided by an uninterrupted chain of high mountains [SWITZERLAND], and the Rhine. On the north of the Tyrol is Bavaria; on this frontier also there are high mountains. East of the Tyrol are the Austrian provinces of Austria and Illyria, from which it is chiefly divided by the continuous ranges which separate the river basins of the Salsa and Drau from those of the Inn and Eisach; only a small portion of the basin of the Drau is included in the Tyrol. The mountains which on the south separate the Tyrol from Italy are frequently interrupted by streams, which escape from the mountain region of the Tyrol by very narrow valleys.

The crownland includes the Vorarlberg, and is divided into 4 circles, 75 arrondissements, and 1093 communes. The area and population of the circles are as follows, according to official returns published in Vienna in 1854:—

Circles.	Arrondissements.	Area in Sq. Miles.	Population in 1854.
Innsbruck .	19	4,094	215,153
Brixen . .	23	3,656	217,577
Trent . . .	27	2,404	323,186
Bregenz . .	6	987	102,506
Total . . .	75	11,141	858,422

The Tyrol is much more mountainous than Switzerland. One-third of Switzerland is an undulating or hilly plain, but the Tyrol, with the exception of a comparatively small tract, is covered with high mountain masses, on which a great number of summits rise above the snow-line and are surrounded by extensive glaciers. Level tracts, admitting of cultivation with the plough, are found only on the banks of the rivers, where they sometimes attain a width of a mile, and in a few places more, but they are usually not more than half a mile wide. All these tracts taken together do not cover one-tenth of the surface of the country; nine-tenths are occupied by the higher and lower mountain masses of the Alps.

The Tyrolean Alps form the eastern portion of the Central or Rhaetian Alps. The most elevated parts lie along the western boundary-line, south of the Inn River, and in the great chain which runs through the country from west to east, dividing the waters which run northward to the Danube, from those that flow southward to the Adriatic, or eastward to the river Drau. The western chain runs uninterruptedly from the Lake of Idro to the Ortler Spitz. South of $46^{\circ} 8' N.$ lat. it probably does not exceed 7000 feet above the sea-level. But near $46^{\circ} 8' N.$ lat. it rises in Monte Adamello to more than 11,000 feet, and from this summit to the Ortler Spitz ($46^{\circ} 30' N.$ lat.); hardly any portion of the range is free from snow even in the latter part of the summer. The general elevation of this range probably exceeds 9000 feet above the sea. The Ortler Spitz is the highest summit of the Rhaetian Alps, being 12,855 feet above the sea. It is surrounded by other summits, and is always covered with snow.

The deep and wide valley of the Upper Etsch (Adige), called Vintschgau, separates the mountain masses of the Ortler Spitz from the mountain range which traverses the Tyrol from west to east. This range is divided into two high and elevated mountain masses, which are divided by a large and wide depression, which occurs near $11^{\circ} 30' E.$ long., and through which the road over the Brenner passes from Germany to Italy. The mountain region west of this road consists of two extensive and very elevated mountain masses, which are connected by a high ridge. The western mountain mass is called the mountains of the Platey Kögl, or of the Great Oetzthaler Ferner, and the eastern is named the mountains of the Winacher Ferner. The mountains of the Platey Kögl occupy nearly the whole country between the Inn and the Achen, a space of nearly 30 miles from south to north, and 20 miles from west to east. A considerable portion of this tract is always covered with snow, from which rise numerous pinnacles, among which the highest are Mount Gebatsch, 12,276 feet; the Similaun Spitz, 11,859 feet; and the Great Oetzthaler Ferner, 10,434 feet above the sea-level. This is one of the most broken portions of the Alps, and the snowy masses are furrowed by only two deep and very narrow valleys. The mountains of the Winacher Ferner, or the eastern part of the region, are connected with those of the Platey Kögl by a high and narrow ridge, which only in a few places is free from snow in summer. The Winacher Mountains also rise above the snow-line, but the mass is less extensive than that of the Platey Kögl. Several summits rise above 10,000 feet, among which are the Kitzkamp, the Winacher Ferner, the Winter Stuben, and the Bock Kögl.

The depression which occurs east of the Winacher Mountains is of considerable extent, for no summit always covered with snow occurs in a space extending more than 18 miles from west to east. No summit of this part of the Tyrolean Alps probably exceeds 7500 feet in height; and in the middle, near $11^{\circ} 30' E.$ long., it sinks much lower: the road from Innsbruck to Trent, over the Brenner, is at its highest level ($47^{\circ} N.$ lat.) not more than 4374 feet above the sea-level. This is the lowest mountain-road across the Alps, and has accordingly become the most frequented line of commercial intercourse between Germany and Italy. Innsbruck is about 1920 and Trent 960 feet above the sea-level.

East of the Brenner the most elevated masses of the Tyrolean Alps constitute an elevated ground running from west to east. Towards its eastern extremity this high tract constitutes the boundary between the Tyrol and the district of Salsach in Austria. It contains an almost uninterrupted series of snow-capped mountains. The highest summits appear to be the Schwarzenstein, the Drei Herrn Spitz, and the Gross Glockner, which rises to 12,438 feet above the sea-level.

On the north-west and north of the mountain region hitherto noticed, and separated from them by the valley of the Inn River, extends another range, containing the sources of the rivers Lech and Isar, which descend from it northward, and enter the Plain of Bavaria. In this range only a few summits rise above the snow-line. The highest are the Arlberg, which is 10,200 feet, and the Great Solstein, which is 9702 feet above the sea-level. West of the last-mentioned summit runs the road which leads from the Plain of Bavaria to Innsbruck.

The mountains which fill up the south-eastern portion of the Tyrol are called the Carnic Alps. They begin on the south-west, on the banks of the Etsch, north-west of Verona, and extend partly within the Tyrol, and partly on its boundary-line with the Lombardo-Venetian kingdom, in a north-eastern direction to the source of the river Drau, where they turn to the east and leave the Tyrol. Very few summits of this extensive mountain region reach the snow-line. The most elevated is Monte Marmolata, which rises to 11,500 feet above the sea-level. The connection between this range and the Eastern Tyrolean Alps is formed by a moderately elevated and narrow ridge, which occurs near $12^{\circ} 12' E.$ long., and separates the sources of the Drau, which flows eastward, from those of the river Rienz, which runs westward and joins the Eisach at Brixen. On the north this ridge is connected with the extensive snow masses and glaciers which occur south of the Drei Herrn Spitz. Over this ridge runs the road which connects the Tyrol with Austria, running from Brixen to Lienz and Illyria. From this another road branches off at Toblach to the southward, which leads over the Pentalsteiner Pass to Treviso and Venice.

The mountain road over Monte Stilvio, or the Stilfsjerloch, was

constructed by the Austrian government between 1820 and 1825, for the purpose of establishing a direct communication between the Tyrol and the Valteline. This road passes over the elevated and snow-covered mountain masses which lie north-west of the Ortler Spitz, and its highest level rises to 9174 feet above the sea, or nearly 1500 feet above the snow-line. It is the loftiest carriage-road in Europe; but it has been abandoned for a new road constructed since 1853 through the defile of Tonale, the highest part of which is only 6250 feet above the sea-level. The old road over the Stilvio, besides being exposed to avalanches, was often impassable for months on account of the snow.

The largest rivers of the Tyrol are the Inn [AUSTRIA, vol. i. col. 719], and the ADIGE, or Etsch. The Inn enters the Tyrol by a very narrow valley at Finstermünz. Its course within the Tyrol is about 100 miles, and it becomes navigable for small river-boats at Telfs, about 20 miles above Innsbruck, and for larger river-boats at Hall, about 8 miles below Innsbruck. Below Kufstein it leaves the Tyrol and enters Bavaria. The Etsch runs east-south-east, and after its junction with the Eisach, below Botzen, southward, and here begins to be navigated. At Borghetto it leaves the Tyrol and enters Austrian Italy. The navigation of these rivers is difficult, and frequently interrupted by their rapidity, especially after the melting of the snow in the mountains.

As a great portion of the country, probably one-tenth, is always covered with snow, whilst its most southern valleys are hardly 500 feet above the sea-level, the climate of the Tyrol must differ greatly in different places. At Innsbruck the mean temperature of the winter is $30^{\circ} 5'$ Fahr., and that of the summer is 64° . The mean annual temperature is 49° , or one degree less than at London. At Trent the mean annual temperature is 53° .

All those parts which on the north are 7500 feet, and on the south 8500 feet above the sea-level, are always covered with snow. Lower down, to an elevation of 6000 feet above the sea, snow is found all the year round in places which are not much exposed to the sun, but in other places the declivities of the mountains are covered with grass and flowers. In the region between 6000 and 5000 feet trees do not grow, but there are some bushes, between which the soil is covered with grass that serves for pasture during two or three months in summer. There are no houses inhabited all the year round at this elevation. Fir-trees occur only at an elevation of between 5000 and 4000 feet, where a few permanent habitations are found, and some potatoes and vegetables are cultivated. The winter lasts in this region eight or nine months. Agriculture is carried on with success in all places below 4000 feet. Rye and barley are grown, and potatoes to a considerable extent. Apple- and pear-trees succeed at the elevation of 4000 feet, but plum-trees only up to 3800 feet, and walnut-trees to 3600 feet. The beech is found between 3000 and 4000 feet, and the oak between 1800 and 3000 feet above the sea-level. Wheat does not succeed above 3000 feet, and vines only between 800 and 1800 feet.

In the Tyrol, owing to the great unevenness of the surface, the air is in continual motion, and a calm day is a rare occurrence. The southern winds are much feared on account of the effect that they produce on the health, especially in the southern valleys. They are most frequent towards the end of summer and in the beginning of autumn, and dissolve in a few hours an immense quantity of snow, and the volume of water which is thus conveyed to the rivers produces extensive inundations in some parts of the valleys. The most fertile lands are in the valleys of the Inn and of the Etsch; the valley of the Etsch is the most fruitful.

Wheat, rye, barley, and oats are cultivated where the climate or stony soil is not unfavourable. In some parts buckwheat is grown to a great extent. Millet is also grown. Indian corn is the principal object of agriculture in the valleys on the border of Italy. Hops grow wild in the southern districts, where also tobacco is grown. Flax and hemp are cultivated. Fruit-trees abound in the southern valleys, and large quantities of fruits are exported to Bavaria. Near Trent are plantations of fig-trees, and at Roveredo chestnuts are very common. In these parts are also plantations of olive-trees and mulberry-trees. A considerable quantity of silk is annually collected. On the northern shores of the Lago di Garda are plantations of oranges, whose fruits get quite ripe. Wine is made in large quantities, and some sorts are very good, but they do not keep.

Cattle are of middling size and numerous: horses are less abundant, and better for the draught than for the saddle. Sheep and goats are very numerous, but pigs are not much kept. There are chamois, hares, marmots, partridges, and some large birds of prey, especially eagles.

The minerals are gold, silver, copper, lead, iron, calamine, coal, and rock-salt, mines of which are worked near Hall, about eight miles below Innsbruck. In the southern districts there is a valuable kind of marble, resembling that of Carrara, which is much worked.

Manufactures and Trade.—Though the inhabitants have a remarkable talent for mechanical arts, the Tyrol is not a manufacturing country. The chief industrial products, which are mostly designed for home consumption, are flaxen-yarn, linen, knit-caps and stockings, baskets, straw-hats, and wooden ware. The transit trade is considerable, and it is much facilitated by the admirable new roads. Besides

the export of the natural productions of the country, thousands of the inhabitants annually migrate as pedlars or hawkers, with gloves, carpets, carvings in wood, and engravings. The Tyrolese have a remarkable talent for the fine arts. Kneller and Angelica Kauffman were natives of the Tyrol. Education is generally diffused among the population. For higher education the crownland had a university at Innsbruck, 45 superior schools, 7 infant schools, and 3306 popular schools in 1847. Charitable institutions are numerous and well conducted.

Of the inhabitants about 600,000 are of German descent; the remainder are Italians. They are all Roman Catholics.

The Tyrolese are honest, frank, with a very independent spirit and a strong attachment to their native land. They are especially distinguished by their devoted attachment to the house of Austria. They are fond of the chase and of manly games, and are a poetical and musical people. The German part of the population which occupies the northern parts of the Tyrol is much given to drinking, smoking, and fighting; and frays, often attended with the infliction of dangerous wounds, are more numerous in the Tyrol than in all the other provinces of the empire together. The inhabitants of Southern Tyrol have more of the Italian in their manners, language, and dress.

History.—In ancient times the Tyrol formed part of Rætia, and was subdued by the Romans in the reign of Augustus. After being ravaged by successive hordes of barbarians, it was divided into several petty lordships, all of which acknowledged the supremacy of the dukes of Bavaria. In the 12th century the Tyrolese became immediate subjects of the empire, and the petty lordships were absorbed under two heads: the two families being united by marriage, the country was governed by one sovereign, the last of whom dying in 1335, left one daughter, Margaret Maultasche, who made over her dominions to her cousins, the dukes of Austria. Austria, after having remained in possession of it several centuries, was compelled to cede it by the peace of Presburg, in 1805, to Bavaria. The people, dissatisfied with the change of masters, rose in arms in 1809 under Andreas Hofer; but the great disasters of Austria left them without support, and the country was again occupied by the French and Bavarians, in whose possession it remained till 1814, when, to the great joy of the people, they were restored to the dominion of Austria, and reinstated in all their ancient privileges.

Towns.—*Innsbruck*, the capital, forms the subject of a separate article. [INNSBRUCK.] *Trent* is situated on the navigable river Adige, in a beautiful and fertile valley, which is surrounded with high mountains. The houses are very high, with flat roofs; the streets tolerably wide, and well paved with broad flag pavement for pedestrians. There are many handsome buildings in the city, and some churches worthy of notice. Among the former are the theatre, the episcopal palace, and the palace of Tertaga Tabarelli, built of red marble by Bramante d'Urbino. Of the thirteen churches the most remarkable are the cathedral, a large edifice in the old Greek style, entirely of marble, the building of which was begun in the 10th century and finished in the 16th; Santa Maria Maggiore, built entirely of red marble, with an extremely lofty chapel, which is much admired, and is memorable as having been the place in which the Council of Trent held its sittings from 1545 to 1562; the church of the seminary (formerly belonging to the Jesuits), adorned with a profusion of costly marble; the church Dell' Annunziata, the lofty cupola of which is supported by immense pillars of red marble, each consisting of a single block. Some of the churches and palaces have fine paintings. Trent is the residence of a bishop and chapter. The city has 13,000 inhabitants, whose occupations are the silk manufacture and the cultivation of the vine. There are in the city extensive sugar-refineries, a large tobacco-manufacture, and many distilleries of brandy and spirits of wine. Among the public institutions are a gymnasium, a lyceum, a Franciscan and a Capuchin convent, and various hospitals. *Borgo*, which is situated 16 miles E. from Trent on the Brenta, on the great road from Trent to Venice, has a population of 2500. *Botsen*, about 30 miles N. from Trent on the Adige, is a well-built town with about 10,000 inhabitants, a gymnasium, and manufactures of linen, silk, hosiery, and leather. A strong dyke, two miles in length, protects the town from the floods of the Adige. Near the town is the castle of Tyrol, which gives name to the crownland.

Roveredo is situated in the middle of the pleasant Lazzarina valley, which is planted with vines and mulberry-trees, on the river Leno, which flows through the town, and at a short distance from the left bank of the Adige, over which there is a stone bridge. The town, though not large, has many handsome houses, mostly built of marble. The new street, Corso Nuovo, in particular, is adorned with fine edifices: the theatre stands at the beginning of this street. The castle, which is surrounded with high walls, is worthy of notice. The town is the seat of several courts of justice, and has a gymnasium, three monasteries, a convent with a school for girls, a public library, and some charitable institutions. The inhabitants, about 8000 in number, manufacture silk, leather, and tobacco, and have a considerable trade in silk and twist. *Schwatz*, in the Lower Innthal, on the right bank of the Inn, about 13 miles below Innsbruck, is a well-built town, with two churches, some cotton manufactures, and about 4000 inhabitants, who are chiefly engaged in mining.

Brizen, a fortified town in the Pusterthal, about 40 miles S.E. from Innsbruck, on the road that traverses the Brenner Pass, has about

4000 inhabitants, a cathedral, a bishop's palace, and some iron- and steel-works.

The *Vorarlberg* comprises the north-western part of the crownland. It is drained by the Rhine, the Ill, and the Lech, a feeder of the Danube. The chief town, *Bregenz*, a well-built place of 3000 inhabitants, on the eastern shore of the Lake of Constance, near the mouth of the Aach, is a place of considerable trade; wooden houses, straw-plat, timber, and vine-poles are exported. Steamboats on the Lake of Constance touch at Bregenz. The other towns are—*Bludenz*, S. of Bregenz, on the Ill, with a castle and 2000 inhabitants; and *Feldkirch*, farther down the Ill, which has a gymnasium and a population of about 2000. The *Vorarlberg* takes its name from its position in front of the Arlberg, looking from Switzerland.

TYRONE, an inland county in the province of Ulster, Ireland, is bounded N. by the county of Londonderry, E. by Lough Neagh and the county of Armagh, S. by the counties of Monaghan and Fermanagh, W. by the county of Fermanagh, and N.W. by the county of Donegal. It lies within 54° 19' and 54° 57' N. lat., 6° 35' and 7° 56' W. long. Its greatest length from east to west is 60 miles, and from north to south 46 miles. The area, including part of Lough Neagh, is 1,260 square miles, or 806,640 acres, of which 450,286 acres are arable, 311,867 acres uncultivated, 11,981 acres in plantations, 710 acres in towns, and 31,796 acres under water. The population in 1831 was 304,468; in 1841 it was 312,956; in 1851 it was 255,734.

Surface, Hydrography, and Communications.—This county lies, for the most part, between the two mountainous districts which cross Ulster from east to west. The northernmost of these districts (that of Antrim, Londonderry, and Donegal) encroaches upon the northern border; and the southernmost (that of Down, Armagh, Monaghan, and Fermanagh) encroaches on the southern border. Outlying groups of mountains occupy portions of the intermediate district. Another group, connecting the two great mountain districts, crosses the county a little to the eastward of the centre, and divides the lower ground, which occupies most of the central and eastern parts of the county, into two parts—the plain or basin of Omagh in the centre, and the plain of Lough Neagh on the east. The diversity of surface renders the county very picturesque, lovely valleys alternating with brown moorlands, and narrow and precipitous gorges with extensive plains.

The plain of Lough Neagh extends south-eastward across the border of the county, which is here formed by the river Blackwater, into the adjacent county of Armagh; and south-westward to the foot of the mountains which border on the county of Fermanagh: northward it extends along the shores of Lough Neagh into the county of Londonderry. It is drained by the Ballinderry in the north, and the Blackwater in the south; both have the upper part of their course in the county and the lower part on the border; the length of the Ballinderry is about 25 miles, of the Blackwater 46 miles. The Blackwater is navigable for about eight miles, namely, below Charlemont, where the Ulster Canal, which skirts its course on the Armagh side for many miles above the junction, opens into it. A canal, 5 miles long, conveys the produce of the Coal Island collieries into the Blackwater.

The plain of Omagh is inclosed on nearly every side by mountains: it extends to the south-west into the county of Fermanagh, to the border of Lough Erne; and to the north-west to the border of the county of Donegal; and is drained by the streams which unite to constitute the Foyle.

The Camoan, or Camowen, the principal of the streams which unite to form the Foyle, rises in the mountains that separate the plains of Lough Neagh and Omagh, and flows westward, then northward, to the border of the county at Strabane; and after separating for some miles Tyrone from Donegal, enters the county of Londonderry. Its whole length, including Lough Foyle, is about 76 miles, of which above fifty miles are in this county or on the border. It is navigable below Newtonstewart, about thirty miles from its source. The lakes are numerous, but are all small except Lough Neagh, of whose surface 27,355 acres 1 rood 28 poles, or nearly 43 square miles, are assigned in the Ordnance Survey to this county. [NEAGH, LOUGH.]

The Dublin and Londonderry road crosses the county from south-east to north-west by Aghnacloy, Omagh, Newtonstewart, and Strabane; the Armagh and Coleraine road crosses the eastern side of the county, through Moy, Dungannon, and Cookstown. The cross-roads are numerous, and are kept in good repair. The Londonderry and Enniskillen railway enters the county near Strabane.

Geology and Mineralogy.—The mountains bordering on Londonderry and Donegal are chiefly of mica-slate interspersed with primitive limestone; the chief heights here are Slieve Sawel, 2236 feet; Mullagh Clogher, or Straw Mountain, 2083 feet; and Oughtdoorish, 1866 feet. The mountain group which bounds the plain of Omagh on the Doorish is 1119 feet; and north of the plain, Mullagh-carn, 1778 feet; Bessy Bell 1386 feet; Slieve Ard, 1381 feet; and Mary Gray, 826 feet. The hills north-east of the plain of Omagh, between the Owen Killew and the Glenelly, feeders of the Camoan, are of greenstone, and rise to the height of 1432 feet. There is some granite towards the north-eastern corner of the county. Rocks of old red-sandstone and sandstone conglomerate occupy the central district of the county, extending into Fermanagh.

The part of the plain adjacent to Lough Neagh, and to the river Blackwater as far up as Charlemont, is occupied by tertiary forma-

tions, probably lacustrine, consisting of beds of white, brown, and greenish-blue clay, alternating with white and gray-sand. Irregular beds of lignite occur, and this mineral is dug by the inhabitants, when other fuel is scarce, for their domestic use. To the north-west of the tertiary beds, the secondary formations, chalk, greensand, and lias crop out, being covered in places by masses of tabular trap. These are succeeded by the red-marl or new red-sandstone, which on the south-west immediately succeeds the tertiary beds. Between Dungannon and Stewartstown is a coal-field which, though small, contains more beds of workable coal than any other in Ireland, and affords coal similar to that of Ayrshire. The formations of the limestone group occupy nearly all the remainder of the plain, and extend south-westward to the neighbourhood of Clogher, where, contrary to its general character in Ireland, it rises into tolerably lofty mountains. The eastern and southern part of the plain of Omagh, and the extension towards Lough Erne, are occupied by the old red-sandstone, which abuts upon and in some places covers the granite, and protruded greenstone, which form the mass of the mountains that separate the two plains of Lough Neagh and of Omagh. The rest of the plain of Omagh and the mountains which on other sides environ it consist of mica-slate, covered in extensive tracts by the old red-sandstone, by the different members of the carboniferous limestone series, or by the millstone-grit. There are some quarries of inferior slate. Freestone and limestone are quarried in various parts of the county; the limestone of Cookstown is remarkable for the number and variety of its fossil remains. Traces of lead and iron are also found.

Climate, Soil, and Agriculture.—The climate is healthy, though moist, for much rain falls, and the lowlands are frequently flooded. The soil in the hilly districts and on the mountain slopes is in general sandy or gravelly; in the south and east it is a light fertile loam, and in the centre much of it is reclaimed moor or bog. Turf is the usual fuel, and is abundant. Grain is grown in the more fertile parts, and cattle are reared on the hills. The number of acres under crop in 1853 was 282,151, of which 4195 acres grew wheat; 150,977 acres oats; 2668 acres barley, bere, rye, peas, and beans; 44,840 acres potatoes; 16,859 acres turnips; 3838 acres other green crops; 24,131 acres flax; and 34,643 acres were in meadow and clover. In 1841 the plantations covered 14,652 acres, yielding oak, ash, elm, beech, fir, mixed timber, and fruit. The holdings in 1852 were 29,150, the stock on which was 22,378 horses, 1414 mules and asses, 148,745 head of cattle, 30,676 sheep, 30,880 pigs, 6187 goats, and 481,794 head of poultry.

Divisions and Towns.—The county is in the dioceses of Armagh and Derry, with a small part in that of Clogher, and contains 46 parishes. It is divided into four baronies:—Clogher; Dungannon, Upper, Lower, and Middle; Omagh, East and West; and Strabane, Upper and Lower. The principal towns are—STRABANE, DUNGANNON, COOKSTOWN, and OMAGH, which, with CASTLEBERG, CLOGHER, and GORTIN, are noticed under their separate names. The following are some of the smaller towns and more important villages, with the population of each in 1851:—

Arboe, a village about 6 miles N.E. from Stewartstown, has a church, a Presbyterian meeting-house, and a Roman Catholic chapel, which has two altars in the open air. Here are the remains of a monastery, said to have been founded by St. Columb, and to have received his body: the walls of the church and a cross are yet standing. *Aughier*, a small market and post-town, population 614, stands on the Blackwater, near its head, 2 miles N.E. from Clogher, and, prior to the Union, was a parliamentary and municipal borough. Four fairs are held here in the course of the year. In the neighbourhood are, Augher Castle, built in 1618, now converted into a mansion; the hill of Knockmanly; and Lumford Glen, a most picturesque spot. *Aughnacloy*, a market and post-town, on the left bank of the Blackwater, 20 miles S.E. from Omagh: population, 1704. It contains some good houses, the parish church of Carranteel, a Roman Catholic chapel, a Presbyterian meeting-house, two Wesleyan chapels, several schools, a dispensary, a loan-fund office, and a convenient market-house. Besides the weekly market there is a monthly fair for live stock. *Ballygowley*, a small market and post-town, about 4 miles N.W. from Aughnacloy: population, 768. It has some well-built houses, a neat parish church, a Presbyterian meeting-house, a dispensary, and some schools. The manufacture of gloves is carried on. There is a considerable sale of linen. *Caledon*, a market and post-town, between Armagh and Aughnacloy, on the left bank of the Blackwater: population, 999. The town is extremely neat and well built. There are a handsome church, a Roman Catholic chapel, a Methodist meeting-house, a dispensary, and several schools. Near the town is Caledon House and demesne, the residence of the Earl of Caledon. There is a large flour-mill, and round the town are a number of limestone quarries. *Coal Island*, a mining village and post-town, 2 miles S. from Stewartstown: population, 627. At this village, and the neighbouring one of *Drumglass*, are the two principal collieries of Tyrone; a canal, 4 miles in length, was cut to the Blackwater to afford facilities for the transport of the coal. There is an iron-work in the village. *Drumore*, a village and post-town, about 9 miles S.W. from Omagh: population, 581. It has an old church, a Presbyterian meeting-house, a Methodist meeting-house, a Roman Catholic chapel, several schools, and a dispensary. Five fairs are held in the course of the year. *Fintona*, a

market and post-town, on a feeder of the Drumragh, 9 miles S. by W. from Omagh: population, 1504. Unbleached linens are woven and sold in considerable quantity in the market, and at the monthly fairs. There are a parish church, a Presbyterian meeting-house, a Methodist meeting-house, a Roman Catholic chapel, a dispensary, and a loan-fund office. *Five-Mile-Town*, a small market and post-town, about 6 miles S.W. from Clogher: population 703. It has a chapel of ease. A considerable number of the inhabitants are employed in the linen trade. It has eight fairs yearly. *Moy*, a market and post-town, is on the banks of the Blackwater, over which is a bridge communicating with the town of Charlemont, in Armagh: population, 833. It contains the parish church, a Roman Catholic chapel, several Dissenting meeting-houses, and a commodious market-house. Considerable trade is carried on in coal, corn, timber, salt, iron, and slate; the market is well supplied, and there is a monthly fair for live stock, especially for horses. *Newtonstewart*, a market and post-town, is on the bank of the Strule, over which there is a bridge, 10 miles from Omagh, on the mail-road to Londonderry: population, 1402. The houses are neat and well built; and the town contains the parish church of Ardstraw, a Roman Catholic chapel, two Presbyterian and two Methodist meeting-houses, a dispensary, and the ruins of an ancient castle. *Pomeroy*, a village and post-town, on the road from Dungannon to Newtonstewart, about 8 miles from the former town: population, 505. There are a church, a Presbyterian meeting-house, a Roman Catholic chapel, a school, and a dispensary. Petty sessions are held monthly, and there is a monthly fair. *Stewartstown*, a market and post-town, about 5 miles S.E. from Cookstown: population, 1022. Some linens and mixed fabrics of linen and cotton (called unions) were formerly made, but the manufacture has declined. In the neighbourhood are several limestone quarries. Stewartstown contains a number of well-built houses of stone, slated; the parish church of Donaghery, a Roman Catholic chapel, two Presbyterian meeting-houses, a school-house, a dispensary, a loan-fund office, and a market-house. Fairs are held monthly, and petty sessions every fortnight. The ruins of an old monastery and of Mountjoy Castle are near the town. *Tyrllick*, a small post-town, between Omagh and Enniskillen, about 8 miles S.W. from Fintona: population 449. The parish church is about a mile from the town, but there are two meeting-houses, a Roman Catholic chapel, schools, and a dispensary. Fairs are held monthly, and petty sessions every fortnight. Near it are the ruins of Tyrllick Castle.

Divisions for Ecclesiastical and Legal Purposes.—Tyrone returns to the Imperial Parliament two members for the county at large, and one for the borough of Dungannon. It is in the north-western circuit. The assizes are held at Omagh, where the county jail is. Quarter sessions are held there, and at Clogher, Dungannon, and Strabane, which three towns have bridewells. Petty sessions are held in nineteen places. There is a resident magistrate at Omagh. The Lunatic Asylum and a fever hospital are at Omagh; fever hospitals are at Aughnacloy and Strabane, and dispensaries at twenty-two places. There are savings banks at Clogher, Cookstown, Dungannon, and Strabane. The Union workhouses are at Castleberg, Clogher, Cookstown, Dungannon, Gortin, Omagh, and Strabane. The county is in the military district of Belfast, and there is a barrack station at Omagh. The staff of the county militia is stationed at Caledon. In September, 1852, there were 270 National schools in the county, attended by 10,731 male and 8,493 female children.

History and Antiquities.—This county seems to have been included in the territory of the Darnii, a nation mentioned by Ptolemaeus. At a subsequent period, parts of it were known by the names of Hy-Briun and Hy-Fiachria (the latter being the country about the river Derg); and the whole appears to have been called Kinel Eoguin, or Tir-oen, modernised Tyrone. About 1177 the county was invaded by John de Courcy, one of the Anglo-Norman invaders; but appears to have remained in the hands of the O'Neills of Tir-oen, who were among the most powerful of the native chieftains, until 1601, when the Lord-Deputy Mountjoy compelled him to submit. Tyrone was comprehended in the great settlement made in Ulster, after the accession of James I. [ULSTER], and was in great part parcelled out among 'undertakers' (that is, persons who undertook to form settlements or colonies), partly Scotch and partly English.

In the great rebellion of 1641 Dungannon Fort was seized by Sir Phelim O'Neill. In 1646 the Scots and English were defeated by the Irish insurgents at Benburb, with the loss of above 3,000 men. This victory restored to the insurgents a predominance in Ulster, which however they finally lost on the arrival and success of Cromwell in 1649. In the revolutionary war the army of James, after raising the siege of Londonderry, retired to Strabane, in this county.

TYRUS, TSUR, TYRE, a city on the coast of Phœnicia, 24 Roman miles S. from Sidon. The most ancient name of the city seems to be *Sar*, which is supposed to be the root of Syria. Tyre is called in the Old Testament the 'daughter of Sidon;' and Justin states that it was a colony of Sidon. In process of time however Tyre exceeded the mother city in importance, and came to be the chief city of Phœnicia. In the time of David and Solomon it was a very great commercial emporium, and was governed by a king (Hiram), who maintained friendly relations with those princes, and assisted Solomon in building the temple and his palaces, and in his naval expeditions. About half a century later Ahab married Jezebel,

the daughter of the king of Tyre and Sidon. There seems to have been a constant commercial intercourse between the Tyrians and the Israelites. Tyre is repeatedly mentioned by the Hebrew prophets, who speak of its strength, wealth, beauty, and its flourishing commerce, and threaten it with destruction for its pride.

The original site of Tyre was on the mainland, but at some unknown period (probably before the time of Solomon) another city of the same name was built on a narrow island, about a mile in length, parallel to the shore, and nearly half a mile distant from it, and not quite four miles from the ancient city. The latter was distinguished by the name of Old Tyre, which it already bore in the time of Shalmaneser, the Assyrian conqueror, who took it. He also blockaded the insular city for five years, but was at last compelled to raise the siege (about B.C. 720-715). The insular city, which from its position soon eclipsed Old Tyre, was again besieged by Nebuchadnezzar for thirteen years. It was taken, after a siege of seven months, by Alexander the Great (B.C. 332), who, in order to attack the city by land as well as by sea, connected the island with the mainland by a mole, formed chiefly out of the materials of Old Tyre, which was razed to the ground for the purpose. This mole was consolidated in the course of time

into the isthmus which still connects the former island to the mainland. After the death of Alexander, Tyre came under the power of the Seleucids, and subsequently under that of the Romans. It was still a strong fortress, and (in the time of Strabo) a flourishing port. Septimus Severus sent thither a Roman colony, as his medals show. It afterwards became the seat of a Christian bishop, and was, in the time of St. Jerome, the most beautiful city of Phœnicia. During the Crusades it suffered several sieges, and remained in the hands of the Christians much longer than any other city of Phœnicia. Its fortifications were almost entirely destroyed by the Mamelukes about the end of the 18th century. It is now a small insignificant place; but several new stone houses have been recently erected on the north side of the peninsula.

The Tyrians, in ante-historic times, colonized the coasts of Spain, Italy, and Africa. Their commerce reached to Britain and India. Their most famous colony was CARTHAGE.

TYTHERLEY. [HAMPSHIRE.]

TYWARDREATH. [CORNWALL.]

TZANA or ZANA, LAKE. [ABYSSINIA; NILK.]

TZARSKOSELO. [PETERSBURG, Province of.]

UBEDA. [JAEN.]

UBES, ST., or SETUBAL. [ESTREMADURA, Portuguese.]

UCAYALI, RIVER. [AMAZONAS; PERU.]

UCKFIELD, Sussex, a village and the seat of a Poor-Law Union, in the parish of Uckfield, is situated on the left bank of the river Ouse, in 50° 58' N. lat., 0° 6' E. long., 9 miles N. by E. from Lewes, and 41 miles S. by E. from London by road. The population of the parish in 1851 was 1590. The living is a perpetual curacy in the archdeaconry of Lewes and diocese of Chichester. Uckfield Poor-Law Union contains 11 parishes and townships, with an area of 74,230 acres, and a population in 1851 of 17,631. The church, a plain stone building, was enlarged in 1840. The Wesleyan Methodists and Baptists have places of worship; and there are National and Infant schools, a Grammar school, and a savings bank.

UDEWALLA. [SWEDEN.]

UDINE, or FRIULI, a province of Austrian Italy, formerly included in the Venetian territories, is divided into 21 districts, has an area of 2519 square miles, and a population of 429,844.

Udine, the capital, situated in an elevated plain near the foot of the Carnic Alps, and about 20 miles from the sea-coast of the Adriatic, on the high road from Venice to Vienna, is a walled town, between four and five miles in circumference, and has a population of about 25,000. Upon an eminence in the middle of the town is the old castle, once the residence of the patriarchs of Aquileia, who were for several centuries lords of Friuli. Udine is a bishop's see: it has some fine churches, among others the cathedral and the church of San Pietro Martire; several palaces of the nobility; a handsome square lined with arcades and adorned with a fountain; several good streets; a communal gymnasium, a royal lyceum, a clerical seminary, three colleges for the education of females, several public libraries, a museum, a philharmonic institute, a monte-di-pietà, and a theatre. A considerable trade in silk, the produce of the country, is carried on at Udine. There are silk and leather manufactories, and a sugar-refinery. About two miles from Udine is the village of Campoformio, memorable for the treaty of peace of 1797 between General Bonaparte and the Austrian plenipotentiaries. *Cividale* is noticed under FRIULI. *Porto-donone*, near the borders of the province of Treviso, is a thriving town of 5000 inhabitants, with manufactories of linen and paper. *Spilimbergo*, on the banks of the Tagliamento, is a town of considerable trade; population, 4000. *Palma Nuova*, a fortified town, important for its situation on the eastern frontier of Italy, has a population of 3000.

The province of Udine is covered in the north-east by the Carnic Alps and their ramifications. In the south are several plains which become marshy along the shore of the Adriatic. The principal river is the Tagliamento, but all the streams of the country are little more than torrents. Its forests, pastures, cattle, fish, game, and corn are the chief sources of wealth in the province. Wheat, rye, maize, oats, rice, buckwheat, hemp, flax, chestnuts, pulse of all kinds, silk and honey, are produced; and some good wine is made. The minerals are iron, copper, marble, limestone, and siliceous earth used by potters. The inhabitants of the mountain districts manufacture linen and all kinds of woodwork, and common pottery. The country is further noticed under FRIULI. The projected railway from Trieste to Venice will necessarily cross the south part of the province of Udine.

UELZEN. [LÜNEBURG.]

UFA. [ORENBURG.]

UFFCULM. [DEVONSHIRE.]

UFFINGTON. [BERKSHIRE.]

UGENTO. [OTRANTO, TERRA DI.]

UIST, the name of two of the larger HEBRIDES, belonging to GEOG. DIV. VOL. IV.

Inverness-shire, and distinguished as North Uist and South Uist. North Uist is separated from Long Island by the Sound of Harris, and from Benbecula by a narrow strait which is dry at low water. South Uist lies south of Benbecula, from which it is separated by a narrow strait, and at its southern extremity it is separated by a strait from the little island of Barra. These islands are separated on the east from the Isle of Skye by the Little Minch, here about 15 miles broad; on the west they are washed by the expanse of the Atlantic. They lie between 57° 7' and 57° 48' N. lat., 7° and 7° 32' W. long.

North Uist is 16 miles long from east to west, and 13 miles wide from north to south in direct lines: the population in 1851 was 3302; the entire parish, which includes eight other islands, had a population of 3918. It is much intersected by inlets of the sea, several of which form commodious harbours. The hills on the east side of the island are from 300 to 700 feet high; Mount Eval, in the south-east, is above 2000 feet. On the west side of the island lie the pasture and cultivated lands, with a shore generally low, but having a few bold rocky headlands. The island is chiefly formed of gneiss: but at the entrance of Loch Maddy are two basaltic rocks rising out of the sea. In the interior are numerous fresh-water lakes, in some of which are islands containing red-deer. There are a parish and also a government church, a parochial and several other schools, some of which possess libraries. There are several antiquities, as upright stones, rude crosses, and cairns; 'duns,' and 'Uaighs,' or Picts' houses.

South Uist, population of the island 4006 in 1851, is about 22 miles long from north to south, and about 8 miles broad from east to west. The eastern side is rugged and mountainous: Hecla, the highest mountain in the island, is 2500 feet high; other mountains are from 1200 to 1300 feet high. The eastern coast is bold and irregular; its three principal inlets, lochs Skipport, Eynort, and Boisdale, are good harbours: the western coast has a more regular outline, and has, except about some rocky headlands, a low sandy shore. The island contains numerous lakes. The island is formed of gneiss, coarse granite, and hornblende; mica-slate occurs. The chief articles produced are potatoes, bere, and oats. The population of the entire parish, which includes the islands of Benbecula, Eriskey, and Flodda, was 6173 in 1851. There are two churches attached to missionary districts, and three chapels for Roman Catholics, who form two-thirds of the population. The population of North and South Uist has been considerably reduced of late years by emigration.

UITENHAGE. [CAPE OF GOOD HOPE.]

UJIJAR. [GRANADA.]

UJITZA. [SERVIA.]

UKRAINE, a name probably derived from the Polish (in which it signifies boundary) is a term which has been in general use since the conquest of Kiev by the Lithuanians, and at that time designated the frontier towards the Tartars and other nomad tribes. Subsequently the name Ukraine was applied to the extensive and fertile tract of land on the banks of the Dnieper, together with the territory of the Cossaks, with rather indefinite boundaries. These countries, which till the time of Peter the Great were a constant source of quarrels between Russia and Poland, constitute the greater part of Little Russia, that is, the four governments of Kiev, Podolia, Poltawa, and Charkow. This tract is remarkable for its rich pastures, and a fine breed of horses and horned cattle. The country is described in the articles KIEV; PODOLIA; POLTAWA; CHARKOW.

ULEABORG. [FINLAND.]

ULEY. [GLOUCESTERSHIRE.]

ULLESWATER. [CUMBERLAND; WESTMORLAND.]

ULM, a city in the kingdom of Würtemberg, situated in 48° 24'

N. lat., 10° 0' E. long., in a beautiful and fertile country at the south-eastern foot of the Swabian Alps, on the left bank of the Danube, which here forms the boundary between Würtemberg and Bavaria, and is joined by the Blau, which flows through the town. The Danube is here navigable, being about 200 feet broad and 12 feet deep. The city is nearly of an elliptical shape, and the ground on which it stands is tolerably level. Previously to the year 1805, it was strongly fortified, but the works have been nearly demolished. Like most of the old German towns, it has in general irregular and crooked streets, and antique-looking wooden houses; there are however some broad handsome streets. Within the city there are three stone and two wooden bridges, over the Blau; but the handsomest is a stone bridge of three arches over the Danube, which connects the town with the Bavarian village of New Ulm, on the right bank of the Danube. The cathedral of Ulm, a very fine specimen of ancient gothic architecture, and one of the largest and loftiest churches in Germany, is 485 feet long, including the choir, 200 feet broad, and 150 feet high above the pavement of the nave. The steeple is 337 feet high, and a splendid monument of German art in the middle ages. The minster, or cathedral, was built in the interval 1377-1488. It contains many curious monuments and works of art; paintings by old German masters, admirable carved-work, painted-glass windows, and a remarkably fine organ. The town-house is a very ancient and spacious edifice. The German-house (das Deutsche-haus), containing the principal public offices, is considered the handsomest and most regular building in the city. The theatre is adorned externally with Corinthian columns. Besides the minster there are two Lutheran and two Roman Catholic churches. There are in Ulm a gymnasium, a museum, a city library, a large hospital, and numerous charitable institutions. The city has about 14,000 inhabitants, who manufacture linen, silks, snuffs, tobacco, tobacco-pipes, porcelain, &c. This city has a very considerable trade; great quantities of manufactured goods and of the productions of the country are sent down the Danube to Vienna. Ulm capitulated to Napoleon (Oct. 17, 1805); General Mack and the Austrian garrison of 28,000 men were made prisoners of war. It is connected with Stuttgart, Augsburg, and Munich by railways.

ULSTER, the northernmost of the four provinces into which Ireland is divided, comprises the following nine counties:—Antrim (including Belfast and Carrickfergus), Armagh, Cavan, Donegal, Down, Fermanagh, Londonderry, Monaghan, and Tyrone, to the separate articles on which we refer for more particular information. Ulster is bounded N. and W. by the Atlantic Ocean, E. by the Irish Sea, S.E. by the province of Leinster, and S.W. by that of Connaught. It is comprehended between 53° 45' and 55° 25' N. lat., 5° 25' and 8° 50' W. long. The area comprises 5,475,438 acres, of which 1,851,995 acres were under crops in 1851. The population in 1851 was 2,011,791.

Ulster is mountainous. Two mountain groups cross the province from east to west. The northernmost, which passes through the counties of Antrim, Londonderry, and Donegal, is divided into three parts by the valleys or depressions through which the Bann and the Foyle reach the sea. The mountains of Donegal are the loftiest: several of the peaks rise to the height of more than 2000 feet; and one (Erigal) is 2460 feet above the level of the sea. The coast of Donegal is very rugged, marked by deep inlets, as Lough Swilly and Lough Foyle, stupendous cliffs, bluff headlands, and numerous islands. The southern mountains commence on the east coast, in the county of Down, where Slieve Donard, one of the Mourne Mountains, rises to the height of 2796 feet above the level of the sea. A lower and comparatively level district intervenes between the northern and southern mountains, and occupies a considerable part of the counties of Down, Armagh, and Tyrone. LOUGH NEAGH is in this central low country.

Ulster was one of the five provinces into which, at an early period, Ireland was divided. In this province the northern Hy Nialls, or O'Neills, had their seat. In the Anglo-Norman invasion, John de Courcy conquered part of the province. He assumed or received the title of Earl of Ulster; but on his decease his lands and title were transferred to Hugh de Lacy, and the title was inherited by the De Burgh and Mortimer family, from the last of whom it came to the dukes of York, and with them to the crown of England. The counties were formed at various periods. Several insurrections having led to extensive forfeitures in the six counties of Donegal, Tyrone, Coleraine (now Londonderry), Fermanagh, Cavan, and Armagh, it was determined to bestow them on Englishmen or Scotchmen, or 'Servitors in Ireland,' or on natives of Ireland, who were to be made freeholders. All were termed 'undertakers,' to whom were severally assigned lots of 1000, 1500, and 2000 English acres, upon different tenures, on certain conditions, including the settling of tenants, who were to be Scotch or English, except on the lands of the 'Irish servitors,' who might take English or Irish tenants at their choice. Large grants were assigned to the corporation and some of the trading companies of the city of London, from which the town and the county of Derry received the distinctive prefix of their name, Londonderry. Accordingly so many English and Scotch settlers were permanently established as have stamped a peculiar character on the population of Ulster, which is at present the great seat of manu-

facture in Ireland, and the part in which the Protestant religion (Episcopal and Presbyterian) is most prevalent.

The population of the counties and two chief towns in the province is given in the article IRELAND.

ULSTER, NEW. [ZEALAND, NEW.]

ULVERSTONE, Lancashire, a market-town and the seat of a Poor-Law Union, in the parish of Ulverstone, is situated in a district called Furness, in 54° 11' N. lat., 3° 4' W. long., distant 22 miles N.W. from Lancaster, and 272 miles N.W. by N. from London. The population of the town in 1851 was 6433. The living is a perpetual curacy, in the archdeaconry of Richmond and diocese of Chester. Ulverstone Poor-Law Union contains 27 parishes and townships, with an area of 135,043 acres, and a population in 1851 of 30,524.

The town of Ulverstone rose to prosperity on the dissolution of Furness Abbey. In the town are a theatre, an assembly-room, a subscription library, and a neat building for the savings bank. The church has been almost entirely rebuilt in the present century; the tower and a Norman doorway remain of the old edifice. A new district church, erected in 1832, possesses a handsome tower and spire; there are chapels for Wesleyan Methodists, Independents, Quakers, and Roman Catholics; a Grammar school; National schools; and schools supported by the Roman Catholics. The market is held on Thursday, for grain and provisions; there are two large yearly cattle-fairs. A canal from the estuary of the Leven enables large vessels to come up and discharge their cargoes in a spacious basin, almost close to the town, from which there is a considerable export of iron-ore, iron, and slate. Petty sessions and a county court are held.

UMMERAPOORA. [AMARAPURA.]

UNITED PROVINCES. [NETHERLANDS.]

UNITED STATES OF NORTH AMERICA, a republic formed by the federal union of 31 sovereign states, with five territorial appendages. It occupies the middle portion of North America; and extends between 25° and 49° N. lat., 67° and 125° W. long.; from the Atlantic Ocean on the east to the Pacific Ocean on the west. It is bounded N. by British America, S.W. by the republic of Mexico, and S. by the Gulf of Mexico. The boundary lines between the United States and British America, and the United States and Mexico, are described under BRITISH AMERICA and MEXICO. The greatest width of the United States from east to west is 2900 miles, the greatest length from north to south is 1730 miles. The entire area of the United States has been very differently estimated. As estimated by the United States authorities for the Census office in 1850, it amounted to 3,306,865 square miles. But a more elaborate and careful estimate made by the United States 'Topographical Bureau,' January 1854, reduces the area to 2,936,166 square miles, and if to this be added the additional territory of 27,500 square miles, ceded by Mexico by treaty in July 1854, the total area at the present time will be 2,963,666 square miles. The population in 1850 was 23,191,876, or 7.90 to a square mile: but this does not include the native Indians, who were estimated by the Indian Commissioner in 1853 at 400,764. The table at the head of the following page shows at a glance the states and territories which are comprised in the Union, with the extent of each, the number and character of its population in 1850, and various other particulars.

The areas of several of the states and territories in this table it will be found on comparison differs in some instances considerably, from those given under the respective titles of the states in this work. For that difference we are clear of responsibility. All the areas of the states were given from the official reports published by the government of the United States. Those in the following table are given from the new computations made by the United States 'Topographical Bureau,' with a view to obtaining greater accuracy; and just made public in the 'Statistical View of the United States,' drawn up and printed by order of Congress.

Surface, Coast Line, &c.—The physical geography of the United States has been given generally under AMERICA; and more particularly under the heads of the several states and territories as enumerated in the following table; of the rivers COLUMBIA; MISSISSIPPI; MISSOURI, &c.; the ALLEGHANY, and ROCKY MOUNTAINS, &c.; the lakes ERIE; ONTARIO, &c. Here it will suffice to remark that this extensive region is naturally divided into three parts, widely differing in their characteristic features, by the Alleghany and Rocky Mountain ranges:—in the centre the enormous drainage basin of the Mississippi, and on either side of it the eastern and western sea-boards. There is a remarkable parallelism between the physical structure of this part of the northern continent of America and that part of the southern contained between the parallel of the head-waters of the southern affluents of the Amazonas and the parallel of the embouchure of the Rio de la Plata: the Rocky Mountains correspond to the Andes; the Alleghany range to the mountains of Brazil; and both in the northern and southern continents the parallel mountain-systems are connected by a tract of undulating country of no great elevation, forming a watershed between river-systems which flow respectively to the north and to the south. The total area of the United States, as already stated according to the revised calculations of Colonel Abert, of the United States Topographical Engineers, is 2,963,666 square miles, which he thus apportions:—Area of the Pacific Slope, or of the region watered by rivers falling into the Pacific, 783,702 square miles; the Mississippi Valley, 1,217,562 square miles; and the region whose waters fall into the Atlantic, 952,602

AREA AND POPULATION OF THE UNITED STATES AND TERRITORIES.

STATES AND TERRITORIES.	Area in Square Miles.	Whites.	Free Coloured Persons.	Slaves.	Total.	Inhabitants to a Square Mile.	No. of Representatives in Congress.
Alabama	50,722	426,514	2,265	342,814	771,623	15.21	7
Arkansas	52,198	162,189	608	47,100	209,897	4.02	2
California	155,980	91,635	962	—	92,597	0.59	2
Carolina, North	50,704	553,028	27,463	288,548	869,039	17.14	8
" South	29,385	274,563	8,960	384,984	668,507	22.75	6
Columbia, District of	60	37,941	10,059	3,687	51,687	861.45	—
Connecticut	4,674	363,099	7,693	—	370,792	79.33	4
Delaware	2,120	71,169	18,073	2,290	91,532	43.18	1
Florida	53,268	47,303	932	39,310	87,445	1.48	1
Georgia	58,000	521,572	2,931	381,682	906,185	15.62	8
Illinois	55,405	846,034	5,436	—	851,470	15.37	9
Indiana	33,809	977,154	11,262	—	988,416	29.24	11
Indian Territory	71,127	—	—	—	—	—	—
Iowa	50,914	191,881	333	—	192,214	3.78	2
Kansas Territory	114,798	—	—	—	—	—	—
Kentucky	37,680	761,413	10,011	210,981	982,405	26.07	10
Louisiana	41,255	255,491	17,462	244,809	517,762	12.55	4
Maine	31,766	581,813	1,356	—	583,169	18.36	6
Maryland	11,124	417,943	74,723	90,363	583,034	52.41	6
Massachusetts	7,800	985,450	9,064	—	994,514	127.50	11
Michigan	56,243	393,071	2,383	—	395,454	7.07	4
Minnesota Territory	166,025	6,038	39	—	6,077	0.04	—
Mississippi	47,156	295,718	930	309,878	606,526	12.86	5
Missouri	67,380	592,004	2,618	87,422	682,044	10.12	7
Nebraska Territory	335,882	—	—	—	—	—	—
New Hampshire	9,280	317,456	520	—	317,976	34.26	3
New Mexico Territory	234,507	61,525	22	—	61,547	0.30	—
New York	47,000	3,048,325	49,069	—	3,097,394	65.90	33
New Jersey	8,320	465,609	23,810	236	489,555	58.84	5
Ohio	39,964	1,955,050	35,279	—	1,990,329	49.55	21
Oregon Territory	185,030	13,087	207	—	13,294	0.07	—
Pennsylvania	46,000	2,258,160	53,626	—	2,311,786	50.26	26
Rhode Island	1,308	138,873	3,670	—	142,543	108.97	2
Tennessee	45,600	756,836	6,422	239,459	1,002,717	21.99	10
Texas	237,504	154,034	397	58,161	212,592	0.89	2
Utah Territory	269,170	11,330	24	26	11,380	0.04	—
Vermont	10,212	313,402	718	—	314,120	30.78	3
Virginia	61,352	894,800	54,333	472,528	1,421,661	23.17	13
Washington Territory	123,022	—	—	—	—	—	—
Wisconsin	53,924	304,756	635	—	305,391	5.66	3
Total United States	2,963,666	19,553,068	434,495	3,204,313	23,191,876	7.90	234

square miles, of which 514,416 square miles belong to the Atlantic slope proper, 112,649 square miles to the Northern Lake region, and 325,537 square miles to the region whose waters fall into the Gulf of Mexico, east and west of the Mississippi. The main shore line of the United States on the Atlantic coast amounts to 6861 statute miles, on the Pacific to 2281 miles, on the Gulf of Mexico to 3467 miles; the island shore on the Atlantic to 6328 miles, on the Pacific to 702 miles, and on the Gulf of Mexico to 2217 miles, giving a main shore line of 12,609 miles, and an island shore-line of 9247 miles.

Agriculture, Manufactures, and Commerce.—The raw products of the industry of the United States may be classed under the heads—Mines and quarries; agriculture and horticulture; fisheries; the forest. The products of the mines consist of gold, iron, lead, and other metals; coal, kitchen salt, and stone for building. In 1850 the number of miners was 77,410, of whom 14,437 were coal-miners (11,753 belonging to Pennsylvania); the iron- and lead-miners are not distinguished in the Census Report. Since the discovery of gold in California, that metal has added very largely to the wealth of the Union. Gold is also found in small quantities in Virginia, North and South Carolina, Georgia, Alabama, Tennessee, and Illinois. There are rich quicksilver-mines in California. The most productive iron-mines are in Massachusetts, Vermont, New York, Pennsylvania, Tennessee and Ohio. Lead is most abundant in Illinois, Missouri, and Iowa. Pennsylvania, Ohio, and Virginia, are the great coal states, but it occurs in several others. Salt and stones are more equably diffused through the settled parts of the Union.

Agriculture employed of the free male population over 15 years of age 2,400,583 persons in 1850. In no census have the occupations of slaves been returned; but Mr. De Bow, the Superintendent of the Census of 1850, is of opinion, as the result of a well-considered examination, that "about 2,500,000 slaves are directly employed in agriculture, including males and females and persons of all ages. Slaves under 10 and over 60 are seldom employed industrially." Of the above about 1,815,000 slaves are employed in the cultivation of cotton, 350,000 in that of tobacco, 150,000 of sugar, 125,000 of rice, and 60,000 of hemp. The number of acres of improved land in farms was 113,082,614; of unimproved, 180,528,000 acres; the average number of acres to each farm being 213. Only about one-thirteenth of the whole area of the organized states is improved, and about one-eighth more is occupied and not improved. The principal grain-crop is maize (Indian corn), about 31,000,000 acres of land being in 1850

employed in its growth, and the crop raised amounting to 592,071,104 bushels; of wheat about 11,000,000 acres were cultivated, and the total crop raised was 100,485,944 bushels: of rye 14,188,813 bushels were raised; oats, 146,584,179 bushels; barley, 5,167,015 bushels; buckwheat, 8,596,912 bushels. The cultivation of rice is confined to the slave states. The total quantity of rice raised in 1850 was 215,313,497 lbs.; of which 159,930,613 lbs. were raised in South Carolina. Of potatoes 65,797,896 bushels, and of sweet potatoes 38,268,148 bushels, were grown. Of peas and beans, 9,219,901 bushels. Tobacco was cultivated on 400,000 acres; the total crop was 199,752,655 lbs. Cotton was cultivated over 5,000,000 acres. Of ginned-cotton the quantity packed was 2,469,093 bales of 400 lbs. each. Of cane-sugar 247,577,000 lbs. were produced, of which Louisiana alone produced 226,001,000 lbs.; of maple-sugar, 34,253,436 lbs.; and of molasses 12,700,896 gallons were made, 10,931,177 gallons being made in Louisiana. Of wine 221,249 gallons were made. Of hops 8,497,029 lbs. were grown. Of hay 13,838,642 tons were made. Of flax-seed 7,709,676 lbs. were gathered. The value of the three staple products of the Union in 1850 was respectively about—maize, 296,000,000 dollars; wheat, 100,000,000 dollars; and cotton, 98,000,000 dollars. The value of orchard-products was 7,723,136 dollars; of market-garden produce, 5,280,030 dollars.

The live stock consisted of 4,336,719 horses; 559,331 asses and mules; 6,385,094 milch cows; 1,700,744 working oxen; and 10,293,069 other cattle; 21,723,220 sheep; and 30,354,213 swine. The products of animals were returned as—Butter, 313,845,306 lbs.; cheese, 105,535,898 lbs.; wool, 52,516,959 lbs.; bees-wax and honey, 14,853,790 lbs.; silk-cocoons, 10,843 lbs.

Manufactures, mining, and the mechanic arts, employed of the free population, over 15 years of age, 719,479 males, and 225,512 females in 1850. The entire capital invested in manufactures was returned at 527,209,193 dollars. The number of establishments of every description producing any kind of manufactured article to the amount annually of 500 dollars, was 121,855. The cotton manufacture employed 33,150 males and 59,136 females, the states chiefly engaged in the manufacture being Massachusetts, New Hampshire, Rhode Island, Pennsylvania, Connecticut, and New York, their respective rank being in the order given. The woollen manufacture employed 22,878 males and 16,574 females, the leading states engaged in the manufacture being Massachusetts, New York, Connecticut, and Pennsylvania. The iron manufacture employed a large number of hands,

namely, pig-iron, 20,298 males and 150 females, iron-casting, 23,541 males and 48 females, and wrought iron, 16,110 males and 138 females. The fisheries employed 20,704 males and 429 females.

The commerce of the United States has gone on rapidly extending, until next to that of Great Britain it is the largest in the world. In the year ending June 30, 1853, the total imports of the United States amounted to 267,978,647 dollars; the exports to 230,976,157 dollars, of which 218,417,697 dollars were of domestic produce, and 17,558,460 dollars of foreign produce. The lake and river commerce was estimated at 653,976,202 dollars. Of the foreign trade, considerably more than half is with Great Britain and its dependencies. In 1853 the imports from Great Britain amounted to 130,265,340 dollars, and from the colonies to 12,954,138 dollars; the exports to Great Britain were 121,302,271 dollars, and to the colonies, 24,251,353 dollars. The next greatest amount of foreign trade was with France and its dependencies, the imports from which amounted to 33,525,999 dollars, and the exports to 27,044,479 dollars. The total amount of tonnage engaged in the foreign trade was 4,407,010. The number of ships built in the Union during 1853 was 1710, of the aggregate burden of 425,572 tons. The total number of American vessels entered from foreign countries in 1853 was 9955, of foreign vessels, 11,722; the clearances during the same year were, of American vessels, 10,001, of foreign vessels, 11,680. There were in 1854 of canals 4798 miles; of railways 17,317 miles completed, and 12,526 miles of railway in course of construction; and there were 89 lines of electric telegraph, having 23,261 miles of wire.

Education, Religion, &c.—The educational statistics may be stated very briefly. In 1850 there were in the United States 239 colleges, having 1678 teachers and 27,821 pupils; 80,978 public schools, having 91,966 teachers and 3,335,011 scholars; and 6,085 academies and private schools, having 12,260 teachers and 263,096 scholars. The number of newspapers was, daily 254, with an annual circulation of 235,119,966 copies; 115 tri-weekly, with an annual circulation of 11,811,140 copies; 31 semi-weekly with an annual circulation of 5,565,176 copies; and 1902 weekly, with an annual circulation of 153,120,708 copies. There are besides 95 semi-monthly, 100 monthly, and 19 quarterly periodicals.

There is no established system of religious worship in the United States, entire freedom of faith and worship being guaranteed by the Constitution. The great majority of the population is Protestant, but the proportion of the respective religious bodies can only be estimated by the number of their churches and church accommodation, which, as the provision for worship is wholly voluntary, may be supposed to be nearly proportionate to the requirements of the several sects. From the Census Report it appears that the Methodists and Baptists have together more than half of the entire number of churches. "In New England the Congregationalists preponderate; in all other parts, except the Territories, the Methodists; in the Territories and California the Catholics. The Baptists are second in rank everywhere, except in the Middle States and California." The principal sects, arranged according to the number of churches, are as follows:—Methodists 13,338 churches, affording accommodation for 4,354,101 persons; Baptists 9360 churches, with accommodation for 3,248,580 persons; Presbyterians 4863 churches, with accommodation for 2,079,504 persons; Congregationalists 1706 churches, with accommodation for 801,835 persons; Episcopalians 1461 churches, with accommodation for 644,598 persons; Roman Catholics 1227 churches, with accommodation for 675,721 persons; Lutherans 1221 churches, with accommodation for 535,180 persons; Quakers 723 churches, with accommodation for 287,073 persons. In all there are 38,183 churches, with accommodation for 14,270,139 persons.

History.—The British colonies of North America, prior to the revolution, were in number 13: Virginia, the oldest, having been founded in 1607; Georgia, the newest settlement, in 1732. The settlers in them were scattered in a straggling line, along the sea-board, from 31° to 44° N. lat. Albany was the western termination of the settled country in the north; the Blue Ridge, in Virginia; in the Carolinas and Georgia the breadth of the settled countries from the sea was still less. The varied circumstances under which the colonies had been originally planted, and the difficulty of intercourse between those which were at a distance from each other, had promoted a striking diversity of provincial character. But the institutions of all the colonies were calculated to develop both the taste and talent for political business. In all new settlements it is found expedient to task private individuals with the discharge of functions which in more matured societies devolve upon professional men. The range of jurisdiction intrusted to justices of the peace was necessarily much wider in the colonies than in the mother country; the licence to practice as legal agents was more easily obtained. In all the colonies, elective assemblies participated largely in the legislative and financial authority. An organised militia was required for defence against the aggressions of the Indians and French settlers. Under the influence of these circumstances, a class of professional public men had grown up in the colonies: men indisposed by their tastes, or incapacitated by their want of powers of continuous industry, for trade or agriculture, devoted themselves to public business, not merely as amateurs, but as a means of gaining a living, and sometimes affluence and power. The narrow sphere in which they acted heaped a number of incon-

gruous employments upon them: they were in general a strange mixture of the lawyer, politician, and soldier, not entirely secluded from mercantile and agricultural pursuits.

The almost incessant wars between France and England had developed more comprehensive views and more ambitious aspirations among these men than could find sustenance in the petty domestic business of one colony. The remoteness of the central government not unfrequently rendered it necessary for the local authorities to take measures which, in strict propriety, could only originate with it, and employ the nearest and readiest agents in carrying them into execution. Undertakings too were at times found necessary which surpassed the powers of a single colony, and for which the combined efforts of several were required. Cases of this kind are numerous, but belong properly to the history of individual colonies. The enterprise however which led to the capture of Louisbourg in 1745, may be mentioned as the first in a train of operations which led to a gradually extending federation of the colonies.

The treaty concluded between Great Britain and France in 1748 produced no peace, but only a hollow truce, during which both parties were digesting and maturing more extensive plans of war; and in 1753 the French crossed the Ohio in force, and entrenched themselves on the upper waters of the Ohio. Orders from England had by this time reached the governors of all the colonies, instructing them, in the event of encroachments on the part of the French, to repel force by force, and recommending union for defence. In compliance with this recommendation, a general convention of delegates from all the colonies was summoned for the purpose of holding a conference with the chiefs of the Indian tribes north of New York, called the Six Nations. The convention met at Albany, on the 14th of June, 1754. It was composed of delegates from New Hampshire, Massachusetts, Rhode Island, Connecticut, Pennsylvania, and Maryland, with the lieutenant-governor and council of New York, and it was met by 150 men of the Six Nations. This assembly constituted an epoch in the history of the United States. A plan was presented to it for a permanent union of all the colonies under one government, so far as might be necessary for defence and other important general purposes.

Several of the commissioners came prepared with plans for a union of the colonies to be submitted to the congress. A vote was taken whether a union should be established, which passed unanimously in the affirmative; a committee was then appointed of one from each colony, to report on the different plans, and that which had been drawn up by Franklin was preferred, and with a few amendments reported. Franklin's proposal was, that application should be made for an Act of Parliament to include all the British colonies in North America within one government, under which each colony might retain its own constitution; that this general government should be administered by a president-general, appointed and supported by the crown, and a council nominated by the legislative assemblies of the different colonies; that the general government should have the power to purchase Indian lands for the crown, to make new settlements on those lands, to make laws for the new settlements till the crown should form them into particular governments, to raise and pay soldiers, build forts and equip vessels for the defence of the colonies, to make peace or declare war with the Indians, to regulate the Indian trade, to levy duties for these purposes, and to appoint a treasurer. After lengthened debates this plan was agreed to, and copies ordered to be transmitted to the board of trade and the assemblies of the several provinces. The board of trade disapproved of it as too democratic—the assemblies as too favourable to prerogative. That such a plan should be proposed was however an indication of the direction which the minds of the American leaders had taken, and its discussion in the provincial assemblies riveted men's minds upon a tangible and practical measure of union. It formed public opinion; for, with the exception of an elective president, it embodies all the essential features of the constitution ultimately adopted by the United States.

The British ministers devised a scheme of their own, whereby the governors of the provinces, with some members of their respective councils, were to meet and make arrangements for the common defence; they were to draw on the treasury of Great Britain for the expense, which was afterwards to be refunded by a tax levied in America by Act of Parliament; but no immediate arrangements were made for realizing this project.

Hostilities had been carrying on in America in 1754 and 1755; but war was not formally declared between Britain and France till 1756. It was ended in 1763 with the cession of Canada to Great Britain by France. Immediately after the ratification of the treaty of peace, the intention of the British ministers to quarter troops in America and support them by taxes levied on the colonies was announced. On the 10th of March 1764, the House of Commons adopted a resolution—"That it was proper to charge certain stamp-duties in the colonies and plantations;" and on the 5th of April an act was passed granting certain duties in the colonies. This act was in substance only a renewal of the Sugar Act of George II., but instead of the reason (commercial regulations) assigned in the preamble of the old statute, the new was avowedly intended for the raising of revenue. Instructions were at the same time very unwisely given by the British

government to the commanders of king's ships stationed in America to enforce the law against smuggling, which had hitherto been very generally connived at by the authorities. Both the act and the instructions were met in a spirit of the most determined resistance.

The Assembly of Massachusetts protested against the Sugar Act and the quartering of troops as unconstitutional; and appointed a committee to sit during the recess, to write to other governments to inform them of the resolutions, and to invite all the colonial assemblies to join with them to obtain a repeal of the Sugar Act and prevent the enactment of a Stamp Act. In Virginia the House of Burgesses, on receiving information of the declaratory act, prepared an address to the king, a memorial to the House of Lords, and a remonstrance to the House of Commons. The confiscations of the naval commanders put a stop to the commerce which the English colonies had carried on with the French islands and the Spanish settlements. The consequence of these acts and discussions was a universal ferment throughout the colonies; nevertheless the Sugar Act, being regarded as a commercial regulation, was not openly disobeyed.

In the beginning of 1765 the British parliament followed up the declaratory resolution of the preceding year by passing an act for raising a revenue by a general stamp-duty through all the American colonies. The Assemblies of Massachusetts and Virginia protested against the act as unconstitutional. On the 7th of October a Congress, consisting of twenty-eight delegates, from the Assemblies of Massachusetts, Rhode Island and Providence Plantations, Connecticut, New York, New Jersey, Pennsylvania, the Delaware counties, Maryland, and South Carolina, met in the city of New York. The results of its deliberations were, a petition to the king, a memorial to each House of Parliament, and a recommendation to the colonies to appoint special agents to solicit redress of grievances. The Stamp Act was never enforced; and in 1766 it was repealed by parliament. But the repeal was accompanied by a declaratory act, asserting the right and power of the British Legislature to bind the colonies in all cases whatever; and in conformity with this declaration an act was passed in 1767, imposing a duty on paper, glass, painters' colours, and teas, to be paid by the colonists in the colonies. This act was met on the part of the Americans with the same determined spirit of resistance as the Stamp Act. The Assembly of Massachusetts addressed, in February 1768, a circular letter to the burgesses and representatives of the people throughout the colonies, requesting them to unite to obtain redress. The colonial legislatures generally expressed their approval of this letter and were consequently dissolved. The members of the Massachusetts Assembly, on being dissolved by the governor, re-assembled under the name of a Convention, and continued to sit and act as a legislature in defiance of his authority. When the new colonial legislatures met, in 1769, they proved as intractable as their predecessors. In 1770 Lord North, who had succeeded the Duke of Grafton as premier, prepared a bill to repeal so much of the act of 1767 as imposed duties on glass, paper, and painters' colours, and to continue that part which imposed a duty on tea. Such an alteration could have no effect on the sentiments of the colonists, who objected to the right of the British parliament to tax them, not to the amount of the tax.

From the meeting of the Congress of 1765 till 1774, the authorities were able to carry into effect none of the parliamentary or ministerial measures throughout the thirteen colonies, except where soldiers were present to enforce them. But the resistance was everywhere local, spontaneous, unpreconcerted, though none the less resolute. In 1771 the Regulators of North Carolina shut up the courts of justice, and were only put down after a pitched battle. In 1772 the colonists of Rhode Island captured the armed government schooner Gaspee. In 1773 the citizens of Boston threw the cargoes of tea, which had been brought into their harbour notwithstanding their non-importation resolutions, into the sea. Every attempt on the part of the government officers to enforce the obnoxious laws called forth petitions, protests, and remonstrances from the colonial legislatures; and when these bodies were dissolved, their members met as congresses or conventions without the authority of the governors, and transacted business as before. The destruction of the tea in Boston in 1773 was punished in 1774 by an act of parliament ordering the port to be shut up. The enforcement of this act converted the community of Boston into martyrs for American liberty. At Philadelphia a subscription was set on foot for the poorer inhabitants; the Assembly of Virginia proclaimed a solemn fast to be observed on the day the port was closed; the neighbouring ports offered the use of their stores and wharfs to the merchants of Boston. Boston became a central point towards which the sympathies of all America converged—the nucleus of a combination of all the colonies. Committees of correspondence already existed in most of them. The first had been appointed at a town-meeting in Boston in 1772; another by the House of Burgesses of Virginia in 1773. In June 1774 the Massachusetts House of Representatives appointed a committee of five persons to meet committees or delegates from the other provinces at Philadelphia on the 1st of September. The colonies represented on this occasion were—New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, and Virginia. On the 14th the deputies from North Carolina arrived. This first Continental Congress continued to sit for eight weeks. During that

period it prepared and published—1. A Declaration of Rights, enumerating the acts by which they had been violated, and declaring a repeal of these acts indispensable to the restoration of harmony between Great Britain and the colonies. 2. A loyal address to the king. 3. An address to the people of Great Britain. 4. Letters to the people of Canada, to the colonies of St. John's, Nova Scotia, and Georgia, and the Floridas, inviting them to unite in the common cause of British America. 5. A memorial to the people of British America. The resolutions of the Continental Congress received the sanction of the thirteen provincial congresses and colonial assemblies, with the exception of that of New York.

A second Congress met at Philadelphia on the 10th of May, but before that time hostilities had been commenced by the battle of Lexington in Massachusetts. The intimation of this collision to Congress called forth a declaration that hostilities had already commenced, and that the colonies ought to be placed in a state of defence. On the 27th of May it was voted that 20,000 men should be immediately equipped, and George Washington appointed general and commander-in-chief; articles of war were framed, and the organisation of the higher departments of the army commenced; bills of credit were issued to defray the expenses of the war, and 'the Twelve United Colonies' pledged for their redemption: in short, all the functions of an independent legislature were now assumed, and from this time continued to be carried on. Before the second Congress dissolved Georgia had elected delegates; and the members of Congress despairing of any of the mainland colonies wrested from the French and Spaniards joining their standard, had forbidden all exportations to Quebec, Nova Scotia, and East and West Florida, and prohibited the supply of provisions to British fisheries on the American coast. Thus, before the adoption of the Declaration of Independence, the United Colonies had already all the essentials of their future general government as well as states' governments. The want of a chief magistrate was supplied by appointing an Executive Committee of twelve, one-third of whom were to retire every year by rotation. The Declaration of Independence, framed by a committee of five persons, including John Adams, Jefferson, and Franklin, appointed by the third Congress for the purpose, was finally adopted by the delegates on the 4th of July, 1776; a day which has ever since been kept by the Americans as a public festival.

In 1777 Articles of Confederation and perpetual union between 'The United States of America' were drawn up by Congress and sent to the legislatures of the several states, with the request that, if they approved of them, they would authorise their delegates to ratify the contract in Congress. By these articles the states were to bind themselves to a league for common defence; the free inhabitants of each state were to be citizens of the whole Union; each state was to retain its sovereignty, and every power not expressly delegated to Congress. Congress was to consist of delegates from all the states, to be invested with the power of determining on peace and war, and other supreme executive powers. These articles, if adopted, were to be binding until alterations were made by Congress, and approved by the legislatures of every state. Massachusetts, Rhode Island, Connecticut, Vermont, New York, Virginia, and South Carolina, acceded to this confederation in 1777; New Hampshire, New Jersey, Pennsylvania, North Carolina, and Georgia, in 1778; Delaware in 1779; Maryland not before 1781. Under this make-shift constitution, in which the legislative, executive, and judicial functions were all vested in one body, the United States brought the war with Great Britain to a successful termination in 1783; and it was not till six years later that they attempted to organise the general government upon a more permanent system.

In 1778 the first public audience was given by the king of France to the American ambassadors. In April, 1782, Holland recognised the independence of the United States. In 1783 peace was concluded between Great Britain and the United States. Their independence was recognised in the course of the same year by Sweden, on the 5th of February; by Denmark on the 25th; by Spain on the 24th of March; and by Russia in July. Treaties of amity and commerce were concluded with all these nations, and thus the United States of North America took their place among the nations of the earth. The original extent of the territory of the United States was from the British possessions on the north to Florida, which had again fallen to Spain, on the south; and from the Atlantic on the east to the Mississippi on the west.

The inadequacy of the Congress, as constituted under the Articles of Confederation, to exercise the functions of government, soon became apparent. A convention, sanctioned by the recommendation of Congress, assembled at Philadelphia, in May, 1787, to frame a constitution for the United States. The great difficulty in this task arose from the jealousies which existed between the large and the small states: it was obviated by instituting a legislature of two chambers, the members of the one (the House of Representatives) to be elected directly by the people in proportion to the population; the members of the other (the Senate) to be elected as each state should determine, two for each state. A president was to be elected for four years, and to be re-eligible at the close of the term. A supreme court of judiciary was also to be created. A qualified negative on the proceedings of the legislature was given to the president, and a right of concurrence in the ratification of treaties to the Senate. The power of taxation

was conferred upon the legislatura. In other respects the provisions of the new constitution were a recognition of those of the old Confederation. On the 17th of September, 1787, this constitution was signed by all the members of the convention present except three. It was then sent to the state legislatures, for the purpose of being submitted in each state to a convention of delegates chosen by the people. Before the close of 1788 all the states except Rhode Island and North Carolina had adopted the constitution. These did not ratify it till May, 1790. An act was passed by Congress appointing the first Wednesday of February, 1789, for the people to meet and choose electors, and the first Wednesday of March following for the electors to meet and choose a president.

A quorum of the House of Representatives had met at New York on the 1st of April, and elected a speaker; a quorum of the Senate had met on the 6th, and elected a speaker pro tempore to count the votes for president. George Washington, it was found, had been unanimously elected president, and John Adams vice-president of the United States. Washington took the oath of office on the 30th of April, and opened the proceedings of Congress by a speech. The constitution was now completely in operation, and since that time down to the present day it has only experienced a few immaterial modifications.

We append a list of the

Presidents of the United States.

1. George Washington	1789	to 1797
2. John Adams	1797	" 1801
3. Thomas Jefferson	1801	" 1809
4. James Madison	1809	" 1817
5. James Monroe	1817	" 1825
6. John Quincy Adams	1825	" 1829
7. Andrew Jackson	1829	" 1837
8. Martin Van Buren	1837	" 1841
9. William Henry Harrison (died in office)	1841	" 1841
10. John Tyler	1841	" 1845
11. James Knox Polk	1845	" 1849
12. Zachary Taylor (died in office)	1849	" 1850
13. Millard Fillmore	1850	" 1853
14. Franklin Pierce	1853	

From the establishment of their position as an independent republic until the present time, the United States have been chiefly occupied in the development of their vast resources. Many questions of internal government and relationship have occurred and excited much interest, but it does not belong to us to notice them.

With foreign countries the intercourse has been for the most part commercial and pacific, the chief exceptions being the war with England 1812-15, which occasioned great losses to both powers, unattended with any material advantage to either, and the war with Mexico, 1845-48, which, as noticed under MEXICO, resulted in the transference of a large extent of territory to the United States.

Since the declaration of independence, the United States have increased with unparalleled rapidity in population and in territory. The first Census of the United States was taken in 1790, at which time there were included in the Union 17 states, or territorial governments, occupying an area of 820,680 square miles, with a population of 3,929,827: at the present time the Union consists of 31 states and 5 territories, occupying an area of 2,963,666 square miles, with a population (in 1850) of 23,191,876.

The following table taken with a few slight changes to render it more readily understood by English readers, from the official 'Compendium to the Census,' will show at a glance the extent of the territorial acquisitions, and the occasions on which they were made:—

Territorial Increase of the United States.

TERRITORY.	Square Miles.
Area of the United States at the peace of 1783	820,680
Purchase of Louisiana from France, 1803	899,579
Cession of Florida by Spain, 1819	66,900
Admission of Texas [see TEXAS], 1844	318,000
Territory obtained by Oregon treaty with Great Britain, 1846	308,052
Territory ceded by Mexico [see MEXICO], 1848	523,955
" additional, ceded by Mexico by a new treaty, 1854	27,500
Total	2,963,666

The following table shows the rate of increase of the various classes of the population at the several censuses of the Union:—

Classes.	1790	1800	1810	1820	1830	1840	1850
Whites	3,172,464	4,304,409	5,962,004	7,861,937	10,537,378	14,195,685	19,558,068
Free Coloured	59,468	108,395	186,446	238,156	319,599	388,203	434,496
Slaves	697,897	893,041	1,191,364	1,538,088	2,006,043	2,487,455	3,304,313
Total	3,929,827	5,305,845	7,339,814	9,638,181	12,866,020	17,069,463	23,191,876

Government, &c.—At their Union the states formed a federal govern-

ment, to which was intrusted all those general measures which had regard to the relations of the Union with foreign countries, and the common interests of the several states; to the local government of each separate state being left the management of its immediate concerns. Both the general and state governments are essentially democratic. By the constitution the power of the general, or federal, government is divided into a legislative, an executive, and a judicial branch.

The legislative authority is vested in a Congress, consisting of a Senate and House of Representatives; it must by law assemble at least once a year, on the first Monday of December. The Senate is composed of two members from each state, and of course at the present time consists of 62 members; they are chosen by the legislatures of each state for six years, one-third of them being elected biennially. The vice-president is president of the Senate ex-officio. The House of Representatives is composed of 233 members from the several states (with one additional accorded for the present to California), elected by the people for the term of two years. The representatives are apportioned among the different states according to population; one member being returned, according to the present ratio of representation, for every 93,423 of the 'representative population,' which consists of all the free persons in the several states with three-fifths of the slaves. The number of representatives apportioned to each state is shown in the table at the commencement of this article. The Congress has power to raise, maintain, and regulate a navy and army; to declare war and grant letters of marque and reprisals; to constitute tribunals inferior to the supreme courts; to define and punish piracies and felonies on the high seas and against the laws of nations; to frame general laws of naturalisation; to establish post-offices and post-roads; to coin money and make laws for punishing forgers; to regulate commerce with foreign nations, the Indian tribes, and among the states; to impose and collect taxes for the common defence and welfare of the United States. All money-bills must originate in the House of Representatives.

The executive power is vested in a president; the vice-president is ex-officio president of the Senate, and successor to the president should he die during his term of office. The president is elected for four years, and may be re-elected; but the usage has been never to elect the same person for more than two terms. He is chosen by electors, who are themselves chosen by an electoral college in each state; the number of these electors being equal to the representatives which such state sends to both houses of Congress. The president has a salary of 25,000 dollars, and the use of the 'White House' (with its furniture) at Washington. The vice-president has a salary of 8000 dollars. The president is commander-in-chief of the army and navy of the United States, and of the militia of the several states when called into active service of the United States; he has power to make treaties, provided two-thirds of the Senate concur; he appoints the officers of state, ambassadors, consuls, and judges of the supreme court; he receives foreign ambassadors; he can grant reprieves and pardons for offences against the United States, except in cases of impeachment.

The principal officers of the executive department of the government are the secretaries of state, of the treasury, of war, of the navy, and of the interior, the postmaster-general, and the attorney-general, whose respective duties are sufficiently indicated by their titles. They form the cabinet, and hold office at the will of the president. Their salary is 8000 dollars each.

The judicial authority of the United States is vested in one supreme court, forty-six district courts, and nine circuit courts. The supreme court consists of one chief justice, with a salary of 5000 dollars, and eight associate justices, with salaries of 4500 dollars each, who hold a court in Washington annually; an attorney-general, reporter, clerk, and marshal. Each district court consists of one judge, an attorney, marshal, and clerk. The circuit courts are composed of one associate justice, and the judge of the district in which it is held. The supreme court has exclusive jurisdiction in all cases to which a state is party, except cases between a state and its citizens; in suits or proceedings against ambassadors, it has appellate jurisdiction from the circuit courts, and authority to issue writs of prohibition to the district courts. The circuit courts have original jurisdiction in all suits of a civil nature at law or equity, concurrent with the courts of the several states, where the value in dispute exceeds 500 dollars, where the United States or an alien is a party, or where the suit is brought by a citizen of one state against a citizen of another. The circuit courts have appellate jurisdiction from the district courts. They have exclusive cognisance of offences against the United States. The district courts have jurisdiction in admiralty and maritime cases, in all suits against consuls and vice-consuls, in some minor offences against the United States, and in causes where an alien sues for a 'tort' in violation of the law of nations.

Provision is made by the constitution for its own amendment. Such amendment can however only be made when it is proposed by a majority consisting of two-thirds of both houses of Congress, or by a convention called on the application of two-thirds of the states; but in either case the amendment must be ratified by three-fourths of the states to give it effect.

Revenue, Army, and Navy.—The total receipts of the United States

for the year ending June 30th, 1854 (exclusive of a balance in hand from the previous year of 21,942,892 dollars), was 73,549,705 dollars; the total expenditure for the same period was 75,354,630 dollars. The entire outstanding public debt, October 1st, 1854, was 45,640,606 dollars.

The regular army in 1853 comprised in all 964 commissioned officers and 9284 non-commissioned officers and privates. The militia force of the several states amounted to an aggregate of 2,259,037 men, of whom 66,289 were commissioned officers. The navy in 1853 consisted of 11 vessels of the line, mounting in all 860 guns, 14 frigates mounting 618 guns, and 49 other vessels,—the whole fleet mounting 2026 guns.

(*Histories of America* by Bancroft, Grahame, Stedman, &c.; *History of England* by Lord Mahon; *Biographies of Washington, Jefferson, &c.*, by Sparks, Marshall, Irving, Tucker, &c.; *Seventh Census of the United States*; *Statistical View of the United States*; *Official Reports*; *American Almanac*, 1855; *Gazetteers of United States, &c.*)

UNNA. [ARNSBERG.]

UNST. [SHETLAND ISLES.]

UNTERWALDEN, a canton of Switzerland, and one of the three Waldstätten, or Forest Cantons, which began the Helvetic Confederation, is bounded N. by the Lake of Luzern, W. by Luzern, S. by the Bernese Oberland, and E. by the canton of Uri. The area is 262 square miles, and the population 25,138. The canton consists mainly of two great parallel valleys, each about 15 miles in length, running from south to north, and terminating on the southern coast of the Lake of Luzern. The eastern valley is drained by the Engelberg Aa, a torrent which rises in the Surenen Alps on the borders of Uri, flows by the abbey of Engelberg, and enters the lake below Stanz. The western valley is drained by the Sarner Aa, the outlet of the little alpine lake of Lungern, at the foot of the Brünig, near the borders of the Bernese Oberland, and which, after passing through the Lake of Sarnen, enters a bay of the Luzern lake below Alpach. The lower part of the eastern valley constitutes the district called Nidwald, or 'below the forest,' and the western valley, with the upper part of the eastern valley, forms the district called Obwald. These denominations relate to the Kernwald, or forest of Kerna, which lies on the borders of the two districts. The Obwald and Nidwald have formed two separate communities ever since 1150. They both joined Schwyz and Uri in the insurrection of 1308, and when the first federal union was entered into at Brunnen, in December, 1315, Obwald and Nidwald were recognised as forming together one canton, by the name of Unterwalden.

Unterwalden is surrounded, except on the north side, by offsets of the Alps, which detach themselves from the great central group of the St. Gothard, and divide the basin of the Aar from that of the Reusa. One branch runs along the southern border of the canton, separating it from the Bernese Oberland. Another ridge runs along the eastern part of Unterwalden, and divides it from Uri, forming the summits of Titlis (10,500 feet above the sea), Wallenstock, and Rothstock, each above 8000 feet. Lastly, another offset of minor elevation runs along the western border of Unterwalden, dividing it from the canton of Luzern. Mount Pilatus (about 7000 feet) is the highest summit of this last offset. In the interior of Unterwalden there are no very high mountains, but the surface of the country consists chiefly of hills and terraces, several valleys, and some tracts of plain bordering on the Luzern or Waldstätter Lake. Unterwalden is chiefly a pastoral country. There are about 12,000 cows, 3000 sheep, 6000 goats, 3500 pigs, but very few horses. About 20,000 cwts. of cheese are annually made. The cheese of Unterwalden, of the first or best sort, is much esteemed in Switzerland and Italy. The canton abounds with fruit-trees: a little bad wine is made. The honey is excellent. The canton imports corn, wine, salt, manufactures, and colonial articles; it exports cattle, cheese, butter, timber, and hides. The canton is not favourably situated for trade, being confined between the Alps and the lake, with no high road passing through it, and none but mountain passes leading out of it. All the native inhabitants who are of age, with the exception of a few *heimathlosen*, are members of the landgemeinde of their respective district, Nidwald or Obwald, each of which has also its own administration. In 1835 there were as yet no prisons: serious offences are punished by fines, corporal punishment, and in certain cases by death. Each of the two divisions of the canton has an hospital and a poor-house. A dialect of the Swiss-German is the language of the country. The Roman Catholic is the religion of the whole canton. The Benedictine monastery of Engelberg, a foundation of the 11th century, and possessed of a library of 20,000 volumes and several valuable manuscripts, has been suppressed since the revolution of 1847. Nidwald and Obwald return each one member to the National Council of Switzerland, as they did also formerly to the Swiss Diet.

The principal towns or villages are—*Sarnen*, the head town of the Obwald, on the northern extremity of the lake of Sarnen, has a fine town-house, with historical portraits of the worthies of Obwald. *Sarnen* has also a college, a theatre, an hospital, a poorhouse, a public school, several churches, and 1999 inhabitants. The arsenal of Obwald is on the hill called Landenberg, where was once the castle and residence of the Austrian governors. *Stanz*, the head town of the Nidwald, situated in a fine plain at the foot of the mountains, has a splendid parish church with a noble dome, and a fine square before it, with two

fountains, and a statue of Winkelried, the hero of Sempach. The convent of the Capuchins (now suppressed) has a considerable library. The town-house contains several paintings. The population of Stanz is 1877.

The canton of Unterwalden is one of the most interesting districts of central Switzerland, on account of its historical recollections, and the old simplicity of manners and pastoral habits of its inhabitants.

UPHAM. [HAMPSHIRE.]

UPHOLLAND. [LANCASHIRE.]

UPLAND. [SWEDEN.]

UPMINSTER. [ESSEX.]

UPPINGHAM, Rutlandshire, a market-town and the seat of a Poor-Law Union, in the parish of Uppingham, is situated in 52° 35' N. lat., 0° 43' W. long., distant 7 miles S. by E. from Oakham, and 89 miles N.W. by N. from London. The population of the town in 1851 was 2068. The living is a rectory in the archdeaconry of Northampton and diocese of Peterborough. Uppingham Poor-Law Union contains 35 parishes and townships, with an area of 52,698 acres, and a population in 1851 of 12,701. Uppingham church is large, with a lofty spire. There are two chapels for Dissenters. The Grammar school is well endowed, and has several valuable exhibitions. There are also National schools, and an hospital for poor men. A county court is held. The market is on Wednesday, and there are two annual fairs.

UPSALA, a town in Sweden, situated in 59° 51' N. lat., 17° 30' E. long., in an extensive undulating plain, about 300 feet above the sea-level, and has about 5000 inhabitants. The town, which is large for Sweden, extends over a considerable area, as there are large gardens to most of the houses. The houses are partly of stone and partly of wood, and mostly two stories high. The streets are wide and straight, and there is a spacious square in the centre of the town. The cathedral was erected between 1258 and 1435, and is considered the finest gothic building in the north of Europe. It contains monuments of many distinguished persons, among others of Gustavus I. and Linnaeus. Formerly the kings of Sweden were crowned in this cathedral. The square in which the church stands is surrounded by buildings belonging to the university, which has a library containing nearly 100,000 volumes, a collection of coins, an anatomical theatre, an observatory, a chemical laboratory, and a very extensive collection of natural objects. There is also a botanical garden. The university was established in 1478; it is governed by a chancellor, and has four faculties—law, medicine, philosophy, and theology. The number of regular professors amounts to 24, and that of adjunct professors to 14. The average annual number of students who attend the lectures is about 1000. The curriculum is modelled on that of the German universities. The Society of Sciences, instituted in 1719, has published several volumes of 'Transactions.' Upsala has also a grammar school, several charitable institutions, and an agricultural society. About 6 miles S.E. from Upsala are the 'mora-stones,' at which the Swedes elected their kings between 1140 and 1520.

UPTON-ON-SEVERN, Worcestershire, a market-town and the seat of a Poor-Law Union, in the parish of Upton, is situated chiefly on the right bank of the river Severn, in 52° 4' N. lat., 2° 12' W. long., distant 10 miles S. from Worcester, and 111 miles W.N.W. from London. The population of the parish in 1851 was 2,696. The living is a rectory in the archdeaconry and diocese of Worcester. Upton Poor-Law Union contains 22 parishes and townships, with an area of 53,016 acres, and a population in 1851 of 18,070.

Upton is a neatly-built town, situated in a flat and fertile plain. The river is here navigable for vessels of 100 tons' burden. There are a basin for barges, and a wharf for loading and unloading. The town is lighted with gas. The market-house, assembly-room, and magistrates' court-room compose one building. The stone bridge of six arches and the old church were injured during the civil wars, and in 1756 the church was taken down and the present edifice erected. The old gothic tower however still remains. The Wesleyan Methodists, Baptists, and Roman Catholics have places of worship. There are National and Infant schools, a mechanics institute, and a savings bank. Petty sessions and a county court are held. Thursday is the market-day. Fairs are held on St. Peter's Day and on Midlent Thursday.

UPWELL. [NORFOLK.]

URAL, a river of Russia, which forms part of the boundary-line between Europe and Asia. It rises in the Southern Ural, at the foot of Mount Kalyan, near 55° N. lat., at an elevation of 2182 feet above the sea-level. It first runs south about 200 miles in a straight line to the fortress of Orskaya, where it turns to the west, in which direction it passes south of the town of Orenburg, and continues to flow about 300 miles in a straight line to the fortress of Uralak. Near this place it again turns to the south, and reaches in that direction the Caspian Sea after a course of 300 miles, measured in a straight line. The whole course of the river is about 900 miles. The first 60 miles it runs in a narrow valley, between the Ural Tau on the west, and the Ilmenes Mountains on the east. At Verkh-Urask, where the level of the river is still about 1248 feet above the sea, it begins to be navigable for small boats. South of Verkh-Urask the Ural flows along the eastern base of the table-land of Sakmara, and on the east of it extend the steppes of the Kirghises. At Orskaya,

where the river turns westward, its level is about 550 feet above the sea. From this place it may be navigated by large barges, as it has no rapids and a considerable depth. Below Orakaja the Ural flows in a bottom from one to three miles wide, which is inclosed by higher grounds rising from 60 to 100 feet above it. These higher grounds are the edges of the steppes. The bottom is chiefly covered with woods, but in parts there are extensive meadows. The greater part of this bottom is annually inundated, and only a few tracts are cultivated. In its middle course the Ural is joined by the Sakmara from the north, and the Ilek from the south. About 40 miles from its mouth the Ural divides into two channels, of which the eastern preserves the name of Ural, and the western is called Mokroi Backsai. Lower down the Ural again divides into two channels, of which the western is called Ural, and the eastern Bukharka. The last-mentioned channel is the most convenient for vessels, and on its banks are the fortress and town of Guriew. The islands forming the delta of the Ural are covered with salt-swamps, and entirely unfit for cultivation or pasture. The quantity of fish annually taken in the Ural is very great. The fish ascend the river to the fortress of Urask, where their course is stopped by a weir. Belugas have been taken weighing 1000 lbs., and yielding 200 lbs. of caviar; and sturgeons weighing 200 lbs., and yielding 40 lbs. of caviar, have been taken in the Ural. Besides the caviar and isinglass, a great quantity of fish is sent to various parts of Russia. In summer the fish is salted, but in winter it is exported in a frozen state.

URAL MOUNTAINS extend along the eastern border of Europe, which they divide from Asia. The whole of the range lies within the dominions of Russia. Its most southern extremity is on the banks of the river Ural, where that river runs from east to west, near 51° N. lat., and on both sides of 55° E. long. The most northern extremity reaches the Arctic Ocean on the Straits of Waigatz, and terminates opposite the island of Nova Zembla in 70° N. lat., and about 60° E. long. As the range reaches its culminating point near the meridian of 60° E. long., and as it extends from south to north, it is classed among the meridional ranges of mountains.

The length of the range is about 1250 miles; towards the southern extremity, near 53° N. lat., the ridges spread over a tract about 100 miles wide, but farther north the breadth is less than 50 miles, and nearly in the centre, between 56° and 60° N. lat., the mountain range is hardly 20 miles across. Farther north it grows wider, but this portion of the mountains is very imperfectly known. The whole area of the Ural Mountains is about 120,000 square miles. The general elevation of the range is not great, none of the summits rising to more than 6800 feet above the sea, and the highest parts of the range often fall short of 2000 feet. The chain descends with steep declivities to the great plains of Asia, which are contiguous to its base. On the west the mountains do not immediately border on the great plains of Eastern Europe, but are separated from them by a hilly tract of from 20 to 40 miles wide. The whole range may be divided into three portions—the Southern, Central, and Northern Ural.

The *Southern Ural* extends from the banks of the Ural River to 55° 30' N. lat. The high ground approaches the right bank of the river so as to leave only a comparatively narrow tract of low and level ground along its course. The ascent of these high grounds is very much broken and rapid, but they are only from 600 to 700 feet above the surface of the river. When this elevation is attained the country gradually rises higher, and near 53° N. lat. may be from 1200 to 1800 feet above the surface of the sea. This tract is called the table-land of the Sakmara, from an affluent of the Ural River which drains nearly the whole of it. On the east the table-land declines with a steep descent to the river Ural, where it flows from north to south, but on the west its slope is very gentle, and it is connected with the low ridge called Obetshel Sirt, which traverses the steppe that lies farther west, and terminates on the banks of the Volga, opposite Kamyshin (between 50° and 51° N. lat.). The surface of the table-land is very much broken, and in many parts there are rocky hills of moderate elevation, but they do not constitute ridges except on the banks of the Ick, a small affluent of the Sakmara. A considerable portion of the table-land is wooded and well stocked with animals, which supply the Bashkirs with a part of their subsistence. There are some large swamps.

On the north side of the table-land of Sakmara are two ranges of mountains, of which the eastern is called the Irendik Mountains, but farther north it takes the name of Ural-Tau (or Girdle Mountains). It runs north by east to 55° 30' N. lat. In a few places it contains elevated summits, for instance, near its southern extremity, east of Lake Tolkaah, where it is more than 2900 feet above the sea; but in general the summit is a level plain about 2000 feet high and seven or eight miles wide: it is mostly covered with swamps. The western chain has no general name. It rises in the most southern bend of the river Bialaya, and runs nearly north-east, gradually approaching the Ural-Tau. Near its southern extremity, which is less than 50 miles distant from that of the Ural-Tau, it does not rise much above the general level of the table-land of Sakmara; but farther north it increases in elevation, and exhibits several high summits, among which are the Yaman-Tau, at the source of the Bialaya, and the Iremel-Tau, north of it. The last-mentioned mount is the highest in

the Southern Ural, and rises more than 4700 feet above the sea-level; and snow is found in some ravines near its summits all the year round. The whole western chain is thickly wooded, but many of the slopes are nearly inaccessible, owing to the deep swamps on their sides. Wild animals are very numerous, especially bears, deer, and elks. The valleys between the ranges are either destitute of trees and covered with thick grass or swamps. In some places however there are extensive woods.

The two chains just mentioned approach one another at the place where the rivers Ural, Bialaya, and Ai, an affluent of the Ufa, originate, but they do not join. They run parallel to one another from 54° 30' to 55° 30' N. lat., being hardly ten miles distant from one another. The eastern, which preserves the name of Ural-Tau, is a continuous range, but not so high as the western, which is composed of three ridges, called from south to north Oorengal-Tau (3000 feet), Tagannai-Tau (3500 feet), and Yeorma-Tau, which is the highest of the three. Between these ridges are depressions, through which the rivers flow westward to the Ufa and Bialaya. The Ural-Tau does not rise in these parts above 2000 feet, and is frequently much lower. The valley between the two chains is about 1000 feet above the sea-level, and occupied by a considerable number of insulated hills. In this valley are the principal mines of Slatoust.

A third range lies farther east, and runs parallel to the Ural-Tau, but is not connected with it. Between 55° 30' and 54° 30' N. lat. it is not inferior to the Ural-Tau in elevation, but farther south it decreases considerably in height, and terminates between 54° and 53° in isolated hills. It bears the name of Ilmenes-Tau, and appears to be sterile and destitute of trees.

The *Central Ural* extends from 55° 30' to 58° N. lat., and may be considered as a wide swell, which begins on the west on the banks of the river Kama, an affluent of the Volga, and rises gradually for 50 or 100 miles more, until it attains its highest level, whence it extends in an uneven plain, and then descends on the eastern side, likewise with a rather gentle but much shorter slope. The lower edge of the western slope at the town of Perm, on the Kama, is only 378 feet above the sea-level, the highest point, on the road leading from Perm to Ekatarinburg is 1638 feet, and Ekatarinburg, on the plain east of the eastern declivity, is 858 feet above the sea-level. The region presents vast swamps destitute of trees in some parts; in others it is overgrown with stunted woods. This part of the Ural Mountains is traversed by the great commercial road between Russia and Siberia, and most of the mines which are worked are in this portion of the range.

Between 58° and 61° N. lat. are the mountains called the *Ural of Verkhotoori*, which some writers consider a part of the Central Ural, and others as attached to the Northern Ural. In these parts the higher portion of the range is covered with rocky mountains, which usually form elevated summits. The most southern of these summits, the Pawdinakoi Kamen, according to some authorities, rises to the height of 6329 feet above the sea; but, according to others, only to about two-thirds of that elevation. On the north of it are other summits, which rise to between 5000 and 6000 feet above the sea. The low depressions by which these summits are separated from one another are very swampy, but generally covered with woods, which also extend over the lower declivity of the summits, whilst the higher part is above the line of trees, and presents either bare rocks, or, where it is covered with soil, swamps of great depth. Though none of these summits appear to be covered with snow all the year round, masses of ice are found even at the end of the summer in the ravines which furrow the northern declivities.

The *Northern Ural* occupies that portion of the range which extends from 61° to 70° N. lat. It is very little known. The Russians call it the *Barren Ural*, to distinguish it from the Central and Southern Ural, which are rich in mines and covered with wood, whilst the Northern Ural consists of rocks, and is destitute of trees. These rocky masses are nearly always covered with fogs. The lower tracts between them are occupied by moors or covered with mosses. There are forests of large pines as far north as 63° N. lat.; but farther north the growth of these trees is stunted, and near 65° N. lat. they disappear. The Northern Ural does not seem to rise to a great elevation, and where it terminates on the Arctic Ocean it is composed of broken rocks covered with swamps.

The basis of the Ural chain is granite, and the superior stratifications are limestone and quartz, and many erratic blocks are scattered over the surface. The central and southern portions abound in wood, chiefly pines, cedars, larches, and other natives of a northern climate; but the oak and ash are found in the south-western parts. There are many rich valleys and fine pastures, where great numbers of cattle are bred. Numberless rivers abounding in fish issue from both sides of the chain, the principal of which are the Sosva, the Isset, the Tobol, the Emba, the Ural, the Belaia, the Kama, and the Petchora. There are seven passes over these mountains: the five that are the most easy to cross are—the road from Perm to Ekatarinburg; that to Petropaulskaja; and the three roads to Orenburg.

The Ural Mountains abound with mineral wealth; and valuable mines of iron, copper, gold, and platinum are worked. The iron- and copper-mines had long been considered among the most valuable sources of the national wealth, when, in the middle of the 18th century, it was discovered that gold-mines also existed there. The

gold-mines of the Ural were considered the most productive in the world previous to the discovery of the auriferous deposits of California and Australia. Very rich veins were met with between 1844 and 1850, but the total yield in any year during this interval did not much exceed a million sterling. Many splendid blocks of malachite are cut in the copper-mines of the Ural, and manufactured into articles of decorative furniture, of which many specimens appeared in the Universal Exhibition in London in 1851. [EKATARINBURG; PERM.]

URBAN. [NATAL.]

URBANIA. [PESARO E URBIÑO.]

URBIÑO, a town of Central Italy, in the States of the Church, is situated partly on a hill, about 20 miles from the coast of the Adriatic, and about the same distance S.W. from Pesaro. It is a walled town, and has several fine buildings, among others the former ducal palace, now the government-house, which contains a collection of ancient inscriptions and sculptures; the palace Albani; the cathedral; and several churches and convents. Urbino is an archbishop's see; it has a college, a theological seminary, an academy of sciences and literature, and about 7000 inhabitants. The house in which Raffaele was born still exists. Urbino was for three centuries the capital of a duchy. In 1626 the duchy was incorporated with the States of the Church. Urbino is the birthplace of Raffaele, Bramante, and other distinguished artists, and of Pope Clement XI. and several cardinals of the Albano family.

URFAHR. [ENS.]

URGEL. [CATALUÑA.]

URI, one of the Swiss cantons, is bounded N. by Schwyz, W. by Unterwalden, Bern, and the Valais, S. by the group of the St. Gothard, which separates it from the canton Ticino, and E. by the Grisons and Glarus. It consists of a rugged mountainous territory inclosing a valley, about 30 miles long, and traversed by the Reusa, which has its sources on Mount St. Gothard about 6000 feet above the sea, and flows northward until it enters the Lake of Luzern, the southern branch of which is called the Lake of Uri. Several minor valleys branch out right and left from the valley of the Reusa. A great part of the surface of the canton is mostly covered with ridges of the Pennine Alps, several of which exceed 10,000 feet in height. There is a tract of open country, called Bodengemeinden, in the lower part of the valley of the Reusa, near the shores of the Waldstätter or Luzern Lake. Uri is essentially a pastoral country: horned-cattle, sheep, and goats are numerous.

The population of the canton, by the census of 1850, was 14,505; the area is 420 square miles. Uri is a pure democracy, like Schwyz and Unterwalden, with annual landsgemeinde, and a landrath or executive council, presided over by the landamman. The religion is the Roman Catholic. The head town, *Altorf*, or *Altdorf*, is the subject of a separate article: population at the last census, 2112. [ALTDORF.] The high road to Italy by the St. Gothard begins properly at Altorf.

URK. [HOLLAND.]

URLINGFORD, county of Kilkenny, Ireland, a market-town and the seat of a Poor-Law Union, is situated in 52° 43' N. lat., 7° 34' W. long., distant by road 17½ miles W.N.W. from Kilkenny, 80½ miles S.W. from Dublin. The population was 1168 in 1851. Urlingford Poor-Law Union comprises 16 electoral divisions, with an area of 76,151 acres, and a population in 1851 of 19,681. The town contains a Roman Catholic chapel, National schools, a dispensary, bridewell, and Union workhouse. Quarter sessions are held in the town. Fairs are held every month.

URUGUAY, REPUBLIC ORIENTAL DEL, formerly known as the BANDA ORIENTAL, South America, comprehends the country lying between the southern limit of Brazil and the Rio de la Plata. It extends between 30° 20' and 35° S. lat., 53° 30' and 58° 50' W. long.; and is bounded E. by the Atlantic Ocean, N. by the empire of Brazil, W. by the province of Entre Rios, from which it is separated by the river Uruguay, and S. by the Rio de la Plata, which divides Uruguay from Buenos Ayres. The area is about 100,000 square miles; the population has been estimated at 250,000, but, including the few native tribes, it probably does not much exceed half that number.

By far the greater part of the country is hilly and elevated. It forms, as it were, the most southern prolongation of the Serro do Mar (the sea mountain range of Brazil), which extends northward to near the mouth of the Rio de San Francisco (9° S. lat.) In Uruguay the range rises rather abruptly on the southern coast, where it forms the hill of Cape de Sta. Maria, the Pao de Asucar (Sugar-Loaf) some miles to the west of Maldonado, the Monte Video on the west side of the bay to which it gives its name, and the hill of Sta. Lucia, farther to the west, near the mouth of a small river bearing that name. At no great distance, however, from the shore, it takes the shape of an extensive table-land, whose surface in many places presents hardly any perceptible irregularity, and in others is covered with extensive ranges of low hills; both the plains and the hills are without trees, and afford only pasture for cattle. The hills are called Cochilhas, and the highest range, which forms the watershed between the ocean and the river Uruguay, is named the Grand Cochilha. It extends into the Brazilian province of Rio Grande do Sul, where it is called Serra de Herval. The eastern declivities of the Grand

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Cochilha, which terminate abruptly in the plains about the lakes Mirim and dos Patos at about 12 or 20 miles from their banks, are called Serra de los Tappes. On the west the table-land extends to the banks of the river Uruguay, but it is there cut by numerous valleys, and presents the aspect of an extremely hilly country. In these valleys, as well as in those which lie along the southern coast, west of Cape de Santa Maria, many fertile tracts occur in which the grains and fruits of Southern Europe succeed very well; but the remainder is only fit for pasture.

The coast north of Cape Santa Maria is low, sandy, and intersected with numerous lakes; it forms a small portion of the great extent of similar coast belonging to Brazil, which reaches up to near 30° S. lat. This low country extends inland for about 50 or 60 miles, and possesses little fertility. West of Maldonado, and along the embouchure of the Rio de la Plata, the coast is much more broken, and affords many accessible bays and harbours, which would afford great facilities for commerce if the inhabitants were prepared to avail themselves of them.

Along this coast there are a few islands, but none of great extent. The largest, called Dos Lobos (of the wolves), is not far from the harbour of Maldonado: it is two miles in circumference, and contains good water, but is almost all rock and stones.

The Rio de la Plata and the Uruguay are the chief rivers of the Republic. The La Plata, the left bank of which belongs wholly to Uruguay, is noticed in a separate article. [PLATA, RIO DE LA.] The *Uruguay* originates in that portion of the Serra do Mar which stretches along the ocean opposite the island of Santa Catherina, and under the name of Pellotas, runs for a considerable distance westward, between banks consisting principally of pointed and massy rocks. It assumes the appearance of a large river, about where it begins to bend its course to the south-west. Numerous small streams increase its waters in this part of its course. In latitude 29½° S. it receives the Ibecuy, and then begins to flow in a southern direction. Not far from the place where it enters the Rio de la Plata it receives the Rio Negro on the left bank. The Uruguay is navigable for large boats to the first great fall, called Salto Grande, situated about midway between the mouths of the Ibecuy and Rio Negro. About 40 miles below the Ibecuy is the Salto Chico, or Little Fall, which again interrupts the navigation of the smaller boats or canoes. The whole course of this river is considerably over 1000 miles.

The *Rio Negro* is formed by the union of several small streams which rise in the Grand Cochilha near the Brazilian border. Its general course is west by south to near 58° W. long., when it turns more southward and expands into a river of considerable width. It falls into the Uruguay about 12 miles above the union of that river with the La Plata; its whole course is upwards of 300 miles.

On the east coast, as already mentioned, there are several salt lakes; but the two largest, lakes Mirim and Mangueira, or Mangheira, which formerly belonged, at least in part, to Uruguay, are now we believe wholly included within the Brazilian territory.

Of the geological character of Uruguay no survey has been made; and little is really known of its mineralogy. Gold and silver are said to have been found, but neither has been worked. At San Carlos west of Cape Maria, a mine of copper was formerly found to be very profitable. From the banks of the Uruguay great quantities of lime are exported to Buenos Ayres, and in some districts potter's-earth and amber are found.

Being situated without the tropics, Uruguay enjoys a temperate climate, resembling that of Spain or Italy. The air is pure and healthy. There is a good deal of rain in the valleys and on the low plains during the winter, which lasts from May to October. Frost is occasionally felt in July and August. The high table-land is annually exposed to it, sometimes for more than a month together; but as very little snow falls, the cattle find pasture in these districts all the year round.

The country contains a large portion of fertile land, and a vast extent of profitable pasturage; but cultivation is everywhere neglected, and in the constantly-disturbed state of the country even those pastoral occupations which alone seem to have any attraction for the natives are generally pursued in a careless manner. The valleys on the west and south are well adapted to a great diversity of productions. Wheat, maize, barley, and rice flourish with little attention. Peas, beans, melons, onions, and numerous other vegetables are cultivated. Cotton, the sugar-cane, and mandioc are grown. Hemp and different qualities of flax grow in great abundance. The fruit-trees of the south of Europe succeed here better than farther to the north, and none so well as the peach. The vine grows well, and produces abundantly. Timber is by no means abundant. It is only on the banks of the principal rivers that any forests of full-grown timber occur, the table-land being either quite bare or only covered with shrubs.

More than four-fifths of the country being only fit for pasture, cattle of course constitute the chief wealth. The richest proprietors often possess thirty or forty square miles of land, and feed from five to ten thousand head of cattle and upwards. By far the greatest number are those called 'bravo,' because they live in a state of wildness. Some cattle are consumed in the country, and others sent to the slaughter-houses of Montevideo and Buenos Ayres; but by far the greater proportion is manufactured into jerked beef, which is salted without

the bones, dried in the sun, and exported to different parts of America, especially Brazil. Every great proprietor breeds also a certain number of horses and mules, and some of them a great number of sheep, which have a fine wool. Neither goats nor pigs are numerous.

Game is very abundant, though little sought after. Among other species of wild quadrupeds, there are the anta or tapir, the deer, the ounce, the monkey, the paca, the rabbit, the armadillo, the squash, the boa, the fox, and some others peculiar to the country. The European species of dogs, known as Chimmaroe Dogs, have multiplied so excessively that they live wild in the plains, and have become a great pest.

Birds are very numerous. In the lakes of the eastern plain there are wild ducks and several varieties of large wild geese. A few other birds of the species found in Europe are also met with, as the heron, the quail, and partridge; but there are other species not known in Europe, as different kinds of parrots, the Macuco partridge, the tucan, and many more.

The only manufactures are of the rude articles required for domestic use. The commerce is comparatively inconsiderable; though, from the position of the country on the Atlantic and the great estuary of the La Plata, with the excellent harbour of Montevideo and others of an exceedingly useful class, and with the facilities for internal communication afforded by the Uruguay, it is the natural entrepôt of the commerce of a vast region of the interior; while its own fertile soil and healthy climate would alone render it, in the hands of a peaceful and industrious people, a great exporting country. At present the trade is chiefly centred in MONTEVIDEO. The exports consist almost wholly of the produce of the herds, as hides, horn, hair, jerked and salted beef, tallow, &c., and do not now probably exceed 1,000,000*l.* sterling annually. The imports are chiefly of articles of British and colonial manufactures, &c.; and of North American and some continental produce. There is also a considerable but fluctuating trade between Uruguay and Brazil, the Argentine provinces, &c. The imports of British goods in 1853 amounted to 529,883*l.* The exports to the United States in 1853 amounted to 302,980 dollars; the imports to 308,446 dollars.

Uruguay is a republic with an elective president, a senate, and a house of representatives; but the actual power is generally centred in the president, who is usually some successful general. The country is divided into nine departments—Montevideo, Maldonado, Canelones, San José, Colonia, Soriano, Paisandu, Durango, and Cerro Largo.

MONTEVIDEO is the political capital, the commercial metropolis, and much the largest and most populous city of the republic. Between it and Cape Santa Maria stands the town of Maldonado, with a fine harbour, good fortifications, and about 2000 inhabitants: it exports hides and copper. *Colonia del Santo Sacramento* is a small town, with a harbour, opposite Buenos Ayres. None of the other towns are of any importance.

The Banda Oriental was, during the Spanish supremacy, the name of that portion of the vice-royalty of Buenos Ayres which was situated to the east of the river Uruguay, and comprehended the present republic of Uruguay and the country called the Seven Missions. The continual civil wars by which the declaration of independence was followed in Buenos Ayres, induced the government of Brazil to take possession of the Banda Oriental in 1815. The republic of Buenos Ayres protested against this step, and, as no amicable settlement could be made, a war ensued between the two countries in 1825. Through the intervention of the English government a treaty of peace was concluded in 1828, by which the northern district known as the Seven Missions was ceded to Brazil, and the more exclusive southern district was declared an independent republic under the title of Republica del Uruguay Oriental. But instead of securing peace to the country its independence appears hitherto to have only entailed discord upon it. Internal hostilities broke out at a very early period, and this was soon followed by the incursion of troops from Buenos Ayres; the assistance of Rosas, the president of Buenos Ayres, having been invoked by Aribe, one of the unsuccessful aspirants to the rulership of Uruguay. After a long continuance of strife without any prospect of either party securing a manifest superiority, Brazil was induced by the appeals of Paraguay and other neighbouring powers to interfere. In order to show her good faith, Brazil sent ministers to the courts of England and France, with a view to obtain their assistance either as umpires or active agents in compelling the respective parties to come to terms. Those powers accordingly sent some ships of war to the Rio de la Plata in 1845. The English ships blockaded Montevideo till 1848 and the French till 1849, when both England and France made treaties with Rosas. On these powers withdrawing, Brazil commenced more active hostilities—the Argentine provinces of Corrientes and Entre Rios uniting with her. The war was however prolonged till 1851, when Aribe was forced to capitulate in Uruguay, and Rosas was soon after deposed in Buenos Ayres. Treaties between the several parties gave peace to Uruguay as far as regarded hostilities with foreign powers, and secured the recognition of the republic by the neighbouring states. But internal discord in this as in so many other of the petty republics of South America appears to have become chronic, and the latest accounts (received in October, 1855) speak of affairs as in the most disorganised condition. Brazil, which by assisting the

government with money and men, had hoped to enable it to re-establish peace, order, and security in the country, finding that no reliance could be placed on the president Flores or his ministers, had withdrawn its subsidy, and was about to withdraw its troops; and the country was fast relapsing into a state of anarchy. The revenue of Uruguay has for some time been inadequate to meet the current expenses, and the interest on its heavy public debt has been long unpaid.

URUMIYEH. [PERSIA.]

USK, RIVER. [MONMOUTHSHIRE.]

USLAR. [HILDESHEIM.]

USSEL. [CORRÈZE.]

USTARITZ. [PYRÉNÉES, BASSES.]

USTICA. [PALERMO, Province of.]

USTIUG (VELIKI, namely Great), a considerable town in the government of Wologda in Russia, situated in 60° 47' N. lat., 46° 5' E. long., at the confluence of the Suchona and the Jug, has a population of 14,000. It is an ancient town; the houses are for the most part of wood; there are 2 cathedrals, 23 churches, 5 convents, a bank, an exchange, and several buildings and warehouses belonging to the crown. The town, being situated on the direct road from Archangel to Siberia, and to the southern provinces, has an important commerce and transit trade with Archangel, St. Petersburg, Casan, Kostroma, Yaroslav, and Novogorod, which is greatly facilitated by many navigable rivers. The chief articles which pass in transit are Russian productions from the other governments, the furs of Siberia, silks and tea from China, and fish from the North Sea. The inhabitants have also manufactures of linen, woollen, leather, soap, candles, hosiery, and wooden utensils, and there are in the town many gold and silversmiths, whose works in enamel and bronzed silver are much esteemed.

USTJUSHNA. [NOVOGOROD.]

USUMASINTA, RIVER. [MEXICO.]

UTAH, a territory of the United States of North America, lying between 37° and 42° N. lat., 106° and 120° W. long. It is bounded S. and S.E. by the territory of New Mexico; E. by the territories of Kansas and Nebraska; N. by that of Oregon; and W. and S.W. by the state of California. The area of Utah is estimated by the 'Topographical Bureau of the United States' at 269,170 square miles. The population in 1850 was 11,380 (of whom 24 were free coloured persons, and 26 slaves en route to California), or 0.04 to the square mile: but this does not include the native Indian population, who were estimated by the Commissioner of Indian Affairs in 1853 at 11,500.

Surface, Hydrography, &c.—The territory of Utah occupies for the most part a vast broken depression, known as the Great Basin, which lies between the ROCKY MOUNTAINS on the east and the Sierra Nevada [CALIFORNIA] on the west; these lofty mountains rising in parts above the line of perpetual snow, while across them are only a few difficult passes. On the north of the Great Basin there is no continuous mountain chain, the watershed being formed by an elevated tract, which is sometimes a swamp. On the south-east the rocky barrier is broken through by the head streams of the Colorado, the only river which finds its way out of the Great Basin; all the others which flow into the basin from the slopes of the mountains being lost in the plains or in the lakes which occupy the bottoms of the larger valleys. The Great Basin is about 500 miles long, from east to west, and little less wide, and some 4000 feet above the level of the sea. Parallel to the main ranges of the Sierra Nevada and the Rocky Mountains are several inferior ranges, of which the Wahsatch Mountains on the east are the most important. Some of these secondary chains attain an elevation of from 2000 to 3000 feet; and from these diverge cross ridges, which form lesser valleys. A large portion of the Great Basin consists of arid plains, on which artemesias and salicornias are almost the only plants, but in many parts these plains are so impregnated with salt as to be unfit to sustain vegetable life. The most remarkable features of this singular country are the great valleys. Of these by far the largest is the Great Salt Lake Valley, which is about 120 miles long and from 20 to 40 miles wide, the Great Salt Lake occupying the greater part of the northern portion of it. In the centre of this valley the surface is level, but it rises gently on both sides to the mountains. There are few or no trees viable. On the south and west of the Great Salt Lake the land is a soft sandy irreclaimable barren, on the north it is a swamp, on the east and south-east, where is the Great Mormon settlement, it is fertile and cultivated from the mountains to the shore. The climate of the valley is dry and mild; but rain seldom falls during the summer months, so that the agriculturist is to a great extent dependent on irrigation. The other valleys bear a general resemblance to Salt Lake Valley, but they are much smaller. The chief are—Utah Valley, about 60 miles long by 20 miles wide; Sand Pitch Valley, 45 miles long by 20 miles broad; Bear River Valley, South Valley, Yuab Valley, Cache Valley, and Sevier Valley. Of that portion of the territory which does not strictly belong to the Great Basin, the Valley of Green River with its tributaries, which occupies the eastern portion of the territory from the Sierra Madre to the Bear River Mountains, is the most extensive, being more than 150 miles long; but it is so elevated and so badly watered that it is thought not to

contain a single spot available for agricultural purposes. The little valley of the Uintah River, a more southern tributary of the Colorado, is much warmer and more promising. But all this eastern part of the country is, with this exception, barren.

Utah possesses no great navigable rivers. The Colorado, as already mentioned, is the only river which flows out of the Great Basin, and it is a stream of little consequence till it has flowed some distance along the territory of New Mexico. There are indeed accumulated in the gorges of the mountains unfailing stores of snow, which furnish during the whole of the summer abundant and perennial streams, which in some instances possess a considerable volume of water; but many of these never reach the bases of the mountains, and the great majority are lost in the arid plains. A few find their way to the lakes, but from the lakes, except from one to another, there is no outlet. Some of the streams which connect the lakes are however of considerable value for irrigation, and may become of essential importance for manufacturing purposes. The most valuable of these rivers is the Jordan, a rapid stream which unites the Great Salt Lake with Lake Utah; it is on this river that Salt Lake City is built, and already several manufactories are established along its banks.

Of the numerous lakes which are in the territory the largest and most remarkable is the Great Salt Lake, which lies at the northern end of Great Salt Lake Valley. This lake is about 70 miles long, from 20 to 30 miles wide, and has a shore-line of 291 miles. Its water is saturated with chloride of sodium (salt); Dr. Gale, who made an analysis of its water for the United States government, says that it contains full 20 per cent. of pure chloride of sodium, and not more than 2 per cent. of other salts, and is one of the purest and most concentrated brines in the world. The specific gravity of the water is 1.170. Several picturesque islands rise to a great altitude above the surface of the lake. On the mountains on each side of the lake are several distinct terraces, exhibiting unmistakable evidences of this valley having been at some time the bed of a great inland sea. The other lakes are much smaller than the Great Salt Lake; the water of Lake Utah, which is connected with the Great Salt Lake by the river Jordan, is said to be quite fresh. It receives several streams from the mountains. In the neighbourhood of the Great Salt Lake, and in other parts of the territory, are several hot and sulphureous springs.

Geology, &c.—Metamorphic, Silurian, and Carboniferous rocks prevail. In the neighbourhood of the Great Salt Lake rocks of granitic and sienitic character occur, with hornblende rocks, and talcose and mica-schists. The more elevated portions of the lake shore and mountain summits appear to consist of carboniferous limestone, which, in some localities, lose their granular character, and become sub-crystalline, or threaded with veins of calcareous spar. All the elevated ranges on the north, south, and west of the Great Salt Lake, seem to be capped with the carboniferous limestone, which generally rests on a coarse granular sandstone. In some localities the sandstones are overlaid with a coarse conglomerate, which is sometimes partly altered so as to assume the character of a quartz rock. Cretaceous strata occur in several places; and along the valleys are tertiary clays, &c. Good building-stone is quarried in the vicinity of Salt Lake City. Of the mineral wealth of Utah little is really known.

Soil, Climate, Productions, &c.—A large proportion of the country is uninhabitable and unproductive, but that portion which is available for agricultural purposes, though limited in extent as compared with the intervening desert tracts, is much of it of extreme fertility; and according to Captain Stansbury, who made a careful survey of the territory for the government of the United States, fully sufficient for the support of a large, though not dense, population. These fertile and habitable tracts are for the most part confined to the narrow strips of alluvial land along the bases of the mountains and the bottoms of the warmer and more sheltered valleys. Along the western foot of the Wahsatch range occurs one of the richest of these tracts, a narrow slip only a mile or two wide, but stretching for more than 300 miles in length. In the valley of the Jordan it is much wider; and there are wider patches in several other of the valleys, as in those of the Tuilla, of the Timpougas and others of the Traverse Range. In fact the most available part of the Great Basin appears to consist of the valleys along its eastern border, sheltered by the Wahsatch range. The most productive of the cultivated soils consist of disintegrated feldspathic rocks, mixed with the debris of the limestones. There also occur in the valley bottoms very rich vegetable and marly loams. So productive are some of the soils that Captain Stansbury mentions an instance of a bushel of wheat producing on three acres and a half of land a yield of 180 bushels; and other authorities speak of 50 or 60 bushels of wheat to the acre as being by no means unusual, but there can, we think, be no doubt that such must be exceptional cases.

In the valleys the climate is milder and drier than in the same parallel of latitude on the Atlantic, and the winters are much more temperate; in the Salt Lake Valley the thermometer seldom descends to zero. But on the higher arid plains the heat is often oppressive. Over these plains the mirage is frequently observed in the warm season. The eastern section of the country is cold. Throughout the habitable portions of the territory rain seldom falls between May and October,

and can never be relied on for agricultural purposes. Artificial irrigation is therefore requisite to agricultural success; but the character of the country happily admits of irrigation being effected with comparative ease in the more fertile valleys, although there are extensive tracts of land which will not admit of cultivation on account of their being beyond the application of irrigation.

The principal cereals grown are wheat, oats, maize, barley, and rye. Very little buckwheat is raised. The common potatoes grow luxuriantly; of sweet potatoes the crops are limited. All the vegetables peculiar to the middle and western states succeed here. The sugar-beet grows to a large size, and is being raised, though not largely, for making sugar. Cotton, the sugar-cane, and rice will, it is said, grow in some districts, but they are evidently not suited to the climate. Tobacco and flax are raised in small quantities. A portion of the territory is well adapted for grazing, though the bunch grass on the lower slopes of the mountains, which at present feeds vast herds of antelopes and deer, is burnt up during the summer months. Horses are the animals of which the inhabitants perhaps possess the largest proportionate number; but they have a considerable number of cattle, and there is a growing attention being paid to sheep, which are in great request for their wool.

The country in its natural state is almost destitute of trees. The only timber found is in the more sheltered ravines, on the banks of a few of the streams, and occasionally on the bases of some of the mountains. Wild game abounds. The antelope, deer, bear, and panther are very numerous. The lake-islands are frequented by aquatic birds in astonishing quantities. The more common kinds are swans, geese, ducks, curlews, plovers, gulls, blue herons, cranes, pelicans, &c. Mosquitoes and sand-flies are very numerous and troublesome. But the greatest insect pest is a large kind of cricket, which at irregular periods appears in enormous numbers, and commits terrible ravages; it is said that the corn crops are this year (1855) almost entirely destroyed by them.

Utah from its insulated situation must be to a great extent thrown upon its own resources, if the peculiarities of its population did not cherish by every means their separate self-dependent condition. Cut off by lofty and difficult mountains and vast deserts from all other settled states, with agricultural resources little more than sufficient for the supply of its own increasing requirements, and without any staple product or material required by the arts or luxuries of other communities, it is not likely to have any considerable amount of external trade or commerce; while there will probably be a sufficient stimulus to the growth of such manufactures as are required for ordinary domestic purposes. With California regular communication is maintained, but the cost of transit is too great for California to offer a market for the produce of Utah. On the other hand, from Salt Lake City to St. Louis, the nearest considerable market, is upwards of 1600 miles. Some modification would undoubtedly be wrought by the construction of the projected Great Pacific railway, but in any case Utah must remain to a great extent a country separated geographically, politically, and commercially. The local government has done everything it could to encourage the establishment of factories, and there are already several woollen-mills, potteries, hardware-works, &c., especially along the valley of the Jordan. Flour-mills are in operation very generally.

Divisions, Towns, &c.—Utah is divided into 12 counties. *Fillmore*, a little village, in the south-western part of the state, is the political capital; but the chief city, indeed the only one of any consequence is Salt Lake City. There are several other 'cities,' but they are merely collections of a few adobe cottages.

Salt Lake City, or as it is officially designated, the *City of the Salt Lake*, is situated on the east side of the Jordan River, a strait which unites Utah Lake with the Great Salt Lake, in 40° 45' N. lat., 112° 5' W. long., and at an elevation of 4300 feet above the sea. The population in 1850 was over 5000; it has since largely increased, but we have only vague estimates of its numbers. The city was laid out in July 1847, under the direction of Brigham Young, the Mormon prophet, as the great central city of the Mormon people. The space marked out was four miles long and three miles broad, the same size as Nauvoo; the streets intersect at right angles, and are 132 feet wide; and the houses are ordered to be set back 20 feet from the front line of the lot, and the intermediate space to be planted with shrubs or trees. A plot of several acres is set apart for the site of the great temple, which is to be built on a scale of the greatest possible splendour, far surpassing the famous temple of Nauvoo. The houses are mostly built of adobe, or sun-dried bricks, and have a neat appearance; but large houses and public establishments are now built of stone. There are several manufactories and mills in the vicinity of the city, and salt is largely made on the borders of the lake. Several schools have been established, and a site has been set apart on one of the terraces of the Wahsatch Mountain for the erection of a university.

Government, History, &c.—The government of Utah territory is exactly similar to that of New Mexico.

The territory of Utah originally formed a part of the Mexican province of Alta, or Upper California, and, with the rest of that province, was transferred to the United States by treaty in 1848. But the whole of the province had really passed out of the hands of Mexico for some years before the formal transfer; and while the tract

west of the Sierra Nevada, or what now forms the state of California, was already in the possession of the citizens of the United States, the Great Basin, hitherto abandoned to the native Indians, lay open to any body of settlers strong enough to maintain themselves within it. By such a body it was occupied in 1847. It does not fall within our province to relate here the early history of that remarkable sect the Mormons, whose occupation of the territory has invested Utah with so singular an interest. It will be enough to remind the reader, that the Mormons first settled as a community at Independence, and afterwards in Clay county, Missouri; and that on being expelled in succession from each of these places, they left the state, and established themselves at Nauvoo in Illinois. Here they speedily became a large and flourishing body; and, besides various public edifices, erected a spacious temple at a cost of nearly a million dollars. Joseph Smith, their prophet, governed them with absolute and almost unquestioned authority until his death in 1844, which was brought about in a very shocking manner. A newspaper established in Nauvoo by some opponents of the sect, having published certain scandalous statements respecting him, the town council directed its publication to be stopped and the office to be razed. The editors appealed to the mayor of Carthage, who issued a warrant for the arrest of Smith and his brother. Smith at first refused to obey, and placed the city in a state of defence; but he was induced to surrender in order to prevent a collision between his followers and the state authorities, on receiving a pledge of protection from the populace. A mob was however permitted to break into the state jail and murder both Smith and his brother. The Mormons elected a new prophet, Brigham Young, as the successor of Smith, and affairs again became prosperous. But organised mobs several times attacked the city, and at length regularly invested it; and the leaders were forced to undertake that the whole body should entirely quit the state. The prophet and elders now formed the bold resolution to lead their followers across the vast western wilderness, to the far distant and nearly unknown country lying beyond the Rocky Mountains—there to seek some secluded retreat beyond the reach of their persecutors. They had been promised to be allowed till the spring to make their preparations for the departure of the first or pioneer party; but their enemies became clamorous, and they were obliged to set out in February 1846, while it was yet winter. The sufferings of this pioneer party were of the most terrible and trying kind; but they struggled on resolutely, planting crops and otherwise preparing the way for those who were to follow them. It was not till July of the following year that the first section of the pioneers reached the promised land. The remainder were soon to follow; for although the authorities had engaged that the rest of the community should be allowed to stay in Nauvoo till apprised of the safe arrival of the first migration, their old opponents came down and drove them all out of the city in September 1846.

On taking possession of the site of their new city by the Great Salt Lake, the elders at once set about organising a regular government, at the head of which they placed their prophet Brigham Young; and as soon as what they deemed a sufficient number of their followers had arrived, and their territory had become by cession from Mexico a part of the United States, they elected the usual state officers, and applied to the federal government to be admitted into the Union as a sovereign state under the name of the State of Deseret. But Congress refused their application, and remanded the state back to a territorial condition, entitling it Utah. Brigham Young was however appointed or continued as governor; and the community, though nominally under the laws of the Union, remained virtually independent, and governed by the maxims of the Mormon leaders. Within the last year or two however Young has been superseded by the president, who has appointed a 'Gentile' governor, and the federal government has assumed a more direct control.

The religious opinions of the Mormons do not properly belong to Geography. Here however, as Utah is their appointed Zion, and as they are almost its only inhabitants, we may just state that the Mormons profess to be a separate people, living under a patriarchal dispensation, with prophets, elders, and apostles, who have the rule in temporal as well as religious matters; their doctrines being embodied in the 'Book of Mormon' and the 'Book of Doctrine and Covenants,' revealed to their first prophet, Joseph Smith; that they look for a literal gathering of Israel in this western land; and that here Christ will reign personally for a millennium, when the earth will be restored to its paradisaical glory. The practice of polygamy, which has drawn upon them so much obloquy, has not been, we believe, officially admitted; but there is little doubt that it has been allowed, at least to their leaders, and some of their more ardent advocates defend it by reference to the practice of the ancient Jewish patriarchs. That such a system could possibly grow up into such magnitude in these times is sufficiently startling; but that it can long maintain itself if not subjected to persecution is inconceivable.

As we did not notice Nauvoo under ILLINOIS, we may add to what we have said of it above, that it stands on the Mississippi, 125 miles N.N.W. from Springfield; and that after the departure of the Mormons, Nauvoo became the seat of a colony of French communists, or Icarians, under the direction of M. Cabot, who were however far from successful. Of its present state we have no trustworthy

particulars; its population has dwindled down to a very insignificant number. The great Mormon temple of Nauvoo was, in October 1848, set on fire by an incendiary and destroyed.

(Capt. Howard Stansbury, Topographical Engineer, U.S. Army, *Expedition to the Valley of the Great Salt Lake of Utah*; Fremont, *Report of Expedition to the Rocky Mountains*; Lieut. J. W. Gunnison, *The Mormons, &c.*; *Statistical View of the United States*; *Seventh Census of the United States*; *Gazetteers of the United States, &c.*)

UTICA, U. S. [NEW YORK.]

UTIEL. [CASTILLA LA NUEVA.]

UTRECHT, one of the Dutch provinces, is bounded N. by Holland and the Zuiderzee, E. by Gelderland, S. by Gelderland and Holland, and W. by Holland. Its area is 534 square miles; and the population at the end of 1853 numbered 155,324. In the northern and western parts, and on the banks of the Leck, the surface is level and low; towards the south-east there are some low hills. The low ground is rich and fertile; in the more elevated tracts the soil is sandy, with here and there some low thickets, extensive heaths, and peat-moors. The province is traversed by the Rhine and its branches, and by several canals. The climate is not so damp as that of the province of Holland: the air is pure and healthy, and there is good fresh-water. The natural productions are the common domestic animals, poultry, fish, bees, corn, pulse, garden-fruit, culinary vegetables, flax, hemp, and tobacco. The manufactures are carried on chiefly in the towns, and consist of woollen, cotton, silk, and linen fabrics; there are also breweries and distilleries. The exports are corn, cattle, swine, butter, cheese, manufactured goods, bricks, and tiles. Railways run from Utrecht, the capital of the province, to Arnhem, Amsterdam, the Hague, and Rotterdam. A direct line from Utrecht to Rotterdam has been for some years in course of construction; it is now open to Gouda, 20 miles west by south from Utrecht. The chief towns of the province are AMERSFOORT and UTRECHT.

UTRECHT, the capital of the province of Utrecht in Holland, is situated in 52° 7' N. lat., 5° 6' E. long., in a pleasant country, at the bifurcation of the Old Rhine and the Vecht, 22 miles by railway S.E. from Amsterdam. The Rhine divides the city into two parts, and there are likewise two canals with 36 drawbridges. The position of the city is healthy, and free from the inconvenience of damp, so common in Holland, it being situated on a dry and rather elevated soil, with a descent towards the river. The approaches to the city are very beautiful, especially that from Amsterdam, which consists of a broad avenue, bordered with rows of trees. The appearance of the city itself is antique, many of the houses being in the gothic style. It was formerly strongly fortified, but the ramparts have been converted into public walks. There is a beautiful walk called the Mallebaan, above half a mile in length, planted with eight rows of lime-trees. The cathedral with its tower, 388 feet high, was destroyed by fire a few years ago. There are 8 Calvinist, 1 Lutheran, 1 Anglican, 1 Moravian, and 8 Roman Catholic churches. The town-house is a handsome modern building. The university, founded in 1634, has five faculties, between 300 and 400 students annually, a botanic garden, observatory, &c. The population of Utrecht is about 45,000: the inhabitants manufacture broadcloths, silk, lace, linen, needles, refined sugar, salt, fire-arms, tiles, &c. The town has also important bleach-works, and an extensive general commerce. Utrecht is the birthplace of Pope Adrian VI.; it gives title to a Catholic archbishop, who is metropolitan for his co-religionists in the Netherlands.

UTTOXETER, Staffordshire, a market-town and the seat of a Poor-Law Union, in the parish of Uttoxeter, is situated in 52° 54' N. lat., 1° 51' W. long., distant 14 miles E.N.E. from Stafford, 135 miles N.W. from London by road, and 136 miles by the North-Western and North Staffordshire railways. The population of the town in 1851 was 3463. The living is a vicarage in the archdeaconry of Stafford and diocese of Lichfield. Uttoxeter Poor-Law Union contains 21 parishes and townships, with an area of 62,980 acres, and a population in 1851 of 15,140.

At Uttoxeter the river Dove is crossed by a handsome stone bridge. The houses in the town are generally well built. The church has been rebuilt of late years, but the lofty tower and spire of the former edifice remain. There are chapels for Wesleyan Methodists, Baptists, Independents, and Quakers. Alleyne's Grammar school is under the care of a head-master and an assistant. There are National schools and a savings bank. The market is on Wednesday: there are several yearly fairs. A county court is held. The Caldon Canal, which joins the Grand Trunk Canal near Stoke, ends at Uttoxeter.

UXBRIDGE, Middlesex, a market-town and the seat of a Poor-Law Union, in the parish of Hillingdon, is situated on the left bank of the river Colne, in 51° 38' N. lat., 0° 29' W. long., distant 15 miles W. by N. from London. The population of the town of Uxbridge in 1851 was 3236. The living is a perpetual curacy, in the archdeaconry of Middlesex and diocese of London. Uxbridge Poor-Law Union contains 10 parishes and townships, with an area of 25,906 acres, and a population in 1851 of 19,475.

Uxbridge was formerly a place of strength and a corporate town, and in the civil wars of Charles I. was the scene of an unavailing negotiation for peace between the commissioners of the king and those of the parliament. The mansion in which the conferences were held is still standing. The town, which is lighted with gas, extends for

about a mile along the Oxford road. There are two bridges over the arms of the river Colne, and one over the Grand Junction Canal. The market-house is a commodious brick structure supported on wooden columns. The Independents, Baptists, and other Dissenters have places of worship. There are a British school, a School of Industry, a literary and mutual improvement society, and a savings

VAELS. [LIMBURG.]

VAILLY. [AISNE.]

VAL DE PENAS. [CASTILLA LA NUEVA.]

VALA'IS, a canton of Switzerland, consists mainly of a great longitudinal valley traversed by the Rhône, and screened by two lofty and massive chains of Alps, one of which, on the south side, divides it from Italy, and the other from the canton of Bern on the north. Both chains are connected at the eastern end of the Valais with the central group of the St-Gothard by means of the Gallenstock, the Furka, and the Muthorn. The Rhône has its sources in a glacier which lies on the west side of the Gallenstock and the Furka, whence it flows westward through the whole length of the Valais, receiving numerous affluents on both banks of the mountains. The offsets form sixteen transverse valleys, some of them more than 20 miles in length, which slope down into the great valley of the Rhône. Near St-Maurice the valley of the Rhône becomes contracted between two lofty masses—the Dent-de-Morcles on the north, and the Dent-du-Midi, a projection of the southern chain—which leave between them at the bridge of St-Maurice merely space enough for the river. This is the geographical termination of the Valais, but the canton continues to stretch over a narrow and partly mountainous tract along the left bank of the Rhône for about 16 miles farther down, to the entrance of the river into the Lake of Geneva: the opposite or right bank below the bridge of St-Maurice belongs to the Canton-de-Vaud.

The area of the Valais is 1658 square miles, of which more than one-half consists of high alps and glaciers, and the remainder of lower offsets and intermediate valleys. The breadth of level ground in the valley of the Rhône varies from a quarter of a mile to three miles. The heat in the summer is very great in the valley, especially in the neighbourhood of Sion and Siders (Sierre in French), where the fig, mulberry, almond, and pomegranate thrive in the open air. [RHÔNE; LEMAN, Lake.] The vine and Indian corn are cultivated up to the height of 1000 feet above the level of the lake, barley to 2500, and potatoes to 3000 feet. Walnut, chestnut, cherry, apple, and pear trees are abundant. In several localities excellent wine, both white and red, is made. Cider is made in other districts. In common years the crop of corn is sufficient for the consumption. The forests are extensive; great quantities of timber are cut down and sent by the Rhône into France. The horned cattle, sheep, and goats, are very numerous; horses and mules are few in number. Mines of iron, copper, lead, silver, cobalt, and zinc have been found.

The population of the Valais amounted in March 1850 to 81,559, 81,096 of whom were Catholics and 463 Protestants. In the Lower Valais cretinism is a common infirmity. A French patois is spoken in the western part of the canton; German in the upper or eastern part. The canton returns four members to the National Council of Switzerland.

The canton is divided into 13 communities or little republics, called 'dixains'; every dixain has its council, the members of which are appointed by the respective communes, and which regulates all local affairs. Each dixain sends four deputies to the diet, or legislature of the whole canton, which meets every year at Sion. The diet appoints the members of the council of state, or cantonal executive. The bishop of Sion is president of the Diet of the Valais, and has four votes.

The Valais was, in Roman times, occupied by the Mantuates, Veragri, and Seduni. On the decline of the empire it fell successively under the Burgundians and the Franks. The Upper Valais maintained its independence during the middle ages, and conquered the Lower Valais in 1475, which it held by right of conquest till 1798, when the whole territory became a canton of the Helvetic republic. Previously the Valais had been only the ally of the Swiss Confederation. In 1802 Bonaparte formed it into a separate republic, which he united to the French empire in 1810. In this interval the Simplon road, through the Valais and over the Alps to Italy, was made, and the newly annexed territory was in consequence called the department of the Simplon. In 1814 the country was restored to its independence, and made a canton of the Swiss Confederation. A constitution was formed, in which the political distinction between the Upper and the Lower Valais was obliterated, but the aristocratic principle was maintained in the elections till 1830, since which date more democratic forms have been introduced.

The principal towns of the Valais are—Sion (Sitten), an old-looking town, surrounded with walls and towers and a ditch, in a picturesque situation at the foot of two insulated rocks, on the right bank of the Rhône. It has large cathedral, several other churches, a fine old

bank. The market on Thursday is important for corn. A market for provisions is held on Saturday; fairs are held on March 25th and September 29th. A county court is held.

UZEL. [CÔTES-DU-NORD.]

UZERCHE. [CORRÈZE.]

UZES. [GARD.]

V

town-house, a college, a curious old tower said to have been raised by Charlemagne, two ruinous old castles on the summit of the two hills, an hospital, an arsenal, and 3516 inhabitants. Sion is the ancient *Sedunum*, a Roman military station; it is called *Civitas Sedunorum* in an inscription in honour of Augustus, which is preserved in the cathedral. *Martigny* (*Martinach*), near the junction of the Dranse with the Rhône, is the chief town of the Lower Valais. It is built on the site of the ancient *Octodurum*, a Roman military station, has several good buildings, inns, and shops, and above 8000 inhabitants in the commune. The high-road of the Simplon, and that leading over the St-Bernard into Italy, pass through Martigny. *St-Maurice*, on the left bank of the Rhône, 10 miles below Martigny, a small town of 1327 inhabitants, is remarkable for its ancient Augustinian abbey, now suppressed. There is (or was before the recent suppression of the monasteries in Switzerland) a college annexed to the abbey, in which the classical languages, mathematics, physics, history, and geography were taught. There are, or were, colleges also at Sion and Brieg. The celebrated convent and hospice of St-Bernard was in the territory of the Valais. [BERNARD, St.]

VALDIVIA. [CHILE.]

VALENÇA DÓ MINHO. [ENTRE DOURO E MINHO.]

VALENÇAY. [INDRE.]

VALENÇE, a city in France, capital of the department of Drôme, is situated in a fertile plain on the left bank of the Rhône a few miles below the junction of the Isère, on the Paris-Lyon-Marseille railway, 381 miles S.S.E. from Paris, 65 miles S. from Lyon, and 143 miles N. by W. from Marseille, in 44° 56' N. lat., 4° 53' 40" E. long., at an elevation of 421 feet above the level of the sea; and had 13,829 inhabitants in the commune at the census of 1851.

Valence occupies the site of the Roman *Valentia*. It was a place of considerable strength, and afforded a refuge to Constantine, who was fruitlessly besieged here by Sarus the Goth. Jovinus sought refuge here, but the town was taken by the Visigoths, under their king Ataulfus. It was afterwards subject to the Burgundians, and passed from them to the Franks. In the middle ages it formed part of the kingdom of Arles, and was the capital of the Valentinois, a district of Dauphiné. The territory of Valentinois was made a duchy and conferred by Louis XII. on Caesar Borgia.

The town is united by an iron suspension-bridge with the famous wine district of St-Péray on the right bank of the Rhône. It is ill laid out, with winding and narrow streets, and ill built; it is surrounded by old walls, flanked with towers, and entered by several arched gateways. The high road from Paris and Lyon to Marseille skirts the wall on the outside and passes through the southern suburb of Saunière. On the north side of the town is a citadel, fronting a parade or exercise-ground planted with trees. The principal buildings are—the cathedral of St-Apollinaire, which contains a monument by Canova of Pope Pius VI. (who died here August 29th, 1799); the former residence of the bishop; the prefect's residence, formerly an abbey, with extensive gardens; the house in which Pius VI. resided; a house in the Grande Rue, the front of which is a rich specimen of gothic architecture; the court-house; the barracks; and the theatre. There are two public walks. There are scarcely any Roman remains existing at Valence.

The manufactures of Valence comprise cotton-yarn, printed cottons, silks, gloves, hosiery, and outlery; there are dye-houses, tan-yards, rope-walks, saw-yards for marble, tile-yards, potteries, lime-kilns, and a great number of cartwrights' shops. Trade is carried on in the wines, fruits, and silks of the south of France; in brandy, liqueurs, corn, and manufactured goods: there are six fairs in the year. Steamers ply daily to Avignon and Lyon. The well-known Hermitage and St-Péray wines are grown in the neighbourhood of Valence. [ARDÈCHE; DRÔME.]

Valence gives title to a bishop whose diocese consists of the department of Drôme. It has tribunals of first instance and of commerce, a college, an ecclesiastical school, a school of artillery (in which Napoleon I. was a pupil from 1785 to 1791), and a public library of 15,000 volumes.

VALENCE. [TARN-ET-GARONNE.]

VALENCIA, an ancient province of Spain, formerly a kingdom, is bounded E. and S.E. by the Mediterranean Sea, W. and S.W. by the provinces of Castilla la Nueva and Murcia, N. by Cataluña and Aragón; on the south it terminates by a point. It is situated between 37° 50' and 40° 45' N. lat., 0° 32' E. long. and 1° 25' W. long. The greatest length north to south is about 220 miles; the greatest width east to west is little more than 50 miles. The area is 7683 square miles. The

population in 1849 was 1,110,960. It is divided into the three following modern provinces:—

Provinces.	Area in Square Miles.	Population in 1849.
Valencia	7,683	500,000
Alicante		363,219
Castellon		247,741
Total	7,683	1,110,960

Surface.—The province of Valencia consists of a long and rather narrow tract extending along the Mediterranean Sea, the modern province of Valencia, forming the central portion, Alicante the southern, and Castellon the northern. The whole of the interior is mountainous, the low and level tracts lying along the coast and the courses of the rivers. The mountains are a portion of the great buttress which in this province and that of Murcia supports the table-land of Castilla la Nueva. The mountains are mostly lofty, rugged, and bare, and in some parts they extend close to the coast. The Sierra de Penanquilla crosses the province north of Alicante in a direction from south-west to north-east, terminating at Cape San Martin. This range consists of schistose rocks capped by limestone. The other sierras, which are very irregular, but have mostly a direction from west to east, consist for the most part of limestone, marbles of various colours, and gypsum. The valleys are generally narrow, but there are a few level tracts of considerable extent.

Rivers.—The rivers mostly originate in the provinces west of Valencia. The Turia, or Guadalaviar, rises in Aragon, and crossing Valencia in a direction from north-west to south-east passes the city of Valencia, and falls into the sea below the small port of Grao. The Jucar rises in Castilla la Nueva, and soon after entering this province receives the Cabriel on the north bank; it then flows westward, receives the Magro, and enters the sea at Cullera. The other rivers have a shorter course. The Alcoy, which rises near the town of Alcoy, and the Palancia, which enters the sea below Murviedro, are the only rivers of considerable size which belong entirely to this province. The Mijares rises in Aragon, and receives in this province the Villahermosa and the Monleon. The Segura crosses the southern angle of the province on its way from Murcia to the sea.

Soil and Productions.—The numerous streams and rivers of this province afford the means of irrigating the lands to perhaps a greater extent and in a more perfect manner than anywhere else in Spain. The most extensive of the level tracts are those of Valencia, Orihuela, Alicante, and Jativa (Xativa), or San Felipe. These flat and rich lands are called Huertas, 'gardens.' The Huerta of Valencia has a main-trunk canal, filled from the Turia, whence numerous smaller canals, called acequias, distribute the water in regulated proportions to the various beds into which the land is divided. These beds are quite flat, and the water is allowed to stand on them for a few days, after which it is let off. The seed is then sown, and no sooner is one crop removed than the land is prepared for another. Three or four crops are thus obtained in the year. The Huerta of Alicante is watered from a vast reservoir called El Pantano, constructed in the mountains about fifteen miles from the city of Alicante. This huerta comprehends an expanse of about 30,000 acres, everywhere encircled by lofty mountains, except towards the sea. The huertas of Jativa and of Orihuela, are also of considerable extent, well watered, and exceedingly productive.

All the level grounds are under cultivation, and wheat, barley, oats, maize, beans and peas, flax and hemp, are produced in abundance. In the swampy grounds large crops of rice are obtained, which are generally consumed in the province, rice forming a large portion of the food of the lower classes; but these tracts are very unwholesome. Much rice is grown in the vicinity of the Albufera. [ALBUFERA DE VALENCIA.] The higher grounds and slopes of the hills are allotted to vines, mulberry-trees, olives, figs, oranges, lemons, quinces, and pomegranates. The forest-trees are mostly elms, chestnuts, the ilex-oak, cypress, and poplars, whilst lofty pines cover the summits of the rocky hills. The rugged moors, unfit for cultivation, are abandoned to the various species of cistus, rosemary, thyme, lavender, and other odoriferous shrubs.

The quantity of wine produced annually in Valencia amounts to about 9,000,000 gallons. In the districts of Benicarlo and Penicola a strong red wine is produced, of which a large quantity is exported to Germany and to Bourdeaux, for mixing with the second-class clarets to give them body and colour. Large quantities of raisins are exported to England, which are called Valencias, and are used for making plum-puddings. The exports of fruit are large, especially of figs.

No great number of cattle or horses is kept in Valencia; and the sheep, though numerous, yield wool of indifferent quality. Mercury, copper, sulphur, arsenic, argentiferous-lead, iron, &c. are among the mineral products, but they are procured only in small quantities. The manufactures are unimportant. Woollen and linen stuffs are indeed made in several towns of the province, and silk goods in Valencia and other places, but they are chiefly consumed within the province.

The manufacture of satins, silk-ribands, and velvets, has so much improved and increased as to render a supply from France no longer necessary. Cloth of superior quality is made at Alcoy, and silk is no longer exported in its raw state, but is spun at Valencia and other places by steam. Cordage and matting are made from the fibre of the esparto-rush; and tiles, soap, glass, paper, pottery, and earthenware, are exported to other parts of Spain.

Towns.—The city of Valencia is the capital of the ancient province and also of the modern. [VALENCIA.] Alcoy, 60 miles S. by W. from Valencia, stands on the main road from Alicante to Valencia, on a tongue of land between two streams which are the head-waters of the river Alcoy. The houses are built among terraced gardens in a ravine overlooked by hills. There are many new houses, for it is a busy commercial place, and has considerable manufactures of paper, and of woollen-cloths of a superior quality. It contains three parish churches, and has a population of about 27,000. The city of Alicante, capital of the province of Alicante, is described under that head. [ALICANTE.] Benicarlo, 80 miles N.N.E. from Valencia, is a walled town with a ruined castle, and with a small fishing port. It is a straggling ill-built place, and contains a population of about 6000. The vicinity is celebrated for full-flavoured red wines, which are exported to Bourdeaux and elsewhere to give body to the inferior clarets. Castellon de la Plana, 40 miles N.N.E. from Valencia, the capital of the province of Castellon, stands in a well-irrigated and fruitful plain, whence the addition to the name. It is a well-built and flourishing town, surrounded by walls, and contains some fine old churches, and a remarkable octagon bell-tower, Torre de las Campanas, 260 feet high. It has brandy distilleries and an active trade. Ribalta, the Spanish painter, was born here, March 25, 1551. The churches and convents once contained several of his finest works, and a few still remain. The population in 1845 was 16,952. Concentina, 55 miles S. from Valencia, contains a square Moorish tower, and has manufactures of woollen-cloths. The population in 1845 was 5972. Cullera, 28 miles S.S.W. from Valencia, is a small town on the coast of the Mediterranean Sea, at the mouth of the Jucar. It contains an old castle and a church, and had in 1845 a population of 7114. Elche, the *Illici* of the Romans, 15 miles S.W. from Alicante, stands at a short distance from the left bank of the Elda, a tributary of the Segura; it occupies both sides of a ravine, over which there is a handsome bridge. The houses are Moorish, with flat roofs and few windows, and rise above each other on the rugged slopes. The old castle has been turned into a prison. The church of Santa Maria is handsome, and has a fine portico, and a tower from which may be seen a vast extent of plantations of date-trees, which encircle the town on all sides: these trees are tens of thousands in number, and many of them are of great age. The dates are exported from Alicante, and are sold as Barbary dates. Elche is a flourishing place, and in 1845 contained a population of 18,068. Jativa (Xativa), or San Felipe, 40 miles S. by W. from Valencia, was the Roman *Setabis*, celebrated for its castle, and its fine linen handkerchiefs, which were greatly prized at Rome. The castle, of very large size, occupies a rocky height above the town. The town is well-built, and well supplied with public fountains. It contains a collegiate church and five parish churches. There are beautiful public walks, and the huerta, abundant in grain, fruits, and flowers, extends northward till it communicates with the huerta of Valencia. The population of the town is about 15,000. Monovar, 27 miles W.N.W. from Alicante, has manufactures of coarse woollens, and contained in 1845 a population of 7590. Morella, 50 miles N. from Castellon, stands on a rugged slope, with a castle above it. The town contains many good houses, and has three or four churches, and several fountains supplied from an aqueduct. The population in 1845 was 6211. Murviedro, 18 miles N.N.E. from Valencia, stands on the site of the *Saguntum* of the Romans, which was besieged and taken by Hannibal, B.C. 219. The town is built on the south bank of the Palancia at the base of a mountain, and is now a poor straggling place. It contained in 1845 a population of 7476. Long lines of walls and towers crown the heights above the town, where are also the remains of the Roman theatre. There are portions of the walls of the Circus Maximus and other Roman antiquities. There is a large Moorish castle, and the place, with its fortifications, is of the highest military importance for the defence of Valencia. Novelda, 20 miles W. from Alicante, stands on the western bank of the Elda, which enters the Segura at its mouth. The town stands in a fine plain, and has manufactures of brandy and lace. Population, 8095. Orihuela, 35 miles S.E. from Alicante, a city, and the see of a bishop, is situated at the foot of a mountain which overlooks it on the north, and is built on both banks of the Segura, which is here crossed by two bridges. The plain, or huerta, is about 17 miles from east to west, and about 5 miles in average breadth from north to south. It is bounded N. and S. by ranges of hills and mountains bare of trees, E. by the Mediterranean, and W. by the Huerta of Murcia, of which it is a prolongation. This huerta is of extraordinary fertility, and produces in abundance all kinds of grain, fruits, and vegetables. There are large plantations of olive-trees, mulberry-trees, and orange-trees. The town is long and narrow, winding round the base of the mountain. The streets are wide, but not paved, the houses tolerably good, and the general aspect agreeable. It contains a cathedral, and ten other churches, a

university-college, hospital, barracks, manufactures of linen and hats, and also tanneries, corn-mills, and oil-mills. The population in 1845 was 17,459. It is of very ancient foundation, and has been possessed successively by the Carthaginians, the Romans, the Moors, and Spaniards. *Peníscola*, 75 miles N.N.E. from Valencia, is a small town and fortress, situated on a rock 240 feet high, and connected with the mainland only by a narrow strip of sand. It possesses a fountain of fresh water. Population, 2000. *Saguntum* is the name of the Roman town which occupied the site of *Murviédro*. *Segorbe*, 30 miles N.N.W. from Valencia, stands near the right bank of the Palancia. It is the see of a bishop, and is tolerably well built. It has 6 plazas, 13 public fountains, and more than 40 fountains not public. The cathedral is used as the parish church, and there is a handsome bishop's palace. There are manufactures of earthenware, paper, starch, and brandy. The population in 1845 was 6015. *Villarreal*, 35 miles N.N.E. from Valencia, and 4 miles inland from the Mediterranean, is inclosed by ruined walls, which are entered by four gates. It has manufactures of woollens and tape, and brandy distilleries. The population in 1845 was 8207. *Vinaros*, 85 miles N.N.E. from Valencia, is a sea-port town near the mouths of the Ebro. It is an ill-built town, partly inclosed by ruined walls. It contains a fine parish church, and has a ship-building yard, a considerable coasting-trade, and active fisheries. The population in 1845 was 10,600.

History, &c.—Valencia under the Moors formed a part of the kingdom or kalifate of Cordova. It was taken by the Cid, Rodrigo Diaz de Bivar, in 1094, and he held the city and province till his death in 1099. The Moors dispossessed his widow Ximena in 1101, but Valencia was retaken in 1238 by Jaime I. of Aragon. It was brought under the crown of Castilla by the marriage of Fernando with Isabel, and afterwards became a province of the kingdom of Spain. Like the other provinces composing the kingdom of Aragon, Valencia preserved its representative body and its privileges; but the inhabitants having taken an active part against the Bourbon dynasty during the War of the Succession, Felipe V. deprived the province of its old constitution, and obliged the inhabitants to conform in every respect to the general laws of Spain. It retained however its title of kingdom (Reino de Valencia) till the ancient province was divided into the present three modern provinces.

The dialect spoken in the province, though much akin to the Catalanian, differs considerably from it, as it retains more of the Provençal.

(Madoz, *Diccionario Geográfico de España*; Ford, *Handbook of Spain*; Swinburne, Townsend, Hoskins, and other travellers.)

VALENCIA, a city of Spain, capital of the ancient kingdom and province of Valencia, and named *Valencia del Cid*, and of the modern province of Valencia, is situated in 39° 30' N. lat., 0° 25' W. long., in a fine plain, on the southern bank of the Turia, or Guadalaviar, about 200 miles E.S.E. from Madrid, 2 miles above its small port called Grao, and 4 miles above the entrance of the river into the Mediterranean Sea. It is the residence of a captain-general, formerly styled viceroy, and is the see of an archbishop. The population in 1845 was 71,018.

The city of Valencia is of a circular form. It is surrounded by a wall built by Pedro IV. in 1356, 80 feet high and 10 feet thick, with a road on the summit. The Turia flows at the base of the wall on the northern side, and the shallow bed of the river is crossed by 5 bridges, which, besides their proper use, serve also to discharge the water in times of inundation. The wall is about 2½ miles in circuit, is flanked at intervals by towers, and is entered by 8 gates. The streets, like those of most Moorish-built cities, are narrow, crooked, unpaved, and frequently without thoroughfares; but those which have been built of late years on the site of demolished convents and churches are wider and tolerably well paved. The houses are lofty and gloomy-looking, and many of them have flat roofs. The principal plaza, called El Mercado, contains the only fountain. In this plaza is the Lonja de Seda, or Silk Hall, a beautiful gothic building of 1482. The city is furnished with public sewers of great solidity, which are said to be the work of the Romans: it has also a quay, or rather promenade, faced with stone and planted with trees, which lines the whole length of the Turia down to the Grao.

The cathedral was begun in 1262, and was extended in 1482; the original architecture was gothic, but it has since been much altered, and mixed with Grecian styles. The interior is richly adorned with gilt-work and marbles, and contains many fine pictures by Juanes, Ribalta, Orrente, and other Spanish painters. The cathedral-tower is an isolated octangular gothic belfry called El Miguelete, 162 feet high, and commanding a magnificent view of the huerta, or surrounding plain. There are 14 parish churches. The church of Nuestra Señora de los Desamparados, and the seminary called La Escuela Pia, both rotundas, are worthy of notice. The archbishop's palace, which is near the cathedral, once contained a fine library, but many of the books were destroyed during the French occupation. There is also a library belonging to the university, which is open to the public: it contains about 15,000 volumes. The university in 1841 had 1600 students and 70 professors. Besides the university there are 6 colleges and several academies. Since the suppression of the monasteries, a collection of the pictures which they had contained has been formed in the convent called the Carmen, where the paintings of the

Valencian school may be studied and appreciated. There are from 600 to 700 pictures by Juanes, Ribalta, Ribera, and others. The citadel was constructed during the reign of Charles V. There is a palace called El Templo, which was built by Charles III. for the knights of the military order of Montesa. The Casa Consistorial is a noble Doric pile, where the Audiencia, or supreme court of justice, holds its sittings. The Casa de Misericordia, or poor-house, is a fine edifice. The custom-house is a large modern structure. The principal theatre is also modern. Outside the wall are botanic gardens, a bull-arena, and a public promenade, called La Glorieta, planted with trees and shrubs, and ornamented with fountains and statues. The principal manufactures are silks, linen- and woollen-cloths, hats, leather, glass, paper, artificial flowers, and tiles for flooring. The suburbs are extensive, and contain a large population, probably not less than 30,000 or 40,000. The Grao is little more than a small roadstead in the bed of the river. The roadstead at the entrance of the river is exposed to south and south-west gales. The city was taken by the French under Suchet in 1812, and they held it till June, 1813. A few miles south from Valencia is a large inlet from the sea called the Albufera. [ALBUFERA DE VALENCIA.]

VALENCIA. [ESTREMADURA, Spanish; VENEZUELA.]

VALENCIENNES. [NORD.]

VALENSOLE. [ALPES, BASSES.]

VALENTIA. [KERRY.]

VALENZA. [ALESSANDRIA.]

VALÉRY, ST. [SEINE INFÉRIEURE; SOMME.]

VALLADOLID, a city of Spain, capital of the modern province of Valladolid, in the ancient province of Leon, is situated in 41° 40' N. lat., 4° 42' W. long., about 100 miles N.W. from Madrid. The population in 1845 was 19,191. The city is built on the left or eastern bank of the Pisuerga, at the confluence of the Esqueva, in an extensive valley encompassed by eminences which are not properly hills or even high grounds, but the rugged and precipitous sides of the limestone plain out of which the Valladolid valley seems to have been scooped. The city occupies both banks of the Esqueva, which thus answers the purpose of drainage. The bridges over the river, the arches, narrow streets, and overhanging houses, are very picturesque. With the exception of the Plaza Mayor, or great square, and the streets leading to it, the city has a melancholy and deserted aspect.

Valladolid was called Pincia by the Romans. The name was changed by the Moors into Belad Walid, or 'the town of Walid,' after Walid Ibn Hishám, the eleventh kalif of the race of Umeyyah, in whose time Spain was conquered by Tárik Ibn Zeyyád and Músa Ibn Nusseyr. The town was reconquered by the Christians under Ordoño II., who was the first of the kings of Oviedo who assumed the title of King of Leon. Early in the 15th century Juan II., king of Castilla and Leon, made Valladolid his place of residence. Under him and afterwards under Carlos V. it was adorned with splendid residences, and still more so under Felipe II., son of Carlos, who was born here, and who in 1595 induced the Pope Clement VIII. to elevate the town to the dignity of a bishopric, and who gave it the title of Ciudad (city). Felipe III. resided here almost constantly. Valladolid having been thus favoured by several kings, became a city of splendid palaces, conventual buildings, churches, public edifices, and mansions of the nobility.

The Plaza Mayor is very imposing from its size and style of architecture. It occupies a central space where there was a great fire in 1561, which lasted three days, and burnt down several streets. The granite pillars which support the arcades give it an air of solidity, and perhaps of gloom, but it is the most frequented part of the city, and contains the best shops. The cathedral was designed and commenced by Herrera under Felipe II., and if completed according to the model which still exists, would have been a grand specimen of Greco-Romano architecture. Only one of the four intended towers was finished, and that fell down in 1341, and has not been rebuilt; and the building is incomplete in other parts. There are several conventual buildings and churches of beautiful architecture, gothic and Grecian; but most of them have been much injured, chiefly during the occupation of Valladolid by the French. Among them may be mentioned—the San Benito, a church and convent of the Benedictines; the Penitencial de las Augustias; the Colegio de San Gregorio; the Dominican convent of San Pablo, distinguished for the exquisite finish of the carvings of its portada (grand entrance); and the Huelgas. The Colegio Major de Santa Cruz, formerly one of the six largest colleges of Spain, a beautiful gothic structure, has been converted into a Museo, in which have been collected the pictures, sculptures, carvings, and other works of art of the suppressed convents. The royal palace of Felipe III. still remains, but it suffered much during the French occupation: it is of mixed architecture. The university, one of the best in Spain, was founded in 1346; it is chiefly distinguished for its schools of jurisprudence, and was attended in 1841 by 1800 students. The Colegio de los Irlandeses is attended by Roman Catholic students from Ireland. The Chancilleria, or building where the chief court of justice holds its sittings, is a large and fine structure of the Tuscan order of architecture. There are beautiful alamedas, or public walks, on the banks of the Pisuerga and Esqueva.

Valladolid has manufactures of silk, cotton and woollen-cloths, jewellery, hats, linen and cotton-thread, paper, perfumery, earthen-

ware, and leather; and also a trade in white wines, olive-oil, and silk, produced in the vicinity.

Valladolid is the see of a bishop, suffragan to the Archbishop of Toledo; and is the residence of a captain-general, a military intendant, and other authorities.

(Madox, *Diccionario Geografico de España*; Ford, *Handbook of Spain*.)

VALLADOLID. [HONDURAS; MEXICO.]

VALLEJO. [CALIFORNIA.]

VALLERAUGUE. [GARD.]

VALLET. [LOIRE-INFÉRIEURE.]

VALLETTA. [MALTA.]

VALLIEVO. [SERVIA.]

VALOGNES. [MANCHE.]

VALOIS, LE, a province of France, belonging originally to Picardie, but incorporated in the military government of the Ile-de-France. Its capital was Crépy: it is now included in the departments of Oise and Aisne. Philippe III., king of France, gave the county of Valois (A.D. 1285) as an appanage to his second son Charles, whose son became king of France as Philippe VI., or Philippe of Valois. Philippe VI. bestowed the county of Valois on his fifth son Philippe; from him it came to his wife Blanche, and on her death (1392) it came to Louis, duke of Orléans, second son of Charles V. of France. The accession of the Duke of Orléans to the crown as Louis XII. reunited the county or duchy of Valois to the crown domains.

VALONA. [AVLONA.]

VALPARAISO, the principal port of Chili, is situated in 71° 45' W. long., 33° 2' S. lat., 55 miles S. from Santiago, and 225 N. from Concepcion. The town has been nearly rebuilt since the great earthquake in 1822. It consists of a long narrow street, built under a cliff, following the sinuosities of the shore close to the sea-side. The houses have all stories above the ground-floor, and they are not flat-roofed. Painted piazzas are substituted for balconies almost at every house, and their different colours give the town a gay appearance. The custom-house and several of the churches and other public buildings are handsome edifices. The Protestants have a cemetery and a place of worship. Trade is in the hands of the English, Americans, and French, and a handsome suburb on the heights above Valparaiso is almost exclusively inhabited by them. The population numbers about 30,000. In 1809 only nine vessels entered the harbour in twelve months; the entries now number nearly 1000 annually. The harbour is good, with nine fathoms water close in-shore, of easy entrance, and sheltered from all winds except the north; it is defended by three forts and a battery on a level with the water. The customs revenue in 1849 exceeded two millions of dollars. The chief exports are—copper, gold, silver, wheat, tallow, hides, timber, indigo, wool, sarsaparilla, fruits, &c. The imports consist of foreign manufactures, tea, chocolate, sugar, tobacco, hardware, &c. The trade of the port has greatly increased since the discovery of gold in California. Steamers ply regularly to Callao and other Pacific ports, and a railway has been constructed to Santiago. There are extensive bonding-warehouses and large shipbuilding-yards. Besides the ships engaged in the import and export trade of Chili, Valparaiso is much resorted to by vessels in the Pacific for the purpose of obtaining provisions. [See CHILE, in SUPPLEMENT.]

VALSESIA. [NOVARA.]

VALTELLINA, a longitudinal valley on the Italian side of the Rhetian Alps, drained in its whole length by the river Adda. The Adda rises at the foot of the Stilsfer Joch, crosses the district of Bormio, which lies east of Valtellina, and then entering Valtellina at the defile of La Serra, flows in a general direction from north-east to south-west until it enters the lake of Como at the western extremity of the valley. Valtellina Proper is about 45 miles in length, but if we include Bormio, which is a continuation of the same valley, the whole length is 55 miles. It is bounded N. by the Swiss canton of the Grisons, the main ridge of the Rhetian Alps dividing the valley of the Adda from that of the Inn, or Engadin; N.E. by the Tyrol, from which it is separated by the lofty group of the Ortler and the Stilsfer Joch; S. by the Austrian provinces of Brescia and Como; and W. by the lake of Como and by the district of Chiavenna, with which it is politically united. Chiavenna consists mainly of the valley of the Liro, a stream which rises at the foot of the Splugen, and flowing from north to south joins the Maira, which comes from the Grisons country. A few miles lower the united stream enters the Laghetto, or Upper Lake of Como. From the Splugen to the lake is a distance of about twenty miles. The three districts of Valtellina, Bormio, and Chiavenna have been for ages united under the same administration, and now form the Austrian province of Sondrio. Valtellina proper is the largest and finest part of the whole: it has a genial climate and a fertile soil. The heat is very great in summer. All the fruit-trees of Italy thrive there. It produces abundance of wine, Indian corn, millet, and wheat. It has excellent pastures and meadow-land, and its cheese rivals the best made in Lombardy. The slopes of the lower hills along the northern side of the valley are covered with vines planted in terraces. The level land along the banks of the Adda is not more than a mile and a half in breadth, the mountains rising gradually on both sides and forming numerous transverse valleys between their offsets. The Val Poschiavo and the Val Bregaglia however belong to the canton of the Grisons. The southern ridge, which

separates the Valtellina from the province of Brescia, is a lower offset of the Rhetian Alps, which detaches itself from the Ortler-Spitz, and runs in a south-west direction towards the Lake of Como. Its principal summit is Monte Legnone, about 8000 feet above the sea. The district of Bormio, being more elevated than Valtellina, is colder and less fertile. [BORMIO.] The northern part of the district of Chiavenna is likewise an alpine country, but there is a fine plain between the town of Chiavenna and the Lake of Como, which is as productive as any part of North Italy.

The area of Sondrio is 1253 square miles; the population 98,550, of whom more than seven-tenths live in the Valtellina. The spoken language is an Italian dialect. The province is divided into seven districts. The principal towns are—Sondrio, the head town of the whole province, situated on the right bank of the Adda. Sondrio has a handsome cathedral, a gymnasium, a college, a court of justice, a theatre, an hospital, and about 4500 inhabitants. Chiavenna, a pretty town on the river Maira, at the branching off of the two roads over the Splugen and the Septimer, has six churches, a town-house, a castle, an hospital; manufactures of silk, paper, cloth made of amianthus, and pottery made of 'pietra ollaria,' a soft stone found in the neighbourhood; and about 3600 inhabitants.

VAN LAKE. [ARMENIA.]

VAN DIEMEN'S LAND, now called *Tasmania*, is an island and British colony situated in the southern hemisphere, south of Australia. It lies between 40° 45' and 43° 45' S. lat., 144° 45' and 148° 30' E. long. It is separated from Australia by Bass's Strait. On the west of the island is the Indian Ocean, on the east the Pacific, and on the south the Southern Ocean. The greatest length is 230 miles; the greatest breadth is 190 miles. The area is about 22,630 square miles. The population in December 1847 had increased to 70,164, of whom 47,828 were males and 22,336 females. Of this total 33,173 were either free emigrants, or were born in the colony; the rest were then or had been convicts. Emigration to Victoria colony has combined with other causes to prevent any material increase of the population of Van Diemen's Land of late years.

Coast-line and Islands.—The western coast is about 240 miles long. It is only broken by the two large inlets which form Macquarie Harbour and Port Davy. The shores elsewhere are steep, exposed to a strong swell and surf, and without anchorage or shelter. The southern coast is about 50 miles long, and runs in a serpentine line, forming several bays, of which a few have good anchorage. The south-eastern coast extends about 60 miles in a straight line. It contains a greater number of safe anchorages than probably any other country of the same extent on the globe; in fact there is hardly a mile along this coast-line which does not offer a safe refuge to vessels. This great advantage is owing partly to the size and form of the island of Brune, which extends along the coast, and partly to two far-projecting promontories, called Ralph's Peninsula and Tasman's Peninsula. The strait which divides Brune Island from the mainland is called D'Entrecasteaux Channel, or Storm Bay Passage, and extends 45 miles in a straight line. The eastern coast extends more than 150 miles in a straight line. It has many good anchorages and inlets, of which Oyster Bay is the largest. On this coast is Maria Island, which is about 12 miles long, and consists of two large masses of rock connected by a neck of land. It is a convict establishment, and Smith O'Brien was for a while confined upon it. North of Maria Island, and near to Oyster Bay, is Schouten Island, which is about 6 miles long and 3 miles wide. The northern coast extends about 160 miles in a straight line. North of this coast is Bass's Strait, at the eastern entrance of which is the group of the Furneaux Islands. The largest, Great Island, extends 40 miles from north to south, and is on an average 9 miles wide. South of Great Island is Cape Barren Island, which extends east to west about 20 miles, with an average width of about 5 miles. North of the Furneaux Islands is the Kent group. The strait which divides Furneaux Islands from Van Diemen's Land is called Banks's Strait, and is 10 miles wide. Lighthouses have been erected at various points on the islands.

Surface and Soil.—The soil is generally good and fertile, but the cultivated land has been much exhausted. Above 4,000,000 acres have been appropriated or leased as pasture; a large proportion of the remaining land is not available even as pasture. The unoccupied country lies west of the range of hills dividing the Derwent from the Jordan. The mountain region, south of 42° S. lat., occupies the southern and western districts of the island, and reaches north-east to the banks of the river Derwent. This river, from its source in Lake St. Clair to its mouth, separates the well-known part of the island from that which is unknown except the coasts and the districts in the immediate vicinity of the river. These districts are occupied by an apparently continuous mountain range, which extends along the river at a short distance from its banks. Many of the summits are from 3000 to 4000 feet high. The valley of the Lower Derwent extends from Mount Nelson upwards to the confluence of the Derwent with the Ouse, and is rather more than 50 miles long. It is a tract of great fertility. A hilly region extends from this valley eastward to the shores of the Pacific. North of this hilly region are elevated plains crossed by woody tracts. Besides the Derwent, this region is watered by the Nive, the Dee, the Ouse, the Clyde, the Jordan, the Huon, Coal River, and Pitt's Water. There are several considerable lakes.

The watershed of the eastern districts of Van Diemen's Land north of 41° 50' S. lat. lies close to the Pacific. The mountains which extend along the shores of the Pacific, and connect the northern part of the Eastern Tier with the range of the Ben Lomond, constitute a high range, overtopped by several summits. Ben Lomond is estimated to rise 4200 feet high. The valleys of the North Esk and South Esk are fruitful portions of this district. North of the upper valley of the South Esk extends a region, the whole of which is probably occupied by mountains; but the interior of it has not been explored. The gorge through which the South Esk flows above Launceston separates the valley of the Tamar, which lies north of it, from the Basin of Lincoln, which extends south of it. The Tamar is only a deep inlet of the sea, which runs up to the town of Launceston, where the two Eskas fall into it. The tide flows no higher than Launceston. The Basin of Lincoln is the most fertile portion of Van Diemen's Land. It extends from south-east to north-west about 25 miles, and as much from north-east to south-west; it is watered by several large rivers, which unite, and ultimately fall into the South Esk. The rivers are, ranging from east to west—Elizabeth River, Macquarrie River, Lake River, Pennyroyal River, and Mæander or Western River. Westward of this basin is the Western Tier, or Western Mountains.

Proceeding westward from the banks of the Mersey, two high and steep mountain ridges must be passed before that region is reached which is called the Surrey Hills, and which constitutes one of the most remarkable features of Van Diemen's Land. It seems to be of somewhat a square form, and each side is about 40 miles long. It gives origin to a great number of rivers, which run off in all directions. The region is elevated, cold, dry, and covered with good herbage. Between the valley of the Mæander and the Surrey Hills on the south, and Bass's Strait on the north, is the hilly region of Devonshire. West of the Emu River begins the Great Plain. It occupies the north-western portion of the island, extending along the northern coast from the Emu to Cape Grim, and along the western coast to the Arthur River. It consists of an alternation of plains, swamps, and forests, and contains only a few spots fitted for cultivation. The river Arthur, whose mouth is near 41° 10' S. lat., is a river of considerable size, and brings down a large volume of water. The Emu river is navigable for boats for a few miles.

Climate and Productions.—There is a considerable difference between the climate of Hobart Town on the southern and that of Launceston on the northern coast. At Hobart Town, heat, cold, rain, and sunshine succeed each other with great rapidity; in winter, the same alternations, with the addition of hail and snow, follow each other in quick succession. Thunder-storms are less frequent than in Australia, but violent gusts of wind sometimes occur, which cause great destruction in the forests. Along the western coast strong south-western winds prevail nearly all the year round, and render this tract almost inaccessible on account of the want of harbours. The climate is very healthy; no epidemic or contagious diseases have been observed, and acute diseases are generally mild and of short duration, and yield more easily to the usual remedies than in any other country.

The minerals of Van Diemen's Land include copper, iron, lead, zinc, manganese, coal, slate, salt, and sandstone. Gold is said to have been found, but as yet the quantity produced is small.

All grains cultivated in England succeed well in Van Diemen's Land. Wheat is of excellent quality. The vegetables and fruits of Europe are cultivated by the colonists in great abundance. The native forest-trees and shrubs are all evergreens. The most useful trees are the stringy-bark tree, which is used for building and fencing; and the blue gum tree, of which most of the boats in the colony are built.

The domestic animals of Europe thrive very well here. Sheep are most numerous. Wool and live stock are exported. Black cattle are numerous, and many head are annually exported. Some horses are also exported.

The spermaceti-whale is very abundant in Bass's Strait, and many of them are annually taken, but more by the inhabitants of Australia than by those of Van Diemen's Land. Black whales abound in all the seas round the island, and a very lucrative fishery is carried on along the southern coast. Whalebone and train-oil are important articles of export. Most of the land animals are similar to those of the neighbouring continent. [AUSTRALIA.]

Colonisation.—In 1808 Lieutenant Bowen, commissioned by the government of New South Wales, landed on the east bank of the Derwent, and formally took possession of Van Diemen's Land as a place of settlement. In the following year Colonel Collins, the first lieutenant-governor, arrived, and established the seat of government on the west bank of the Derwent: he gave to the spot the name of Hobart Town, in compliment to Lord Hobart, then secretary of state for the colonies. In 1819 the immigration of free settlers from England commenced, the colony having been previously exclusively formed of criminals sent from New South Wales for crimes committed there, and of the civil and military officers charged with their superintendance. Till the year 1824 the government was subject to that of New South Wales; but it was then made independent of that colony. Great progress was made by the colony between the

years 1824 and 1836, during the administration of Colonel Arthur. Roads were formed and bridges constructed in different parts of the island; wholesome laws were introduced, and the fruits of enterprise and industry were secured by an improved police system.

Trade and Commerce.—The efforts of the local government are rapidly extending improvements over the island. Among the greatest works is a bridge over the Derwent, on the high road from Hobart Town to Launceston; it is of wood, and has 20 bays, or arches, of 32 feet span each.

The exports to Great Britain in 1853 included 5,514,756 lbs. of wool (the average quantity for four years, 1849-52, had been upwards of 5,000,000 lbs.); 9599 hides (the average number for the previous four years had been about 300,000); 778 cwt. tallow; 4762 cwt. bark; and 405 tons spermaceti-oil. The declared value of the imports of British produce and manufactures from Great Britain in 1853 was 1,408,927*l.*, the average for the preceding four years being only about 420,000*l.* Of foreign and colonial produce, chiefly spirits, wine, and tobacco, imported from Great Britain, the declared value for 1853 was 694,790*l.* The number of sailing vessels entered as belonging to Van Diemen's Land on December 31st, 1854, was, Hobart Town 219, tonnage 21,473; Launceston 62, tonnage 6389. Of steam-vessels 6, of 510 tons aggregate burden, were entered at Hobart Town, and 2 of 356 tons at Launceston.

Hobart Town, the capital of the colony, is built upon an undulating surface, on the left bank of the river Derwent. The streets are of good width, and laid out on a regular plan, and contain many good dwelling-houses and shops. Some improvements have been made of late years, particularly in the construction of a new market-place in the town, and of docks and wharves at the river-side. Several of the public buildings are handsome. A small rivulet which runs through the town, affords a supply of fresh-water. The population on December 31st, 1847, was 21,467, of whom 38 were aborigines.

Launceston, the second town of the colony, is situated at the confluence of the North Esk and South Esk, which there form the Tamar, 45 miles from its outfall in Bass's Strait. It is 124 miles N. by W. from Hobart Town. Launceston contains a government house, a court house, jail, barracks, and other public buildings, and several places of public worship. Convenient wharfs have been constructed. The population in 1847 was 10,100. The shipping trade is important. A good highway extends from Hobart Town to Launceston, and there are inns along it at short distances from each other.

Richmond is situated on the Coal River, about 12 miles N.E. from Hobart Town, and contains a population of 8300. *Longford* has a population of 3,690. *Avoca* is a small town in the rural deanery of Longford, with a population of 963.

Van Diemen's Land is divided into 19 police districts, and each of the districts generally contains a town or village of the same name. Lincoln, Perth, and George Town at Port Dalrymple, are places of some importance. They are seated on the Tamar, or the Macquarrie, as it is called in the upper part of its course.

Government.—Van Diemen's Land is administered, under the 13 & 14 Vict., cap. 59, by a Lieutenant-Governor, who is assisted by an Executive Council and a Legislative Council, of whom two-thirds are elected and one-third nominated. The judicature consists of a supreme court, courts of quarter sessions, and courts of requests.

A bishop of Tasmania was appointed in 1842, whose diocese includes the whole island and its dependencies, and is divided into the arch-deaconry of Hobart Town, containing 34 places of worship, and the rural deanery of Longford, containing 19 places of worship. There are also 13 places of worship of the Church of Scotland, 3 for Roman Catholics, 21 for Wesleyan Methodists, 15 for Independents, 3 for Baptists, and 2 for Jews. Of these bodies all except the Independents and Jews receive government aid. There are numerous private schools in Hobart Town and Launceston, besides schools supported by the Government.

VANCOUVER ISLAND (or *Quadra and Vancouver Island*) lies off the western coast of North America in the North Pacific. It is long and narrow, extending in a direction from south-east 48° 24' to north-west 50° 3' N. lat., and between 122° and 129° W. long., the length being about 250 miles, the average width 50 miles. It is overlapped at its southern end by the continental headland of Cape Flattery, and between is the strait of Juan de Fuca, five leagues wide at its entrance, and running in an east-south-east direction for about 100 miles, widening in several parts, extending southward into Puget's Sound, and forming several bays on the continental shore, then, suddenly narrowing, turning northward through an archipelago of small islands, called the Arro Archipelago, thence widening into the Gulf of Georgia, and re-entering the ocean amidst another archipelago, through Johnstone's Strait into Queen Charlotte's Sound. Vancouver first discovered this passage in 1792. There are many bays and harbours all round the island. Three islands of the Arro group are separated from the coast of Vancouver Island by a passage called the Arro Canal, which is narrow at both extremities, but expands to a considerable width in the middle. At Wentuhuyzen Inlet, which is at the north end of the Arro Canal, several extensive beds of coal have been recently discovered, the site of which has been named Newcastle. Coal exists also in the northern part of Vancouver Island. At the southern end the settlement of Victoria has been formed, on a harbour

named Camosack, safe and easily accessible for vessels, but having the drawback of being scantily supplied with water. The other principal harbours are, Nootka Sound, Clayquot, Nitinat, all on the western coast. The shores of the island present an alternation of rocky cliffs and sandy beaches. At no great distance from the sea is a compact mass of rugged mountains, whose summits are covered with snow. The island contains a considerable quantity of fertile land, covered with good natural grass. There are numerous small tribes of Indians on the island, of whom some have been found of a friendly disposition.

The possession of Nootka Sound had nearly given rise to a war with Spain, who claimed it, and had expelled some English settlers from Nootka, but it was at length resigned to England, and has since continued in their hands. Vancouver Island was made over in 1846 to the Hudson's Bay Company by a charter, on condition that they should colonise it. To some extent this has been done.

North of Queen Charlotte's Sound lie *Queen Charlotte's Islands*, between 52° and 54° N. lat. The group consists of three islands, extending about 150 miles in length, by about 60 miles in breadth. In these islands are several excellent harbours. At Mitchell Harbour, on the middle island, and at other spots, gold has been found, embedded in quartz rock. Traces of silver have been found in the rocks. The interior of the islands is hilly and well wooded, the climate is healthy, and the soil remarkably fertile. The islands contain some beds of coal, and several fine specimens of lead and copper have been obtained.

VANDALIA. [ILLINOIS.]

VANDOTENE. [PONZA.]

VANNES. [MORBIHAN.]

VAR, a department in the south-east of France, is bounded N. by Basses-Alpes, E. by Piedmont (from which it is partly separated by the river Var), S. by the Mediterranean, and W. by the department of Bouches-du-Rhône. Its greatest length is 83 miles; the extreme breadth is 49 miles. The department, including its islands, lies between 42° 57' and 43° 55' N. lat., 5° 41' and 7° 15' E. long. The area of the department is 2790 square miles. The population in 1851 was 357,967, giving 128.3 inhabitants to a square mile, or 46.28 below the average per square mile for the whole of France.

The coast is rocky, and is skirted by numerous islands. From the mouth of the Var, at the eastern extremity of the department, to Cape-de-la-Garoupe, the coast forms an open bay, on the shore of which is the town of Antibes. Westward of Cape-de-la-Garoupe are the somewhat deeper bays of Juan and Napoule, separated from each other by a small intervening headland, and protected seaward by the Lerins Islands, comprehending the islands of Sainte-Marguerite (which lies opposite Cannes) and St-Honorat, with some smaller ones. These islands are defended by a fort, and further protected by the surrounding rocks: they abound with rabbits and partridges. Some other small gulfs, as the port of Agay, the gulf of Fréjus, the gulf of Grimaud, and the roadstead of Hyères, lie to the west of the gulf of Napoule. The roadstead of Hyères is bounded on the west of the peninsula of Giens, which is connected with the mainland by a low sandy isthmus. [HYÈRES.] The coast is for the most part high, but some of the bays present a low sandy shore. There are several small seaports, but none of any importance except Toulon.

The department is mountainous. A branch of the Alps extends from east to west through the department, and separates the valley of the Argens and the tracts watered by the Siagne, Loup, and Var, all of which flow into the Mediterranean from the valley of the Durance, which belongs to the river-basin of the Rhône. Another range of mountains parallel to the above, and known as 'Les Monts des Maures,' extends along the coast between Hyères and Fréjus, separating the coast from the valley of the Argens, which river after draining the valley in its eastern course turns to the south-east and flows past the eastern extremity of 'Les Monts des Maures' into the Mediterranean near Fréjus. A group of mountains forming the continuation of 'Les Monts des Maures,' extending north-eastward from Fréjus, is known as Mont-Esterel, and is distinguished by its picturesque character. The hill of Faron, immediately above Toulon, rises to the height of nearly 1400 feet; and Mont Caoume, near the same town, is 2806 feet above the level of the sea. The summit of the mountain La-Sainte-Baume, which is near the boundary of Bouches-du-Rhône, is 3285 feet; and the mountain of Sainte-Victoire, a little farther north, is 3125 feet. The coast eastward from Toulon is occupied by the primary and lower secondary formations, and presents in many parts a rugged and sterile soil; in the more inland parts these formations are covered by the limestones and other secondary rocks which intervene between the cretaceous and the carboniferous groups.

Among the minerals of the department are coal, lignite, marble, alabaster, porphyry, granite, serpentine, jasper, and gypsum. There are salt-works on the coast, especially at Hyères.

The rivers are small, and none of them are navigable. The Var, from which the department is named, rises in the department of Basses-Alpes, a few miles east of Colmars; after running a few leagues it enters the Sardinian states, and lower down separates the Italian province of Nice from the French department of Var. In its upper course it forms some cascades. Timber is floated down the stream. The course of the river is generally south; in its lower part are many small islands. The whole length of the river is about 70 miles. In spring the Var is subject to great floods; it frequently changes its

bed, and is useless to navigation. The chief feeder of the Var, on the French side, is the Esteron. The Gapou, or Gapeau, in the western part of the department, the Argens in the centre, and the Siagne and Loup in the eastern part, flow into the Mediterranean, and, with their several tributaries, belong wholly to this department. The Verdon flows into the Durance, and forms in one part the northern boundary. The Durance itself just touches the north-west corner. The length of the Argens, the most considerable river which belongs wholly to this department, may be estimated at about 60 miles: it receives the Caulon, the Calami, the united stream of the Bresque and the Braque, the Artuby, and the Endre. Three shore-lakes of considerable extent are found near the coast: the chief is that of Pesquier, in the isthmus of Giens; the others are those of Napoule and Villepey.

The climate of the department is temperate; the winters are mild except when 'the mistral' blows. The south-east wind is very relaxing.

The soil is by no means favourable, taken as a whole, however fertile particular spots may be; and from the hilly nature of the country, cultivation is very much carried on by manual labour. Only about a sixth part of the surface of the department is under the plough. The produce in grain is not equal to more than half the consumption of the department. There is a considerable extent of heath or other open pasture: in summer however the grass is so scorched up, that the sheep are chiefly sent at that season to feed in the mountain pastures of the department of Basses-Alpes. Sheep, goats, mules, asses, and pigs are numerous. The vineyards cover 170,000 acres, and the orchards and gardens 5000 acres. The vine and the olive are cultivated in terraces on the slopes of the hills. The department yields about 17,600,000 gallons of white and red wines and good muscatel annually. The olives are used for making oil, or are exported for use at the table. The pomegranate, the citron, the orange, the almond, and the fig grow in the open air; the plum and the peach are grown and preserved for exportation; and the caper and the jujube are cultivated. Mulberry-trees are extensively grown for the production of silk. Tobacco is an important crop, and odoriferous plants are abundantly cultivated. The woodlands, which cover about 570,000 acres, yield fir, cork-trees, and the kermés oak. Game is abundant, and a great number of bees are kept, which produce exquisite honey.

The tunny, anchovy, and sardine fisheries are actively carried on along the coast; and the rivers yield abundance of fish—the sturgeon, trout, eel, shad, barbel, tench, carp, and cray-fish.

The department is divided into four arrondissements, as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Draguignan . . .	11	60	86,079
2. Brignoles	8	54	68,664
3. Grasse	8	60	67,753
4. Toulon	8	28	135,471
Total	35	202	357,967

1. In the first arrondissement the chief town is DRAGUIGNAN, which is also the capital of the department. *Callas*, population 2125; *Salernes*, population 2544; *Lorgues*, population 4106, on the road between Brignoles and Draguignan; *Le-Luc*, population 3441, on the road from Toulon to Fréjus; *St-Tropez*, a small sea-port with 3538 inhabitants; and *Fréjus*, population about 3000, on the coast. Fréjus, the representative of the ancient *Forum Julii*, is built on an eminence about a mile from the sea and the mouth of the Argens. Forum Julii was a place of importance in Roman times; it has remains of an aqueduct, an amphitheatre, a triumphal arch, of the two moles that form the entrance to the harbour, and other ancient buildings. The ancient harbour communicated with the sea by a canal fed from the Argens. Long neglect converted the harbour and canal into a marsh which has been recently drained, and corn now grows where the Roman galleys formerly rode at anchor. Fréjus gives title to a bishop, whose diocese is the department of Var.

2. In the second arrondissement the chief town, *Brignoles*, is situated in a fertile basin screened by hills, 25 miles W. by S. from Draguignan, and has 5581 inhabitants in the commune. It is a well-built town, and has manufactures of broadcloth, soap, glue, wax, candles, pottery, leather, and brandy. The trade in these articles and in silk, wine, liqueurs, olive-oil, plums, and fruits, is considerable. *Bargols*, situated on a small affluent of the Argens, in a beautiful district, has about 3000 inhabitants, who manufacture paper, leather, brandy, and confectionery. *Cottignac*, population 3602 for the commune, in the country between the Bresque and the Argens. *St-Maximin*, a walled-town near the source of the Argens, has 6385 inhabitants in the commune, manufactures for cotton-yarn and woollen-stuffs, some brandy-distilleries, marble-quarries, and some trade in saffron. There are a school of arts and trades, a public library of 3000 volumes, and a handsome church built in 1283. *Roquebrussane*, 8 miles from Brignoles, stands at the foot of a rock, crowned with the remains of a castle, which was burnt by the Piedmontese in 1707: population 1500.

3. In the third arrondissement the chief town, *Grasse*, situated on

the slope of a high hill, 23 miles E. from Draguignan, has tribunals of first instance and of commerce, a college, an ecclesiastical school, and 11,381 inhabitants, who manufacture coarse woollens, silk, liqueurs, olive-oil, soap, leather, and a great quantity of essences and perfumes, particularly those made from orange flowers, roses, mint, &c. The houses of the town are well built; but the streets are steep, crooked, and narrow. In the highest part of the town there is an abundant spring, which supplies water to two public wash-houses, and drives the machinery of several mills; after performing these services the water is conducted by canals to irrigate the environs of the town, which abound in flower-gardens. *Antibes* is noticed in a separate article [ANTIBES.] *Cannes*, a small town of 3381 inhabitants, situated on the slope of a hill above the shore of the Mediterranean, 8 miles S. from Grasse, is pretty well built, and has a large quay, but vessels cannot come close to shore. The vicinity of Cannes presents many beautiful sites in which the orange and citron flourish; the climate is delicious. *Vence*, an ill-built walled town, with pretty suburbs, is situated 12 miles N.E. from Grasse, in a well-cultivated district and a most delightful climate; it occupies an ancient site, as is proved by its old ruins with inscriptions, and has 3165 inhabitants, who manufacture leather and oil.

4. In the fourth arrondissement the chief town is *TOULON*. *HYÈRES*. *Cuers*, situated 13 miles N.E. from Toulon, among vineyards, olive-grounds, and orchards, has an agricultural population of 4300. *Ollioules*, on the road from Toulon to Marseille, and at the extremity of a savage gorge, has a population of 3000. *La-Seyne* is a well-laid-out and a well-built town, with large quays, a good port, a small ship-building yard, and about 8000 inhabitants: it is at the western end of the inner road of Toulon, about 3 miles from that town; the tunny and sardine fisheries are actively carried on. *Soliers-le-Pont* is on the river Gapeau, 7 miles N.E. from Toulon; the neighbourhood comprehends some of the best grass-lands in the department: population about 3000.

The department constitutes the diocese of Fréjus, the bishop of which is a suffragan of the archbishop of Aix, Arles, and Embrun. It is in the jurisdiction of the High Court, and within the limits of the University-Academy of Aix, and is included in the 9th Military Division, of which the head-quarters are at Marseille. It sends three members to the Legislative Body of the French empire.

VARALLO. [NOVARA.]

VARDHARI, RIVER. [AXIUS.]

VAREL. [OLDENBURG.]

VARENNE. [ALLIÈRE; MEUSE.]

VARESE. [GENOA.]

VARNA, a fortified town and sea-port of Turkey-in-Europe, in the province of Bulgaria, is situated at the head of a small bay on the west coast of the Black Sea, in 43° 12' N. lat., 27° 53' 58" E. long., and has a population of 16,000 to 20,000. The bay or road of Varna is protected from the north and north-east winds, and has a good bottom, with a depth of 8 to 15 fathoms. The entrance of the bay is formed by two steep rocky capes (Galata and Hodrova, or Sughanlik), $\frac{1}{4}$ miles asunder. The shores sink gradually to the head of the bay, where in the neighbourhood of the city they are level. The Paravati River (the ancient Lyginos), which rises in the Balkan near Shumla, after traversing the two lakes of Devne, discharges itself by a broad stream into the Black Sea, along the foot of the southern walls of Varna. The distance between the eastern shore of the eastern Lake of Devne and the Black Sea is little more than half a mile. It has lately been proposed to deepen the channel of this river so as to admit ships to the lake, which would thus be converted into a harbour capable of affording shelter and accommodation to the largest fleets in all weathers. In the isthmus between the two lakes Alexander the Great defeated the Triballi. The isthmus is from a mile to a mile and a half broad.

Varna is a wretchedly built town, surrounded by old stone walls and a dry ditch. It is a place of considerable trade, the exports of corn, barley, tallow, eggs, and other Bulgarian produce, amount in value to about 600,000*l.* Austrian steamers between Constantinople and Galatz put in at Varna. Under the walls of Varna the Sultan Murad II. in 1444 defeated the Hungarians under King Ladislaus (who was killed) and John Huniades. The Russians took Varna in 1828. An Anglo-French army encamped in Varna and its environs in the summer of 1854, previous to its embarkation for the Crimea.

VARZY. [NIÈVRE.]

VASAREHELY. [HUNGARY.]

VASSY. [MARNE, HAUTE.]

VASTO, IL. [ABRUZZO.]

VATAN. [INDRE.]

VAUCLUSE, a department in the south of France, bounded N. by the department of Drôme, E. by Basses-Alpes, S. by Bouches-du-Rhône, from which it is separated by the Durance, and W. by the departments of Gard and Ardèche, from which it is separated by the Rhône. Its greatest length from north-west to south-east is about 69 miles, its breadth 38 miles. It lies between 43° 38' and 44° 27' N. lat., 4° 40' and 5° 46' E. long. The area is 1372 square miles: the population in 1851 was 264,618.

The eastern side of the department is mountainous: the mountains of Lure, which separate the department of Hautes-Alpes from that

of Drôme, enter this department on the north-east side, where they rise to the height of 5500 feet, and are connected with Mont Ventoux, which has an elevation of 6423 feet above the level of the sea. This eastern side of the department is occupied by secondary geological formations. The western and south-western sides, where the hills subside, and plains extend along the banks of the Rhône and the Durance, are occupied by the tertiary formations. The mineral wealth of the department includes lignite, iron, coal, potter's-clay, gypsum, limestone, and freestone. Peat is found. There are several mineral springs.

The department belongs wholly to the basin of the RHÔNE, which flows along its western boundary, as its tributary the DURANCE does along the southern. The Rhône is the only navigable river. Large rafts are formed of the timber floated down the Durance from the well-wooded districts about its upper waters; and the produce of the country is sometimes transmitted on these rafts to the neighbourhood of Avignon. The other rivers of the department are the Lez, the Aigues, and the Sorgues (with its affluents the Neaque, the Auzon, and the Ouvèze), all three tributaries of the Rhône; and the Calavon and the Leze, tributaries of the Durance. There is a number of canals for purposes of irrigation.

The fountain of Vaucluse, to which the verses and letters of Petrarch have given celebrity, and from which the department takes its name, is the source of the Sorgues: it rises in a cavern in the secluded valley of Vaucluse ('vallis clausa') midway between Apt and Avignon. The spring is sufficiently copious to form at once a stream capable of bearing a boat. Not far distant from the fountain is the village of Vaucluse, in which Petrarch lived; and between the village and the fountain is an old castle, formerly belonging to the bishops of Cavillon, in which the poet frequently resided, and which has derived from that circumstance the name of Petrarch's Castle.

The department is traversed by 4 imperial, 22 departmental, and 9 parish roads; and also by the railway from Paris to Marseille, which passes through Orange and Avignon.

The climate is on the whole temperate and healthy: the variations of the weather are however rapid; tempests are frequent, and the hail is often destructive to vegetation.

About one-half of the area of the department is under cultivation, but from the poorness of the soil the produce in grain is not sufficient for the consumption: rye, barley, and wheat are the principal corn crops. The meadow-lands occupy about 15,000 acres; the heaths and open pastures about 170,000 acres. There are numerous flocks of sheep. The ass and the mule are much employed in agricultural labour. The vineyards occupy an area of 70,000 acres, yielding about 9,000,000 gallons of strong red wine. The department yields abundance of olives, almonds, and walnuts; good pears, peaches, plums, apricots, figs, and melons. Saffron, madder, artichokes, anise, coriander, fustic, and the evergreen oak are cultivated. The silkworm is extensively reared (between two and three millions of mulberry-trees are planted for this purpose), and honey and wax are abundant. The woodlands occupy above 150,000 acres.

The department is divided into four arrondissements, as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Avignon . . .	5	30	78,382
2. Carpentras . . .	5	31	55,916
3. Apt . . .	5	30	57,034
4. Orange . . .	7	48	73,286
Total . . .	22	149	264,618

1. In the first arrondissement are the following towns:—*AVIGNON*. *Cavillon*, an ill-built formerly fortified town, in a pretty country on the right bank of the Durance, with a handsome town-hall; madder-oil and silk-mills, about 7000 inhabitants, and a weekly market for raw silk; and *L'Isle*, a town on an island of the Sorgues, with above 6000 inhabitants, who manufacture woollen-yarn, blankets, woollen-stuffs, silk, and leather; and trade in silk, oil, wine, and madder.

2. In the second arrondissement the chief town is *Carpentras*, which stands on the left bank of the Auzon, at the foot of Mont Ventoux, and has a college and 10,473 inhabitants. The town is surrounded by turreted walls, and has well-built houses, but crooked narrow streets. Amongst some remarkable structures are the cathedral, the Orange-gate, the court-house, the Hôtel-Dieu, the theatre, and the public library, which contains 22,000 volumes, 2000 manuscripts, and 6000 medals. The library building and its contents were bequeathed to the town by Bishop Inquimbert.

3. In the third arrondissement the chief town *Apt*, 30 miles E. from Avignon, on the left bank of the Calavon, has a college and 5699 inhabitants, who manufacture cotton- and woollen-stuffs, confectionary, brandy, silk-twist, and leather. The town is well built and clean, and surrounded by strong walls. The gothic church is a building of high antiquity; it stands over crypts still more ancient. A Roman bridge of three arches over the Calavon is still perfect. Several Roman antiquities have been found in Apt, which takes its name from, and occupies the site of, the ancient *Apta Julia*, a city of the Celtic Vulgiones. *Cadenet*, population 2441; and *Pertuis*, population 4380, on

or near the Durance. At Pertuis woollen-yarn, brandy, and earthenware are manufactured.

4. In the fourth arrondissement the chief towns are—ORANGE; *Bollène*, population 4790 in the commune, on the Lez; *Malacène*, population 3290; *Vaison*, on the Ouvèze, population 2879; and *Vairéas*, at the foot of the Dauphiny Mountains, population 4569 in the commune. *Vaison* has an ancient Roman bridge over the Ouvèze of one arch and of considerable width, the remains of an amphitheatre, an ancient temple, and various other fragments of Roman buildings; and an ancient cathedral, some portions of which are probably as old as the 10th century. *Vaison* was the *Vasio* of the Romans. *Malacène* has silk-mills, oil-mills, copper-works, and a paper-mill.

The department constitutes the metropolitan diocese of Avignon, the archbishop of which has for his suffragans the bishops of Nîmes, Valence, Viviers, and Montpellier. It is in the jurisdiction of the High Court of Nîmes, within the limits of the University-Academy of Aix, and in the 9th Military Division, of which the head-quarters are at Marseille. *Vaucluse* returns two members to the Legislative Body of the French empire.

VAUD, a canton of Switzerland, is bounded N. by the canton of Neuchâtel and by France, from which it is separated by the chain of the Jura Mountains; E. by the cantons of Freyburg, Bern, and the Valais; S. by the Lake of Geneva, which separates it from Savoy; and W. by France and the canton of Geneva. The area is 1180 square miles; and the population in 1850 was 199,575, of whom about 7000, or only 1-27th, are Catholics.

The central part of the canton is traversed from east to west by the Jorat, a succession of highlands which connect the Jura with the Alps, and divide the waters that flow northward into the Lake of Neuchâtel and the Aar from those which run southward into the Lake of Geneva and the Rhône. The southern part of the canton slopes to the shores of the Lake of Geneva, and is one of the finest regions of Central Europe. The vine is planted in terraces along the slopes of the hills, and its cultivation employs above 20,000 persons. The vineyards yield good white wines. The canton is essentially agricultural. The highlands of the Jura and those of the Alps on the east towards the borders of Bern, feed considerable herds of cattle. Horned cattle, sheep, goats, horses, and pigs are reared in great numbers. Corn is not produced in sufficient quantity for the consumption of the population. Fruit-trees are abundant; and the forests cover considerable tracts. There are no manufactures of any importance.

The principal towns of the canton are—LAUSANNE. *Vevay*, 12 miles E. from Lausanne, in a beautiful situation on the banks of the Lake of Geneva, has a handsome church, a college, a public library, and about 5000 inhabitants, who carry on a considerable trade. To the east of *Vevay* is the castle of Chillon. Farther eastward, in the valley of the Rhône, are *Aigle*, a small town at the entrance of the romantic valley of Ormonts; and *Bex*, with salt-mines, sulphur-baths, and about 3000 inhabitants. West of Lausanne, along the shore of the Lake of Geneva, is a succession of picturesque small towns—*Morges*, *Rolle*, *Nyon* (population about 2500), *Coppet*, and, higher up the hill, *Aubonne*. In the northern part of the canton is *Yverdon*, on the Lake of Neuchâtel, with a castle, and about 3000 inhabitants. In the interior of the canton are *Moudon*, with 2350 inhabitants, and a college; and *Payerne*, on the river Broye, an affluent of the Lake of Neuchâtel, with 2700 inhabitants. *Orbe*, at the foot of the Jura, on the road from Lausanne to Paris by *Beaumont*, has about 1900 inhabitants. The high valley of the Orbe, with the romantic Lake of Joux, in the Jura Mountains, is a most interesting district in the summer season. Watch-making, outlery, and iron-works are carried on in this remote district. The canton is traversed by the railway from Geneva to Bern, which is now open between *Morges* and *Yverdon*, as is also a branch from *Morges* to *Lausanne*. Steamers ply on the Lake of Geneva between Geneva and Lausanne and *Vevay*.

The canton of the Vaud forms an important part of the *Suisse Romande*, called also *Suisse Française*, because the common people speak Romance patois or dialects, and the educated people speak French. The *Suisse Romande* comprises Vaud, Neuchâtel, part of Freyburg, the Lower Valais, and Geneva. The people of German Switzerland in common discourse designate the whole by the name of *Wälschland*. These countries formed part of the ancient kingdom of Burgundy, having been occupied by the Burgundians as early as the 4th century.

The Pays-de-Vaud was conquered about the middle of the 13th century by Peter, count of Savoy, and was annexed to the dominions of that house as a great fief, which was given in appanage to a branch, with the title of barony of Vaud. In 1359 the barony reverted to Amadeus VI., count of Savoy, by a cession made by Catherine, the heiress of the barons of Vaud. The country was then parcelled out among a number of feudal lords. The Pays-de-Vaud, as the collective territory was styled, had states or assemblies of the clergy, the nobility, and the deputies of the towns, which used to meet generally at *Moudon*.

In 1476, the Bernese and their confederates, having defeated Charles the Rash (who was joined by James of Savoy) at *Granson* and *Morat*, overran the Pays-de-Vaud, took and pillaged *Lausanne*, and finally

detached the eastern districts of *Bex*, *Aigle*, and *Ormonts*, which were incorporated with Bern, and those of *Morat*, *Granson*, and *Orbe*, which were administered as common bailiwicks subject to both Bern and Freyburg. In 1536 the Bernese made themselves masters of the whole Pays-de-Vaud, which soon after embraced the doctrines of Calvin.

The Pays-de-Vaud was divided for the purpose of administration into fifteen bailiwicks, the baillis, or governors, of which were appointed by the government of Bern. Several of the old noble families were inscribed among the patricians of Bern, and thus obtained a share in the government of the whole canton. All the rest of the population were subjects of Bern. But the communes had their own councils, and appointed their local officers and magistrates. In 1798 the French directory imperiously required Bern to restore the Pays-de-Vaud to its independence. Meantime popular assemblies were formed in the Pays-de-Vaud, countenanced by a strong body of French troops assembled along the frontier. The council of Bern acted with indecision, the French troops entered the Pays-de-Vaud, and that fine country was lost to Bern for ever. In 1803 it was constituted as a sovereign canton of the Swiss confederation by Bonaparte's Act of Mediation. Napoleon I. being overthrown in 1814, the Act of Mediation fell with him; but in the Federal Pact, established by the allied powers in 1815, Vaud was constituted a canton of Switzerland. After the French revolution of July, 1830, several thousand *Vaudois*, armed with sticks, repaired to *Lausanne*, to oblige the council of state to convoke the assemblies of circles, for the purpose of appointing deputies to frame a new constitution. The council yielded a constituent assembly to be convened, which framed a new constitution on the principles of equality of political rights and rotation of office, without any property qualification, which constitution was laid before the primary or communal assemblies, in June, 1830, and accepted. The members of the great council, or legislature, are elected by the assemblies of circles, one for each thousand inhabitants. All citizens of the canton, being bourgeois of a commune, who have completed twenty-three years of age, and are neither bankrupts nor paupers, nor interdicted, are possessed of the elective franchise. The members of the legislature are elected for five years. Candidates for seats must be twenty-five years old, citizens of the canton, and have their domicile in it. The great council meets twice a-year for about a month each time: its members receive a remuneration. It appoints the members of the executive, and those of the courts of justice.

There are primary schools in every commune, middle schools, or schools of industry, colleges, and lastly the Academy of *Lausanne*, a sort of university, with fifteen professors and four faculties—theology, law, philosophy, and belles-lettres.

VAULRY, ST. [CREUZE.]

VAUVERT. [GARD.]

VECHT. [RHINE.]

VEERDT. [LIMBURG.]

VELAY, a small territory in France, which formed part of *Vivaraia*, and of which *Le-Puy* was the chief town. It is now included in the department of *Haute-Loire*.

VELEIA, an ancient city at the base of the Apennines, 23½ miles S. from *Piacenza*, and 45 miles from *Parma* by the existing roads. The population of this part of Italy was brought under the Roman dominion about A.U.C. 595, by M. Fulvius Nobilior. The inhabitants of *Veleia* up to the fourth year of the reign of *Tiberius* lived in villages; but a town was formed subsequently, which became a municipium, probably between the fourth year of the reign of *Tiberius* and the eighth of *Vespasian*. The period of the ruin of *Veleia* is not accurately known, though it is conjectured to have taken place in the fourth century of the Christian era. Tradition reports a slip of the mountains called *Moria* and *Rovinazzo* to have been the cause of the catastrophe which most probably buried the city unexpectedly.

Presuming the city of *Veleia* to have been buried shortly after the reign of *Constantine*, it remained unknown and forgotten for fourteen centuries and a half. The first notice of the revival of this ancient city was owing to the *Trajan* tablet, or bronze table, called the 'Alimentary Table,' which contains a law under the directions of which 279 children were maintained. This remarkable document was discovered in 1747 by a peasant of the commune of *Macinisco* (now called by its ancient name of *Veleia*), while working in a field. In 1760, excavations ordered by *Duke Philip* of *Parma* led to the discovery of the foundations of the forum and of some public and private buildings. Twelve marble statues also (some of them of superior workmanship), and numerous small bronze statues, medals, money, stamps, inscriptions, and small instruments and implements of bronze (including a pair of snuffers of the form now in use), were brought to light. Another bronze table was also found at a short distance from the spot where thirteen years previously the Alimentary Table of *Trajan* had been discovered. This table is nearly square, being 2 feet 2 inches and 7 lines (*Paris*) wide, by 8 feet 8 inches high, and about 2 lines thick. On the sides and in the middle are holes by which it was probably attached to a wall. The writing, like the large table, is divided into pages; the first contains 52 lines, and the second 58. At the beginning of the division between the pages, the number IIII is marked, from which it is manifest that this table was preceded by three others, forming six pages. There are good reasons for supposing that this

table dates at the latest from about the middle of the 8th century of Rome. The inscription seems to have been a copy of a law which prescribed to the municipalities of Gallia Cisalpina a constant rule of procedure. Most of the objects found in this ancient town are now in the museum of Parma.

In the centre of the buildings discovered are the forum, on the left the amphitheatre, on the right the baths, and at the south end the basilica. Among the most remarkable objects in the forum are the remains of the marble tables and seats of the money-changers, or perhaps officers of the treasury, and the inscription, originally of bronze letters, inserted in the stone pavement of the centre of the forum. A dorio portico ran round three sides of the area of the forum, interrupted only on the north by the portico of a small amphiprostyle temple, and was stopped on the south by the wall of the basilica. The basilica contained the twelve marble statues preserved in the museum at Parma. The city was well provided with sewers and drains. The buildings were constructed of rough materials, and stuccoed and painted. A painted fragment is preserved in the museum at Parma, showing that the taste for arabesque decoration was the same as in the south of Italy. Bricks were used to make the foundations level. Some of the bricks are stamped with the maker's name. A few mosaic floors have been removed to the floor of the museum in Parma.

VELEZ MALAGA. [GRANADA.]

VELIA. [PRINCIPATO CITRA.]

VELINO, MONTE. [ABRUZZO.]

VELINO, RIVER. [RIETI.]

VELLETRI, a city in the States of the Church, prettily situated on the lower slopes of the Monte Artemido (which forms the northern boundary of the Pontine Marshes), at a distance of 16 miles S.E. from Rome, and has 12,500 inhabitants. It is an ill-built town, with narrow and inconvenient streets; but the climate is healthy. The town is the residence of a Cardinal Legate, and conjointly with Ostia gives title to a bishop. There is a spacious piazza, or square, named from the church of Santa Maria, in Trivio, which is surmounted by a lofty campanile, erected in 1353. The principal structures are the cathedral of San Clemente, rebuilt in 1660; the church of Santa Maria del Orto; the Palazzo Publico, or town-hall, which was built by Bramante; the Ginetti, or Lancellotti palace, which was the headquarters of Carlo Borbone during the battle of Velletri, and is now deserted; and the Borgia Palace, formerly famous for its museum. The town is surrounded by old turreted walls crumbling to ruin. The beauty, majestic bearing, and graceful costume of the women of Velletri are celebrated by travellers.

Velletri occupies the site of the Volscian *Velitra*, which after long hostilities with Rome was destroyed, and the inhabitants removed to the city on the Tiber. The city seems however to have been afterwards rebuilt. Augustus Caesar was born at Velitra. It was occupied by Belisarius in the 6th century, and suffered severely in the Lombard invasion subsequently. The hills north of the town were the scene of Carlo Borbone's great victory over the Austrians in 1734, which secured the kingdom of the Two Sicilies to the Spanish Bourbons.

Velletri is the capital of the Legation, or province of Velletri, which has an area of 629 square miles, and a population of 59,356 (in 1850). The province lies between the Comarca-di-Roma and the Neapolitan frontier, and includes a vast extent of marsh-land, which is infested by malaria in summer and autumn. Corn, wine of good quality, and cattle are among the chief products.

VELLORE (*Velur*), a town and fortress in Hindustan, is situated in a small district of the same name, in the presidency of Madras, on the right bank of the river Palar, in 12° 55' N. lat., 79° 12' E. long., about 20 miles W. from Arcot by road. Vellore is a large fortress, containing spacious barracks and a curious pagoda, commanding the main road from the coast of the Carnatic to the province of Mysore. The fortress is surrounded by a strong stone wall, with bastions and round towers, and by a wide and deep ditch. The town, which is large and populous, is connected with the fortress by extensive outworks.

VENAFRO. [LAVORO, TERRA DI.]

VENAISSIN, LE. [COMTAT VENAISIN.]

VENASQUE. [ARAGON.]

VENCE. [VAR.]

VENDÉE, a department in the west of France, is bounded N. by Loire-Inférieure, N.E. by Maine-et-Loire, E. and S.E. by Deux-Sèvres, S. by Charente-Inférieure, and S.W. and W. by the Atlantic Ocean. Its greatest length from north-west to south-east is 82 miles; its greatest breadth, at right angles to the length, is 56 miles. This department comprehends also the islands of Boin, Noirmoutier, and Dieu. The whole is comprehended between 46° 18' and 47° 4' N. lat., 0° 35' and 2° 30' W. long. The area of the department is 2596 square miles. The population in 1851 was 383,734.

The coast of this department is generally low. The north-western coast forms, with the islands of Boin and Noirmoutier, the Bay of Bourgneuf. The south-western coast forms, with the Isle of Ré, the gulf Pertuis-Breton. The shore is low, and lined with marshes, which rest on the north-west on a bed of sand, and on the south-west on a very thick stratum of stiff clay. Industry has rendered these marshes remarkable for fertility; they are intersected in every direction by

ditches for the purpose of drainage. The island of Boin is insulated only by a small river, Le Dain, which is not navigable. It is united to the mainland by a causeway across the Dain. The island appears to be formed by alluvial deposits on a limestone rock; and is about 7 miles long and 4 miles wide. Noirmoutier protects the Bay of Bourgneuf to seaward: it is about 12 miles long from north-north-west to south-south-east, and in one part nearly 5 miles broad. It is separated from the mainland at its south-eastern extremity by a narrow channel about half a mile across. The coast of the island is lined in some parts by sand-hills or low flat rocks, in others by sands and shoals extending far out to sea; on the east side, in the Bay of Bourgneuf, is a small road or anchorage. The soil of the island is very fertile; sea-weed is used for manure; some of the most productive parts are considerably below the level of the sea, from which they are protected by embankments. The produce of the island includes grain, pulse, fruit, salt (made in the salt-marshes), and good cheese. The oyster fishery is actively carried on; and the inhabitants, who amount to about 7000, are excellent seamen. The *Île d'Yeu* lies farther out from the mainland, from the nearest part of which it is distant more than 10 miles: its chief town, *St.-Aubin*, which is in a central position, is in 46° 42' N. lat., and about 2° 23' W. long. The length of the island is about 6 miles; its breadth about 3 miles. Its western coast, towards the open sea, is high and inaccessible; the eastern coast is low and flat, affording ready and safe access to small boats. The whole island is little else than a vast granitic rock, covered with a vegetable soil three feet in thickness in the lower part, but in the higher ground so thin as to leave the rock almost bare.

The department is crossed on the north-eastern side by the heights, which extend from the mountain-district of central France north-westward to the mouth of the Loire. These heights cross just within the border of the department, here formed by the little river Sèvre-Nantaise, the valley of which they overlook. The hills are none of them lofty, having their greatest elevation under 500 feet; but they overspread a considerable tract. These higher grounds consist for the most part of granitic or other primitive or lower secondary rocks: the flat country, which extends southward and westward towards the coast, is occupied chiefly by the limestones, and other formations intervening between the cretaceous and new red-sandstone groups. The department has three coal-mines, some iron-works, and a number of mineral springs. The manufacture of salt is actively carried on in the marshes which line the coast.

The greater part of the department is drained by several small rivers, which flow into the Atlantic; but the northern and north-eastern parts belong to the basin of the Loire, and are drained by its two tributaries, the Sèvre-Nantaise, with its affluent the Maine (formed by the juncture of the Grande Maine and Petite Maine) and the Boulogne, which flows into the Lake of Grand Lieu, and then, under the name of Achenau, reaches the Loire. The rivers which flow directly into the Atlantic are the Sèvre-Niortaise, which, with its feeders the Autize and the Vendée, drains the south-eastern part; the Lay, formed by the junction of Le-Grand Lay and Le-Petit Lay, which, with its affluents, drains the central and south-western parts; and the Gui-Chatenay, the Ausance, the Jaunay, the Vic, and several canals, drain the western and north-western sides of the department. The Sèvre-Niortaise is navigable in all the part which is in this department or on the boundary; the Autize is navigable for about 6 miles above its junction with the Sèvre-Niortaise, and the Vendée (which gives name to the department) from Fontenay about 16 miles above its junction with the same river; the Lay has by labour been made navigable for about 20 miles above its outfall; and the Vic is navigable for about 5 miles. The only navigable canal is that of Luçon, which has a course due south, 9 miles from the town of Luçon, into the road of Aiguillon, south of which is a remarkable spit of land projecting about 3 miles into the sea. The department is crossed by 5 imperial, 16 departmental, and 11 military roads.

The climate varies with the elevation of the soil. The district of *Le-Bocage* in the north and north-east of the department, is the most elevated and the healthiest. This district, which extends into the adjacent departments, derives its name from the abundance of wood found in it, rather however in the form of copse or thicket, than of forest, though intermingled with the underwood are forest-trees, as oak, ash, chestnut, and elm. The soil of this part is chiefly a stiff loam, sometimes sandy, and at other times clayey. The valleys which intersect this hilly country are watered by numerous brooks, and afford good meadow-land; the hills are cultivated, except on the north side of the higher hills, where little grows except heath and furze. The Bocage covers about two-fifths of the whole department. The temperature is colder than in the rest of the department; but the air is purer: the summer is usually very dry, the winter wet. The inhabitants are the most robust in the department, and are remarkable for the simplicity of their manners, and their attachment to old opinions and habits.

The district which extends between the Bocage and the southern boundary of the department is called the Plain, and has an extent nearly 300 square miles: it is the most fertile district in the department, and has a clayey soil resting upon limestone.

The rest of the department consists of the *Marais*, or the Marsh the most extensive district, but the most unhealthy, the air bel

loaded with fogs rising from the ditches and drains. The changes of temperature on the coast are sudden.

Above three-fifths of the area of the department are under the plough, but agriculture is in a very backward state. Wheat, barley, oats, rye, millet, buckwheat, hemp, and flax are grown. The grasslands measure about 270,000 acres, and the heaths and open pastures amount to above 160,000 acres; they are chiefly in the Bocage and the Marais. The breed of horses is small but vigorous; a great number of mules and asses are bred. Horned cattle and sheep are of inferior breeds. The vineyards occupy above 40,000 acres, yielding annually about 5,000,000 gallons of bad white wine. The woodlands occupy about 70,000 acres, and the orchards about 20,000 acres; the apple, the cherry, and the chestnut are the principal fruits.

The department is divided into three arrondissements, as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Napoleon-Vendée . . .	10	104	140,969
2. Fontenai . . .	9	111	133,530
3. Les-Sables-d'Olonne	11	79	109,185
Total . . .	30	294	383,734

1. In the first arrondissement the chief town, *Napoleon-Ville*, originally *Roche-sur-Yon* (which name it bore till 1803, when the population was only about 800), after the restoration *Bourbon-Vendée*, after the revolution of 1848 *Napoleon-Vendée*, and since again *Napoleon-Ville*, is the capital of the department. It is situated in 46° 40' 17" N. lat., 1° 25' 23" W. long., 235 miles S.W. from Paris, on a hill above the little river Yon, and has a college, a tribunal of first instance, and 6186 inhabitants. Napoleon I. chose the village and castle of Roche-sur-Yon to be the site of the capital of the department, and authorised the erection of the necessary public buildings. In the centre of the town, and on the summit of the hill, is the Place Royale, a spacious rectangle bordered with rows of trees, and surrounded by good buildings; into this square the principal streets, which are straight, wide, clean, and well built, open. Many of the streets are still only traced out. The chief buildings are—a handsome parish church; the residence of the mayor, a beautiful Grecian structure, adorned with a peristyle; a market-house, which is a square building, surrounded by a peristyle supported on several steps; a theatre; the prefect's residence; the great barrack; and the hospital.

2. Of the second arrondissement the chief town is *Fontenai-le-Comte*, situated on the slope of a hill above the left bank of the Vendée, in a plain between the Bocage and the Fens, has a tribunal of first instance, a college, and 7348 inhabitants. The town has a very pretty appearance, and is approached by four fine roads, leading from Nantes, Rochelle, Saumur, and Niort. The streets in the older parts of the town are narrow and winding. The principal buildings are the beautiful gothic church of Notre-Dame, with a spire 266 feet high; the college, which is surrounded by walls and gardens, and has accommodation for 400 boarders; the hospital, the new prison, the theatre, and the pretty fountain, whence the town has its name, near the ruins of the old castle of the counts of Poitiers. The trade of Fontenai in corn, timber, seeds, oak-staves, coals, charcoal, provisions, and Bordeaux wines, for which Fontenai is an entrepôt, is greatly facilitated by the navigation of the Vendée. The manufactures are linen and coarse woollen-stuffs. The Republicans were defeated here by the Vendéans under Larochejacquelin, Lecuire, and Bonchamps, May 24, 1793. *Luçon*, a gloomy town, situated on the eastern edge of the Fens, and at the extremity of the Luçon Canal (which is navigable for vessels of 60 tons) gives title to a bishop, and has a diocesan seminary and 4300 inhabitants.

3. The third arrondissement has for its chief town *Les-Sables*, or *Les-Sables d'Olonne*, which is situated on a peninsula on the coast, and consists of several long, clean, and well-paved streets. The southern part of the town stands on a slight eminence; the suburb of La-Chaume, built on a level rock, is separated from the town by a canal. The harbour admits vessels of 200 tons. The town is protected in one part by the salt-marshes, in another by a wall, and towards the port and the sea by a fort and batteries. There are two churches, a nunnery, a school of navigation, a lighthouse, two almshouses, or hospitals, and a prison. The townsmen are engaged in ship-building, rope-making, and in the fishery, particularly of the pilchard. Corn, salt, and wine are exported. *Noirmoutier*, a small sea-port on the isle of Noirmoutier, with about 2500 inhabitants, is well-built and well-paved: the road affords good anchorage for vessels of 200 tons, and there is a tide harbour with 12 feet of water when the tide is up.

The department constitutes the diocese of Luçon, the bishop of which is a suffragan of the archbishop of Bordeaux: it is included in the jurisdiction of the High Court and within the limits of the University-Academy of Poitiers. It is comprehended in the 15th Military Division, the head-quarters of which are at Nantes; and sends three members to the Legislative Body of the French empire.

VENDEUVRE. [AUBE.]

VENDÔME. [LOIR-ET-CHER.]

VENEZIA. [VENICE.]

VENEZUELA, Republic of, South America, extends over the north-

eastern portion of that continent, being situated between 1° 10' and 12° 20' N. lat., 60° and 73° W. long. It is bounded N. by the Caribbean Sea, W. and S.W. by New Granada, S. by Brazil, and E. by Brazil, English Guyana, and the Atlantic Ocean. The area is estimated at about 417,000 square miles, but the boundaries are very irregular, and not very strictly defined. The population in 1851 was 1,356,000.

Sea-coast.—The sea-coast of Venezuela extends from the Boca de Navios, or principal mouth of the river Orinoco, in a general west-north-west direction to the innermost recess of the Gulf of Paria and the peninsula of Paria, a distance rather exceeding 200 miles. The whole of this tract is very low; it is composed of a great number of islands, which consist of alluvium brought down by the Orinoco and the Rio Guarapiche, which traverse it by several channels; and it is overgrown with trees, which in some parts are high, but in others are only bushes. The peninsula of Paria divides the gulf of that name from the Caribbean Sea. It is occupied by a ridge of high rocks, which on the southern side approach near the sea and form several small harbours. The northern shore, from the Punta de Paria to the Punta d'Araya, presents only naked rocks, less elevated than those along the Gulf of Paria, which in some places also come close up to the water, but in others recede to some distance, leaving along the shore small plains, the soil of which is arid and sterile. The elevated coast which surrounds the Gulf of Cariaco shelters it against the swell and against all prevailing winds, and renders its waters as smooth as a lake. Opposite the peninsula of Araya is the island of Margarita, which constitutes one of the provinces of the republic. It is about 40 miles long and 20 miles wide in its broadest part, and consists of two large masses connected by a narrow isthmus about 10 miles in length. The eastern mass, called Cerro de Copei, is 3240 feet, and the western, called Cerro del Macanao, is 4573 feet high. Between Cumaná and Barcelona, about 72 miles, the coast is of moderate elevation, but rather steep, and it contains several good harbours. Between the high and rocky islands which lie along this coast are some narrow but deep straits. From Barcelona to Cape Codera, about 128 miles, the shores are low and sandy, and in most places covered with salt-swamps, lagoons, or morasses. The coast between Cape Codera and Puerto Cabello, about 155 miles, is very high. Mountains rise like a wall from the water's edge, with a steep ascent to a great elevation. It contains several harbours, but they are mostly open. From Puerto Cabello to La Vela de Coro, 165 miles, the coast is in general low, sandy, and arid; but in many parts covered with mangrove-trees (*Rhizophora mangle*), and in others swampy and overgrown with bushes. The isthmus which connects the peninsula of Paraguán with the continent is about 13 miles long and 3 miles wide, and consists of low sand-hills, interrupted by some swamps and small lagoons. The peninsula of Paraguán is occupied by an isolated mountain mass called El Cerito de Santa Ana. There are several small harbours on the western shores of the peninsula. Farther west, as far as the channel of the Lake of Maracaibo, the coast is low, sandy, arid, and in some places covered with swamps or lagoons; and the same description of coast continues westward on the islands of Zapara and San Carlos, and, west of them, on the peninsula of Goajira to Coroja, at which place it rises to some elevation, and this elevation generally continues to Cape Chichibacoa, the most western point of the coast of Venezuela. The whole coast-line of the republic is 1534 miles, of which about 150 miles are washed by the Atlantic Ocean, an equal extent borders on the Gulf of Paria, and the remainder forms the southern shores of the Caribbean Sea.

Surface and Soil.—Venezuela contains three distinct mountain regions, separated from each other by plains, and extending respectively over the north-west, the north-east, and the south-east parts of the republic. The north-western parts are occupied by the Andes and the mountains of the coast, which are connected with the Andes; the north-eastern districts are mostly covered by the ranges of the Sierra de Bergantín; and the south-eastern region comprehends the western portion of the Sierra de Parima. According to the estimates of Codazzi, the mountain regions occupy somewhat less than one-fourth of the republic, or 96,000 square miles; whilst the plains extend over about 312,000 square miles.

The Mountain Region of the Andes and the Coast-range (Sierra Costanera).—The Andes of Venezuela are the most northern portion of the Eastern Andes of New Granada. [ANDES, vol. i. col. 357.] Before the range leaves the territories of New Granada it divides, south-west of the town of Pamplona, into two branches, one of which runs north, with a small inclination to the east, whilst the other extends to the north-east. The western of these two ranges, which incloses the basin of the Lake of Maracaibo on the west, is called in the south Sierra de Ocaña, in the middle Sierra de Perijá, and on the peninsula of Goajira, where it terminates with Chichibacoa, it is called Montes de Oca. This chain, from the sources of the Rio del Oro to its termination on the Caribbean Sea, constitutes the boundary-line between Venezuela and New Granada; but its southern portion is entirely within New Granada. The highest summit of the Sierra de Perijá is said not to exceed 4200 feet above the sea-level. The whole of the range is covered with thick woods, and no part of it is cultivated. It is only inhabited by the independent tribes of the Cucinas and Goajiras.

The eastern or principal branch of the Andes enters Venezuela at the source of the river Tachira, an affluent of the Zulia, and terminates on the north-east, on the banks of the Rio Cojedes, south of Barquicimeto, near 9° 10' N. lat. It constitutes an enormous mass of rocks, occupying with its declivities a mean width of more than 60 miles, and its length is nearly 330 miles. The highest portion of this range is generally a narrow table-land, but so elevated that only a few hardy alpine plants are found on it. These table-lands, called paramos, are from 10,000 to 12,000 feet above the sea-level, and the best known of them are the Paramos de Zumpador, Agrias, Batallon, Portachuelo, Apure, Nequitao, and Rosas. Several summits rise above these table-lands, but only one, the Sierra Nevada de Merida, is always covered with snow: its two pinnacles rise respectively to 15,310 and 15,342 feet above the sea-level. The Picacho de Mucuchies and the Salado rise to 14,168 feet. The descent from the table-lands on both sides is steep, but frequently interrupted by plains of moderate extent, which lie one below another like terraces. In their natural state the plains have no trees, but in many places they are overgrown with bushes; whilst the valleys and declivities of the mountains, where they are not too steep, are thickly wooded. The most elevated terraces and the upper portion of the valleys are not inhabited; but cultivation has advanced to an elevation of from 8000 to 9000 feet. At this height wheat, barley, potatoes, and different European vegetables are grown, and continue to form the principal objects of agriculture to about 4000 feet, where they are replaced by maize, coffee, yuccas, and other tropical productions. Numerous rivers originate in the higher part of the range, and descend along its declivities with continual rapids and cataracts until they reach its base, where they become navigable, and continue to be so in the plains until they reach on the north the Lake of Maracaibo, and on the south the Rio Apuré.

Between the Sierra de Perijá and the Andes lies the basin of the Lake of Maracaibo. This Lake, the largest in South America, covers a surface of 8400 square miles: it is about 2500 square miles less than Lake Erie, the smallest of the five great lakes of North America. The main body of the lake is 92½ miles long, and the channel 46½ miles, so that the whole lake extends 139 miles from south to north; in its widest part it is 32 miles across; the channel varies from 14 to 4 miles in width. The water of the lake is sweet, but in the northern portion of the channel it is brackish. From the base of the mountain ranges which surround the lake the surface lowers very gradually to its borders, a distance varying between 50 and 80 miles. That portion of the plain which lies within a distance of from 10 to 20 miles from the lake is for a great part of the year inundated by the water which descends in numerous rivers from the Andes and Sierra de Perijá. The whole region in its natural state however is covered with thick woods, containing excellent timber-trees and others which afford dye-woods. By the channel there are several tracts which supply pasture for cattle and goats, and sheep find food in most places. Some parts, especially near the town of Maracaibo, are cultivated, and produce maize, manioc, yucca, and several other tropical roots. It is stated that 105 rivers, which always contain water, and 400 smaller ones, which contain water only for a part of the year, fall into the lake. The largest rivers are—the Catatumbo, which runs more than 200 miles, and has a navigation of 135 miles; the Zulia, which runs nearly 230 miles, and is navigable 160 miles; the Escalante, whose course is nearly 140 miles, of which about 80 are navigable; and the Motatan, which flows more than 180 miles, and is navigable for more than one-half of its course. The lake could be navigated by large vessels if they could pass the channel, whose depth varies in general between 10 and 12 feet. About 10 miles north of the islands of San Carlos and Zapara a bar above a mile wide runs across the entrance, with a channel near the middle, from 15 to 30 fathoms wide, and having not more than 12 feet of water; so that only vessels of moderate size can enter the lake. In 1499, when Ojeda and Vespucci first entered the lake, they found houses in the midst of the channel, which were built on wooden piles; and comparing them with Venice, they called the country Venezuela, or Little Venice.

The coast-range (Sierra Costanera) begins where the Andes terminate on the left bank of the Cojedes, an affluent of the Portuguesa. The mountains themselves do not constitute a large mass of rocks, but divide into several ridges, and their elevation is little more than half that of the mountains south of the Cojedes. The mountain region grows narrower as it proceeds north; by the mouth of the Yaracui, where it is called Sierra de Nirgua, two continuous ridges branch off to the east, and on the north-west of it is a mountainous tract of considerable extent, but of moderate elevation, called the mountains of Corogaa. But north of the Rio Tocuyo the country rises higher, and extends in its most elevated part in an uneven table-land, which in general is a few miles wide, and in this part, where it is called Sierra San Luis, attains an elevation of 4200 feet above the sea. Between this high ground and the sea on the north is a tolerably level tract, several miles wide, but on the east along the shores of the Golfo Triste the hills come close up to the sea at several places, and leave between them level tracts, which form part of the valleys that traverse the country from east to west. This part is swampy and very unhealthy; and although the alluvial soil of the valleys, and the declivities of the hills, which are covered with thick forests, are extremely

fertile, and yield rich crops of cacao, coffee, sugar, and other tropical productions, it would be entirely uninhabited if the mines of Aroa and the valuable timber of the forests did not attract a few adventurers. Farther west the country differs a good deal in character, but it suffers from want of water, and is little cultivated. The climate and the vegetation are however favourable to the sheep and goat, which are numerous; the skins of the animals constituting the principal wealth. The Sierra San Luis contains a greater portion of cultivable land; and coffee, sugar, plantains, cotton, maize, yucca, and several kinds of vegetables are grown.

The peninsula of Paraguaná is an appendage to the region of the mountains of Coro, being united to it by a narrow isthmus. The centre of the peninsula is occupied by a rocky mass, called El Cerito de Santa Anna, which rises to 1320 feet, and from which a high ridge extends to Cape San Roman. On the other sides it is surrounded by a low and level tract, the soil of which is arid and of indifferent quality. Cotton and a few tropical vegetables are grown: it is rather populous, and a considerable number of the inhabitants are employed in making salt.

The eastern portion of the coast range is composed of two well-marked ridges and one which is frequently interrupted. The most northern of these ridges branches off from the Sierra de Nirgua, near the innermost recess of the Golfo Triste, and runs close to the sea as far eastward as Cape Codera, about 130 miles; its mean elevation exceeds 4500 feet. The highest summits are north-east of the town of Caracas; the Silla de Caracas is 8308 feet, and the Picache de Naiguatá is 9480 feet above the sea-level. Between Puerto Cabello and the town of Valencia there is a considerable depression in this range, called Abra de Puerto Cabello, through which the road leads that unites these two commercial towns.

The southern ridge, called the interior ridge, branches off from the Sierra de Nirgua at Mount Tuouragua (3660 feet high) and runs eastward, parallel to the northern ridge; it terminates south-east of the mouth of the Rio Tui with the Cerro de Altagracia (5040 feet), but its continuation to the banks of the Rio Unare is marked by some lofty isolated hills. The Cerro de Platilla 6217 feet, and the Cerro Azul 5816 feet high, are its highest summits. These two parallel ridges of the coast range are connected by a transverse ridge, which occurs east of the Abra de los Llanos, and attains an elevation of more than 5800 feet above the sea. The country inclosed by the two parallel ridges is divided by this ridge into two parts, of which the western, in which the Lake of Valencia is situated, has the name of Valles de Aragua, and the eastern constitutes the valley of the river Tui. The Lake of Valencia extends from west to east about 80 miles, and from north to south 13 miles in the widest part, and has no outlet. The soil about it, which in most parts is alluvial, as the whole of the plain once seems to have formed part of the lake, is much more productive than that of any other portion of the republic. This tract is very populous, and its lower and more level parts are covered with plantations of sugar, coffee, tobacco, indigo, plantain, and cotton, and with fields of wheat, maize, yucca, and other tropical roots and vegetables. The surrounding mountains are partially covered with woods, but large tracts are only overgrown with bushes or grass.

The valley of the river Tui is, next to the vales of Aragua, the most populous and best cultivated portion of the republic. It extends from west to east about 100 miles, and is in general about 20 miles wide, but only a small portion of this extent is level enough to admit of cultivation. The course of the Tui is above 150 miles, and it becomes navigable for small river barges between Aragiita and Santa Lucia, about 68 miles from its embouchure. East of the mouth of the river is the Laguna de Tacarigua, which is 15 miles long and more than six miles wide; and is separated from the sea by a narrow strip of low land, over which in one place the sea breaks at high-water. This lake contains an incredible quantity of fish of different kinds, and is much frequented by fishermen; but the bulk of the population of the valley of the Tui are occupied in agriculture: they raise coffee, cacao, indigo, tobacco, sugar, maize, rice, and in a few places wheat, yuccas, plantains, manioc, and nearly all the roots and vegetables which are cultivated in South America and the West Indies. Many extensive tracts are covered with grass for the greater part of the year, on which numerous herds of cattle pasture.

South of the southern ridge of the coast-range is another but much lower ridge, called Galera de San Carlos and Del Pao. It is not connected with the Andes, like the other ridges, but originates in the savannas of San Carlos, several miles from the base of the Andes, and terminates before it reaches the banks of the Rio Orituco, an affluent of the Guarico, which falls into the Orinoco. This ridge is remarkable as forming the line of division between the mountain region above described and the Llanos, which extend south of it, and as marking also the limit of cultivation.

The mountain region, called Sierra del Bergantin, which occupies the north-eastern portion of the republic, is of comparatively small extent. The river Neveri, where it flows from south to north, incloses it on the west; and from that river it extends along the coast to the most eastern point of the peninsula of Paria. Its length is about 130 miles, but its width varies between 50 and 10 miles, and where it approaches the Bocas dos Dragos, or the strait called the Dragons' Mouths, it is still narrower. Its highest summit is the Turumiquire,

at the source of the river Nevori, 6863 feet. Other high summits occur between the upper course of that river and the sea, among which the Cerro Pionia rises to 6860 feet and the Arrempuja to 5820 feet above the sea. The table-lands which lie between the summits and ridges are generally from 3000 to 4000 feet high, and covered with grass, while the acclivities of the summits and the valleys are overgrown with high trees. In the fertile valleys of this range wheat, maize, and all tropical roots and vegetables are cultivated, and also cacao, coffee, sugar, cotton, and tobacco.

South of the mountain regions hitherto mentioned lie the Llanos, or Cattle-Plains, which extend from the banks of the Rio Orinoco to the foot of the ridges, generally without the intervention of a hilly tract, and between the eastern extremity of the coast-range and the western extremity of the Bergantin they reach to the shores of the Caribbean Sea. Westward they extend to the base of the Andes, along which they run southward to the Rio Meta, by which they are separated from the Wooded Plains. This region, according to the statement of Codazzi, covers a surface of 116,592 English square miles. Though one immense plain, this tract presents a great variety in elevation, climate, rivers, and productive powers. Some tracts are hardly elevated above the sea, whilst others rise to nearly 1300 feet: some are arid deserts, while the vegetation of others is extremely vigorous nearly all through the year. The whole however is characterised by a want of forests. The trees which are found stand singly or form groves of small extent, with the exception of the delta of the Orinoco.

Beginning on the east we find, first, the Delta of the Orinoco, which consists of a deep alluvial soil, formed by the deposit of the earthy matter brought down during the inundations, which last from April to August. Except on the banks of the branches of the rivers which traverse it, the whole is a swamp covered with trees. In the forests the mauritia-palms are numerous; and from the means of subsistence which these trees offer, the few inhabitants of this tract, the Warrows (Guaraunos) derive their maintenance. During the rains they live on scaffolds which are erected between the trunks of the high trees, several feet above the water—a circumstance which has given rise to the opinion that this tribe lives in trees. The low swampy tract extends beyond the Delta westward along the southern shores of the Gulf of Paria, nearly to the innermost western recess of that basin. From this low tract the country rises slowly to the west, until at the distance of about 50 or 60 miles it reaches the table-lands. This region is a prairie, destitute of trees and shrubs, except that in many places groves of mauritia-palms occur, where water is always found. It is traversed by numerous rivers, which during the rains inundate the adjacent low grounds; and hence it forms an excellent pasture-ground during the dry season, when the table-lands do not contain a blade of grass.

The table-lands, called in the country Mesas, constitute a peculiar and well marked feature in this part of Venezuela. They begin on the east, at the southern base of the mountain-system of the Bergantin, attain their highest elevation in the Mesa de Urica, whose surface is 1300 feet above the sea-level, and continue westward to the river Orituco, where they join the southern ridge of the coast-range. Their surface is quite level, and the soil consists chiefly of sand, which in many places is mixed with chalk. This soil is unproductive, and the vegetation even in the rainy season is limited to a few hardy grasses covered with a kind of hair, which afford indifferent pasture. The rains, which fall in abundance from April to July, quickly find their way through the upper layers of the soil, until they meet an argillaceous chalk, where they collect and form springs and rivulets, and give origin to a hundred rivers, which run south to the Orinoco, east to the Gulf of Paria, and north to the Caribbean Sea. The rivers running southward are deep, and have always a great volume of water; but those which run to the north soon leave the table-lands and enter an arid and much lower plain, where their waters are soon exhausted. Between the table-land and the Caribbean Sea a level plain extends about 60 miles from north to south; it has a sandy soil, and is chiefly covered with grass, but there occur many tracts covered with oaks and some palms. A kind of lily spreads over extensive tracts, and it is supposed that all the parts covered with this plant were formerly cultivated by the Indians. At present it is only used as pasture for cattle, except near the coast where a few tracts are planted with cotton, cacao, coffee, sugar, tobacco, and several tropical roots and fruits.

The most uneven portion of the cattle-plains is that which extends on the south side of the coast-range, and lies west of the river Orituco, reaching to the banks of the Portuguesa; but south of this tract the country continues to be uneven, as there are several small Mesas; while on its southern edge are several isolated hills, which are surrounded by extensive plains covered with fine grass.

South-west of the uneven tract just mentioned are the Plains of Barinas (Varinas), which are considered the most fertile part of the great plain, and the best adapted for cultivation. These plains extend along the base of the Andes from the Rio Portuguesa to the Rio Sarare and Apure, a distance of more than 150 miles, and are from 60 to 80 miles wide. The mountains terminate abruptly on the plain. From their base a very gentle slope descends in a south-eastern direction towards the banks of the rivers Portuguesa and Apure. This slope is furrowed by numerous large rivers, which descend from the mountains

and drain the plain, running nearly parallel to one another. They are navigable nearly to the base of the mountains, but during the rains they inundate a considerable portion of the plain, the higher tracts along the river banks being the only parts not subject to inundation. These high banks are also the only parts of the plain which are covered with woods, and which contain tracts fit for cultivation. Numerous hamlets and single farm-houses are built on these higher grounds, where maize, yucca, and plantains are extensively grown: the lower parts, which are subject to inundation, serve as pasture-grounds during the dry season.

Between the Rio Apure and the Rio Meta, both affluents of the Orinoco from the west, are the Plains or Llanos of Apure. They contain the lowest portion of the Cattle-Plains. This tract is so level, that the current of the Apure and Meta is imperceptible, and a strong eastern gale, or the least rise in the Orinoco, causes their waters to flow back. No rock, no stone, not even a pebble is seen in these plains. The soil consists of a mixture of sand and chalk. It is covered with grass, but is entirely destitute of trees and bushes, except a few scattered groves. The only inequalities of the surface are some hills, mainly of sand, which rise a few yards above the common level, and some slightly elevated grounds called banks. In the dry season this plain is one immense pasture-ground; but during the rains from April to July or August it becomes an immense lake, in which the banks appear like islands.

South of the Rio Meta begins a Woody Region, which extends southward to the limits of Brazil, and may be considered as the northern portion of that immense forest, or series of forests, which occupies South America on both sides of the equator. In their present state these forests can only be entered by means of the rivers which, descending from the Eastern Andes of New Granada, traverse them in their course to the Orinoco. In the southern districts of this region is the Rio Casiquiare, or that branch of the Orinoco which separates from the river soon after it issues from the mountains, and running south by west joins the Rio Negro, or Guainia, an affluent of the AMAZONAS.

That portion of Venezuela which lies east of the Rio Orinoco and north of the Pacaraima ridge is mostly occupied by the Parime Mountains and their offsets. [ORINOCO.] The greater part of this immense tract, which comprehends more than one-third of the territories of the republic, is entirely unknown, as the interior has been traversed only by a few adventurers, who followed the course of the large rivers in search of the famous El Dorado. They found nearly the whole covered with an interminable forest of tall trees, amidst which rocky masses frequently rose in fantastic forms. A few tribes of aborigines inhabited the banks of the rivers, and lived mostly on the produce of their fisheries and a few wild fruits. The country adjacent to the banks of the Orinoco River however was more populous, and in these places the Capuchin monks established some missions. Though in some places the ridges of the Parime Mountains approach the river, in general they remain at a considerable distance from its banks: and this intermediate space is generally an uneven plain, on which a considerable number of wooded rocks rise to a moderate elevation. Below the rapids of Atures both sides of the river, with the exception of a few places, are skirted by a low ground which is annually inundated. It varies from half a mile to three miles in width. The district of Uputa, which lies south of the delta of the Orinoco, and extends from the river Caroni on the west to the Sierra Imataca, the most maritime ridge of the Parime Mountains on the east, is the only part which is occupied, except by two or three scattered families. It is a table-land, whose surface is 1400 feet above the sea-level, and whose northern declivity approaches the Orinoco within a few miles. The surface of this table-land is very uneven, and presents a quick succession of small grassy savannas, well-wooded isolated rocks and hills, and delightful valleys. The fertility of this tract in many parts is said to be hardly inferior to that of the Vales of Aragua, while its climate is less hot and dry than that of other parts of the republic. This tract is no less fit for rearing cattle than for cultivation. Coffee, cacao, cotton, sugar, indigo, and all the roots and fruits which grow between the tropics are cultivated. The cascarilla is collected in great quantities.

Venezuela is well watered, with the exception of the Mesas and that tract of the coast which extends from the town of Cumarebo westward to the Gulf of Venezuela. The number of rivers is very great, and that of the navigable rivers considerable. Most of them join the Orinoco, which runs about 1300 miles, and is navigable for the greater part of its course. This river, with its principal tributaries, is noticed elsewhere. [ORINOCO, vol. iv., col. 13.] Of the rivers joining it from the west, the Inirida flows 424 miles; the Guaviare flows more than 800 miles; and the Meta flows an equal distance, and all of them are navigable for a large part of their course. Farther north the Orinoco is joined by the APURE, which is more navigated than the other rivers of the republic. The rivers which fall into the Orinoco from the east descend from the Parime Mountains, and preserve the characteristic of all the rivers originating in that mountain system, being impeded in their course by cataracts and rapids. The largest are the Caura, and the Caroni, each of which flows for about 600 miles. The navigation of these two rivers is interrupted at several places by cataracts.

The southern portion of Venezuela is drained by the Rio Negro, which in its upper course is called Guainia. It is joined from the north by the Casiquiare, a branch of the Orinoco, which connects the Rio Orinoco with the Rio Amazonas. This natural channel is 240 miles long, in general 80 feet deep, and on the average about 400 yards wide. It is navigable, as well as the Rio Negro, as far as it drains the territories of the republic; but lower down in Brazil the navigation is interrupted by numerous rapids and small cataracts.

One of the principal affluents of the Essequibo, the Cuyooni, rises in Venezuela. It flows 600 miles, of which above 400 miles are navigable; but only the upper portion of this river belongs to the republic.

The rivers which fall into the sea within the territory of the republic without joining the Orinoco, Rio Negro, or Essequibo, have a comparatively short course. A few of them however are navigated, as the Guaripeho, which rises in the mountain-system of the Bergantin, and falls into the Gulf of Paria. It runs about 180 miles, of which more than 70 miles are navigable. The Neveri, on which the town of Barcelona is built, rises in Mount Turumiquire, runs about 60 miles, and is navigable for small boats for 40 miles, and for larger boats 18 miles. The Unare, rising in the Mesas, flows about 170 miles, and is navigable for 90 miles. The Tui, which drains the principal valley of the coast-range, flows 190 miles, and is navigable for more than 80 miles. The largest of the rivers falling into the Caribbean Sea is the Tocuyo, which rises on the northern declivity of the Paramos of Niguitao and of Rosas, and falls into the Golfo Triste at a course of 300 miles, of which more than 150 miles are navigable. The largest of the navigable rivers falling into the Lake of Maracaibo have been noticed.

Climate, Productions, &c.—With respect to climate, Venezuela is divided by the natives into three zones, called Tierras Calidas, Templadas, and Frias. Hot countries (tierras calidas) are all those which do not rise more than 2000 feet above the sea, and in which only tropical plants and fruits succeed. The temperate countries (tierras templadas) are between 2000 and 7000 feet above the sea; the agricultural productions of Europe succeed best in them. The cold countries (tierras frias) are those which, from 7000 feet above the sea-level, rise to the summit of the Sierra Nevada de Merida (15,348 feet), 148 feet above the snow-line (15,200 feet), and are uninhabited. The cold and temperate regions however occupy only a comparatively small portion of the country, by far the greater portion of which has a hot climate. In Venezuela, as in other countries between the tropics, the year is divided into two seasons, a wet or winter, and a dry or summer season. The north-east trade-wind, which properly blows the whole year round in this country, is modified in its direction and force by these seasons. As soon as the sun crosses the equator, the wind passes to the south of east, and the rains begin, accompanied by thunder-storms. The rains are generally abundant and continual, though there occur a few days in which not a drop falls; and there is also an interval, either before or after mid-summer, when it does not rain for a whole month. This season is called the Little Summer of St. John. The dry season, or summer, begins when the sun has entered the southern hemisphere. This general order of the seasons is however subject to numerous modifications in several parts of the country.

Codazzi gives a list of 180 plants which are cultivated in Venezuela; there are also 240 kinds of trees and shrubs, whose wood is used for domestic purposes, 36 plants yielding gums and resins, and 45 which produce medical drugs. The articles of cultivation which are grown for exportation are coffee, cotton, indigo, cacao, sugar, tobacco, and cocoa-nuts. Cotton is grown chiefly in the valleys of the coast-range, and in the country adjacent to it on the south, and also in Barinas. Indigo, which was once the most important object of cultivation, is much neglected, and coffee, cotton, and sugar have taken its place; but indigo is still grown in some places within the coast-range. The cacao of Caracas is known as the best, but its cultivation has greatly extended in the valleys of the coast-range and of the Bergantin, and in the plains of Barinas. Coffee has of late years become the staple product: it is very largely grown in the valleys of the coast-range, on the declivities of the Andes, and in the plains of Barinas. The plantations of sugar are much less extensive: nearly all of them are in the valleys of the coast-range, especially in the vales of Aragua. The cocoa-palm is met with to the height of 700 feet, and large quantities of the oil are exported. The tobacco of this country is of the best quality, and grows in the valleys of the Bergantin, the declivities of the Andes, and the plains of Utapa and Barinas. The tobacco of Barinas (Varinas) is well-known in Europe, but that of Cumauca in the Bergantin Mountains is said to be better. Maize is most extensively cultivated all over the country; but wheat only in the more elevated tracts, especially in those which are more than 1800 feet above the sea-level. Rice is grown in a few places in the lower tracts, and barley only on the declivity of the Andes. Millet is an object of cultivation. The plantain (*Musa paradisiaca*), is cultivated in all the agricultural districts up to 7000 feet. The roots which are grown as food are chiefly potatoes, batatas (*Convolvulus batatas*), yucca (*Jatropha manihot*), &c. The cultivation of almost every kind of leguminous plants is considerable, especially beans, haricots, lentils, vetches, and garbanzas. Melons and water-melons are much attended to, but vegetables are in general neglected.

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The number of fruit-trees is great, but the cultivation is little attended to. Besides the vine, which succeeds well in some of the higher valleys, the fig, pomegranate, orange, lime, and lemon have been transplanted from Europe. Some of the indigenous trees bear excellent fruits, among which the most remarkable are the *Laurus Persea*, *Annona squamosa*, *A. Humboldtiana*, *Sapota mammosa*, the pine-apple, and the tamarind.

The domestic animals constitute one of the principal branches of the wealth of Venezuela. The large plains supply pasture for cattle, horses, mules, and asses, and the number of these animals is very great. It is also considerable in the other districts, as the greater part of the country is uncultivated. Sheep and goats are also generally kept, but are only numerous in the mountains of Nirgua and the hilly tract which lies north of them. Pigs abound in the valleys of the mountain ranges and the countries contiguous to them.

Wild animals are numerous; among them are the jaguar (called in the country the tiger), the puma, the ounce (which is found in the forests of the Sierra de Nirgua), the tiger-cat, the tapir, the capybara, the venado (a kind of deer), the aguti, porcupine, rabbit, several kinds of wild hogs, the sloth, the ant-eater, and several varieties of monkeys and apes. Two kinds of whales, the physeter and narwhal, are frequently met with along the northern coast; and in the large rivers are the manati and the touina, a kind of dolphin, which attains a length of 9 or 10 feet. The birds are numerous, especially those belonging to the *Falconidae*, *Ardeidae*, *Syrigidae*, *Turdidae*, *Tanagridae*, *Picidae*, and *Psittacidae*; among the last-mentioned the loris are distinguished by the beauty of their plumage. There are also pelicans, wild geese and ducks, and flamingoes.

Fish are abundant in the sea, the rivers, and lakes and lagoons. The greatest fishery is carried on in the strait which divides the peninsula of Araya from the island of Margarita, round the island of Coche, where a great quantity of a fish called liza is taken, salted, and exported to all the ports of the republic and the West Indies. The salted and dried eggs of the fish are also a considerable article of commerce. Turtle are found in the sea, and manteca made from their eggs is an important article of commerce. Manteca is also made from the fat of the manati. The alligator abounds in the Orinoco, Apure, and Portuguesa, and is also found in several other rivers. The iguana is eaten, and considered a dainty. The chameleon is common in some parts. There are boa-constrictors and several venomous snakes. The pipa abounds in the Parime Mountains. Pearl-oysters were very abundant soon after the discovery of America in the strait between the peninsula of Araya and the island of Margarita, and a very advantageous fishery was carried on for several years. In the hilly tract between the Golfo Triste and the lake the cochineal insect is found, but is not turned to any account.

Venezuela is not rich in minerals. Gold is found in several places, and has been worked, but not to much purpose. Silver, tin, and copper-ore are also met with, but only the last is profitably worked. Iron- and lead-ore occur, but are not worked. Coal is found at some places in the coast-range. A kind of natron is extracted from a small lake on the southern declivity of the Andes, in the province of Merida, and is mixed with tobacco. At several places petroleum occurs, especially in the peninsula of Araya. Salt is produced to a great amount in the salt-works of the peninsulas of Araya and Paraguana, and in the Gulf of Maracaibo.

Manufactures and Commerce.—The few manufactures of this country are carried on in the Sierra Nirgua and on the declivities of the Andes, at Tocuyo, Barquisimeto, Trujillo, and Merida, where straw-hats, hammocks, coarse cotton-cloth, some worsted stuffs, and earthenware are made. The tanneries are rather numerous, and nearly all the articles of leather which are consumed in the country are made within it, and constitute one of the most important branches of internal commerce.

The commerce of Venezuela diminished greatly during the War of Independence, cultivation having been much neglected during that period; but though the state of society has been unsettled ever since the termination of the war, the trade has recovered, though very different of course to what it might be were the country in the hands of a peaceful and industrious people. The total value of the exports do not average much over a million and a quarter sterling, and the imports are little over a million. More than half the entire amount of both the export and import trades is with the United States and Great Britain. The exports to the United States in 1853 amounted to 2,613,780 dollars; the imports were 844,527 dollars. The imports from Great Britain in 1853 were 248,190*l.*; in 1854 they amounted to 300,899*l.* The countries with which the trade of Venezuela is next largest in amount are, Denmark, Germany, France, Holland, and Spain. The exports are chiefly cacao, coffee, indigo, cotton, sugar, tobacco, vanilla, sarsaparilla and dye-woods, copper-ore, horses, mules, cattle, jerked beef, hides, horns, &c.

Inhabitants.—The inhabitants consist of Indian aborigines, of Spaniards and Africans who have settled among them, and of the offspring which has resulted from the mixture of these three nations. The unmixed aboriginal Indians are distinguished by a large head, narrow forehead, lank and long black hair, eyes of middling size, sharp nose, wide mouth, thick lips, and broad face. They are generally

copper-coloured, some very dark, others almost as fair as Europeans; they are short in stature, and have little hair, though they are not altogether beardless. Their limbs, large and muscular, have the appearance of great strength, but they support hard labour with difficulty. The greater part of them are acquainted with agriculture, and cultivate cotton, plantains, yucca, batatas, and even the sugarcane. They live in houses, but all of them go nearly naked. The following was given as the distribution of the population in 1844, but we have no similar semi-official summary for 1851, when the total population was said to have increased to 1,356,000:—

Independent Indian tribes	52,000
Subjected Indians of pure blood	14,000
Indians mixed with the other population, who have adopted the manners of the other inhabitants, but preserve the characteristic features of their race	160,000
Whites or creoles, Spanish Americans, and foreigners	298,000
The mixed race, mulattoes, mestizoes, zamboes, tercerones, and quarterones	480,000
Negroes or slaves (by the law of 1830, the importation of slaves was forbidden, by an act of 1854 they were emancipated)	48,000
	1,052,000

Divisions, Towns, &c.—Venezuela is divided into 5 departments—Maturin, Venezuela or Caracas, Tulia, Apure, and Orinoco. These are subdivided into 13 provinces, 88 cantons, and 523 parishes.

The capital of the republic is CARACAS. The following are some of the other more important towns: the populations are merely vague estimates:—

ANGOSTURA.

Angostura, the capital of the province Margarita, stands in a narrow valley on the east side of the Island of Margarita. It has about 3500 inhabitants, and carries on some trade in coffee, palm-oil, and the other products of the island.

BARCELONA; BARQUICIMIENTO.

Barinas, or *Varinas*, the capital of the province of the same name, is built on the St. Domingo River, at the base of the Nevado de Mérida, in 7° 30' N. lat., 70° 12' W. long.: population about 6000. It is the centre of a very fertile district, and a large trade is carried on, the inhabitants of the higher country bringing in their corn and fruit, and taking in exchange the produce of the numerous herds which pasture on the plains. A good deal of tobacco is grown in the vicinity.

Carora, on the left bank of the Tocuyo, 100 miles N.W. from Barquicimento, population 4000, has some manufactures of cotton-stuffs and several tanneries, and carries on a good trade.

Coro, the capital of the province of Coro, stands on an arid plain about 2 miles from the sea, at the western angle of the Gulf of Maracaibo: population, 4000. It carries on some trade, chiefly with the Dutch island of Curaçao, by means of the small harbour called Vela de Coro, which is about 7 miles from the town.

Cumaná, the capital of the department of Maturin, stands about a mile from the sea, at the entrance of the Gulf of Cariaco: population 12,000. The gulf itself is spacious and safe, but its entrance is somewhat dangerous, owing to a sandbank, which extends from Punta Araya, and a shoal off the opposite coast. The town has no remarkable buildings; the houses are low and slightly built, on account of the frequent earthquakes. There is a considerable trade in cattle, dried meat, salted fish, and salt, with Caracas and the Windward Islands.

Guayra, or *La Guayra*, the port of CARACAS, from which it is distant in a straight line only 6 miles, but by the road over the mountains about 13 miles: population, 6000. It is built on a narrow and uneven plain between two huge masses of rock, and at the back of the town the mountains rise almost perpendicularly. The town is rather well built; but it has only an exposed roadstead, and the anchoring ground is not good. The climate is exceedingly hot, and it is considered very unhealthy, but it is said without reason.

Maracaibo, the capital of the province of the same name, is built on the western shores of the strait which connects the great lake with the Gulf of Maracaibo: population, 14,000. It contains some good buildings, but the greater part of the houses are of wood and thatched. The town has a considerable trade, as it is the harbour of the provinces of Mérida and Trujillo, and also of several districts of New Granada, especially those surrounding Cúcuta, from which cacao, coffee, honey, sugar, preserves, tobacco, ropes, and some smaller articles are brought to Maracaibo, and then exported by English, American, Dutch, French, and Danish vessels. By the same way these provinces are supplied with European articles and with salt. Besides the ordinary schools the town has a college and a school of navigation. A considerable number of vessels are built here, the forests on the southern banks of the lake supplying abundance of excellent timber.

Maturin is a considerable place on the banks of the Rio Guarapiche, which falls into the Gulf of Paria. The river is navigable at the town for barges, and for larger vessels at the Caño Colorado, about

27 miles lower down in a straight line. The town exports to Trinidad a great number of cattle, horses, and mules.

Merida, the capital of the province of the same name, population 6000, is built on a plain, or rather table-land, 10 miles long and 3 miles wide, which on one side joins the range of mountains, and on the other sides is encompassed by deep valleys. It is 5518 feet above the sea-level, and on the south of the town is the Sierra Nevada. The coffee grown in the vicinity is of excellent quality. Several kinds of woollen and cotton stuffs are made. There are a college and several schools.

Puerto Cabello, is situated at the bottom of the Gulf of Triste, in 10° 20' N. lat., 69° 10' W. long.: population, 10,000. The port is considered the best on the south coast of the Caribbean Sea. The harbour is formed on the west by a peninsula projecting northward, and terminating about 100 yards from the island, and is sheltered by a narrow low island, about 2 miles long, which is overgrown with mangrove-trees, and at its eastern extremity is united to the continent by a shoal. The space between the peninsula and island forms the entrance of the port, which is deep, but so narrow that only one vessel can pass through it at a time. The harbour itself is spacious, and the largest vessels may lie there in safety: the water being always as smooth as that of a lake. The city is small, but contains several good houses and is well fortified. There is an excellent wharf, close to which vessels of large burden may lie. A suburb, much more extensive than the city, but built with less regularity, is separated from it by a cut. The commerce of the town is considerable. The exports consist of cacao, coffee, sugar, and a great number of mules. Formerly 10,000 mules are said to have been annually shipped for Jamaica and other parts of the West Indies.

San Felipe, near the left bank of the Yuracuy, about 60 miles N.E. from Barquicimento: population, 7000. The town is well built and has a considerable trade, but it stands in a low unhealthy region which is subject to frequent inundations. In its neighbourhood are the copper mines of Aroa.

Tucuyo is situated in an elevated valley near the source of the river Tucuyo: population, 10,000. The town is the centre of that part of the province of Barquicimento which is best adapted for the cultivation of wheat. It is a well built place, and the inhabitants are enterprising and industrious: they make cotton and woollen-stuffs, and tan leather, of which they make boots, shoes, and leathern girdles, which they send to the plains. In the town are a college and some elementary schools.

Trujillo, the capital of the province of Trujillo, stands on the great road from Caracas and Barquicimento to Mérida and New Granada: population, 4000. The town is built on a slope between two ranges of high mountains, and is 2744 feet above the sea-level. In its vicinity much wheat is grown. Many worsted stuffs are made in the town, also preserves and cheese. There are a college and several elementary schools.

Valencia, the capital of the province of Carabobo, stands on a slope, near the opening of a valley, about six miles from the west bank of the Lake of Valencia: population, 15,000. Its position is important for commerce, as all the products of the provinces of Barinas and Barquicimento pass through the town to Puerto Cabello. It is well built, and contains among other institutions for education, a college, a grammar school, and several elementary schools.

Victoria, or *La Victoria*, is situated in the vale of Aragua, about 40 miles S.W. from Caracas: population, 8000. The town is advantageously situated for the commerce with the great plains; for to the south of it the southern ridge of the coast range presents a great depression, through which the road leads to the town of Cura, which is built at the southern opening of the depression. In the southern plains is the town of Calabozo, a thriving place. Maracai and Turmero, both in the vale of Aragua, are also considerable places.

History, &c.—The most eastern part of this coast, and the Island of Margarita, were discovered by Christopher Columbus in his third voyage, 1498, and the following year the whole northern coast of South America, from the Gulf of Paria to Cape de la Vela in New Granada was discovered by Ujeda and Vespucci. In the same year Christobal Guerra made a voyage for the purpose of ascertaining the commercial wealth of the country. The first settlements on the continent were at Cumaná, which was built in 1520, and at Coro, which was built in 1527. About this time the emperor Charles V. gave up the whole northern coast as far west as Cape de la Vela to the Welsers, a family of merchants in Augsburg, to be held as a fief of the crown of Castile; but he resumed possession of it in 1542. Several places in the coast range had already been discovered where there were indications of gold; and the Spaniards now began to form their settlements. Tucuyo was established in 1545, Barquicimento in 1552, Valencia in 1556, and Caracas in 1567. In 1634 the Dutch took possession of the island of Curaçao, and from that time Venezuela began to rise. The continually increasing demand for cacao on the part of the Dutch induced the Spanish settlers to attend to its cultivation, and in a short time a considerable quantity of cacao was exported. This excited the jealousy of the Spanish court and of the Spanish merchants. Various means were employed to direct this branch of commerce to Spain, but with little success. In 1700 the company of Guipuzcoa was established, in which was vested the exclusive right of

carrying on the commerce with Venezuela; but the cultivation of cacao, as well as of indigo, was more promoted by the smuggling trade with the Dutch, than by that of the company, and in 1778 the company dissolved, and the trade was opened to all the ports of Spain. Venezuela remained under the sway of Spain till 1808, when Napoleon I., having deposed the royal family, made his brother Joseph king of Spain. Venezuela, like all the American colonies of Spain, declared for the ancient dynasty; but being dissatisfied with the measures of the regency of Spain, it proclaimed its independence in 1810, but in 1812 was brought back to its ancient political condition. In 1818 Bolivar, a native of Venezuela, made an unsuccessful attempt to liberate his native country from the yoke of Spain; in 1816 he was more successful. In that year a war began between the Spaniards and the inhabitants, which lasted till 1823, when the Spaniards who had remained in the country gave up Puerto Cabello, their last place of refuge. In 1821 Venezuela united with New Granada and Quito, and formed one republic under the name of Colombia, [COLOMBIA]; in 1830 they separated amicably, and since that time they have constituted the three republics of Venezuela, New Granada, and Ecuador. In the year in which the union was dissolved Venezuela formed a new constitution, which underwent some modifications in 1843. By it Venezuela has a central government, the legislature of which is invested with the power of making laws on all subjects. The legislative power is vested in a Congress, which consists of a house of representatives and of a senate. Each province sends two members to the senate, and one member to the house of representatives for every 25,000 inhabitants. The executive power is vested in the president, who, like the vice-president, is chosen for four years. Like the other South American republics Venezuela has since its independence been in a continually disturbed state; and like two many of them it has a heavy public debt, the interest on which it has for a long time made no attempt to pay. Its finances are in a thoroughly disorganised state, as may be judged from the fact, that in 1853 its expenditure was about three times its receipts.

(Humboldt, *Voyage aux Régions Equinoxiales du Nouveau Continent*; Dépons, *Voyage à la Partie Orientale de la Terre Ferme*; Lavasse, *Statistical, Commercial, and Political Description of Venezuela*; Chesterton, *Narrative of Proceedings in Venezuela*; Hall, *Columbia, its Present State, &c.*; *Letters from Columbia; Campaigns and Cruises in Venezuela*; Codazzi, *Resumen de la Geografía de Venezuela*.)

VENICE (*Venezia*), the capital formerly of the Republic of Venice, now of the Crownland of Venice in Austrian Italy, is situated in 45° 26' N. lat., 12° 20' E. long., and has a population of about 100,000, exclusive of the garrison. It is built on a cluster of islets, about 80 in number, that rise in the middle of the lagoons, or shore-lakes, which here skirt the Adriatic, and about 2 miles from the mainland of Italy, with which it is now connected by a viaduct of above 200 arches, supporting a railway to Mestre, where is the junction of the Venice-Milan and Venice-Trieste railways. The lagoons are divided from the Adriatic by a long narrow tongue of land called Littorale, which however is broken into islands by a few openings whereby ships enter the canals that lead up to the city. The islands on which the city is built are divided from each other by narrow canals, which serve for the purpose of communication, as streets in other towns. Above 450 bridges connect the various islands. Narrow streets and lanes, alleys and courts, separate the buildings of each island from one another, and there are also narrow quays along the canals. Carriages and horses are useless, and therefore not seen in Venice; and their place is supplied by boats called gondole, which are continually plying in all parts of the town, and of which it is said there are above 4000. The circumference of the city is nearly eight miles. There is a tide from the Adriatic which rises three feet over the lagoons, part of which is left nearly dry at the ebb, except the seven large canals by which communication is kept up between Venice and the ports of Malamocco and Chioggia on the Adriatic, and the landing-places of Mestre, Fusina, and others on the mainland.

The city is divided into two parts by a canal broader than the rest, called Canal Grande, or the Great Canal, over which there is only one bridge, the Rialto. Another and much broader canal, or rather arm of the sea, bearing the names of Canal della Giudecca and Canal di San Marco, divides the city properly so called from the long island and suburb of La Giudecca, and from the neighbouring island of San Giorgio.

The finest part of the town is the district of San Marco, which contains the splendid cathedral dedicated to the patron saint of Venice, with its lofty detached belfry, the handsome square (Piazza) before it, with its arcades and numerous coffee-houses—the fashionable place of resort of the Venetians; and the vast and massive ducal palace, which was the seat of the republican government, and contains the halls of the various councils of the administration. The vast hall in which the Great Council of the republic used to assemble is now the repository of the library of St. Mark. All the apartments of the Palace of the Doges are adorned with paintings by Titian, Tintoretto, Paul Veronese, and other masters of the Venetian school, which commemorate the great events in the history of the republic. The library of St. Mark contains 65,000 volumes, and about 5000 manuscripts.

The Piazzetta, or lesser square of St. Mark, which is open on one side to the sea, has two handsome pillars of granite brought from Greece in the 12th century. Upon one is the winged lion, of brass,

the ancient emblem of the republic, known by the name of the Lion of St. Mark; and upon the other is a statue of St. Theodore, a patron saint of the republic.

Among the many remarkable churches of Venice, besides St. Mark's, the following deserve especial mention:—1. San Giorgio Maggiore, which was constructed by Palladio, and contains the monument of the Doge Domenico Michieli, the conqueror of Jaffa, Tyre, and Assalon, who afterwards, when attacked by the Byzantines, sailed with his fleet through the Archipelago, and ravaged many of the islands, so as to deserve the title of 'Terror Græcorum,' which is on his epitaph. 2. Il Redentore, also by Palladio, one of the handsomest churches in Venice, situated on the island of La Giudecca, is, like most other Venetian churches, rich in paintings. 3. Santi Giovanni e Paolo has numerous and splendid monuments of doges, senators, commanders, and other illustrious men. The church is also adorned with paintings, some of which are historical. A bust of Titian above the door of the vestry-room preserves the memory of that great master. 4. I Frari, a splendid church which contains numerous monuments, among others that of Canova, and several good paintings. In the suppressed convent of the Frari are deposited the archives of the old republic, which were taken to Paris, but were afterwards restored.

The banks of the Canal Grande are lined with splendid marble mansions of the nobility, whose historical family names have in many instances outlived the fortunes of their former possessors. Some of them are used as government offices, others are let to foreign consuls and other strangers. Several of the Venetian palaces possess valuable paintings and sculptures. In the Manfrini palace is a rich gallery, containing among others the painting of the 'Three Portraits' by Giorgione, which Byron in his 'Beppo' has so highly extolled. The Academy of the Fine Arts, of which the patriotic Count Cicognara was the originator, has been the means of saving many masterpieces of the Venetian school which otherwise would have been lost to Venice. Many of them belonged to the suppressed monasteries; others were restored from Paris in 1815; some, such as the famous Assumption by Titian, were discovered in a corner of a church, where they lay forgotten, covered with dust and filth. A painting by Gentile Bellini represents a procession passing through the square of St. Mark in the 15th century, with the costumes and localities of that age. 'The Slave Emancipated by St. Mark' is a masterpiece of Tintoretto. The academy has altogether about 400 paintings, besides models of the Elgin and Parthenon marbles, and of other masterpieces of sculpture; and a collection of original drawings of Leonardo da Vinci, Michel Angelo, and Raffaele.

The arsenal or dockyard of Venice, begun in 1504, celebrated in Dante's 'Inferno' (canto xxi.), long the main instrument of the power of the republic, formerly employed 16,000 workmen, a number which was reduced in the last century to 1500. The arsenal is situated at the eastern extremity of the town, is surrounded by a high wall, and occupies an area of about three miles in circumference. It has been recently fortified by the Austrian government. The arsenal of Venice is now the dockyard for the Austrian navy. A naval college is established at Venice. A body of artillery and a battalion of marine infantry are attached to the service of the navy. The arsenal contains a number of docks and basins, foundries for cannon, forges, a rope-walk above 1000 feet long, a vast timber-yard, and an armoury. There is also a monument to the memory of Angelo Emo, great admiral of Venice, who died in 1792, and was the last who caused the Venetian flag to be respected in the Mediterranean. This monument to Emo was one of the first works of Canova. At the land entrance of the arsenal, which is a gate adorned with several statues, are two marble lions, brought from Athens by Morosini in the latter part of the 17th century.

Venice has several theatres; that of La Venice is one of the largest in Italy. The Venetians are fond of music; and the songs in their dialect, set to music by native composers, are very pretty. The Carnival at Venice is still very long; but masks are not used now except by the lower orders. The people are naturally lively and light-hearted: their festivals and public rejoicings, however noisy, are unattended by quarrels or disorderly conduct. The educated classes have a social affability and ease of manners which are very fascinating.

Venice has a gymnasium, a lyceum for scientific instruction, a patriarchal seminary for clerical students, two colleges for female education under the direction of nuns, an atheneum of sciences and literature, and the academy of the fine arts already mentioned. Besides the library of St. Mark there are libraries belonging to the different colleges and academies, as well as to several convents and palaces of the nobility. The printing-press of Venice is still active.

The charitable institutions are numerous, but not more so than what is absolutely required by the decayed condition of Venice. When the French evacuated the town in 1814, nearly one-half of the population was in want of charitable assistance. The Austrian administration after the restoration applied itself to alleviate the distress of Venice. Pecuniary assistance from the treasury of the kingdom, a better administration of the communal revenue, a great diminution of local taxation, the establishment of a free port, and important public works undertaken at the expense of the government, in great measure answered the intended purpose. Out of the treasury of Austrian Italy above two millions sterling were spent for the relief of the city.

Venice. The mercantile shipping of Venice assumed a new activity; and traded all over the Mediterranean. In consequence of its rebellion against Austria in 1848-9 (when the city was long besieged by the Austrians by sea and land, and at last capitulated), the returning prosperity of the city received a new check; it lost its privileges as a free port, and the entrepôt of foreign commerce was confined to the island of San Giorgio; but in 1851 the freedom of the port was restored. Since that time railways have been completed nearly to Milan in one direction, and to beyond Pordenone, on the way to Udine and Trieste, in another, but the stream of commerce that so long flowed into the lagoons of Venice has turned away into other channels, and no change of government could restore Venice to its former prosperity.

Among the island towns in the neighbourhood of Venice the following deserve notice:—1. *Murano*, about a mile N. from Venice, is a town of about 6000 inhabitants, and has manufactories of glass and plate-glass, and also of mock pearls and beads. The principal churches are those of San Michele and San Donato. The latter, which is called the Domo di Murano, is of Byzantine architecture of the 12th century, with mosaics and columns of Greek marble. The church of St. Peter and St. Paul is rich with paintings. 2. *Torcello*, farther distant to the north-east, is remarkable for its ancient and splendid church, built A.D. 1008 by the bishop Orseolo; it is covered with mosaics, and adorned with marble, a testimonial of the wealth of Venice in that remote age. The neighbouring church of Santa Fosca, of the 9th century, is built with remains of structures of the Roman times. These islands were peopled with the fugitive inhabitants of the neighbouring towns of Altinum and Julia Concordia, on the mainland, which were devastated by the northern barbarians. Martial (iv. 35) speaks of the shores of Altinum as rivalling in his time those of Baia in attractions. 3. *Sant' Elena*, with a church dedicated to the mother of Constantine, whose remains were carried thither from Constantinople in the 12th century. 4. *Lazaretto Nuovo and Vecchio* with the quarantine establishment. 5. *Malamocco*, the residence of the doges in the early ages of the republic: it gives its name to the port of Malamocco, one of the principal entrances from the sea into the lagoons. 6. *San Lazaro*, an island south of Venice, with a celebrated monastery of Armenian monks, who are in communion with Rome and acknowledge the supremacy of the pope. They have a library of 10,000 volumes, and about 400 manuscripts, mostly in the Armenian language, a printing-press for works in the same language, and a college for clerical students. 7. *San Andrea del Lido*, with a fortress which is considered a masterpiece of the architect and engineer San Micheli, and which commands the entrance into the lagoons on that side. 8. *Paestrina*, a small town south of Malamocco, on the Littorale. Near it are the 'Murazzi,' or breakwater, made of large blocks of marble laid on piles driven into the sand: it rises ten feet above high water. 9. *Chioggia*, a well-built town and a bishop's see, situated at the southern entrance of the lagoons, has a good harbour, a fine cathedral, a theatre, and about 16,000 inhabitants. The salt-pans in the neighbourhood are very productive. To the south of Chioggia is the port of *Brondolo*, at the mouth of the Adige.

The metropolitan province of Venice, formerly called *Il Dogado*, contains an area of 1056 square miles, with a population of 298,425. It comprises, besides the islands in the lagoons, a long strip on the mainland from the estuary of the Po to that of the Tagliamento, with the small towns of Ariano, Loreo, Dolo, Fusina, Mestre, San Donà, and Porto Gruaro. The area and population of the Crownland of Venice are given in the article LOMBARDO-VENETIAN KINGDOM. Of the whole of the dioceses in the old Venetian states the archbishop of Venice, who is styled patriarch, is metropolitan.

In A.D. 421 the inhabitants of Aquileia, Padua, and other Italian cities, in order to escape from the fury of the savage followers of Attila, fled for refuge to the islands at the mouth of the Brenta. There they founded two cities, Rivoalto and Malamocco, which were incorporated in A.D. 697, under one magistrate, entitled Doge, or duke. The first doge was Paolo Lucio Anaseto. Pepin, as king of Italy, granted to the rising town some territory along the Adige, and Rivoalto (Rialto), united with neighbouring islands (now also built upon), took the name of *Venetia* from the province Venetia (territory of the ancient Veneti), of which these islands formed a dependency. The secure position of the city, its facilities for trade, and the commercial enterprise of its inhabitants, had already in the 11th century raised it to great prosperity. Its fleets were powerful, and its flag respected in all parts of the Mediterranean. In the 12th century the fleet of Venice conveyed the Crusaders to the Holy Land, the crafty republic having first made them help her to conquer the coast of Dalmatia. The end of the 14th century saw Venice conquered by her rival Genoa, which however declined in consequence of the efforts she had made during the war; while, on the contrary, Venice rose to a higher pitch of power. Jealous of the power of the Republic, almost all the states of Christendom, suspending their quarrels with each other, united in the league of Cambray in 1508 for the destruction of Venice. By the battle of Agnadell, the republic lost all her continental territories, but her fleet, her wealth, the courage and firmness of her citizens, and the disunion that soon broke out among the allies, saved the city and prolonged the term of her greatness. Venice joined the crusade against the Turks, and shared in the victory of Lepanto in 1571. A conspiracy, formed by the emissaries of Spain in 1618, placed

the city on the brink of destruction; but the senate obtaining information in time seized the accomplices, and had the greater number of them drowned in the canals. Venice continued a great flourishing state till the capture of Candia by the Turks. This war, which lasted from 1611 to 1669 (for nearly 20 years of which the siege of Candia continued), exhausted the resources of the republic. From this time Venice began to decline, not however entirely owing to the war.

The greatness of Venice originated in the commercial spirit of her citizens, which made them early cultivate the art of navigation and ship-building, which for centuries were neglected in Western Europe. The products of the east reached the coast of the Levant (as in the time of the Phœnicians), and the ships of Venice transported them to the island city, whence they were distributed over Europe. The crusades threw into the city enormous sums for the mere transport of troops, and helped to render her mistress of the Morea, the Ægean Islands, and other parts of the Greek empire. But after Vasco da Gama showed the way to India by doubling the Cape of Good Hope, and ships were able to convey the produce of the east to Western Europe without breaking bulk, the commerce of Venice naturally and gradually declined, and with it her political importance also gradually dwindled away. By the treaty of Campo Formio in 1797, Venice, which had been taken by the French, was ceded to Austria. In 1805 it was included in the kingdom of Italy. Lastly, in 1814, it fell again to Austria.

In its earliest period Venice was governed by an elected council which shared the legislative power with the Doge. The council afterwards obtained a preponderance of power, and its members even appointed their successors, so that the government became a class oligarchy. In the course of time a senate was instituted to settle questions of peace and war. The senate, as well as the councillors of the Doge, were appointed by the great council. The discontents and frequent revolts that broke out in the 14th century led to the appointment of the Council of Ten, which by degrees sapped the foundations of republican government, and established a system of espionage, assassination, and terror.

VENLOO. [LIMBURG, Dutch.]
VENOSA. [BASILICATA.]
VENTIMIGLIA. [NICE.]
VENTNOR. [WIGHT, ISLE OF.]
VERA. [GRANADA.]

VERA CRUZ, a sea-port and commercial town in the republic of Mexico, is situated in 19° 11' N. lat., 96° 8' W. long., on the southwestern shores of the southern part of the Gulf of Mexico; population about 11,000. The town is built on a level and arid shore, consisting of sand, and almost entirely destitute of vegetation. At the back of the town are shifting sand-hills from 25 to 36 feet high, which it is supposed owe their origin to the gales of the north. The high temperature which these sand-hills acquire in summer, and the reflection of the solar rays from them, are regarded as the principal causes of the great heat then experienced in the town. During the summer months, from May to September, both inclusive, the mean temperature of Vera Cruz is 81.5° Fahr., or somewhat higher than the mean annual temperature of the equator. During three of these months (July to September) the rains are very abundant. Water is scarce and of bad quality. The water used by the poorer classes for drinking is brought by an aqueduct from a lake about 6 miles from the town; but the water collected in the tanks is much better.

Vera Cruz is the port of the city of Mexico, and the most important commercial town of the republic, though its harbour is in fact only a roadstead formed by several shoals, which inclose in a semicircular form a tract of sea which in many parts offers good anchorage. The largest of these shoals, called La Gallega, lies opposite the town; and at its western extremity is a rocky island, on which the fortress of San Juan de Ulua is built. The strait which separates the fortress from the town, and is the most secure portion of the harbour, is less than 700 yards wide, and about 1000 yards long. Vera Cruz is always dangerous to navigators. From October to April the norths blow with incredible violence; the air is filled with sand, and the sky darkened with clouds; whilst the waves are driven with such impetuosity on the beach, that the whole line of coast is one sheet of foam. All communication between the shipping and the town is suspended, even when vessels are at anchor under the walls of the castle, or secured to the rock on which it stands by iron rings fastened there for the purpose; but these gales purify the atmosphere, and tend to abate or remove the vomito prieto, a kind of yellow fever, which during the summer proves fatal to foreigners along the whole eastern coast of Mexico. During the prevalence of the vomito prieto the wealthier merchants and others retire to Xalapa. [MEXICO, vol. iii. col. 790.]

Vera Cruz is inclosed by walls, and has straight, wide, and well-paved streets. Many of the houses are excellent, and erected at great expense, on account of the scarcity of materials. They are constructed of a porous white coral, which composes the cliffs on the coast; and their flat roofs, covered with cement, receive the rain-water for the tanks, or albiges, with which every good house is furnished, and which hold sufficient water for two or three years' consumption. The public buildings are not distinguished by beauty. There are several churches and hospitals.

During the War of Independence, the Spaniards kept possession of the castle of San Juan de Ulua till November 1825, and the town lost more than half its inhabitants, as well as a large part of its trade. It has since recovered much of its population, but it has not regained its commerce. Before 1820 Vera Cruz was the only port on the eastern coast of Mexico from which the produce of the country was exported, and by which foreign goods destined for the consumption of the interior reached their destination. At that period the value of the articles exported amounted to 21,780,000 and those imported to 14,650,000 Spanish dollars. Other ports of the country have since been thrown open to the foreign trade, and many of its productions, especially the produce of the northern mines, have found their way to other ports, especially to Tampico. Vera Cruz however serves still as an outlet for the produce of the mines situated south of 21° N. lat., for all the cochineal destined for the markets of Europe and the United States, and for the tobacco, sugar, and coffee which are grown in the plain between the Gulf of Mexico and the table-land of Anahuac, with the jalap, vanilla, and sarsaparilla which are collected mostly on the declivities of the table-land. It is probable however that all these articles taken together do not reach half of the above sum. The imports however have not decreased in the same proportion, as the greater part of the table-land, and even some tracts along the Pacific, are supplied with foreign goods from the capital, which receives them by way of Vera Cruz.

The island on which the castle of San Juan de Ulua is built was visited for the first time by Europeans under the command of Juan de Grijalva in 1518, and in the following year Cortes landed his army at the place where the town now stands; but the town founded by him, and called Villa Rica de Vera Cruz, was some miles farther north. After three years that place was abandoned, and another town was built a little farther south, at a place still called Antigua, to distinguish it from the present town. This situation was also found inconvenient, and the present town was built towards the close of the 16th century, but it was not incorporated before 1615. The fortress of San Juan was taken by the United States army in the late war with Mexico.

VERA PAZ. [GUATEMALA.]

VERAGUA. [PANAMA.]

VERBITZA, RIVER. [BOSNIA.]

VERCELLI, an administrative division of the Sardinian continental dominions, consists of three provinces, which, with their area and population, are as follows:—

Provinces.	Area in Square Miles.	Population in 1848.
Vercelli	473	121,808
Biella	377	136,691
Casale	335	120,428
Total	1,185	378,925

The Province of Vercelli is bounded N. by the provinces of Val di Sesia and Biella, E. by the provinces of Mortara and Novara, S. by the Po, which divides it from the province of Casale, and W. by the provinces of Ivrea and Turin. It is mostly a plain sloping towards the south, and through which runs from north to south the river Sesia, an affluent of the Po. The rivers Cervo and Elvo, which rise in the mountains of Biella, flow through the province of Vercelli in a south-east direction and join the Sesia above the town of Vercelli. A canal for the purpose of irrigation, called Canale d'Ivrea, and also Canale di Santhia, from the town of that name, receives part of the water of the Dora Baltea below Ivrea, and after irrigating the plain of Vercelli empties itself into the Sesia near Vercelli. This canal is one of the largest in Piedmont. The lower part of the province of Vercelli consists of rice-fields, which are laid under water during the summer until September, when the water is let out, and the rice is reaped. This system of cultivation renders the country unhealthy. The province of Vercelli produces also corn, wine, and silk in abundance.

Vercelli, the head town, situated on the left bank of the Sesia, about midway between Milan and Turin, near the site of the ancient Verocella, a town of Cisalpine Gaul, is a large and well-built but somewhat decayed town, in an atmosphere rendered unhealthy by the rice-grounds; it is a bishop's see, has many churches, convents, and palaces, a gymnasium, a clerical seminary, a large hospital with a botanical garden and a museum of anatomy attached to it, and about 15,000 inhabitants.

Borgo Vercelli is a suburb on the opposite or left bank of the Sesia, with about 2000 inhabitants. It was in the plains of Verocella that the Cimbric were defeated by C. Marius, B.C. 101.

The other towns of the province are—Santhia, a town of 3300 inhabitants, on the road from Vercelli to Ivrea. Trino, a town of about 7000 inhabitants, in a low marshy plain near the Po. Trino is a great market for cattle and pigs. The hams of Trino are in repute in northern Italy. Crescentino, west of Trino, on the high road to Turin, has about 4000 inhabitants, and some remains of Roman buildings in its neighbourhood. Livorno, not far from Crescentino, has 3600 inhabitants, who deal in silk, the produce of the country,

Gattinara, on the banks of the Sesia, north of Vercelli, has 3700 inhabitants; its territory produces good wine.

The Province of Biella is drained by the upper courses of the Cervo and Elvo. Its northern districts are covered by offshoots of the Pennine Alps, but a great part of the surface is level and productive. The chief products are wheat, rice, silk, hemp, and good wine. Cattle are very numerous. Among the minerals are iron and copper. The system of irrigation is extensively adopted. Biella the chief town, on the slope and at the foot of a hill on the right bank of the Cervo, has a college, manufactures of silks and woollens, and a population of 8000. The trade of the town in raw-silk, oil, chestnuts, and wine is considerable. Biella gives title to a bishop.

The Province of Casale is noticed separately. [CASALE.]

VERCHNEI UDINSK. [SIBERIA.]

VERD, CAPE, ISLAND. [CAPE VERD.]

VERDEN, the chief town of the former principality of Verden, now comprised in the province of Brunen in Hanover, is situated in 52° 56' N. lat., 9° 15' E. long., on the navigable river Aller, which here divides into two arms, and over which there is a bridge 400 paces in length. It is surrounded with walls, and has three gates. The principal building is the gothic cathedral, besides which there is another church, an hospital, and a school attached to the cathedral. The inhabitants, about 5000 in number, have tobacco and snuff manufactories, breweries and spirit distilleries, but are chiefly engaged in cultivating the fields and gardens of the environs. Verden is a station on the railroad that connects Hanover and Bremen, from which cities it is distant 54 and 22 miles respectively.

VERDUN. [FRANCE: SAONE-ET-LOIRE.]

VERGARA. [BASQUE PROVINCES.]

VERKHOTURYE. [SIBERIA.]

VERMAND. [AIGNE.]

VERMANDOIS, or VERMANDAIS, LE, a province in France, formerly included in Picardie. Its capital was St. Quentin. The province was the territory of the ancient Vermandui, from whom it obtained its name. It is now included in the departments of Aisne and Somme.

Héribert IV., count of Vermandois, a descendant of Charlemagne (1077), united, in right of his wife, the county of Valois to that of Vermandois, and the united counties came into the hands of Hugues, son of Henri I. king of France, and one of the principal leaders of the first crusade (1096). The counties of Valois and Vermandois were united to the crown by Philippe-Auguste (1215).

VERMLAND. [SWEDEN.]

VERMONT, one of the United States of North America, extends between 42° 44' and 45° N. lat., 71° 30' and 73° 25' W. long. It is bounded E. by the state of New Hampshire; N. by the British colony of Lower Canada; W. by the state of New York; and S. by Massachusetts. Its length from north to south is 157 miles, its breadth varies from 40 to 92 miles. The area is 10,212 square miles. The population in 1850 was 314,120, of whom 718 were free coloured persons: the density of the population was 3076 to a square mile. The inhabitants being all free the federal representative population is the same as the entire population in 1850; this, according to the present ratio of representation, entitles the state to send three representatives to Congress. To the Senate, like each of the other United States, Vermont sends two members.

Surface and Soil.—The surface of Vermont is for the most part mountainous. Vermont in fact constitutes a part of that irregular mountain region which extends over the greater part of the United States which lies east of the River Hudson, and of Lake Champlain. A range, called the Green Mountains, traverses the state from south to north, and is a continuation of that known in Massachusetts as the Hoosic Mountains. They form a continuous ridge to near 44° N. lat., where they divide into an eastern and a western branch. Up to this point their width varies between 10 and 15 miles. The highest summit is Killington Peak, 8675 feet above the sea-level. The summits of the mountains are rocky, and only covered with winter grass and a spongy green moss. Their sides are covered with forests of evergreen-trees, especially pine, spruce, and hemlock, which near the base of the mountains attain large dimensions, but towards their summits are only from 2 to 3 feet in height. There are some good farms among the hills, and much excellent pasture-ground.

From the division of the range the mountain region widens till between Richmond and Danville it occupies more than half the width of the country. Of the two branches the eastern ridge is the lowest; it forms the watershed between the basin of the Connecticut River and the streams which run eastward into Lake Champlain. In the western branch are the highest summits of the Green Mountains, Camel's Rump, west of Montpelier and south of the river Onion, being 4188 feet, and Mount Mansfield, north of Montpelier, 4279 feet above the sea-level. Between the mountains are valleys of considerable extent, well sheltered and of great fertility, their soil, the debris from the mountains, containing a large proportion of mould. The lower part of these northern mountains is covered with large trees, from which great quantities of pearlshells are obtained. The extreme north of the state is much inferior in fertility to the region farther south. The valleys are rather narrow, and contain a comparatively small portion of cultivable land; but as the hills are not very steep or elevated, the

are covered with tall forest-trees, and in most places afford good pasture. The tract of country which lies between the eastern ridge and the Connecticut River is very hilly and broken, and is the least fertile part of the state. Its elevation above the sea-level can hardly be less than 1000 feet, and it has a bad climate and a poor soil, consisting mostly of rocks and coarse gravel.

The country surrounding the Green Mountains on the south is of indifferent quality. The soil is chiefly stony and gravelly, but it is well drained; and it is much used as pasture-ground, especially for sheep. A large part is still covered with beech, sugar, maple, elm, oak, button-wood, bass-wood, ash, and birch; and a number of swine are fed in the forests. In proceeding northward the country improves. The soil is less stony, and contains a larger proportion of loam or clay: along the banks of the Connecticut River some very fertile tracts occur. In these parts an isolated summit, Mount Ascutney, rises, near the town of Windsor, to 3320 feet above the sea-level.

The most level part of Vermont is that which lies on the banks of Lake Champlain, though the surface is broken by numerous water-courses. Near the banks of the lake are some low swampy tracts, from which the country rises gradually to the base of the mountain region, and becomes hilly in approaching it, but the hills have such gentle slopes as to admit of cultivation almost everywhere. This plain is about 100 miles long, and in its southern districts less than 10 miles wide, but widens northward to 30 miles. The soil varies greatly, consisting in many places of coarse gravel, while in others it contains much clay or loam, but a large portion of it is productive. It enjoys great facilities by the lake and the Sorel River for exporting its produce to Montreal in Canada.

Hydrography, Communications.—More than two-thirds of the drainage of Vermont runs into Lake Champlain, which is navigable by large vessels. [CHAMPLAIN.] The largest rivers falling into that lake are Otter Creek, Onion River, Lamoille River, and Missisquoi River. *Otter Creek* rises on the western declivity of the Green Mountains, near 43° 15' N. lat., and runs north by west, nearly parallel to Lake Champlain, draining the southern part of the fertile plain on the east of the lake. Lake vessels ascend it to Vergennes, about eight miles from its mouth, where the first falls occur; it is navigable by boats to Pittsford, 17 miles higher. *Onion River* originates in the mountain region of the centre; runs south-west past Montpelier, and falls into Lake Champlain, 5 miles N. from Burlington. Much of its course is remarkable for the romantic character of its scenery, and it is of great value for irrigation and for mechanical purposes. The *Lamoille*, which rises in the same region, also affords great hydraulic power. Both are greatly interrupted by rapids; have a very impetuous current, and are unnavigable. *Missisquoi River* rises in Canada, and at first flows southward, parallel to Lake Memphramagog. In approaching Vermont it turns westward, but soon afterwards enters that state by a south-western course. At Sheldon, about 10 miles from its mouth, it becomes navigable for river-boats, and falls into Missisquoi Bay, the north-eastern arm of Lake Champlain, which is about 15 miles long and 3 miles wide, and in its whole extent navigable for lake vessels. The northern portion of Missisquoi Bay is within Lower Canada.

A few small rivers which drain the northern district of the mountain region fall into Lake Memphramagog, of which about one-fifth part lies within Vermont. This lake has a curved form: it is nearly 30 miles long, but in no part exceeds 2 miles in width. It is surrounded by mountains covered with forest-trees, and it discharges its waters into the St. Francis River of Canada by a channel which is called Magog, and which enlarges about the middle of its course into a small lake called Scaswaninepus. Lake Memphramagog contains several kinds of fish, especially salmon-trout.

The *Connecticut River*, which divides Vermont from New Hampshire, presents in the upper part of its course a continual succession of rapids and cataracts. The last of these cataracts, which entirely prevent navigation, are the Barnet Falls, which occur near 44° 15'. Farther down there are several small falls and rapids; but from Haverhill (44° N. lat.) downwards the river is usually navigable for boats. All the rivers falling into the Connecticut from the Green Mountains are small, and none of them navigable.

The only canals in Vermont are three short cuts, altogether not a mile in length, made to avoid rapids and falls on the rivers. The railways are nearly all portions of the great trunk lines which connect New York, Boston, and the coast of New England with Canada and the North-West. On the 1st of January 1855, there were in Vermont seven lines of railway, having 419 miles in operation, and 59 miles were in course of construction. The ordinary carriage-roads are numerous, and generally well kept.

Geology, Mineralogy, &c.—The geology of Vermont belongs almost entirely to the Green Mountain system of M. Marcou, or the Oldest Meridional and Hoosac Mountain system of Professor Hitchcock. The rocks are for the most part eruptive, consisting chiefly of granites, but there are also many metamorphic rocks, including very fine crystalline limestones; Mr. Logan has pointed out metamorphic fossiliferous rocks about Memphramagog Lake. The only non-igneous rocks are the Lower Silurian strata, which skirt the eastern bank of Lake Champlain. The minerals are as might be expected numerous. At several points of the Green Mountains quartzose veins traverse itacolumites

(a quartzose conglomerate, which in South America and India forms the matrix of some of the most precious gems), and contain native gold, though not as far as is known in sufficient richness to be profitably worked. In the neighbourhood of Brandon on the Otter Creek, copper of some richness has been found, in some instances in union with silver. Lead, zinc, and manganese are also met with. Iron-ore occurs in great abundance along the western base of the Green Mountains. Sulphuret of iron is found in several localities, and an immense quantity of copperas is manufactured from it. Kaolin, or porcelain earth, is extensively wrought. Marbles of various colours, and of very fine qualities are quarried in several places. Slate, soap-stone, oil-stone, granite, and other useful minerals are also quarried, and some of them very extensively.

Climate, Productions, &c.—Vermont is distinguished by the severity of its winter, which continues almost without intermission from the early part of December to the beginning of April. The frost is very intense, and the thermometer sometimes descends to 27° or even 30° below zero. A great deal of snow falls; and the ice on the lakes and rivers, except where the rivers have rapids or cataracts, will bear heavy loads. The spring lasts only about six weeks, to the end of May, and the weather is then mild and pleasant, with frequent showers. In summer, from June to August, both months included, the heat in the middle of the day is oppressive, as the thermometer generally rises above 80°, and sometimes even to 94°, but the evenings and nights are cool. The most pleasant season is from the beginning of September to the middle of October, the heat being then moderate, and the air dry, elastic, and invigorating.

The soil and general character of the products have been already noticed. Vermont is an agricultural state, but the greater part of the state is more adapted for grazing than for tillage; indeed it is said that scarce any part of the United States is better suited to the rearing of horses, horned cattle, and sheep, all of which are reared in large numbers in this state. Swine are also numerous, but much less so than formerly. Of the cereals oats are raised in the greatest abundance, and next maize. Wheat is most grown on the western side of the mountains. Buckwheat, rye, and barley are grown, but not to any great extent. Very large quantities of potatoes, and considerable crops of peas and beans are raised. Garden vegetables are also carefully cultivated. Some hops and flax are grown. A large quantity of maple-sugar is obtained. Apples and most of the hardier fruits ripen well everywhere; but the peach seldom comes to perfection. A great deal of butter and cheese is made; and wool is one of the staple products of the state.

There are still many wild animals in the mountains and forests, but their numbers have greatly diminished, and many kinds once common are now extinct. Fish is plentiful, especially in the lakes; and abundance of salmon ascend the Connecticut River to Lake Champlain.

Manufactures, Commerce.—Vermont has no great manufacturing towns, but it has a good deal of capital, and above 8300 persons employed in various branches of manufacture. In 1850 about 1300 persons were employed in the woollen, 230 in the cotton, 1100 in the iron manufacture; and 400 in tanneries. The other manufactures were chiefly such as are incidental to an agricultural region.

The foreign commerce of the state is principally carried on at Burlington, and finds its chief outlet by the Chamby River to Canada. The exports for the year ending June 30, 1853, amounted to 94,117 dollars; and the imports to 184,512 dollars—all in American vessels. The shipping owned in the state in 1850 amounted to 4530 tons, of which 3097 tons were navigated by steam.

Divisions and Towns.—Vermont is divided into 14 counties. Montpelier is the political capital. There is no large town in the state. The following are some of the more important towns; the population is that of 1850:—

Montpelier, the capital, is beautifully situated between two green and lofty hills, in a rich plain, on the right bank of the river Onion, in 44° 17' N. lat., 72° 36' W. long., 524 miles N.N.E. from Washington, population 2810; but *East Montpelier*, separated from it in 1848, contained 1447 inhabitants in 1850. The town consists chiefly of a broad street lined with fine trees on each side; and contains many well-built houses, several churches, a court-house, prison, &c. The state-house is a handsome building of fine-grained gray granite with a portico, and is surmounted by a handsome dome. Several mills and factories are in the town and its vicinity. The state-road centre here, and the Vermont Central railway increases the commercial facilities.

BURLINGTON, the largest town in the state, is noticed in a separate article.

Bennington, the oldest town in Vermont, is situated on the right bank of the Hoosac River, 103 miles S. by W. from Montpelier: population 3923. It is the market-town of a busy agricultural district, and contains several mills, furnaces, and factories. *Brandon*, on Otter Creek, about 46 miles S.S.W. from Montpelier, population 2835, is a place of some trade. *Brattleborough*, on the right bank of the Connecticut, 110 miles S. from Montpelier, population 3816, is a flourishing place, with woollen and cotton manufactures, paper-mills, &c. The Vermont Asylum for the Insane is at Brattleborough; it had 389 patients in the institution in 1854. In connection with the asylum there is a library of 1200 volumes, and a large number of newspapers

and periodicals are taken in. *Castleton*, on Castleton River, 60 miles S.W. from Montpelier, population 3016, is a place of some trade; the point of intersection of the Saratoga and Castleton, the Rutland and Washington, and the Vermont and Canada railways; and the seat of a medical college. *Danville*, on a tributary of the Passumpsic River, 23 miles N.E. from Montpelier, population 2577, has several manufacturing establishments. *Middlebury*, about 35 miles S.W. from Montpelier, on both banks of Otter Creek, which is here 170 feet wide, with falls of 20 feet perpendicular height, affording water-power for many mills: population, 3517. There are several manufactures of woollen and cotton goods, nails, &c., and white and variegated marble is extensively quarried and wrought. There are several churches, a court-house, and two academies. Middlebury College, pleasantly situated on elevated ground, consists of a spacious stone edifice, and had, in 1854, 7 tutors and 55 students. *Newbury*, on the Connecticut River, 30 miles S.E. by E. from Montpelier, population 2984, has considerable trade and manufactures, and is the site of a Methodist seminary. *Rutland*, on Otter Creek, about 60 miles S.S.W. from Montpelier: population, 3715. The town is well situated for business, and three railways pass through it. In the town are several marble and slate-works, iron-foundries, machine-shops, &c., besides a court-house, jail, churches, schools, &c. Iron-ore, lime, white and variegated marbles, &c., are largely worked in the neighbourhood. *St. Albans*, on Lake Champlain, about 60 miles S.W. from Montpelier, population 3567, is the port of a fertile district, and has a large trade and some manufactures. *Vergennes*, on Otter Creek, near Lake Champlain, about 36 miles W.S.W. from Montpelier: population, 1378. This 'city' stands at the head of navigation, and though the city itself has but few inhabitants, a large business and considerable manufactures are carried on in it and in its vicinity. *Windsor*, on the Connecticut, 61 miles S. by E. from Montpelier, population 1928, is a flourishing and rather handsome town, with some manufactures. *Woodstock*, 14 miles N.W. from Windsor, on an affluent of the Connecticut, population 3041, contains a handsome court-house, churches, and other public buildings, Vermont medical college, &c.; and has some manufactures.

History, Constitution, &c.—The tract of country between Lake Champlain and Montpelier, called Vermont by the French settlers from its green mountains, was ceded by them to the British in 1763. The French had commenced their settlement as early as 1731, but little progress was made in colonising Vermont till after the British had conquered Canada in 1760, after which time it began to be settled rapidly. Vermont was at first claimed by Massachusetts, and afterwards by New Hampshire and New York. The rival claims were decided by the king of England in council in 1764, in favour of New York. A serious quarrel was the result of this decision, which was interrupted by the war of the Revolution, in which the 'Green Mountain boys,' as they were called, distinguished themselves by their hardness and bravery. In January, 1777, they declared the state independent, but New York still claimed jurisdiction; and the differences were only finally adjusted in 1790 by Vermont paying to New York 30,000 dollars in full of all demands. In 1791 Vermont was admitted into the federal union.

The constitution was adopted in 1793, but has since been several times modified. Every seventh year 13 censors are elected, whose duty it is to inquire whether the constitution has been duly observed, and to call a convention if it requires modification. Slavery is prohibited; imprisonment for debt is permitted only in cases of fraud; perpetuals are abolished. The right of voting is vested in every man 21 years of age, who has resided in the state for a year, and is of quiet and peaceable behaviour. The legislature consists of a Senate of 30 members, and a House of Representatives of 230 members, one for each town (township). The executive power is vested in a governor. The governor and the members of the legislature are elected by the people annually. The judges are elected by the general assembly in joint ballot.

Vermont has no state debt. The entire receipts for the financial year 1853-4 (including the balance from the previous year) was 165,111 dollars; the total expenditure was 152,443 dollars. The state militia at the last return consisted of 23,915 men, of whom 1088 were commissioned officers. The number of colleges in the state in 1850 was five, having 30 teachers and 464 students. The number of public schools was 2781 having 4178 teachers and 93,457 scholars. There is no state school fund.

(Thompson, *Geography and Geology of Vermont*; Adams, *Annual Reports on the Geology of Vermont*; Hitchcock, Logan, Maroon, &c.; *Statistical Gazetteer of the United States*; *Seventh Census of the United States*; De Bow, *Statistical View of the United States*; *American Almanac*, 1855, &c.)

VERNEUIL. [EURR.]

VERNON. [EURR.]

VEROLI. [FRANCONE.]

VERONA, a province of the Austrian crownland of Venice in North Italy, is bounded N. by the Tyrol, E. by the provinces of Vicenza and Padua, S. by the provinces of Rovigo and Mantua, and W. partly by Mantua and partly by the Lake of Garda, which separates the northern part of the province of Verona from the province of Brescia. The length of the province is about 50 miles from north

to south, and its greatest breadth is about 25 miles. The area is 1094 square miles; the population in 1850 was 302,902. The northern part of the province is hilly, and even mountainous near the borders of the Tyrol; the highest summit of Monte Baldo is above 6000 feet high. The southern part merges into the great plain of the Po; but the territory of Verona does not touch that river, its southern boundary being marked by the Tartaro or Castagnaro, an affluent of the Adige, which divides it on that side from the province of Mantua. The province is divided into thirteen districts.

The river Adige crosses the province of Verona in its length from north to south-south-east. It runs through a very narrow valley from the frontiers of the Tyrol down to the defile of Chiusa, near Rivoli, after which it emerges into the plain of Lombardy. The province of Verona has few towns of any consequence besides the capital. *Legnano* is a fortress of considerable strength, on the Adige, south of Verona: population, 6000. *Villafianca* is a bustling market-town on the road from Verona to Mantua. *Rivoli*, on the right bank of the Adige, north of Verona, is famous for the battle won by Bonaparte and Massena over the Austrians in January, 1797. This country is full of the recollections of those memorable campaigns, and also of the campaigns of the Sardinians and Austrians in 1843 and 1849. On the banks of the Alpone, near the wooden bridge of Arcole, is an obelisk, raised in commemoration of the battle of Arcole. The eastern bank of the Lake of Garda, which belongs to the province of Verona, is not so favoured by nature as the opposite or Brescia side: the ridge of Monte Baldo ranges close to the shore of the lake, and joins on the north the Alps of the Tyrol. The town of *M.lesius* (population 3000), with an old gothic castle, is on this coast, as well as the little town of *Garda*, which has given to the lake its modern name. [GARDA.] In the mountains near Verona is the village of *Gargamago*, where Dante, for a time a guest of Can della Scala, lord of Verona, wrote part of his 'Purgatorio.' The valley of Ronca, 15 miles distant from Verona, is worth the notice of the geologist for its fossil fishes and its shells.

VERONA, the chief town of the province of Verona, and the military capital of the Crownland of Venice, is situated in 45° 25' N lat., 11° E. long., on the Adige, which divides the town into two parts, and at the foot of hills which are the lower offsets of the mountains of the Tyrol. The situation of Verona is pleasant and healthy; the town is substantially built, with long and tolerably wide streets, is surrounded by old walls flanked with towers, and retains much of the appearance of a town of the middle ages. The ramparts and bastions constructed by the architect and engineer San Micheli in the early part of the 16th century, were almost entirely destroyed according to one of the conditions of the peace of Luneville in 1801, but the gates were spared, one of which, the Porta del Palio, has been termed a miracle of architecture. There are remains of walls erected round the town by the emperor Gallienus, by Charlemagne, and by the Soligneri. The remains of the last add greatly to the beauty of the city. But all the former fortifications of the place are insignificant when compared to the works erected round Verona within the last few years by the Austrians, who have constructed walls and ramparts in the polygonal or cyclopean style, so that Verona is now one of the strongest fortresses not only in Italy but in Europe.

Among the many remarkable buildings of Verona the most worthy of notice are, the splendid palace of Canossa, built by San Micheli; palace called della Gran Guardia in the Piazza di Bra, the elegant palace Quarta Verza by San Micheli; the palace Bevilacqua; the palace Ridolfi, which has a curious representation of the cavalcade of Pope Clement VII. and Charles V. on the occasion of that emperor's coronation at Bologna; the palace del Consiglio, built after the design of Sansovino, but its spacious hall was constructed by Frá Giocondo the commentator of Vitruvius; the Palazzo Publico, opposite to the amphitheatre; and the palaces in the Piazza dei Signori, from which rises a square Campanile tower 300 feet high, surmounted by an octagonal pyramid, the whole forming a most conspicuous object in the scenery of the city. The custom-house is a noble building raised in the 18th century by Count Alessandro Pompei.

The churches of Verona are numerous, and many of them interesting for their monuments and paintings. The church of San Nazario and San Celso is said to be of the 7th century. The subterranean galleries in its neighbourhood were once used as catacombs. The church of San Zenone dates from the 9th century: its bronze gates, a statue of the saint with his tomb, and its curious emblems, arabesques, and figures, attest the antiquity of the structure. The cathedral of Verona, a gothic building, said to be of the age of Charlemagne, with its facade covered with old sculptures of men and animals, contains the tomb of Pope Lucius III., who died at Verona in 1185; several valuable paintings, among which is an Assumption by Titian; a sepulchral monument of Roman times to Julius Apollonius and his wife Attica Valeria; and other interesting objects. The church of San Fermo has a fine mausoleum of the Turriani family. Several monuments of learned men, and also several very old paintings, one of which, by an unknown artist, is said to be anterior to the time of Cimabue. The churches of Santa Maria della Scala, San Giorgio Maggiore, and San Sebastiano are among the finest churches of Verona, and are also rich in paintings.

The library of the Chapter of Verona is very ancient; it contains above

12,000 volumes and about 540 manuscripts, among which is a palimpsest of the Institutes of Gaius. In this library Petrarch discovered Cicero's Epistles 'ad familiares.' Many private collections of paintings, sculptures, and books which once enriched Verona have been sold.

The Teatro Filarmonico of Verona is a handsome structure; in the court and under the portico is Maffei's collection of Etruscan and other inscriptions, and of ancient bassi-relievi given by him to his native town. The sepulchral monuments of the Della Scala (Scaligeri) family in the shape of pyramids, surmounted by the equestrian statues of the various members of that family who were lords of Verona, are remarkable objects. The pretended tomb of Juliet is still visited by credulous travellers.

The amphitheatre of Verona, one of the best-preserved monuments of its kind, forms one side of the Piazza di Bra. Of the outer circuit, which originally consisted of 72 arches, only 4 are preserved; but the interior is nearly perfect. The arena forms an ellipse, the greater axis of which is 210 feet long. The entire inclosure forms an ellipse, the axes of which measure 506 and 404 feet respectively. The seats afford room for 22,000 spectators. The building resembles in style the Coliseum of Rome; it is constructed of marble and in part of brick. Another classical monument, the Arco de' Gavii, the sepulchre of an ancient family, with its handsome fluted columns, was pulled down in 1805 in order to clear the approaches to the citadel. The gate De' Borsari was one of the entrances into Verona in the wall of Gallienus, erected about A.D. 265. Although now nearly 1800 years old, it stands firm and solid, spanning a crowded street of the city. The Porta di Leone, another of the gates in the emperor's wall, is much mutilated. Remains of a theatre have been discovered on the left bank of the Adige. Four bridges cross the Adige at Verona: that called Di Castelvecchio is remarkable for the width of the central arch.

Verona is a bishop's see: it has a lyceum, a ladies' college, a school of drawing and painting, an academy of agriculture and commerce, and a clerical seminary. Verona is the general head-quarters of the Austrian army in Italy. It is altogether a very interesting city, one of the first among the second class of Italian towns: the population amounts to near 60,000 inhabitants. Many families of the local nobility have their residence at Verona, and in the pleasant country-seats which are scattered among the neighbouring hills.

Verona was a town of the Cenomani. Livy (v. 35) says that the Cenomani Gauls occupied the country previously held by the Libui, in which were Brixia and Verona. Under the empire it produced many distinguished men, such as Catullus, Pliny the elder, Vitruvius, and others. After the fall of the empire it was one of the principal towns of the Longobards. It was afterwards taken by Charlemagne. In the 12th century it was a free municipal town, and joined the Lombard league. In the following century it fell under the power of Ezzelino da Romano, after whose death Mastino della Scala was elected Podestà, about 1259. His descendants usurped the sovereign power, and created the dynasty of Della Scala, or Scaligeri, which lasted above a century, until it was conquered by the Visconti, dukes of Milan, who became masters of Verona. After the death of Giovanni Galeazzo Visconti, Verona was seized by Francis of Carrara, lord of Padua; but in 1409, being besieged by the Venetians, the citizens gave themselves up to Venice, by a convention which secured their municipal liberties, and since then Verona has formed part of the Venetian territory.

VEROVICZ. [CROATIA.]

VERSAILLES, capital of the department of Seine-et-Oise in France, is situated in 48° 47' 56" N. lat., 2° 7' 39" E. long., 11 miles by railway W. from Paris, and had 29,975 inhabitants in the commune at the census of 1851.

Versailles was a mere village in the time of Louis XIII., who in 1627 built here a small hunting seat, which Louis XIV. converted, by his vast and expensive additions (1661-1672), into the most magnificent palace then in Europe. Under this prince and his successors Louis XV. and XVI. Versailles was the ordinary residence of the court, and the village of Versailles grew into a handsome city with above 70,000 inhabitants.

The town is divided into two nearly equal parts by a noble avenue nearly half a mile long and nearly 300 feet broad, running east and west, planted with four rows of elms, forming three alleys. The road from Paris, of which this avenue forms part, enters the town on the east, immediately opposite to the palace. Before the bend at the entrance of the Avenue of Paris, the road passes between the villages of Grand Montreuil on the right and Petit Montreuil on the left: these villages are now regarded as suburbs of Versailles. Versailles itself is divided by the Avenue into the Quarter of St. Louis on the south side, and the Quarter of Notre-Dame on the north side. The quarters are named after the parish churches which they respectively contain: the two parts are equally modern, and consist of straight well-built streets crossing each other at right angles.

Besides the Avenue of Paris, two other avenues (those of St. Cloud and Sceaux) converge to the Place-d'Armes, or parade-ground, which is immediately in front of the court of the palace. These avenues are all planted with fine elms, and lined with pleasant residences. Besides these avenues there are in the Quartier Notre-Dame three boulevards, all planted with fine elms, and bordered with neat houses and other buildings. Of the Places, or squares, the Place-d'Armes is the largest; the Place-Hoche (adorned with a statue of the general

from whom it is named), formerly the Place-Dauphin, is the handsomest. There are two market-places, and a number of fountains.

The town front of the palace consists of a central and two wings, inclosing three sides of a court, which is open on its fourth or east side towards the Place-d'Armes. The central and principal part of the palace of Louis XIV. also forms three sides of a quadrangle, and fronts the gardens. It presents three fronts to the gardens, namely, the principal front and two side-fronts, and is in advance of the rest of the building; the wings, which have the same general direction as the principal front of the central building (namely north and south), are thrown back about 250 or 260 feet, which is the extent of the two side-fronts of the central portion. The whole extent of the garden front is above 1900 feet. This front is in the estimation of many persons one of the grandest and most beautiful in existence. It is adorned with Ionic columns, 86 in number, arranged in 15 colonnades of 4, 6, or 8 columns, each colonnade supporting a cornice crowned with as many statues as there are columns; and if the northern face or extremity of the north wing, and the southern face of the south wing, be included, the number of columns will be augmented to 162. The spaces between the colonnades are adorned with pilasters, or with columns engaged in the wall; and the attic has dwarf pilasters throughout, and is surmounted by a balustrade. Niches immediately behind some of the intercolumns are occupied by statues. This palace was built from the designs of J. H. Mansard.

Immediately in front of the palace, on the west side, is the garden or little park, an irregular polygon about 3 miles long from the palace to its western extremity, and about 2 miles broad. It is included in the limits of the great park, which is estimated to be from 20 to 25 miles in circuit. The garden was laid out by Le Notre in terraces, parterres, and alleys, adorned with a profusion of statues, vases, and other sculptures; with a canal in the shape of a cross, and other pieces of water; and a number of fountains, which are supplied with water from the Seine by the forcing-pump (substituted for the former waterworks), aqueduct, and reservoirs of Marly. The fountains play on the first Sunday in the month during the summer: these exhibitions always attract crowds of spectators from Paris. The orangery is remarkable for the number and beauty of the orange-trees which it contains.

The interior of the palace was fitted up with great cost by Louis XIV. After the first French revolution the building was neglected. Louis Philippe completely restored the palace, and converted it into a national museum, or gallery of paintings and other monuments illustrative of different portions of the history of France, which was opened to the public on the occasion of the marriage of his son, the Duke of Orleans (June 10, 1837). Adjacent to the north wing of the palace, on the town side, is the chapel, which is remarkable for the beauty of its exterior, for its interior decorations, and for its many historical associations. The palace-chapel, the last work of Mansard, was built in the interval of 1699-1710. The theatre of Versailles, called Salle-de-l'Opera, has a beautiful interior. It was commenced in 1763, and opened in 1770, on the occasion of the marriage of Louis XVI. It was used in his reign for court-balls, on which occasion the pit was covered by a floor on a level with the stage. It was fitted up in this way for an entertainment given by the king's body-guard to the officers of the regiment of Flanders when it was surprised by the revolutionists; and in this state it remained till Louis Philippe had it repaired and re-opened for dramatic representations, June 10, 1837. In 1855 it was distinguished by magnificent fêtes in honour of the visit of Queen Victoria to the emperor Napoleon III.

In the park of Versailles are the two royal seats of the Grand Trianon and the Petit Trianon, with their respective gardens. The Grand Trianon was built by Louis XIV.; the Petit Trianon by Louis XV. The 'English garden,' which is the great attraction of the Petit Trianon, was formed by the orders of Marie Antoinette. In the Place-d'Armes, opposite to the town-front of the palace, are the two ranges of stables, buildings of great extent, occupying respectively the spaces between the Avenue of Paris and the converging avenues of St. Cloud and Sceaux. There are near the palace various other buildings, as the Grand Commun, which had a thousand sleeping-rooms, and could lodge two thousand persons. To the south-east and south of the palace are the kitchen-garden and a very large piece of water. The former mansions of the master of the king's household, and of the chief huntsman, are now converted respectively into the town-hall and the courts of law; the former Garde-Meuble is now the prefect's office. The Tennis-court, famous for the oath taken in it by the National Assembly (June 20, 1789), was used as a studio by Horace Vernet, who executed here all of his paintings that adorn the collection in the palace. Besides these and other buildings connected with the court or the government offices, Versailles has two churches, namely, the cathedral of St. Louis and the church of Notre-Dame. There is also a beautiful chapel attached to the royal college, and there is a parish church in the suburb of Montreuil. The general hospital is one of the finest in France. Versailles has also an ecclesiastical school, a primary normal school, a public library of 42,000 volumes, a museum, a free-school for drawing, an agricultural society, a theatre, baths, several barracks, and a prison.

Versailles has a good corn-market, manufactures of fire-arms, files, clocks and watches, jewellery, cotton-yarn, net, pasteboard, hats,

hosiery, wax-candles, earthenware, and glass. There are breweries and tan-yards, and a number of nursery-grounds. A small garrison is kept in Versailles.

Versailles gives title to a bishop, whose diocese is the department of Seine-et-Oise. At Versailles were born Philip V., king of Spain; Louis XVI., Louis XVII., Louis XVIII., and Charles X., kings of France, Marshal Berthier, and General Hoche. Blücher plundered the town in 1815.

VERTOU. [LOIRE-INFÉRIÈRE.]

VERTUS. [MARNE.]

VERVIERS. [LIÈGE.]

VERVINS. [AISNE.]

VESOUL. [SAONE, HAUTE.]

VESUVIUS (*Vesuvius*), a mountain situated east of the bay and east-south-east of the city of Naples, celebrated for many centuries as one of the principal and most active volcanoes of Europe. Its height above the sea is variable, according to the condition in which eruptions leave the crater; and owing to the same causes the figure of the mountain, though in a general sense always conical, changes from time to time. During the early part of the present century the top of Vesuvius had become a rough and rocky plain, covered with blocks of lava and scoriae, and out by numerous fissures, from which clouds of vapour were evolved. By the violent eruptions of October, 1822, this was all thrown out, and replaced by a vast elliptical gulf or chasm three miles in circumference, three-quarters of a mile in the longest diameter, and perhaps 2000 feet in depth. More than 800 feet of the summit of the ancient cone were carried away by the explosions, and the height of the mountain was thus reduced from 4000 to 3200 feet. One of the greatest eruptions of modern times took place in 1855, when vast floods of lava poured down the mountain for about three weeks, destroying the village and township of Cercolo, covering a great extent of vineyards and sweeping away houses and bridges. For about ten miles the vast lava-stream flowed irresistibly on until it almost reached the sea in the direction of the Ponte Maddaloni. The eruption commenced on the 1st of May. After hurling up stones and flames for a week, the old crater broke up altogether, and in the middle of the cone ten new craters were formed, whence lava poured forth like a river on the side of the Cavallo and as far as the Minatore. Here four other craters were formed, which threw up glowing masses of bitumen pyramidal in form, and resembling gigantic fireworks. About the 20th the lava ceased to flow.

The mountain called Somma, which surrounds for half a circle with a precipitous escarpment the true peak of Vesuvius, is part of the ancient large crateriform cone described by the Roman historians, the summit and part of the side of this ancient cone being destroyed by the explosion of A.D. 79. No record exists of an actual eruption of Vesuvius prior to the Christian era. Diodorus Siculus notices (iv. 21) that it has "many signs of having been burning in ancient times;" and Strabo infers its igneous origin from the nature of the rocks; but the slopes were richly cultivated and proverbially fertile, though the top was a rough, sterile, slightly concave plain, in which Spartacus was besieged by the Roman army. (Florus, iii. 20.)

In A.D. 63 the long-dormant volcano gave the first symptoms of renewed agitation in an earthquake, which occasioned considerable damage to many of the cities in its vicinity, amongst others to Pompeii. In the month of August, A.D. 79, occurred the first and perhaps the greatest of all the recorded eruptions of Mount Vesuvius, described in the letter of Pliny the Younger to Tacitus, which records the death of Pliny the naturalist. The cities of Stabiae, Pompeii, and Herculaneum were overwhelmed by showers of cinders and loose fragments, no lava having been ejected on this occasion. Other eruptions succeeded in A.D. 203, 472, 512, 685, 993, and 1036, which last is said to be the first which was attended by an ejection of lava. Eruptions were renewed in 1049, 1138 (or 1139), 1306, 1600, 1631, 1660, 1682, 1694, and 1698, from which time to the present phenomena of this nature have been repeated very frequently, so as seldom to leave any interval of rest exceeding ten years. Sometimes this mountain has flamed twice within a few months.

The eruption of 1737 gave forth lava currents, which passed through Torre del Greco into the sea, the solid contents being estimated at 33,587,058 cubic feet. In 1794 the lava followed the same course, and amounted to 46,098,766 cubic feet. In the various eruptions of this mountain, currents of melted rock, torrents of heated water, clouds of ashes and scoriae, and great volumes of steam and gases have at different times been observed. The force with which the subterranean agencies operate during their paroxysmal excitement may be judged of by the height (2000 feet) to which stones have been projected, and the distance to which they have been thrown. Stones of 8lbs. in weight fell on Pompeii in the eruption of A.D. 79, while masses of an ounce weight overwhelmed Stabiae; and in a later eruption fine ashes were transported by the winds even to Constantinople.

VEURDRE, LE. [ALLIER.]

VEVAY. [VAUD.]

VEXIN. [NORMANDIE.]

VEZÈNBRES. [GARD.]

VIAREGGIO. [LUCCA.]

VIALAS. [LOZÈRE.]

VIANA. [ENTRE DOURO E MINHO; NAVARRA.]

GEOG. DIV. VOL. IV.

VIÁTKA (Wjatka, or Wiátak), an extensive government of Russia, is situated between 55° 50' and 60° 5' N. lat., 55° 46' and 54° E. long. Its area is 52,900 square miles, and the population in 1846 was 1,662,800. It is bounded N. by Vologda, E. by Perm, S. by Oranburg and Casan, and W. by Kostroma. The country is covered by branches of the Ural Mountains, and by vast morasses and immense forests. The climate is cold and inclement, especially in the northern portion of the country, but salubrious. The soil is in general clay or moor, with no considerable tract of rich mould, except on the banks of the Kama, which rises in the north of the government, but soon enters Perm, through which it flows from north to south. The principal river is the Viátka, which rises near the source of the Kama, and with various windings traverses the government from north to south, and falls into the Kama at the south-western corner of the province. It receives in its course the Tschepza, Metscheda, Malmyschka, Sohomsa, Cholumitza, and several other rivers.

Agriculture is the chief occupation of the inhabitants. The species of grain cultivated are rye, barley, oats, and a little wheat; pulse of different kinds, and flax and hemp are grown. The forests of pines, oaks, elms, limes, and other trees, are a principal source of wealth: they are the resort of abundance of deer and of fur-bearing animals. The breeding of oxen, sheep, swine, and goats is much attended to. The country-people have also great quantities of bees, and the fishing in the rivers is profitable. The minerals are copper and iron. The inhabitants build boats, manufacture coarse cloth and linen, tan leather, and make iron and wooden utensils. The Finnish part of the population, as well as the Russians and Tartars, provide for almost all their own wants. A good deal of brandy is distilled. The exports of the government go to Archangel.

Viátka, the capital of the government, is situated in 58° 22' N. lat., 49° 45' E. long., at the confluence of the Viátka and Chlenopka. There are 23 churches, all of stone, and about one in nine or ten houses are also of stone. The town is the seat of government and the see of a bishop. There are a gymnasium, a seminary, and a convent, founded in 1520.

The second town in the government is *Sarapol*, on the Kama, nearly 400 miles S.W. from Viátka. It is a well-built town, and has 6000 inhabitants. *Slobodskoi*, on the Viátka, has 6000 inhabitants, who manufacture iron and copper. *Volka* has also about 6000 inhabitants who manufacture anchors and crucibles. At *Isch*, on the river Isch, 27 miles S.W. from Volka, there are large establishments, where fire-arms are manufactured for the army: the population is about 8000.

VIC. [AÏENE.]

VICEN-BIGORRE. [PYRÉNÉES, HAUTES.]

VIC-FEZENSAC. [GÈRE.]

VIC-SUR-ALLIER. [PUY-DE-DÔME.]

VIC-SUR-CÈRE. [CANTAL.]

VICENZA, a province of the crownland of Venice, in Austrian Italy, is bounded N. by the Tyrol, E. by the provinces of Belluno and Treviso, S. by the province of Padua, and W. by that of Verona. It is about 50 miles long from north to south, and 25 miles in its greatest breadth. The area is 1083 square miles, and the population in 1850 numbered 340,694. The river Bacchiglione crosses the province in its length. The Brenta crosses the eastern districts and passes by Bassano. More than half of the area of the province is occupied by mountains and hills; the rest, which is level, is very fertile in corn, maize, pulse, potatoes, and hemp. The pastures are extensive. Fruit-trees are abundant, and the chestnut-trees in the mountains supply food to a part of the population. A large quantity of silk is produced annually. The forests are rather extensive. Some coal-mines are worked. Cattle and sheep are very numerous. The manufactures consist chiefly of woollens and silks. The province is traversed by the railway from Venice to Milan, which passes through the city of Vicenza.

The principal towns are VICENZA and BASSANO. Citadella is an old fortified town, the fortifications of which are now in ruins. *Riccione*, in the mountains north of Vicenza, is celebrated for its mineral baths. *Montebello* is a large village on the road from Vicenza to Verona. *Asiago* is the head town of the district called I Sette Comuni, whose inhabitants speak a very corrupt and old dialect of German, is situated in the mountains north-west of Bassano, has between 3000 and 4000 inhabitants, and a substantial church. The inhabitants of the Sette Comuni are chiefly graziers and breeders of cattle: the principal manufacture of the district consists in the plaiting of straw-hats, which are exported. Timber is also exported from the forests in the mountains. The dialect of the Sette Comuni may be judged by the following extract from a version of Cardinal Bellarmine's Catechism:—"Saitar iart Christian? Ja: ich pins as Gott vorgheltz. Bas ist ein Christian? Ar ist dear, da ist gutofet, un clobet, un professart baz de hatüz galiarnet Jesu Christo."

VICENZA, the capital of the province of Vicenza in Austrian Italy, is situated in a fine and fertile country on the river Bacchiglione, 39 miles by railway W. from Venice, and has about 33,000 inhabitants. The city is about three miles in circumference, and is surrounded by walls. It is adorned with many beautiful architectural mansions or palaces, many of which were built by Palladio, a native of the town. The cathedral and other churches of Vicenza are rich in

paintings by native artists, the two Montagnas, Magansa, Zelotti, Andrea Vicentino, Bassano, and others. The Teatro Olimpico, which was not finished till after Palladio's death, is an imitation of an ancient theatre; it was opened in 1585 for the performance of the 'Oedipus' of Sophocles, translated into Italian.

Vicenza is a bishop's see: it has a lyceum with ten professors, a gymnasium with fourteen professors, a clerical seminary, and a college for boarders, a public library of 36,000 volumes and about 200 manuscripts, an orphan asylum, and several hospitals. There are also several private collections of minerals and fossils, with which the country abounds. In the Piazza de Signori, a remarkably fine square, are two columns, in imitation of those in the Piazza San Marco in Venice, and a beautiful campanile 20 feet square and 300 feet high. The remains of antiquity consist of the ruins of a Roman theatre, and some remains of a palace, and three arches of an aqueduct near the village of Olbia. Vicenza has been long known for its silk manufactures, which are the most important of the kind in the Venetian states. In the neighbourhood of Vicenza is the celebrated Villa Capra, by Palladio, the architecture of which has been imitated for country-seats in England and other countries. The church of La Madonna del Monte, upon a hill called Monte Berico, about a mile out of Vicenza, is a celebrated sanctuary. A long covered portico leads up the hill to the church, whence there is a splendid view of the surrounding country from the Alps to the Adriatic. The church and annexed convent are possessed of some valuable paintings.

Vicentia, or Vicetia, is mentioned by Pliny ('Hist. Nat.' iii. 23) among the towns of the Veneti. In the middle ages it was for a time a free municipal city; it became subject to Ezzelino da Romano, and afterwards to the Della Scala, lords of Verona. It afterwards fell under the dominion of Gian Galeazzo Visconti, duke of Milan; after his death, 1404, the citizens called in the Venetians, who held Vicenza till 1797. [VENICE.] Vicenza had a university in the 13th century, which was frequented chiefly for the study of the canon law. The people of Vicenza are characterised in history as irritable, quarrelsome, and prone to revenge. The town was bombarded and taken by the Austrians in the campaign of 1848.

VICH. [CATALUÑA.]

VICHY. [ALLIER.]

VICKSBURG. [MISSISSIPPI, State of.]

VICO EQUENSE. [NAPLES, Province of.]

VICTORIA, or PORT PHILLIP, a British colony in Australia, situated at the southern extremity of the continent, extends between 34° and 39° S. lat., 141° and 150° E. long.; and is bounded N. and E. by New South Wales, from which it is divided by the river Murray, and a line drawn from the head waters of that river to Cape Howe; S. by Bass's Strait and the Pacific Ocean; and W. by South Australia, from which it is separated by the meridian of 141° E. long. The form of the province is triangular, its greatest length being from east to west about 500 miles; its greatest breadth about 300 miles. The area is 98,000 square miles, or nearly 63,000,000 acres. The population in 1846 was 32,800; on March 2nd 1851 it was 77,345; on December 31st 1852 it was estimated at 151,127. The progress of emigration has since considerably increased the population of the colony. On the 19th of August 1854, it was estimated that the population on the gold-fields of Victoria colony was 111,735, including 77,550 men, 16,555 women, and 17,630 children.

From Cape Howe, at the eastern extremity of the province, a line of coast, called the Long Beach, extends 200 miles in a south-westerly direction to Wilson's Promontory. This part of the coast, which curves slightly inwards, consists for the most part of low and sandy shores backed by hills. Near the centre are several lagoons, and a considerable sheet of water called Lake Wellington. A short distance north of Wilson's Promontory is Corner's Inlet, where a settlement called Alberton has been formed. The inlet is full of shoals, but it forms a harbour for small vessels, and maintains considerable intercourse with Hobart Town, exporting sheep and fat cattle from the adjoining country. Near Cape Wilson are a number of small rocky islands, forming a continuation of the ridge of the Australian Alps. From Wilson's Promontory to the western boundary of the province, the coast-line runs in a north-westerly and westerly direction more than 300 miles. Only three harbours are found on it—Portland Bay, near the western, and Port Phillip and Western Port, near the eastern extremity. Between Portland Bay and Port Phillip, a distance of more than 200 miles, there is no place of safety even for small vessels, with the exception of Warrnambool and Port Fairy, small harbours for coasting vessels. During the summer the south-eastern winds blow on this coast for three months with great force. From Wilson's Promontory to Western Port the coast is mostly high. From Western Port to the western boundary-line it is generally low. The low shores are sandy, except at some places where swamps exist. West of Cape Nelson the coast is bounded by sand-hills.

Western Port affords good anchorage for vessels of considerable size, and is safe, being protected against the southern and south-eastern winds by Phillip Island, which lies across its entrance. Port Phillip, situated at the western entrance of Bass's Strait, is a harbour of great capacity. It is entered by a passage a mile and a half wide, bounded by Cape Nepean on the east, and Cape Lonsdale on the west. The channel is still further narrowed by some shoals which front the

entrance. Within, the basin extends about 40 miles north, and about midway attains the same breadth, sending off an arm to the west, where it forms the harbour of Geelong. Hobson's Bay, at the northern extremity of the basin, affords good anchorage for vessels of all sizes, and forms the port of Melbourne. Lighter vessels ascend the Yarra-Yarra 8 miles to the capital, which is only a mile and a half distant by land. Portland Bay, near the western boundary, extends 26 miles from east to west, and 10 miles from north to south, and has good anchorage on its western shores in from 4 to 6 fathoms; but it is open to the south-east winds, and during the south-west gales a swell sets in, causing a heavy surf on the beach.

Wilson's Promontory, the most southern headland of Australia, is formed by a mountain, which is visible at the distance of 15 leagues. This rocky mass may be considered as the commencement of the Australian Alps, a range of mountains which, for a distance exceeding 70 miles, runs to the west of north, and farther on, for about 100 miles, to the east of north, until it approaches 37° S. lat. From this part of the range, which has a mean elevation of 2500 feet above the level of the sea, several lateral ridges extend to the south-east and west. The acclivities both on the east and west are gentle, and are partially overgrown with forests, containing many timber-trees, mostly blue gum and black butt. Near 37° S. lat. the range rises above the snow-line, and this portion of it is called the Ajuk Mountains. The valleys in this district comprise much land no less fit for cultivation than for pasture. That portion of the province which from the eastern declivity of the southern portion of the Australian Alps and the Ajuk range descends to the Pacific, is called Gippsland. It extends along the coast to 148° E. long., and consists of an inclined plane, which however near the mountains appears to descend with great rapidity, as in the middle of the region the plain is only 210 feet above the sea-level. The northern portion of this country is traversed by several ranges of hills, which are of considerable elevation near the principal range, but grow lower as they proceed southward. The valleys exhibit a considerable degree of fertility, and many cattle stations have been established in them. In the centre of Gippsland are plains of considerable extent, which are covered with open forests, and are capable of maintaining numerous herds of cattle. The most southern portion of Gippsland is traversed by several offsets of the Southern Australian Alps, which are covered with forests of blue, green, and black butt, in which numerous timber-trees are found. The whole of Gippsland is abundantly watered by several streams. The country extending north-east of Gippsland to the boundary of New South Wales has been but partially explored.

On the north of Port Phillip the watershed between the rivers falling into the Southern Sea and the Murray occurs about 45 miles from the northern extremity of the harbour, but farther to the west it is between 80 and 100 miles from the sea-shore. On both sides of the watershed the country is hilly and broken, and between 142° and 148° E. long., it rises into mountains. This hilly tract is in general from 80 to 40 miles across. To the south of it is an extensive plain, which descends gently to the sea-shore. Near the sea it is almost level or slightly undulating; but farther north it contains a rather large number of hills, rising from 500 to 700 feet above their bases; among them is Mount Buninyong, which rises 1570 feet above its base. A great number of lakes are scattered over this plain, one of which, called Carangamite, is about 90 miles in circumference. Its waters are salt, as are those of nearly all the others. The isolated hills which rise on this plain appear, from their formation, to be of volcanic origin. The southern part of this plain contains extensive tracts of the finest land for pasture and tillage. West of the river Hopkins (142° 45' E. long.) the land along the sea-shore, as far as Portland Bay, is generally poor, and that lying west of Portland Bay, though better, is only indifferent. But that portion of the plain which lies north of 38° S. lat. contains a large portion of good land. In some parts it is overgrown with thick forests of Eucalyptus trees, *Banksia*, *Casuarina*, and other trees peculiar to Australia; at other places it is covered with open forests and abundant grass. The numerous hills are thickly wooded, and the best soil is found at their bases.

Of the western division of the province, which, for its beauty and apparent fertility, was called by Sir Thomas Mitchell, who first explored it, Australia Felix, the best portion is that which lies within the hilly tract on both sides of the watershed. Nearly all the ridges by which this tract is overtopped run nearly at right angles to the watershed. The most western of these ridges rises to the elevation of mountains, and has been called the Grampians. Nearly in the centre of the Grampians stands Mount To-ol, or Mount William, which rises to 4500 feet above the sea-level. Mount Abrupt is 1700 feet, and Mount Sturgeon is 1071 feet in height. The Grampians are surrounded by extensive forests of fine tall timber-trees of Eucalypti.

The country which is drained by the rivers originating in the southern and western portion of the Grampians appears to be the most fertile tract of New South Wales. It is abundantly watered by the Nangeela, or Glenelg, and its tributaries. The soil is black and rich, several feet deep, and rests on a subsoil of clay. The surface of the higher portion of this plain is strongly undulating, and on it are found many small sandhills.

The hilly tract of the watershed east of the Grampians has its surface diversified by numerous narrow ridges of rocks, several round hills of moderate elevation, and many rather narrow valleys traversed by clear and beautiful streams. In some parts the hills are covered with wood; at other places free from wood, but overgrown with grass to the top. About 30 miles east of the Grampians, some more elevated ridges traverse the watershed. They have been named Pyrenees, but the natives call them Peerick Hills. They consist wholly of granite, but are all grassy to their summits, and thinly wooded. East of the Pyrenees the country is more broken and the hills are higher. There are forests chiefly composed of box and lofty blue gum. A considerable portion of the hilly country, placed nearly in the centre of it, consists of hills of lava. A very large portion of this hilly country affords excellent pasture.

Between the hilly region of the watershed on the south, the mountain region of the Australian Alps on the south-east, the course of the Murray on the north, and the boundary-line of South Australia on the west, lie the plains of the Murray River. The Murray and its tributary the Bayunga flow in wide bottoms, sometimes 8 or 10 miles across, which bottoms are overgrown by high trees, partly swampy or covered with lakes and ponds, but exhibiting an extraordinary degree of fertility in the vigour of their vegetation. In some places are found salt-lakes in considerable numbers, but in general the plains are open, grassy, and beautifully diversified with serpentine lines or clumps of wood. Even at a considerable distance from the banks of the rivers water is not scarce, as there are numerous hollows in the plains, which generally contain water. The plains of the Murray are fit both for cultivation and rearing of cattle. The river Murray, rising in the Australian Alps, flows in a north-westerly direction along the boundary of the province, entering South Australia at 34° S. lat., after a course of above 600 miles. In the lower part of its course along the border it has a channel 350 yards broad, with a depth of from 12 to 20 feet. Its chief tributaries, which drain the northern division of the colony are the Mitta-Mitta, Ovens, Goulburn, Campaspe, and Loddon, most of which are dried up during summer and converted into chains of ponds. The Mitta-Mitta rises in the Australian Alps, not far from Lake Omeo, the neighbourhood of which forms one of the gold-fields of Victoria. The Loddon rises near Mount Alexander, the principal gold-field, and its feeders, after the rainy season, are employed in the process of gold-washing. The Avoca, Avon, and Wimmera flow northward from the Pyrenees and Grampian chains. The Glenelg, collecting several tributaries from the western slopes of the Grampians, flows southward along the frontier and enters South Australia just before reaching the ocean. The Hopkins, with its several affluents, waters the country south from the Pyrenees, reaching the ocean a little to the eastward of Port Fairy. The Barwon, after flowing in a north-easterly direction to the neighbourhood of Geelong, bends to the south-east, and falls into the sea near the entrance of Port Phillip. The Yarra-Yarra, a considerable stream, which washes the capital, is subject to heavy floods during the rainy season. It comes in from the mountains to the east of Melbourne and continues in a very circuitous course to the head of Port Phillip. It is navigable to the city for small vessels and steamers of light draught. The Latrobe, rising in the Great Swamp, which is divided from Western Port by a belt of land a few miles broad, intersects the southern range of the Alps and flows eastward through Gippsland into Lake Wellington. Lake King collects the waters of the Tambo, the Riley, and the M'Arthur, which drain the northern district of Gippsland.

The predominating rocks in the higher masses of the Australian Alps are granite, sienite, and quartz, intermingled occasionally with mica-schists and various other rocks of a slaty texture. Quartz, ironstone, sandstone, and clay-slate are general throughout the other hilly portions of the colony. Veins of coal have been found on the coast between Port Phillip and Cape Otway, besides traces of lead and manganese. Rich veins of copper ore have been met with on the banks of the Yarra-Yarra. The chief mineral however is gold, the discovery of which in 1851 has led to a remarkable increase in the wealth and population of the colony. The gold is found chiefly at Ballarat, 40 miles N.N.W. from Geelong; at Mount Alexander, 75 miles N.W. from Melbourne; and around Lake Omeo, in the Australian Alps. At Ballarat, where the precious metal is found extensively on the ranges and flats and in the beds of the watercourses, a section of the workings exhibits the following series of strata:—Red ferruginous earth and gravel, streaked yellowish and red-clay, quartz gravels of moderate size, large quartz pebbles and boulders with masses of ironstone set in very compact clay, blue- and white-clay and pipe-clay. The gold is uniformly found in the formations superior in position to the pipe-clay. The richest deposits occur in the blue-clay, where the ore is for the most part quite pure. It is washed from the clay in rounded or flattened grains; sometimes it is found in fused pieces of pure metal, at others incorporated with quartz-pebbles, and occasionally in rolled water-worn lumps called nuggets. The number of miners' licences issued at the colony of Victoria in August 1854 amounted to 15,682; and in July to 14,617. The grand total quantity of gold received at the gold offices of Melbourne and Geelong, from the various gold fields of the colony in July and August 1854 was 276,613 oz., valued at 1,106,454*l.* The amount of fees received on account of licences in the same months was 54,087*l.*, and the amount of fees on private gold

and cash transmitted per escort 10,191*l.* The number of mining licences issued in December 1854 was 8059, and the quantity of gold received at Melbourne and Geelong in November and December 1854 was 277,027 oz., valued at 1,108,108*l.* The amount of fees received for licences in those two months was 48,990*l.*, and the fees on private gold and cash per escort 8141*l.* The quantity of gold exported from Victoria in the months of November and December was 427,921 oz. The quantity exported during the quarter ending the 31st of December was 510,188 oz., valued at 2,084,375*l.* In the early part of 1855 serious riots took place at the gold-diggings of Ballarat, in consequence of the miners resisting the payment of the licence fees. This led to the substitution of a tax on gold exported from the colony, instead of the licence fee for diggers.

The climate of Victoria is comparatively mild. The mean temperature of summer is 65°, of winter 48°, of the whole year 57°. The atmosphere is so dry and elastic that the heat of summer, sometimes very intense, is less oppressively felt. Hot winds occasionally come from the north, and last from 20 to 30 hours, suddenly raising the temperature to an extreme heat, but they do not occasion great inconvenience, and they are generally succeeded by a refreshing breeze from the ocean. During June, July, and August, the winter months, cold and wet days frequently occur, and at rare intervals light snow showers fall. In August, 1852, snow fell at Bendigo to the depth of seven feet. The average fall of rain for the year is 30.7 inches. The rapid changes of temperature, sometimes 80 degrees in 24 hours, are unfavourable to consumptive patients. Dysentery and a species of ophthalmia prevail to some extent in the hottest months. On the whole, the climate is found agreeable and salubrious. The wild animals found in the province are, the dingo, or native dog; the great gray kangaroo, which abounds in some districts; the rock wallaby, or badger; kangaroo rat; opossum; flying squirrel; wild cat; bandicoot; cloth, or Australian bear; and various others. Among its birds are, the bustard, or wild turkey, which on some of the plains appear in considerable flocks; numerous quails; many species of parrots; the lyre-birds, or Australian pheasant, which frequents the mountains of Gippsland; black swans, which abound in the neighbourhood of Western Port; the emu; magpie; pelican; eagle-kingfisher; and plover. Snakes are numerous. Mosquitoes, locusts, and ants appear in great numbers in summer, and also lizards and other reptiles. The bays and rivers abound with fish. Codfish of a large size are found in the rivers of the northern district. Shoals of herrings appear on the coasts in February and March. The most important timber-trees are, the red gum, lightwood, blackwood, pine, tea-tree, she-oak or siak, honey-suckle, and iron-bark. The kangaroo apple-tree, the grass-tree, and the quandong, which forms a fine preserve, are indigenous. The fruits which have been successfully cultivated are, the peach, plum, quince, nectarine, apricot, pear, apple, mulberry, almond, and fig. Several vineyards have been formed. Vegetables are abundant. The potato, turnip, carrot, cabbage, brocoli, and radish grow to an enormous size. Indigo and flax are indigenous. The tobacco and castor-oil plants and Indian corn grow luxuriantly. The common cereals are produced in great perfection; wheat is of the finest quality, with a return of from 40 to 50 bushels an acre.

The country around Melbourne is equal to any part of Australia for the growth of wheat, Indian corn, and potatoes. In all parts of the colony there are tracts of the finest arable land. But sheep-farming is the principal pursuit in this province, apart from the recent mining operations, and the export of wool has for some years very rapidly increased.

The settled part of the province, comprehending principally the eastern and southern portions, is divided into 24 counties. Melbourne, the capital, and Williamstown, its port, are noticed in the article MELBOURNE. In that article the revenue of the city of Melbourne for 1852 is given at 16,161*l.* 19*s.* 5*d.*, instead of 26,161*l.* 19*s.* 5*d.*, which is the correct amount. The second town in the colony is Geelong, now an important shipping port, pleasantly situated on the south-western shore of Port Phillip, at the head of Corio or Geelong Bay. It is regularly built, well supplied with water, and is steadily advancing in population and trade. Smaller vessels ascend to the town, but those of greater burden discharge at Port Henry, 10 miles down the bay. The increase of the town of Geelong consequent on the gold discoveries is shown by the town revenue in 1851 and 1852, which stood thus: 1851—2785*l.* 4*s.* 1*d.*; 1852—10,697*l.* 16*s.* 1*d.* The principal part of the receipts has been laid out in public improvements, to assist which considerable grants of public money were made to the town; more recently a large amount has been borrowed by the corporation of Geelong for the purpose of carrying out extensive improvements. A railway to Melbourne is in course of construction. Near the mouth of the Yarra, on the north-east shore of Port Phillip, are the neat villages of St. Kilda and Brighton, which are resorted to as bathing places by the citizens of Melbourne.

The town of Portland is built near the western extremity of the bay of the same name. It has a small population, but occupies a considerable space, being built in streets crossing each other at right angles. There are some whaling establishments in the place, and the wool and other produce of the neighbouring district are shipped at the harbour, which is inconvenient and exposed. Belfast, an active and thriving town, is situated on Port Fairy, some miles east from Portland

Bay. It is famed for its butter and cheese, and lies amid some of the best tillage-land in the western division of the province. *Warrambool*, near Belfast, is a small seaport, having frequent intercourse by trading vessels with Melbourne and Portland. It is the port of a considerable agricultural district. A Presbyterian church, built of stone, replacing a wooden structure, was opened here in the early part of 1855. *Bal-larat*, the seat of the gold-diggings of that name, is described by Mr. William Howitt, who visited the place, as containing a large population, who are settling down into regular habits, and are constructing a neat, well-laid out, and commodious town.

The principal towns in Victoria colony, in addition to those already mentioned, are:—Alberton, Avoca, Ballan, Beechworth, Benalla, Bendigo, Brunswick, Buninyong, Castlemaine, Chepstow, Colac, Flemington, Kilmore, Kyneton, Mount Alexander, Port Fairy, Prahran, Richmond, Sandhurst, and Wangaratta.

By an act of the Legislative Council of Victoria, ratified by the act of the Imperial Legislature, 18 and 19 Vict., cap. 55, it is provided that there shall be a Legislative Council of 30 members, and a Legislative Assembly of 60 members, for the colony. Members of Council must be 30 years of age, natural born subjects of the Queen, and possessors for at least one year previous to election of lands and tenements in the colony of the value of 5000*l.*, or of the annual value of 500*l.* No judge, minister, traitor, or convicted felon, can be a member. Electors must be 21 years of age, natural born subjects, or naturalised for at least three years, and possessed of freehold property of the clear value of 1000*l.*, or clear annual value of 100*l.*, or leasehold property of 100*l.* yearly. Members of Assembly must be 21 years of age, possessing freehold property to the amount of 2000*l.*, or 200*l.* yearly value. Judges, ministers of religion, and persons who have been attainted for treason, or convicted of felony, are excluded. Electors must be 21 years of age, possessed of freehold property of 50*l.* value, or 5*l.* yearly value, or leasehold property of the clear annual value of 10*l.*, or occupy premises of 10*l.* yearly rent, or have a yearly salary of 100*l.* After the expiration of two years from the passing of the act no person is to be registered as an elector who cannot read and write. The leading feature of the new charters for Victoria and the other Australian colonies is that, with the exception of a few reserved points in reference to imperial rights, the business of each colony will be managed by its own legislature. In particular the management of the waste lands is committed to the colonial legislatures.

The imperial authority is represented by a lieutenant-governor, whose salary is 10,000*l.* per annum, with an allowance of 5000*l.* per annum for salaries of staff, repairs to government-house, travelling, and other expenses. The laws are administered by a chief justice and three puisne judges, who have criminal jurisdiction and exercise the powers of the Queen's Bench, Common Pleas, and Exchequer courts. There is also a master in equity. Under the new act, 50,000*l.* a year is to be reserved for the purposes of religious worship, to be distributed in proportion to the respective numbers of the several religious denominations. This sum is to be laid out in assisting to erect places of worship and in payments to ministers. The sum given in aid of ministers' stipends is not to exceed 25,000*l.* in any one year. The religious bodies in the colony are—the churches of England and Scotland, the Free Church of Scotland, United Presbyterians, Independents, Baptists, Methodists, and Roman Catholics. At the head of the Church of England in the province is the Bishop of Melbourne. At the close of 1852 there were 7841 scholars attending schools in the colony. The colonial revenue in 1851 was 379,824*l.* 12*s.* 4*d.*; in 1852 it was 1,577,181*l.* 8*s.* 1*d.*: the expenditure in 1851 was 409,884*l.* 1*s.* 5*d.*; in 1852 it was 784,961*l.* 18*s.* 2*d.* The estimated income for 1855 is 3,015,683*l.*, and the estimated expenditure is 4,801,292*l.*, showing a deficit of 1,785,609*l.*, to provide for which a considerable amount of difficulty has been experienced by the government.

The number of ships entered at the ports of the colony in 1851 was 712, of 129,426 tons; the number in 1852 was 1657, of 408,216 tons. The number of ships registered as belonging to the colony on December 31st 1854 was 272 of 81,985 tons, and 12 steam-vessels of 29,395 tons. The value of the goods imported into the colony in 1851 amounted to 1,422,909*l.*; in 1852 the amount was 7,451,549*l.* From Great Britain alone there was sent to the colony in 1858 goods to the (declared) value of 7,062,387*l.* of British produce and manufactures, besides upwards of 2,200,000*l.* worth of foreign and colonial produce and manufactures. About 21,000,000*lbs.* of wool was imported into Great Britain from Victoria colony in 1853. The emigration to the colony from Great Britain during 1854 included 35,384 persons, the whole of the other Australian colonies having only 6788 emigrants from Great Britain in the same period.

Port Phillip was discovered and entered by Lieutenant John Murray in January 1802, and was soon after visited by Captain Flinders, who called it Port Phillip, in honour of the first governor of New South Wales. Although occasionally visited in succeeding years, it remained without any settlement till 1835, when the first sales of land took place in the Australian colonies. A settler from Van Diemen's Land having purchased an extensive tract of country from the natives, the government refused to recognise the validity of the purchase, and the entire district adjoining Port Phillip was taken possession of on behalf of the crown. Colonists from Van Diemen's Land, bringing their

flocks with them, arrived in great numbers. The New South Wales squatters, with their flocks and herds, came from the north. The district rapidly advanced in population and wealth, and was placed under the control of a superintendent appointed by the governor of New South Wales, till, after repeated representations on the subject, it was, in 1850, separated from that colony, and constituted a distinct province. The bishopric of Melbourne was founded in 1847; the diocese comprises the colony of Victoria. There is one archdeacon, of Geelong.

VICTORIA. [HONG-KONG; MEXICO; VENEZUELA.]

VICTRI. [BASILICATA.]

VIENNA (*Wien*), the capital of the Austrian empire, of the Arch-duchy of Austria, and of the Crownland of Lower Austria, is situated in 48° 12' 35" N. lat., 16° 22' 58" E. long., at an elevation of between 500 and 600 feet above the sea, on the right bank of the Danube, at its confluence with the little river Wien, which flows through the city. Vienna is full two miles from the main stream of the river, which divides above the city into several branches, forming many islands, so that only a small branch, which serves as a canal, and is generally called the Danube Canal, passes under the walls. The population, exclusive of the military, numbers above 410,000.

Vienna consists of the interior or old city and the suburbs. The old city is nearly circular, and not above three miles round. It is surrounded with a broad fosse, and a wall from 40 to 50 feet high, which has ten regular bastions and forms one of the most favourite promenades of Vienna, commanding a very fine view. Beyond the fosse is the glacis, which varies in breadth from 960 to 1500 feet, formerly reserved as a clear space without the walls, but is now laid out in public walks, and extends all round the city, except towards the north-north-east, in which direction the fortifications flank the right bank of the Danube Canal, between the Chain Bridge and the mouth of the Wien. The Wien, after reaching the glacis on the south side of the city, between the Kärnthner Gate and the Polytechnic school, makes a bend eastward, and runs north by east between the city and its eastern suburbs: between the Stuben Gate and the Invalides Hospital it communicates with the Vienna-Neustadt Canal. The western suburbs are traversed by a small stream called the Alster.

The city is surrounded by 34 suburbs, two of which are to the north-east, on the island of Leopoldstadt in the Danube, and the 32 others beyond the glacis. These 32 suburbs are surrounded by the Lines, that is, a fosse with a wall 12 feet high. From the old city twelve gates lead to the suburbs, the principal of which is the Burg-Thor, or palace gate, which was completed in 1824, and is a splendid piece of architecture, with five equal archways. From these gates there are paved streets and avenues to the principal streets in the suburbs, and these are connected by twelve other gates in the Lines, or outer fortifications, with the adjacent country. The extent of the Lines is 12 miles, and the circumference of the two suburbs situated on the island is above 6 miles. The old city occupies about a tenth part of the whole space.

The inner or old city is very irregularly built; most of the streets are crooked and narrow. The places, or squares, are 20 in number, most of them small and irregular; among the best are—the New Parade, before the imperial palace, the largest square in Vienna, nearly 1000 feet in length and 650 feet in breadth, perfectly regular, surrounded with avenues of trees, and adorned with grass-plots and flower-beds; the Hof, 450 feet long and 300 feet broad; the Hofs Markt, with a beautiful marble temple; the Josephplatz, in which there is a colossal equestrian bronze statue of Joseph II.; and the Graben, which is rather a street than a square, 540 feet long and 100 feet broad: it is nearly in the centre of the city, and is a place of fashionable resort, especially for strangers. The streets are well paved, well lighted at night, and cleansed and well drained by capacious sewers. Differing in this respect from most other European capitals, the old city is the most fashionable; it contains the palaces of the emperor, of many of the principal nobility, the public offices, the finest churches, and most of the museums and public collections, the colleges, the exchange, and the most splendid shops. The houses, which are in general of brick, are six or seven stories, and very large; most of them are inhabited by several families. There is a common staircase, and a porter keeps the street-door.

The public buildings, palaces, churches, &c., are very numerous:—1. The most remarkable is the cathedral, dedicated to St. Stephen, a very majestic edifice, built entirely of freestone, in a beautiful gothic style, in the 12th and 13th centuries: it is one of the finest specimens of ancient German architecture. The interior is 342 feet in length, 222 feet in breadth between the two great towers, and 79 feet in height. The church is surmounted by four towers, one of which is above 450 feet high. In this steeple hangs the great bell, weighing 357 cwt., and cast, in 1711, out of 180 pieces of Turkish cannon, which had been used in the siege of Vienna. The interior of the church contains thirty-eight marble altars and numerous monuments of celebrated men, among which are those of the emperor Frederick IV. and of Prince Eugene of Savoy. The crypt beneath the church consists of thirty large vaults, in which since the time of Ferdinand III. the bowels of all the deceased members of the imperial family are deposited in copper or silver urns, their hearts being deposited in the Augustinian church, and their bodies in the church of the Capuchins in the New Market, where also is the sarcophagus of the Duke of

Reichstadt, son of Napoleon I. 2. St. Peter's, built on the model of St. Peter's at Rome, and adorned with fine fresco and old paintings. 3. The elegant Augustinian church, which contains the celebrated mausoleum of the archduchess Christina, a masterpiece of Canova. 4. The church of the Capuchins, with the imperial family vaults, where the bodies of the imperial family are deposited, beginning with the emperor Mathias and his consort. 5. St. Michael's, a magnificent edifice, containing some capital paintings. 6. St. Ruprecht's is remarkable only as the oldest Christian church in Vienna, having been originally built in 740, for the convenience of the Avari. 7. The church of Maria Stiegen, built in 882, and recently assigned to the Redemptorists, and likewise to the Slavonian nation. 8. The Scotch abbey church (so called from the Scotch Benedictines, who possessed it from 1158 to 1418). Besides these there are the Italian church, the German church, two chapels in the Burg, the church of the United Greeks, and two churches of the schismatic Greeks. The Lutheran and the Calvinist chapels have neither steeples nor bells. The Jews have a synagogue and school.

The principal public buildings are—1. The Burg, the imperial palace, the residence of the emperor, an old irregular edifice, built at different times. It consists of three quadrangles. It contains the imperial jewel-office, one of the richest collections of the kind in Europe, a fine cabinet of works of art, a very extensive collection of natural history, and the cabinet of medals, which far surpasses all other collections of the kind. The Imperial Library, connected with the Burg, is a handsome edifice, with a saloon, and a gallery 250 feet long, and in the centre 100 feet broad, in which is the imperial library, consisting of 320,000 volumes and 16,000 manuscripts, many of which are very ancient and very valuable. The library possesses a collection of 20,000 volumes and 650 manuscripts in Oriental languages, relating to the history of Turkey and other eastern countries, formed by Von Hammer. The collection of engravings is one of the largest and most valuable in Europe: it consists of above 800,000 engravings, from the origin of the art to the present time. 2. The building formerly called the Imperial Chancery, the fine façade of which forms one side of the quadrangle called the Burghof, or Burgplatz, built by Fischer von Erlach, with five colossal groups by Machioli, representing the Labours of Hercules. 3. The Imperial Riding-School, a masterpiece of architecture, by Fischer von Erlach. 4. The splendid palace of the Archduke Charles, formerly belonging to his father-in-law, the Duke of Saxe-Teschchen; containing an extensive library and a collection of 180,000 engravings in 900 portfolios. The collection contains also 15,000 drawings by the old masters. 5. The Mint, formerly the residence of Prince Eugene. 6. The University. 7. The Town-house. 8. The archbishop's palace, near St. Stephen's. 9. The Zeughaus, or Imperial Arsenal. 10. The former City Hospital, a large building four stories high, with 10 court-yards or quadrangles, and divided into 200 residences. 11. The Trattnerhof, a spacious building divided in a similar manner. 12. The Town Arsenal. 13. The Bank in the Singer-street. 14. The Imperial Austrian National Bank. 15. The public offices called Chanceries, such as the Bohemian, Austrian, and the Hungarian and Transylvanian chanceries. 16. The Custom-house. 17. The palaces of the nobility, most of which are remarkable for their architecture, and contain good collections of paintings and other works of art. There are five theatres in Vienna, two in the inner city and three in the suburbs. 1. The Hof or Burg Theatre, attached to the imperial palace, for the performance of the regular drama. 2. The Theatre at the Karntner, or Carinthian gate, for operas and ballets. 3. The Theatre on the Wien, in the suburb Wieden, the largest and handsomest in Vienna, for melodrama. 4. The Theatre of the Leopoldstadt, an Austrian national theatre, the favourite of the middle and lower classes. 5. The Theatre in the Josephstadt.

The hospitals and other charitable institutions are numerous and well endowed. The General Hospital, founded by Joseph II., is a very large building, containing 2000 beds. Connected with it is an admirably-managed lying-in hospital, and a foundling hospital. There is also a lunatic asylum. The institution for deaf-mutes was founded by Joseph II.; the inmates are treated with parental care. The Hospital of the Charitable Brothers is open to the sick of all nations and religions. The Invalids' House, or Hospital, founded by Joseph II., accommodates 800 old soldiers.

The principal establishments for education are the following:—The University, founded by Duke Rudolph IV. and his brothers, with the consent of Pope Urban IV., in 1365. It is famous as the first medical school in Germany, is attended by above 2000 students, and has 80 professors, a library of 120,000 volumes, an observatory (the latitude and longitude of which are given in the previous column), a botanic garden, an anatomical theatre, a veterinary school, and a laboratory. The Josephinum, founded by Joseph II., is a medical institution for the instruction of surgeons for the army, with very rich collections. Other establishments worthy of notice are—the Imperial Oriental Academy; the Academy of Engineers; the Academy of the Fine Arts; the Geographical Institution; the Mineralogical Institute; the Normal School; the Polytechnic Institution; and many others.

Vienna, being the centre of the Austrian dominions, is likewise the principal seat of commerce and manufactures. Steam-vessels ply along the Danube, and to Constantinople, Trebizond, and Smyrna, and other Mediterranean ports. Railways connect Vienna with Trieste

(its great port on the Adriatic), with Pesth and other towns in the crownland of Hungary, with Prague, Dresden, Cracow, Warsaw, Brealau, Berlin, and all the important towns of North and Central Germany; and lines are in course of construction to extend its communication by railroads to Milan, Salzburg, Munich, and South-Western Germany. By electro-telegraphic wires Vienna has instantaneous communication with Constantinople, Paris, London, Milan, Berlin, and all the important towns in Europe. Manufactures of every kind are carried on in Vienna. The principal are—silk, velvet, shawls, gold and silver lace; cottons, woollens, ribands, carpets, leather, porcelain, jewellery, mathematical and musical instruments, cannon and fire-arms, gold and silver plate, watches, fine cutlery, carriages, gloves, lace, straw-hats, paper, &c. The printing of large and accurate maps, and of books in various dialects of human speech, are greatly encouraged by the Austrian government.

The suburbs are not built on a regular plan, but they have broad and straight streets, many of which are of great length. They contain numerous palaces and gardens of the nobility, a great number of handsome private houses, several convents, and above 30 churches, of which we may instance the church of St. Charles Borromeo, perhaps the handsomest ecclesiastical edifice in Vienna. Among the other buildings in the suburbs the following are most worthy of notice:—The Imperial Mews, 600 feet in length, fitted up to receive 400 horses. The Belvedere Palace, which was built by Prince Eugene, and consists of two buildings, the Upper and Lower Belvedere, with a public garden on the space between. The Lower Belvedere, which stands at the foot of a gentle eminence, contains the celebrated Ambras collection of ancient armour, paintings, jewels, &c., removed from the castle of Ambras, in the Tyrol, in 1806, when that province was ceded to Bavaria. The Egyptian Museum is deposited in the same building. The Upper Belvedere, which crowns the eminence, contains the imperial gallery of paintings, consisting of nearly 1300 pictures, arranged according to schools. The palace of Prince Liechtenstein contains a splendid gallery of 1200 pictures, a valuable collection of engravings, and many other works of art: attached to the palace is a fine garden. Prince Esterhazy's summer residence contains his splendid gallery of paintings, some fine sculptures, and a collection of 50,000 engravings. The beautiful palace of the Duke of Modena; that of Count Rasumowsky; the Polytechnic Institution, with a very remarkable collection of many thousand specimens of the national manufactures; the Imperial Porcelain Manufactory, which occupies an entire street. Several of the public institutions already noticed are in the suburbs.

Among other structures in Vienna must be mentioned the bridges over the Danube, of which the Ferdinand Bridge, opening upon the Tabor-Strasse, in the northern suburb, opposite to the Rothethurm Gate, is considered a masterpiece of construction; it consists of ten cast-iron arches supported on stone piers. A chain-bridge was completed in November, 1849. Many additions have been made to the fortifications of Vienna since the troubles of 1848-49. On the left bank of the Danube is the great central railway station where the junction between the northern and southern railways takes place. The custom-house; the church and convent of the Sisters of Mercy; the Standehaus, or house of assembly for the states of Lower Austria; the new post-office; the several barracks; the new gate; the Weillburg and Schönbrunn palaces; the savings bank, Dittmann's-Haus, in the Präter; the music hall, and the exchange, are also to be numbered among the fine structures in or near this illustrious capital.

The public promenades, which are the great places of resort for the citizens of Vienna, are the following:—The Bastei, or ramparts of the old town, and the glacis, or esplanade between the city and the suburbs. That part of the Bastei is the most frequented which is near the imperial palaces, and communicates with the Volksgarten (the people's garden), which was laid out and thrown open to the public by the emperor Francis. There are two handsome coffee-houses in this garden, and an edifice copied after the temple of Theseus at Athens, in which is placed the fine group of Theseus slaying the Minotaur, by Canova, the gardens of the palaces of Liechtenstein, Rasumowsky, Schwarzenberg, and the Belvedere, are also open to the public. The Präter, an immense park, in the Leopoldstadt suburb, was opened to the public by the emperor Joseph II. in 1766. The Präter is a league and a half in length, and is traversed by six noble avenues of chestnut-trees, running in different directions, the principal one being 15,000 feet in length. This is divided into three parts; one for horsemen, one for pedestrians, and the broad road between them for carriages. Beyond the avenues there are fine meadows, with groups of magnificent trees, and large herds of deer. The Präter is always crowded with company every Sunday in the spring; the grand day is Easter Monday, when there may be 20,000 pedestrians, and an uninterrupted line of carriages two leagues in length. There are many coffee-houses along the walks. The most characteristic part of the Präter however is the Würstel Präter, so called from the puppet-shows (Würstel-spiele) there exhibited. It is covered with innumerable liquor-shops, swings, roundabouts, jugglers, and all sorts of diversions for the lower classes. The whole is like a great fair or encampment of sutlers' booths; long rows of tables and benches are constantly supplied with guests. Adjoining the Präter is the Augarten, and next to that the Brigittenau, which are very agreeable walks, but not so frequented as the Präter.

The environs of Vienna are very picturesque. On the north it has the beautiful islands of the Danube; on the west the lofty Kahlenberg Mountain; on the south hills covered with thick forests and rich vineyards, the Noric Alps commencing with the Schneeberg, and towards Modlin and Baden a dark circle of hills, valleys, ruins of castles, antique churches, modern palaces, and handsome country-seats. The imperial palaces of Schönbrunn and Laxemburg are at a short distance from the city.

The climate of Vienna is extremely variable, great heat being often suddenly followed by severe cold. The islands and the parts of the city next the river are subject to inundations, and the atmosphere is frequently foggy.

The inhabitants of Vienna are a gay, friendly, and hospitable people, among whom a stranger quickly finds himself at home. Beggars are not seen in the streets, and one may traverse them at all hours without meeting with any kind of disturbance or annoyance. Breaches of the peace are rare, cases of drunkenness seldom occur, and gaming-houses are unknown. Among the virtues of the Viennese charity is pre-eminent. They are also devoted to pleasure. Literary societies are however very numerous, and the higher classes are very accomplished. French, English, and Italian are currently spoken, as well as the native German. The ladies are extraordinary proficient in music, of which they are excessively fond.

Vienna, called by the Romans *Vindobona*, was long the head-quarters of a Roman legion, and the capital of Pannonia. When the Roman power declined, it was overrun by the Goths and Huns, till, in 791, Charlemagne annexed it to his dominions. It was then and long afterwards of small extent; St. Stephen's cathedral, now in the centre of the city, being when erected in 1114 without the walls. It however increased progressively from the mercantile advantages of its situation, and by being the usual residence of the dukes and emperors. The most remarkable events in its annals are the various sieges which it has sustained. In 1484 it was taken by Mathias, king of Hungary, who resided in it till his death, when it was restored to Austria. In 1529 the Turks, assisted by the Hungarian insurgents, approached the city and destroyed the suburbs. In 1619 the Bohemian insurgents, supported by a party in Austria, succeeded in penetrating into the city, but were almost immediately expelled. In 1625 it was threatened by the Swedish general Torstenson. In 1678 the plague carried off in the city 49,486 persons, and 73,323 in the suburbs. In 1683 the city was besieged by a Turkish army, and reduced to extreme distress, when it was relieved by John Sobieski, king of Poland, who, with 60,000 men, totally defeated the Turkish army of nearly 200,000. In 1797 it was threatened by Napoleon I., and occupied by him in 1805 and 1809. Strict discipline was observed by his troops on both occasions. A Congress was held at Vienna in 1814-15, at which the territorial and political state of Europe was settled after the downfall of Napoleon I. In the troubled period that followed the last French revolution, Vienna was for a time in the hands of insurgents. The city was taken after a bombardment by the Austrian army under Prince Windischgrätz on Nov. 1, 1848. [See SUPPLEMENT.]

VIENNE, a department of France, bounded N. by Indre-et-Loire, E. by the departments of Indre and Haute-Vienne, S. by Charente, W. by Deux-Sèvres and Maine-et-Loire. Its greatest length from north to south is about 80 miles; the greatest breadth is 51 miles. The area of the department is 2692 square miles. The population in 1851 was 317,305.

The department has no mountains. A chain of hills called the heights of Gatine, which extends from the central mountains of Auvergne towards the mouth of the Loire, crosses the south-western side of the department; and a branch from these hills extends towards the north-east, between the Clain and the Thoué. The central part, between the Clain and the Vienne, consists of tolerably high ground; but the part east of the Vienne is low. The north-eastern border of the department is occupied by cretaceous formations; the rest of the department is occupied by the secondary rocks. The department has several iron-works, quarries for millstones, whetstones, lithographic-stone, limestone, and freestone, and a quarry of marble which takes a good polish. There are sulphureous springs at La-Roche-Posay, near the junction of the Creuse and the Gartempe.

The department belongs almost entirely to the basin of the Loire; a very small part in the south-west corner, about Civray, belongs to the basin of the Charente. The *Vienne*, which is one of the principal affluents of the Loire, rises in the department of Corrèze, and after traversing Haute-Vienne and a part of Charente enters this department on the south, just above Availles, and flows northward through the department, which it quits below the junction of the Creuse. About 65 miles of the course of the Vienne are in this department: from the junction of the Clain to its mouth in the Loire, a distance of about 40 miles, it is navigable. Nearly all the other rivers of the department are tributaries of the Vienne: the Grande-Blourde, the Ozon, and the Creuse join it on the right bank; and the Dive and the Clain on the left bank: the Veude, which joins it on the left bank long after it quits this department, and the Mable, a feeder of the Veude, have their source amid the hills on the north of the department. The Creuse has the last 20 miles of its course on the border of this department; its feeder, the Gartempe, rises in the department of Creuse, but has the lower part of its course, for nearly 40 miles, within or

upon the border of this department. The Anglin, a feeder of the Gartempe, and the Sarleron and Benaize, feeders of the Anglin, belong partly to this department. The *Clain* rises in the department of Charente, but has nearly the whole of its course of more than 60 miles in this department. None of the affluents of the Vienne are navigable except the CREUSE. The *Dive*, a tributary of the Thoué (an affluent of the Loire), is navigable for 8 miles. It rises in this department, and has the greater part of its course within or upon the western border. The Charente just crosses the south-western corner of the department.

The department is traversed by 6 imperial, 9 departmental, and a great number of communal or parish roads: the most important is the high road from Paris to Bordeaux. The Paris-Bordeaux railway also traverses the department in its whole length, passing through Châtelleraut, Poitiers, and Civray.

The air is generally mild. The north wind prevails in winter, the north-west wind in spring, and the south wind in summer. The marshes in the west of the department are unhealthy.

The area of the department may be stated in round numbers at 1,680,000 acres, of which more than 1,000,000 acres are under the plough. The most productive soils are on the northern part of the department; those on the south and south-east are generally poor. The principal productions are wheat, rye, oats, hemp, flax, peas, and potatoes. The meadows occupy above 100,000 acres, and the heaths or open pastures nearly 190,000 acres. A great number of horses, mules, horned cattle, sheep, goats, and pigs are bred: poultry is abundant. The vineyards occupy 70,000 acres, and yield ordinary white and red wines. The orchards occupy 14,000 acres, the woods 200,000 acres. A considerable quantity of walnuts, chestnuts, and fruit are grown.

The department is divided into five arrondissements, as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Poitiers	10	82	110,640
2. Châtelleraut . . .	6	50	58,819
3. Civray	5	45	50,093
4. Loudun	4	63	35,805
5. Montmorillon . . .	6	60	61,948
Total	31	300	317,305

1. In the first arrondissement the chief town is POITIERS. Among the other places worth notice are *Lusignan*, on the Vonne: population, 2560. *Newville*, between the Auzance and the Palu: population, 2800. *Mirebeau*, on a feeder of the Dive, which flows into the Thoué: population, 2556, for the whole commune. *Vivonne*, on the Clain, has a manufacture of coarse woollens, a corn-market, and about 2700 inhabitants. *Lusignan* has a manufacture of coarse woollens, and considerable trade in grain and seeds. There was formerly a strong castle at Lusignan, the site of which is now occupied by a pleasure public walk. The house of Lusignan acquired the crowns of Jerusalem and Cyprus. *Mirebeau* was built by Foulques Nera, count of Anjou, who also erected a castle here. In this castle *Eléonore* of Guienne, widow of Henry II. of England, was besieged (1202) by her grandson, Arthur, duke of Bretagne, but was relieved by the approach of her son, King John of England, who took Arthur prisoner. The village of Vouillé, on the Auzance, a feeder of the Clain, 10 miles W. from Poitiers, was the scene of the great battle in which Clovis and the Franks defeated and slew Alaric II., king of the Visigoths, in A.D. 507.

2. In the second arrondissement the chief town, *Châtelleraut*, is situated on the right bank of the Vienne, 20 miles by railway N. from Poitiers, and has 11,959 inhabitants in the commune. It is in general an ill-built town. The site of the old fortifications is occupied by handsome residences and pretty walks. A fine stone bridge connects the town with the suburbs, on the left bank of the Vienne. At the town end of the bridge is a large mansion, flanked with four massive towers, with a lofty arch in the centre of the building, under which the high road enters the town. *Châtelleraut* has important iron-works, a college, tribunals of first instance and commerce, manufactures of cutlery, jewellery, lace, hardware, side-arms, &c.

3. In the third arrondissement the chief town, *Civray*, which stands on the Charente, has a church of great antiquity, the ruins of an ancient castle, a college, and 2210 inhabitants, who trade in corn, chestnuts, and truffles. *Availles*, on the left bank of the Vienne, has mineral waters, and about 2000 inhabitants.

4. In the fourth arrondissement the chief town, *Loudun*, situated on the slope of a hill 34 miles N. by W. from Poitiers, has a tribunal of first instance, a college, and 4457 inhabitants. It is an ancient town, with wide streets of good houses, and surrounded by vineyards which produce some of the best wine in the department: the town has some pleasant walks (formed on the site of the old castle of Loudun), a theatre, and an hospital. Coarse woollen, leather, linen, jewellery, and lace are manufactured; and considerable trade is carried on in corn, wine, brandy, walnuts, and oil. *Moncontour*, a small place on the Dive, gives name to the victory which the Duke of Anjou (afterwards Henri III.) gained over the Huguenots, under Admiral Coligni, in 1569.

5. In the fifth arrondissement the chief town, *Montmorillon*, situated

on the Gartempe, 27 miles S.W. from Poitiers, has a tribunal of first instance, an ecclesiastical college, and 4894 inhabitants. The town is ill-built. Biscuits and highly esteemed macaroons are made; and there are paper-mills, bleach-grounds, and tan-yards. Considerable trade is carried on in cattle fattened in the neighbourhood for the Paris markets. The ecclesiastical college is established in the buildings of the former hospital of Maison-Dieu, founded in the 11th century. These buildings are spacious, of very curious construction, and contain several groups of strange allegorical figures.

This department, and the adjacent one of Deux-Sèvres, constitute the diocese of Poitiers, the bishop of which is a suffragan of the archbishop of Bordeaux. It is in the jurisdiction of the High Court and within the limits of the University-Academy of Poitiers. It is included in the 18th Military Division, of which Tours is head-quarters. The department returns two members to the Legislative Body of the French empire.

VIENNE, HAUTE, a department of France, is bounded N. by the departments of Vienne and Indre, E. by Creuse, S. by Corrèze and Dordogne, and W. by Charente. Its greatest length from north to south is 60 miles; its greatest breadth at right angles to the length is 50 miles. The area is 2130 square miles; and the population in 1851 numbered 319,379.

The Gatine Hills, which extend from the great central mountain group of Auvergne towards the mouth of the Loire, cross the south of the department from east to west. Mont-Jargeau, their most elevated point, is about 3114 feet high. Another chain, nearly parallel to these, crosses the centre of the department, separating the valley of the Vienne from that of its feeder the Gartempe. The most elevated point in this chain is Le-Puy le-Vieux, 3196 feet high. The mountains have generally round tops. The whole department is occupied by the primary and lower secondary formations. Iron, copper, lead, antimony, and coal-mines are worked. There are numerous iron-works. Porcelain-clay and granular felspar are obtained. Good granite and other building-stone and limestone are dug.

The department is chiefly included in the basin of the Loire. The southern slopes of the Gatine Hills belong to the basins of the Charente and the Garonne. On these slopes the Tardoire and the Bandiat, which unite and flow into the Charente—and the Dronne, the Isle, and the Loue, which belong to the system of the Garonne—rise; but only a small portion of the upper course of these rivers belongs to this department. Of the tributaries of the Loire, the Vienne is the only one belonging to this department, which it enters on the east side, a few miles from its source (in the department of Corrèze), and crosses from east to west into the department of Charente, receiving several small feeders on both banks, and passing the city of Limoges. The Gartempe, a feeder of the Creuse, drains the north of the department. None of the rivers named are navigable in this department. Ponds are numerous, but none of them is large.

The department is traversed by 7 imperial, 9 departmental, and 34 parish roads.

From the general elevation of the surface the air is colder than the latitude would lead one to expect. The atmosphere is moist, and the temperature changeable.

The area of the department in round numbers is 1,370,000 acres, of which about 533,000 acres are under the plough. A considerable quantity of rye and buckwheat is grown; the growth of corn is however insufficient for the support of the inhabitants, but the deficiency is made up by the abundance of chestnuts. The meadows and pasture-lands amount to above 320,000 acres, besides 230,000 acres of heath, common, or other open pasture, and grazing forms the most important branch of agricultural industry. Great numbers of mules, horses of the best Limousin breed, and of horned cattle, are reared. Horse-races and a cattle-show are held yearly at Limoges, and prizes are distributed. Pigs are numerous. The vineyards occupy only about 7000 acres, and produce only ordinary red wine. The woodlands occupy above 90,000 acres, chiefly in small clumps or in copses. Chestnuts and walnuts are grown in great abundance, and there is a considerable quantity of oak-timber. Game is plentiful. A great number of bees are kept. Besides iron, which is the most important industrial product of the department, coarse woollens, flannel, blankets, linen, leather, paper, nails, glass, and pottery are manufactured.

The department is divided into four arrondissements, which, with their subdivisions and population, are as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Limoges . . .	10	78	138,756
2. St.-Yrieix . . .	4	26	44,610
3. Bellac . . .	8	65	84,082
4. Rochechouart . . .	5	30	61,331
Total . . .	27	199	319,379

1. In the first arrondissement the chief town is *Limoges*, which forms the subject of a separate article. [*LIMOGES.*] *Aize*, a small place 7 miles S.W. from Limoges, has some Roman remains and the ruins of a castle of the middle ages. *St.-Léonard*, on an eminence on the right bank of the Vienne, over which there is a handsome bridge,

is a tolerably well-built town, with about 5600 inhabitants. Its boulevards command a pleasant prospect. The church is of very great antiquity. There are paper-mills and copper works, and the townsmen manufacture wollen-stuffs, common hats, porcelain, and sheepskin and other leather. At Eymoutiers (or Aimoutier), which is on the left bank of the Vienne, in a mountainous district, there are tan-yards; and cotton-yarn is manufactured: population of the commune 3500.

2. In the second arrondissement the chief town is *St.-Yrieix*, which is situated in the south of the department on the Loue, a feeder of the Isle, and has a college and 7403 inhabitants in the commune. The town is ill-built; it has five parish churches, one of which, a collegiate church, is considered an admirable specimen of gothic architecture. The townsmen manufacture porcelain and common earthenware, woollen-cloths and coarse woollen-stuffs, and leather. There are some iron-works. *Chalus*, a small place of about 2000 inhabitants, near the source of the Tardoire, has some historical interest as being the place where Richard I. (Cœur-de-Lion) of England received his death-wound, whilst besieging the castle that formerly defended the town, 1199. It is divided by the Tardoire into the upper and the lower town. *St.-Germain-les-Belles*, N.E. of Yrieix, has 2500 inhabitants in the commune.

3. In the third arrondissement the chief town *Bellac*, is situated on a hill above the Vinçon, a feeder of the Gartempe, 24 miles N. by W. from Limoges, and has 3775 inhabitants, who manufacture paper, broadcloth, linen, leather, blankets, and hats. Near the town there is a large druidical altar. Among the other towns may be mentioned the following—*Beaunes*, on the Gartempe: population, 2640; *Château-Ponsat*, also on the Gartempe: population, 3387; *Le-Dorat*, N. of Bellac on the Sèvre a feeder of the Gartempe, with a fine church, an ecclesiastical college, and 2500 inhabitants; and *Magnac-Laval*, E. of Le-Dorat: population, 3600.

4. In the fourth arrondissement the chief town, *Rochechouart*, is situated on the Grenne, a feeder of the Vienne, 22 miles W. from Limoges, and has 4166 inhabitants, who manufacture glass-bottles, bricks, tiles, and vinegar. On a rocky hill above the town are the remains of an old feudal castle, one of the towers of which serves for a prison. There are iron-works near Rochechouart. *St.-Junien*, is built on the slope of a hill at the junction of the Glane with the Vienne, on the right bank of the latter. It is surrounded by boulevards, which are planted with trees and command a pleasant prospect of the surrounding country. This town is one of the busiest places in the department. The parish church and the chapel of Notre-Dame close to the bridge over the Vienne are the principal buildings. The inhabitants, who number about 5500, manufacture gloves, blankets, hats, woollen-cloths, serge, porcelain and common earthenware, chamois and other leather, and paper. There are monthly fairs for the sale of horses, mules, cattle, hides, corn, hemp, flax, and wine.

This department and the adjoining department of Creuse constitute the diocese of Limoges, the bishop of which is a suffragan of the archbishop of Bourges. It is in the jurisdiction of the High Court of Limoges, within the limits of the University-Academy of Poitiers, and in the 21st Military Division, of which Limoges is head-quarters. It returns 2 members to the Legislative Body of the French empire.

VIENNE. [ISÈRE.]
 VIERZON. [CHER.]
 VIESTL. [CAPTANATA.]
 VIF. [ISÈRE.]
 VIGAN, LE. [GARD.]
 VIGEOIS. [CORRÈZE.]
 VIGEVANO. [NOVARA.]
 VIGO. [GALICIA, Spanish.]

VIJI ISLANDS is the name of an extensive group of islands in the Pacific Ocean, which on our maps are called Fidji, or Feedjee Islands. The group is little known, partly because it is situated out of the common track of vessels and in a dangerous part of the ocean, and partly on account of its great extent. The Viji Islands lie between 15° 5' and 19° S. lat., 177° and 182° E. long., and consist properly of three groups. The most eastern contains a great number of small islands, and one of considerable size, the island of Lakemba. Farther to the west there is a more extensive group, containing several islands of moderate size, and a large one, Viji-levu, or Great Viji. The third group lies to the north of the Viji-levu, and contains the large island of Pau, or Tarkanava, with several smaller ones. Several good harbours have been visited by Europeans; the best are at Rewa, on the southern shores of Viji-levu, and at Libuka, on the island of Ovalan, west of Viji-levu.

These islands seem to be of volcanic origin, though no active volcano has been observed, and they exhibit that irregularity of surface which is peculiar to islands of that formation. Many of them rise to a considerable elevation. The climate is hot, but not so constant as it generally is between the tropics, because this group is situated on the southern limit of the trade-winds, where the changes in the temperature are frequent and sudden. In August and September the thermometer on board ship varied between 72° and 88°. The domestic animals are pigs and dogs, and the wild animals are rats. There are few kinds of birds; the most common are parrots. Cocoa-nut palms, bread-fruit trees, bananas, yams, sugar-cane, sago, maize, and

particularly rice, are cultivated. The forests supply timber for the construction of boats.

The population is stated to amount to 200,000 individuals. In the structure of their bodies the inhabitants resemble those of the Friendly Islands, and there is no great difference in their languages: they evince a considerable degree of inventive power and ingenuity in the construction of their boats and houses, and in making arms, clothes, wicker-work, and earthenware. They have three kinds of boats: the largest, consisting of two boats united, are sometimes 50 feet long, and are used to make voyages which last several days. Many of them are made for sale in the neighbouring islands. In Rewa is a large manufacture of earthenware, which is made with great taste, and is also an article of export to the neighbouring islands. Of late years some Wesleyan missionaries have established themselves on the islands.

These islands are sometimes visited by American vessels. They get there sandal-wood, tortoise-shell, and trepang for the Chinese markets. The Americans bring guns, gunpowder, cochineal, cotton-stuffs, and iron-ware. The inhabitants of the Friendly Islands obtain here the best of their large boats, and pay for them with 'topa,' or stuffs made from the bark of the Chinese mulberry-tree, and the teeth of the *Physeter macrocephalus*.

The Viji Islands were discovered by Tasman in 1643, but from that time were not visited until 1739, when Captain Bligh, after the mutiny of his crew, sailed through the most eastern group, and in 1792 he discovered the islands farther to the west.

VILAINE. [ILLE-ET-VILAINE.]
 VILLA DE LEON. [MEXICO.]
 VILLA DEL FUERTE. [MEXICO.]
 VILLA DO CONDE. [ENTRE DOURO E MINHO.]
 VILLA FRANCA. [AZORES, St. Michael's; NICE.]
 VILLA HERMOSA. [MEXICO.]
 VILLA REALE, VILLA RICA. [PARAGUAY.]
 VILLA SAN GIOVANNI. [CALABRIA.]
 VILLA VIEJA. [COSTA-RICA.]
 VILLACIDRO. [SARDEGNA.]
 VILLAFRANCA DEL VIERZO. [LEON.]
 VILLAINES. [MAYENNE.]
 VILLANOVA DE PORTIMÃO. [ALGARVE.]
 VILLARD. [ISÈRE.]
 VILLAVICIOSA. [ASTURIAS.]
 VILLAVIÇOSA. [ALEMTEJO.]
 VILLEFORT. [LOZÈRE.]
 VILLEFRANCHE. [AVEYRON; DORDOGNE; GARONNE, HAUTE; RHÔNE.]

VILLENA. [MURCIA.]
 VILLENEUVE. [AVEYRON; GARD; LOT-ET-GARONNE; YONNE.]
 VILLEMUR-SUR-TARN. [GARONNE, HAUTE.]
 VILLERS. [AISNE; SOMME.]
 VILNA. [WILNA.]
 VILVERDE. [BRABANT, SOUTE.]
 VIMIERA. [ESTREMADURA, Portuguese.]
 VIMOUTIER. [ORNE.]
 VINAY. [ISÈRE.]
 VINÇA. [PYRÉNÉES ORIENTALES.]
 VINCENNES. [INDIANA; SEINE, Department of.]

VINCENT, ST., one of the islands of the Columbian Archipelago, situated between 13° 10' and 13° 25' N. lat., 61° 10' and 61° 20' W. long., having Barbadoes on the east, Grenada on the south, and St. Lucia on the north. The area of St. Vincent is 131 square miles, or about 84,000 acres, of which about 35,000 acres are under cultivation. It is one of the most beautiful islands of the Caribbee group, of an oval form, 18 miles long by 11 miles broad; and though the surface is irregular, the valleys, some of which are very beautiful, possess a fertile soil, and are well watered. The coast is bold and rocky, and a range of high mountains crosses the island from north to south. The *Grenadines* consist of several small islets off the southern extremity of the coast. Bequia, the largest, has an area of 3700 acres, and there are seven others. Bequia possesses a fine harbour, called Admiralty Bay. The most remarkable physical feature of St. Vincent is the Souffrière, a volcanic mountain 3000 feet high, with a crater half a mile in diameter, from the centre of which rises a conical hill 300 feet high, and 200 feet in diameter at the base. After a repose of nearly a century an eruption of the mountain took place in 1812. St. Vincent has several times suffered severely from hurricanes.

St. Vincent was discovered by Columbus in 1498. In 1672 Charles II. included St. Vincent with Barbadoes and several other islands under one government. In 1714 the French began to form a settlement with the permission of the natives. For many years it was a subject of dispute between the French and the English, but it was at length ceded to the British crown at the peace in 1763. St. Vincent is in the diocese of Barbadoes. The population in 1852 was estimated at 30,128.

The chief productions of the island are, sugar, rum, and molasses, with some arrow-root, coffee, cacao, and cotton. Pozzuolano is exported as an excellent subaqueous cement. The cultivation of cotton and arrow-root is increasing.

The amount of the revenue in 1852 was 14,390%; that of the expen-

diture was 14,932%, besides 7786% for civil and military establishments defrayed by Great Britain. The imports during 1852 amounted in value to 167,059%, the exports to 204,995%. The amount of tonnage entered inwards during 1852 was 30,541; the amount cleared outwards was 31,181 tons. Of places of worship there were 103 in 1852, of which 14 belonged to the Church of England, the others being almost entirely belonging to the Wesleyan Methodists. The number of children attending school was 2154.

Kingstown is the capital of the island, and contains about 5000 inhabitants. It has a harbour, a few public buildings, and a commodious church. A botanic garden of 30 acres was formed more than half a century ago.

VINDELICIA, the ancient name of a part of Southern Germany. It extended from the Lacus Brigantinus (Lake of Constance), as far as the junction of the Inn with the Danube, and from Rhetia to the Danube. Vindelicia at first was a part of Rhetia; from the time of Diocletian it was a separate province, and was called Rhetia Secunda, which name was gradually supplanted by the name Vindelicia, which is first mentioned by Sextus Rufus (c. 8). The name of Vindelicia is derived from the Vindelici, a warlike Celtic tribe in the southern mountainous part of the country; and it is believed that this tribe had its name from the Vindo or Vinda, also called Virdo, now Wertach, and the Licus, now Lech, which were two of the principal rivers of the country. The Romans founded many colonies in Vindelicia. Among them were Augusta Vindelicorum, now Augsburg; Campodunum, now Kempten; Brigantia, now Bregenz; Reginum, or Castra Regina, now Ratisbon, or Regensburg; Pons Oeni or Aeni, now Mühldorf, on the Inn. The municipal rights given to these colonies by the Romans, were the cause of their afterwards becoming free Imperial towns. After the 3rd century Vindelicia was invaded by German tribes (Alemanni and Boiarii), who extirpated the ancient population.

VINDHYA MOUNTAINS. [HINDUSTAN.]

VIRE. [CALVADOS.]

VIRGIN ISLANDS are an extensive group of small islands, which form part of the Columbian Archipelago, commonly called the West Indies. They lie between 18° 5' and 18° 50' N. lat., 64° 10' and 65° 40' W. long., exclusive of the island of Santa Cruz, or Saint Croix, which properly does not belong to the group, but is commonly considered as forming part of it, because it belongs to Denmark, which also is in possession of some islands of the group itself. This island is about 90 miles S. from the centre of the Virgin Islands. The Virgin Islands extend in nearly a straight line from west-south-west to east-north-east, and occupy a space of about 100 miles in length, with an average width of 20 miles. The most western belong to Spain; the most eastern belong to the British; those in the centre to Denmark.

The British islands lie between 64° 10' and 64° 50' W. long., and amount to about 50 in number; but most of them are very small. They are stated to cover a surface not exceeding 60,000 acres, or between 93 and 94 square miles. The largest of these islands are—Anegada, Virgin Gorda, Comance, Beef Island, Guana, Tortola, Jost van Dyke's, and Peter's Island. The population of the whole of these islands in 1850 was estimated at 7000 persons. The colonial income in 1849 was 1675%. Anegada, which is the most north-eastern island of the whole group, contains 31,200 acres, but has only a few inhabitants. [ANEGADA.] Virgin Gorda, also called Spanish Town, which is considered to be a corruption of Penniston, the original name of the island, consists of a rocky mass, and two peninsulas which project from the mountains to the east and south-west. Of the rocky mass in the centre of the island the summit is about 1500 feet high. The island is said to contain 9500 acres. The soil is sandy and dry. The exports consist of sugar, rum, tobacco, indigo, peas, and some cotton. The produce of the island is sent to Tortola for exportation. At St. Thomas Bay, on the southern peninsula, is a group of houses called the Town. In the prolongation of the southern peninsula is a cluster of rocks, exhibiting a great variety of fantastic figures, resembling ruined temples, columns, and arches. They are called the Fallen City, or Broken Jerusalem. Between Virgin Gorda and Tortola, at a short distance from the last-mentioned island, are—Great Comance, which is very rocky and elevated, and thinly inhabited; and Beef Island, which is also rocky, but contains a considerable proportion of pasture-ground. Each of these islands contains an area of about 1500 acres. The small island of Guana lies north of Tortola.

Tortola, the most important of the British Virgin Islands, extends nearly 12 miles from east-north-east to west-south-west, but its width does not exceed 2 miles. Its area is said to be 13,300 acres. It is a mountain-mass, broken up and furrowed by glens and ravines in every direction, so as to present a succession of undulating surfaces and precipitous eminences. The most elevated part runs through the middle of the island from east to west. Sage Hill, the highest summit, which lies west of Road Town, is 1650 feet above the level of the sea. The descent is more precipitous to the north than to the south, and high rocky masses advance to the water's edge on the north-west, but at all other places the country on the shores of the sea is of moderate elevation. The shores are indented with bays, harbours, and creeks, which afford shelter and anchorage for a great quantity of shipping. The soil is dry, and has little depth. The capital of the island is Road Town, or Kingstown. It is built on the southern side of the

island, in the western bight of a deep bay, which is 5 miles long and 3½ miles wide, and constitutes an excellent harbour, being perfectly land-locked on all sides. The town consists of only one long irregular street, which incloses in a curve the base of a projecting point of land, and lies close to the water's edge. The houses are mostly well built. To the north of the western extremity of Tortola is *Jost van Dyke's Island*, which is more than 3 miles long and about 1 mile wide. It resembles Tortola in soil and productions. To the south of Tortola, about 4 miles from the island, extends a row of islands from Broken Jerusalem on the east-north-east to the western extremity of St. John. They are all rocky and elevated, but small. The largest, *St. Peter's*, has an area of 1890 acres. Between this row of islands and Tortola is Sir Francis Drake's Channel, which is of difficult navigation on account of the numerous rocks and shoals, the strong tides, and the heavy swell of the sea.

The Danish Virgin Islands, St. John, St. Thomas, Santa Cruz, and numerous islets, are situated between 64° 40' and 65° 10' W. long. The island of *St. John* lies about a mile distant from Tortola: it is about 8 miles long, and on an average 3 miles wide. The surface is very uneven, the mountains reaching a height equal to that of the Tortola eminences. Sugar, coffee, and cotton are cultivated on level tracts near the sea-shores. In the interior maize and ground provisions are cultivated. There are several good anchorages, the best of which is Coral Bay. St. John, a small town at the western extremity of the island, possesses a good harbour. The island of *St. Thomas*, west of St. John, has an area of about 30 square miles. Its unevenness of surface renders a considerable portion of it unsuitable for agriculture. The soil is mostly a dry loam. Maize, ground provisions, and fruits are cultivated to some extent. Most of the white inhabitants of this island and of St. John are of Dutch origin, and Dutch is the common language. The town of St. Thomas is built on the north shore of a fine bay, which has good anchorage for 200 vessels. Being a free port, open to all nations, it is an important entrepôt for articles of plantation consumption, and is the chief mart of the inhabitants of the Virgin Islands generally. The population is about 3000, of whom about 400 are whites. [ST. THOMAS, in SUP.] The most important of the Danish possessions is *Santa Cruz*, or *St. Croix*, in the Columbian Archipelago. Though it does not properly belong to the group of the Virgin Islands, it is usually reckoned along with them. It lies between 17° 40' and 17° 50' N. lat., 64° 30' and 65° W. long., and is 2½ miles long and nearly 8 miles broad in its widest part, containing an area of about 110 square miles. Along the northern shores there is a chain of hills, of which the eastern extremity spreads over the whole width of the island. The island is comparatively fertile, the sugar-cane, cotton, and provisions being produced. The island is traversed in its whole extent lengthwise by three good roads. The greater number of the whites on the island are of English origin, and English is the language most generally spoken. The population is upwards of 30,000, including about 2500 whites. The capital of Santa Cruz is *Christianstadt*, also called the Basin, which stands on a small bay on the northern shore. This town, one of the best built in the West Indies, stands on the gentle declivity of a hill. The streets, which are parallel to the sea, are wide and straight, and rise like terraces one above the other. *Christianstadt* is the seat of the governor of the Danish possessions in the West Indies. The government-house has the appearance of a palace, and there are several other handsome public buildings. There are four churches (Danish, Dutch, English, and Roman Catholic), and two elementary schools for poor boys and girls. *Frederickstadt*, at the western extremity of the island, has a population of 1500, and a good roadstead.

The Spanish Virgin Islands are a short distance from the eastern coast of Puerto Rico, and consist of two islands of moderate extent, and of several islets. The northern island, called *Culebra* (Snake Island), or *Passage Island*, has an area of about 10 square miles, is rocky, and rises to a moderate elevation. The products are sugar and coffee. The population is only about 300. The southern island, called *Bieque*, or *Crab Island*, extends from east to west about 16 miles, and is between 3 and 4 miles wide. On the northern side is a great lagoon, which usually dries up at the close of the dry season. The western part of the island is rocky and hilly. About two-thirds of the surface of the island is low, level, and overgrown with trees and bushes.

Climate.—These islands have two rainy and two dry seasons. The short rainy season begins in May, and lasts from 15 to 20 days. The heat in this season is equal to that of the summer in Southern Europe. In July and August the heat is considerable, the thermometer in August usually marking 92° at noon. In September the rain comes down like a deluge, and speedily makes the surface of the islands a sheet of water. Between July and October hurricanes occur. The summer or dry season commences generally in December, and from this period till the month of April showers are rare, and the heat is moderate. This is the most healthy and the most agreeable season of the year. Earthquakes occasionally occur, but the shocks are generally slight. On the northern shores of these islands a very heavy swell, called the 'ground-sea,' is experienced between October and May, and sometimes later. This swell has worn away much of the lower parts of the northern shores, leaving the coasts lined in many places with high rocks or cliffs.

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Productions.—The chief articles of export are sugar, rum, a little cotton, and salt from Anegada. Maize and guinea-corn are cultivated. The castor-oil plant and the tamarind grow wild, but are also cultivated. Other wild-growing and useful plants are the *Aloe perfoliata* and the *Agave Americana*. In the forests are many useful trees, among which are mahogany- and fustic-trees. There are no wild quadrupeds, and birds are rare. There are two or three kinds of turtles. Fish is plentiful.

History.—Santa Cruz and the Virgin Islands were discovered by Columbus on his second voyage, 1494. They were then inhabited, and Santa Cruz was the most northern island in which the Caribbees had established themselves; but towards the end of the 16th century no inhabitants were found on them. In the 17th century these islands became the resort of buccaneers; some Dutch buccaneers began to settle Tortola in 1648, but were expelled from the island by the English in 1666, and since that time the island has always been in their possession. The island of St. Thomas was settled by the Danes in 1672; and a few years later the Danes also possessed themselves of St. John. These islands were taken by the British in 1801, but were restored in the following year. They surrendered to the English in 1807, and continued in their hands till 1815, when they were again restored to the Danes. The British islands are under the authority of the governor of St. Kitts, but they have a separate legislative assembly, which meets at Road Town. The Danish islands are under the care of the Danish governor residing at Christianstadt; and the Spanish islands are dependencies of Puerto Rico.

VIRGINIA, one of the United States of North America, extends between 36° 30' and 39° 43' N. lat. (with the exception of a long narrow alip of land which extends between Pennsylvania and the Ohio River as far north as 40° 38' N. lat.), 75° 15' and 83° 30' W. long. It is bounded E. by the Atlantic Ocean and the Potomac River, which separates it from the state of Maryland and the district of Columbia; N.E. by Maryland; N. by Pennsylvania; N.W. by Ohio; W. by Kentucky; S.W. by Tennessee; and S. by North Carolina. The area is 61,352 square miles. The population in 1850 was 1,421,661, of whom 54,353 were free coloured persons, and 472,528 slaves: the density of population was 23.17 to the square mile. The federal representative population in 1850 was 1,232,649, in which number three-fifths of the slaves are included. This, according to the present ratio of representation, entitles the state to send 13 members to Congress. To the Senate, like each of the other states, Virginia sends two members.

Sea-Coast.—From the northern extremity of the Currituck Sound, which is included within the boundary of Virginia, to Cape Henry, about 80 miles, is an unbroken line of low shelving sandy shore. From Cape Henry, which is a low sand-hill, it is about 12 miles to Cape Charles; and between these two capes is the entrance of Chesapeake Bay, which extends inland about 180 miles. Chesapeake Bay is described under MARYLAND, to which state the greater part of it belongs. From Cape Henry to Windmill Point, a distance of about 45 miles, the coast of Virginia presents a succession of projecting headlands, inclosing many bays, some of which extend far inland, and preserve a considerable width and depth to a distance of from 20 to 50 miles from the sea. These larger bays are the estuaries of rivers, and admit large vessels, so as to constitute good harbours. The smaller bays are formed by indentations of the shores, and most of them have safe anchorage for coasting vessels. The headlands between the bays have low and frequently swampy shores, but at some distance from them the country rises from 15 to 20 feet. That part of Virginia which lies east of Chesapeake Bay, and is called the 'Eastern shore of Virginia,' is skirted on the side of the Atlantic by a number of low sandy islands, which towards the north form one row, but towards Cape Charles two or three parallel rows. They are inhabited by a few fishermen, and the straits which separate these islands from one another afford some passages for small coasting vessels. The coast opposite these islands supplies shelter and good anchorage, and that on the side of Chesapeake Bay has some good harbours for small vessels.

Surface, Soil, Climate, Agricultural Productions.—Nearly one-half of the surface of Virginia is mountainous. The Appalachian or Alleghany Mountains run through it obliquely from south-west to north-east, spreading along the southern boundary over the western, and towards the north over the central, districts of the state. From the eastern base of this mountain region there extends to the shores of the Atlantic and of Chesapeake Bay a plain known as the Atlantic Slope, which along the shores of the sea is a low undulating plain, and at the back of it a higher hilly country, which reaches to the Blue Ridge. These two plains constitute the maritime and the higher slope of the Atlantic. That portion of Virginia which lies to the north-west of the mountain region, between it and the rivers Ohio and Big Sandy, is much more hilly than the eastern plain, and may be called the hilly region of the Ohio and of the Kanawha. The following table exhibits a rough estimate in square miles of the respective areas of these four regions:—

1. Maritime or Lower Slope of the Atlantic	8,000
2. Hilly or Upper Slope of the Atlantic	17,000
3. Mountain Region of the Appalachians	26,300
4. Hilly Region of the Ohio and Kanawha	10,000
	61,300

1. *The Maritime Slope of the Atlantic* comprehends also the eastern shore of Virginia, or that part which lies east of Chesapeake Bay. This country consists of a tongue of land about 70 miles long and 10 miles in width, the islands included, but without them only 7 miles across. Along the shore is a sterile tract mostly covered with low sand-hills or swamps, and about half a mile wide; the interior is a level flat country, with a light sandy soil resting on clay. The principal crops are maize and oats, but wheat, cotton, peas, beans, and potatoes are also grown. There are good orchards, in which the fig-trees and pomegranate-trees attain a large size, and yield abundant fruit. The palma-christi, from which the castor-oil is obtained, is cultivated to a considerable extent.

Of the Maritime Region west of Chesapeake Bay, the south-eastern portion is a flat country which rises imperceptibly towards the south. The soil is a mixture of sand and clay, but less fertile than the eastern shore; its productions are the same. On some low tracts near the Dismal Swamp rice is grown, and this is the most northern point where that grain is cultivated on the Atlantic shore of the United States. The Dismal Swamp extends into NORTH CAROLINA. From the forests at the southern part of the Swamp a large quantity of lumber is obtained. Near the centre of the Swamp, in Virginia, is Lake Drummond, which extends about 7 miles in every direction, and varies in depth from 10 to 20 feet. The remainder of the Maritime Region has a somewhat undulating surface, which towards the western limits of the region is diversified with hills. The soil is alluvial, but thin and poor. Some of the higher tracts are nearly destitute of vegetation and barren, and others are covered with forests of stunted pines, from which tar, pitch, and rosin are extracted. The bottoms of the rivers have a deeper and richer soil, and produce good crops. Wheat is not much cultivated, but maize, oats, potatoes, and sweet potatoes are extensively grown; tobacco is also cultivated. The orchards yield apples, pears, cherries, quinces, neotaries, apricots, almonds, plums, pomegranates, figs, peaches, and mulberries.

The climate of this low region, if compared with that of low countries on the east of the Atlantic, is distinguished by great and sudden changes, which occur at all seasons except October and November. The winters are much colder than in any part of Europe south of the Alps, and also more severe than in the low countries north of the Alps. Frosts are frequent, and sometimes very severe, but generally of short duration. During July and August the heat is very great, the thermometer rising almost every year to 90°, and sometimes to 96° and 98°. The mean annual temperature is 56°. Though the number of rainy days is less in this region than in England, the mean annual quantity of rain is much greater. The prevailing wind all the year round is the south-west; but in autumn and winter the wind blows from all quarters except the south, and southerly winds are at all seasons very rare. The change of the wind produces sudden changes in the temperature. Jefferson states that the thermometer has descended 45 degrees in thirteen hours, from 92° to 47°, in consequence of a change of the wind.

2. *The Upper Slope of the Atlantic* extends from the western limit of the Maritime Slope to the Blue Ridge. From the base of the ridge the country descends to the falls of the rivers in an inclined plane. Where the falls occur, a ledge of rocks extends across the state, rising from 100 to 200 feet above their base, which in most places is about 100 feet above the sea-level. The surface of this region presents only a comparatively small number of hills, from 300 to 500 feet high; it generally extends in undulating plains, which in many places have a gentle acclivity, but in others are broken and uneven, and between these plains are the deeper depressions, in which the rivers run. The hills are generally not steep, but the soil is sometimes rocky, and not fit for cultivation. They are mostly overgrown with ash, beech, elm, hickory, chestnut, oak, and hemlock. The soil of the higher grounds between the bottoms of the rivers is sandy, but has in general a moderate degree of fertility. The cultivated tracts yield moderate crops of wheat, maize, tobacco, and oats, and also rye and buckwheat. The orchards are extensive, and all the trees mentioned in the foregoing region succeed, except pomegranates and almonds. The forests, which still cover a considerable part of the surface, are comprised of oak, hickory, gum, maple, logwood, and especially yellow pine. The bottoms along the watercourses are extensive along the large rivers: that of the James River is in general from two to three miles wide, and extends from Richmond to Lynchburg, 125 miles. Their soil is generally excellent, and produces good crops of wheat, maize, and oats, and the best sort of tobacco, which is extensively cultivated. Nearly all the cotton exported from Virginia is from this district. The hills which are dispersed over this region are mostly isolated and irregular; but there extends over the whole width of the state a series of hills and short ranges, nearly in a parallel line with the Blue Ridge, and at a distance of from 15 to 30 miles east of it. North of James River, which for more than 30 miles flows along its eastern base, this hilly tract is called the South-West Mountain; but towards the northern extremity it is called the Bull Run and Kittoctan Mountains. This chain rises from 800 to 1200 feet above the sea-level. The hills are covered with forests of oak, hickory, green maple, white and yellow poplar, black and white walnut, ash, sassafras, dogwood, chestnut, and chestnut-oak. The long valley which extends between these hills and the Blue Range is in general hilly; for several offsets of the Blue

Ridge advance into it from 5 to 10 miles from the range, and it also contains many isolated hills. The soil generally consists of a good mould lying on a substratum of red clay. In the northern district it is lighter, and contains a good proportion of sand or gravel. The principal objects of agriculture are maize, wheat, rye, oats, and potatoes. In the southern districts much tobacco is grown, and hemp in several places. The orchards yield apples, peaches, cherries, plums, quinces, and grapes. The general level of this valley is from 500 to 700 feet above the sea, except towards the north, where it is lower. The mean annual temperature of this region is from three to six degrees lower than in the maritime region.

3. *The Mountain Region of the Appalachians* lies west of the upper region of the Atlantic Slope. It is described generally under ALLEGHANY MOUNTAINS. It extends in a general north-east direction, from the southern boundary of the state along the Cumberland Mountains to the Greenbrier Ridge, and along Laurel Range to Cheat River, which breaks through it near 39° 20' N. lat., and thence to Pennsylvania, where it goes by the name of the Laurel Hills. The extensive region inclosed by this line and the Blue Ridge is widest in the southern part; between the southern boundary of the state and 37° 25' N. lat. it extends 150 miles east and west, but north of that parallel it hardly ever exceeds or falls much short of 90 miles. The most elevated points of this region are the peaks of Otter, which occur in the Blue Ridge near 37° 35' N. lat., and whose highest summit is 4260 feet above the sea, and the White Top Mountains, situated near the place where the three states of Virginia, North Carolina, and Tennessee are contiguous, and whose highest summit is still more elevated. These however are single summits, which are not frequent in this mountain system, as the upper edges of the ridges extend in nearly straight lines, which at certain distances, usually from eight to ten miles, are broken by narrow depressions, through which gaps the roads run. The general elevation of the ridges however seems to vary between 2500 and 3000 feet, except towards the banks of the Potomac, where it sinks to between 1400 and 1000 feet above the sea.

South of 37° N. lat. there are, besides several smaller ones, four large parallel ridges, called, from west to east, the Cumberland Mountains, Clinch Mountains, Iron Mountains, and the Blue Ridge, which are connected by the Great Ass Mountains, and other transverse ridges. This section of the mountain region appears to be more favoured by nature than any other. It is well watered by rivers of gentle current, and free from rapids or other impediments to navigation; the valleys are rather wide, and the soil is black and of the best quality. Cultivation is successfully carried on nearly to the northern extremities of the valleys; the mountains inclosing which are steep, but almost entirely covered with large forest-trees, such as chestnut, beech, walnut, elm, black and white oak, maple, ash, poplar, and buck-eye. The principal articles of cultivation are maize, wheat, rye, oats, hemp, flax, and potatoes. The orchards are generally planted with apple- and peach-trees and vines, this being one of the best grape countries in Virginia. On the mountains are good pastures, and many horses, cattle, and hogs are reared.

North-east of this section lies that which is drained by the Kanawha. It is also traversed by four larger ridges, of which the two most southern preserve the names of the Blue Ridge and Iron Mountains; but the continuation of the Clinch Mountains is called Walker's Mountains west of the Kanawha, and Peter's Mountains east of that river. The most northern ridge is called Great Flat Top, and is connected with the Great Ass Mountains. A transverse ridge running nearly due north and south, near 80° 15' W. long., connects Peter's Mountains with the Iron Mountains, and these with the Blue Ridge. This section is probably the most elevated part of the mountain system south of the Potomac; where the Kanawha is joined by the Greenbrier River its surface is 1833 feet above the sea. The river runs sometimes for many miles between high rocks rising almost perpendicularly from the water's edge. In other places level tracts, hardly ever half a mile wide, but of some extent, are found near the banks; but they do not constitute what is called a river bottom, being many feet elevated above its level in the time of the freshets. These are the only tracts which are fit for cultivation, and on which considerable quantities of maize, potatoes, hemp, and flax are raised. The mountains are generally covered with tall trees.

All the waters collected in the two sections already described run off to the Ohio by the Tennessee and Great Kanawha rivers, but farther north the greater part of the drainage flows into the rivers which fall into the Atlantic. The watershed between these rivers and those which run to the Ohio is formed by a continuous ridge, which on the banks of the Kanawha is called Peter's Mountain, but farther north is known as the Alleghany Mountains. The wide space east of the Alleghany Mountains and west of the Blue Ridge is traversed in all its length by a chain known as the North Mountain, or Great Kittatiny Chain. The western districts of this section are traversed by numerous ridges rising from 1000 to 1200 feet above the sea, but between them along the large rivers are valleys from one to two miles wide, where maize, wheat, rye, oats, barley, buckwheat, potatoes, flax, and hemp are grown. They are however better adapted for pasture; and live stock, with butter and wool, constitute the principal articles for the market. Those parts of this section which are contiguous to the Blue Ridge have wider valleys and an equally good soil, which pre-

duces abundant crops of maize, wheat, and tobacco. There are also extensive orchards, which produce apples and peaches of good quality.

The northern section of this mountain region, or that which lies within the basin of the Potomac in Virginia, is divided by the Kittatinny Chain into two natural divisions, which gradually lower as they proceed from south to north. Nearly the whole of that division of it which is inclosed by the Blue Ridge on the east and the Kittatinny Chain on the west, is drained by the Shenandoah and its affluent. It is comparatively level; and the soil is in most parts stony, but, consisting almost entirely of limestone, it is generally fit for cultivation, and on the river bottoms it exhibits a considerable degree of fertility. The crops of wheat, rye, maize, and oats are tolerably abundant. But as the colder climate of this region favours the growth of grasses, the inhabitants pay more attention to the dairies and rearing of domestic animals. North of the plain of Staunton the true character of the Alleghanies reappears. Between 88° 30' and 39° 10' N. lat. the whole space between the two principal ranges is filled up by several elevated ridges, with their intervening valleys. These ridges rise as high as the Blue Ridge and run parallel to it. The valleys contain the best description of limestone-land, and are from two to three miles wide. They produce the same articles as are grown in the plain of Staunton, and cultivation extends at some places over the lower declivities of the Blue Ridge, but the ridges west of it are unfit for cultivation. The low tracts along the rivers are very fertile, but mostly used as grass-lands, for here too the rearing of cattle is more profitable than the cultivation of grain. The mountains are mostly covered with oak, pine, hickory, and chestnut. The mountain ridges which traverse the central basin of the Shenandoah extend northward to the banks of the Potomac, where they spread over the western districts, which contain only narrow valleys between high ridges, so that this tract is better adapted for pasture than cultivation. But as the space between these ridges and the Blue Ridge widens considerably north of 39° 10' N. lat., a plain occurs here, which extends to the banks of the Potomac. Its surface is uneven and in some parts hilly, but the slopes of the hills are not too steep for cultivation, and the soil is rather fertile, being what is called limestone-land of the best description. Wheat, rye, maize, and tobacco are extensively grown. The cultivation of grasses is also carried on to some extent, and the orchards are numerous. This tract is considered the most fertile in Virginia, and is very populous.

The basin of the Upper Potomac, or the country between the Kittatinny Chain on the west and the Alleghany Mountains on the east, may be considered as a terrace considerably elevated above the basin of the Shenandoah. Its surface is very elevated; and it is traversed longitudinally by several ridges, which leave only narrow valleys between them. The soil of the valleys is either poor or of indifferent quality, except a fine tract of bottom ground on the south branch of the Potomac. As the climate is cold the crops do not always succeed, and therefore the inhabitants have turned their attention more to the rearing and fattening of cattle and keeping of other domestic animals, especially sheep. But in the country which approaches the north branch of the Potomac cultivation is more attended to. The grains, except maize, with flax and hemp, are cultivated. Fruit-trees are scarce, with the exception of apples and cherries. Vegetables are extensively grown. The low lands and the slopes of the mountains are still to a great extent covered with forests. On the top of the mountains and more elevated portions of the slopes are cedars, and pitch, spruce, and white pines; in some places these trees have attained their full growth, but in others they are stunted. The less elevated grounds are overgrown with oak, beech, elm, black walnut, and hickory; and on the low grounds along the banks of the rivers, which are subject to be inundated during the freshets, the woods consist mostly of sycamore-trees, plane-trees, and red or water maple.

The principal articles which are cultivated in the region west of the Alleghany Mountains, are maize, oats, and buckwheat; cattle are rather numerous. The eastern portion is an elevated table-land, whose surface is distinguished by extensive prairies; it is drained by five or six small rivers, which by their union form Cheat River, an upper branch of the Monongahela. Numerous herds of cattle find pasture on these natural meadows. The western district, or that which lies contiguous to the Laurel Ridge, is a valley, called Tygart's Valley. It is about 30 miles long and 2 miles wide, possesses a fertile soil, and is well settled. It produces maize, wheat, rye, oats, and several vegetables in abundance: clover and other grasses are extensively grown, and cattle are numerous. The mountains surrounding the valley are well stocked with fine timber—oak, poplar, cherry, pine, fir, red-cedar, &c.

The climate necessarily varies greatly in a mountain region, which in some parts rises to 3000 feet above the sea, and in others hardly attains an elevation of 300 feet. The winters are more severe than in the countries east of the Blue Ridge, and they generally last three months without interruption. The vegetation on the east side of the Blue Ridge is usually two weeks earlier than on the west side; but the air is never so hot on the west side as to dry up the grass during the summer months; droughts however occasionally occur.

4. *The Hilly Region of the Ohio and Kanawha* comprehends the north-western portion of the state, or that which is inclosed by the

north-west limit of the mountain region, the Sandy River and the Ohio, and the boundary of Pennsylvania. The most southern portion of this region is the most elevated, which is north of it, by a line commencing on the banks of the Big Sandy River, where that stream is cut by 88° N. lat., and running thence to a point on the Great Kanawha River a little above the salt-works, whence it continues in the same direction to the salt-works on the Little Kanawha, where it turns eastward. The whole country consists of high masses of rocks, which generally rise to the elevation of mountain ridges, which are united to the western edge of the Mountain Region at right angles, as they generally extend from south-east to north-west. There are no bottoms along the river-courses, except a few small tracts hardly a quarter of a mile wide. The rocks, which are generally contiguous to the banks, rise to 500 feet and more, and in many places with a nearly perpendicular acclivity. Where the acclivity is not too steep the mountains are covered with soil, and along the watercourses overgrown with bushes; but in many parts the rocks are bare. At some distance from the watercourses the high grounds present a hilly surface, usually covered with low bushes or stunted trees. There are only a few tracts of moderate extent, on which maize, oats, and potatoes are grown; and the pastures which the higher grounds afford are too poor for cattle. The inhabitants obtain their livelihood partly by taking lumber to the lower country.

The remainder of this region is only hilly, with the exception of the north-eastern country, where some short ranges of mountains occur. The hills rise from 300 to 500 feet above the river bottoms, generally with a gentle acclivity, though in many places they are steep. The bottoms differ in width, from a quarter of a mile to upwards of two miles. The least fertile part is the tract which lies between the Big Sandy River and the Great Kanawha, where the hills which form the higher grounds between the rivers consist of sandstone, rise with a steep acclivity, and have flat tops covered with low bushes. They are not cultivated, and not even available as pasture-ground for sheep. In the depressions between the hills the soil is also poor. The bottom of the Great Kanawha has many very fertile tracts, and in general it yields good crops of maize, wheat, rye, oats, and potatoes. The hills which inclose the bottoms of this river and those of its affluents contain large trees, especially lime, hickory, sugar-maple, laurel, hemlock, and sumach: the sumach attains here the height of a stately tree. North of the Great Kanawha the country improves. It is still hilly, but the slopes of the hills are not so steep, and the soil is more fertile. The higher grounds are overgrown with trees or bushes. The best portion of this region is the basin of the Monongahela. Though the river-bottoms are not so wide as those of the Ohio or Great Kanawha, they are very fertile, and produce abundant crops of wheat, maize, rye, oats, potatoes, and vegetables. In some places the higher grounds rise into mountains. In general the hills on the higher ground, though broken, have a good soil, which produces maize, rye, and oats. The higher grounds between the Laurel Chain and Chestnut Ridge are destitute of trees, but in summer they are covered with grass; the cultivated tracts are not very numerous. The most northern part of Virginia, or that narrow tract which lies between the western boundary-line of Pennsylvania and the Ohio, resembles the countries on the banks of the Monongahela, being much broken, but equally fertile.

Hydrography, Communications.—Virginia has numerous navigable rivers. They all originate within the Mountain Region or on the ranges which form the edges of that region. The greater number run east and south-east, and flow into the Atlantic. The others flow north or north-west into the Ohio.

The *Potomac*, from its source to its mouth, forms the boundary between Maryland and Virginia, and will be found described under *MARYLAND*. As there mentioned, ships of the line ascend it to the Washington navy yard, and large boats to Harper's Ferry, where the river breaks through the Blue Ridge. Its principal tributary in Virginia is the *Shenandoah*, which rises near 88° N. lat., and drains nearly the whole of the Mountain Region north of that parallel and between the Kittatinny Chain and the Blue Ridge. It flows 130 miles before it joins the Potomac.

The *Rappahannoc* rises on the eastern declivity of the Blue Ridge, with two branches called the Hedgeman and Rapid Ann, which unite after a course of about 50 miles. After the union of these streams the river becomes navigable, but 10 miles farther down it has some falls, and a short distance below them it meets the tide-water at Fredericksburg, up to which place vessels of 140 tons can ascend. In approaching the sea it widens to a narrow bay, which at its lower extremity is about 2 miles across. Its course is about 160 miles.

York River originates in the south-east mountains, with two branches, the Pamunkey and Mattaponi, each above 100 miles long. By their union the York River is formed, which is an estuary from one to three miles across. After a course of 35 miles it falls into Chesapeake Bay. The largest ships ascend to Yorktown, 12 miles from the sea, where it forms an excellent harbour. Up to the union of its two branches it has a depth of 3 fathoms, and admits coasting-vessels. The Pamunkey and the Mattaponi are navigable by boats for 70 and 50 miles respectively.

The *James River* is the principal river belonging wholly to Virginia. It rises in the Alleghany Mountains with several branches, of which

1. *The Maritime Slope of the Atlantic* comprehends also the eastern shore of Virginia, or that part which lies east of Chesapeake Bay. This country consists of a tongue of land about 70 miles long and 10 miles in width, the islands included, but without them only 7 miles across. Along the shore is a sterile tract mostly covered with low sand-hills or swamps, and about half a mile wide; the interior is a level flat country, with a light sandy soil resting on clay. The principal crops are maize and oats, but wheat, cotton, peas, beans, and potatoes are also grown. There are good orchards, in which the fig-trees and pomegranate-trees attain a large size, and yield abundant fruit. The palma-christi, from which the castor-oil is obtained, is cultivated to a considerable extent.

Of the Maritime Region west of Chesapeake Bay, the south-eastern portion is a flat country which rises imperceptibly towards the south. The soil is a mixture of sand and clay, but less fertile than the eastern shore; its productions are the same. On some low tracts near the Dismal Swamp rice is grown, and this is the most northern point where that grain is cultivated on the Atlantic shore of the United States. The Dismal Swamp extends into NORTH CAROLINA. From the forests at the southern part of the Swamp a large quantity of lumber is obtained. Near the centre of the Swamp, in Virginia, is Lake Drummond, which extends about 7 miles in every direction, and varies in depth from 10 to 20 feet. The remainder of the Maritime Region has a somewhat undulating surface, which towards the western limits of the region is diversified with hills. The soil is alluvial, but thin and poor. Some of the higher tracts are nearly destitute of vegetation and barren, and others are covered with forests of stunted pines, from which tar, pitch, and rosin are extracted. The bottoms of the rivers have a deeper and richer soil, and produce good crops. Wheat is not much cultivated, but maize, oats, potatoes, and sweet potatoes are extensively grown; tobacco is also cultivated. The orchards yield apples, pears, cherries, quinces, nectarines, apricots, almonds, plums, pomegranates, figs, peaches, and mulberries.

The climate of this low region, if compared with that of low countries on the east of the Atlantic, is distinguished by great and sudden changes, which occur at all seasons except October and November. The winters are much colder than in any part of Europe south of the Alps, and also more severe than in the low countries north of the Alps. Frosts are frequent, and sometimes very severe, but generally of short duration. During July and August the heat is very great, the thermometer rising almost every year to 90°, and sometimes to 96° and 98°. The mean annual temperature is 56°. Though the number of rainy days is less in this region than in England, the mean annual quantity of rain is much greater. The prevailing wind all the year round is the south-west; but in autumn and winter the wind blows from all quarters except the south, and southerly winds are at all seasons very rare. The change of the wind produces sudden changes in the temperature. Jefferson states that the thermometer has descended 45 degrees in thirteen hours, from 92° to 47°, in consequence of a change of the wind.

2. *The Upper Slope of the Atlantic* extends from the western limit of the Maritime Slope to the Blue Ridge. From the base of the ridge the country descends to the falls of the rivers in an inclined plane. Where the falls occur, a ledge of rocks extends across the state, rising from 100 to 200 feet above their base, which in most places is about 100 feet above the sea-level. The surface of this region presents only a comparatively small number of hills, from 300 to 500 feet high; it generally extends in undulating plains, which in many places have a gentle acclivity, but in others are broken and uneven, and between these plains are the deeper depressions, in which the rivers run. The hills are generally not steep, but the soil is sometimes rocky, and not fit for cultivation. They are mostly overgrown with ash, beech, elm, hickory, chestnut, oak, and hemlock. The soil of the higher grounds between the bottoms of the rivers is sandy, but has in general a moderate degree of fertility. The cultivated tracts yield moderate crops of wheat, maize, tobacco, and oats, and also rye and buckwheat. The orchards are extensive, and all the trees mentioned in the foregoing region succeed, except pomegranates and almonds. The forests, which still cover a considerable part of the surface, are comprised of oak, hickory, gum, maple, logwood, and especially yellow pine. The bottoms along the watercourses are extensive along the large rivers: that of the James River is in general from two to three miles wide, and extends from Richmond to Lynchburg, 125 miles. Their soil is generally excellent, and produces good crops of wheat, maize, and oats, and the best sort of tobacco, which is extensively cultivated. Nearly all the cotton exported from Virginia is from this district. The hills which are dispersed over this region are mostly isolated and irregular; but there extends over the whole width of the state a series of hills and short ranges, nearly in a parallel line with the Blue Ridge, and at a distance of from 15 to 30 miles east of it. North of James River, which for more than 30 miles flows along its eastern base, this hilly tract is called the South-West Mountain; but towards the northern extremity it is called the Bull Run and Kittoctan Mountains. This chain rises from 800 to 1200 feet above the sea-level. The hills are covered with forests of oak, hickory, green maple, white and yellow poplar, black and white walnut, ash, sassafras, dogwood, chestnut, and chestnut-oak. The long valley which extends between these hills and the Blue Range is in general hilly; for several offsets of the Blue

Ridge advance into it from 5 to 10 miles from the range, and it also contains many isolated hills. The soil generally consists of a good mould lying on a substratum of red clay. In the northern district it is lighter, and contains a good proportion of sand or gravel. The principal objects of agriculture are maize, wheat, rye, oats, and potatoes. In the southern districts much tobacco is grown, and hemp in several places. The orchards yield apples, peaches, cherries, plums, quinces, and grapes. The general level of this valley is from 500 to 700 feet above the sea, except towards the north, where it is lower. The mean annual temperature of this region is from three to six degrees lower than in the maritime region.

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4. *The Hilly Region of the Ohio and Kanawha* comprehends the north-western portion of the state, or that which is inclosed by the

north-west limit of the mountain region, the Sandy River and the Ohio, and the boundary of Pennsylvania. The most southern portion of this region is the most elevated, which is north of it, by a line commencing on the banks of the Big Sandy River, where that stream is cut by 88° N. lat., and running thence to a point on the Great Kanawha River a little above the salt-works, whence it continues in the same direction to the salt-works on the Little Kanawha, where it turns eastward. The whole country consists of high masses of rocks, which generally rise to the elevation of mountain ridges, which are united to the western edge of the Mountain Region at right angles, as they generally extend from south-east to north-west. There are no bottoms along the river-courses, except a few small tracts hardly a quarter of a mile wide. The rocks, which are generally contiguous to the banks, rise to 500 feet and more, and in many places with a nearly perpendicular acclivity. Where the acclivity is not too steep the mountains are covered with soil, and along the watercourses overgrown with bushes; but in many parts the rocks are bare. At some distance from the watercourses the high grounds present a hilly surface, usually covered with low bushes or stunted trees. There are only a few tracts of moderate extent, on which maize, oats, and potatoes are grown; and the pastures which the higher grounds afford are too poor for cattle. The inhabitants obtain their livelihood partly by taking lumber to the lower country.

The remainder of this region is only hilly, with the exception of the north-eastern country, where some short ranges of mountains occur. The hills rise from 300 to 500 feet above the river bottoms, generally with a gentle acclivity, though in many places they are steep. The bottoms differ in width, from a quarter of a mile to upwards of two miles. The least fertile part is the tract which lies between the Big Sandy River and the Great Kanawha, where the hills which form the higher grounds between the rivers consist of sandstone, rise with a steep acclivity, and have flat tops covered with low bushes. They are not cultivated, and not even available as pasture-ground for sheep. In the depressions between the hills the soil is also poor. The bottom of the Great Kanawha has many very fertile tracts, and in general it yields good crops of maize, wheat, rye, oats, and potatoes. The hills which inclose the bottoms of this river and those of its affluents contain large trees, especially lime, hickory, sugar-maple, laurel, hemlock, and sumach: the sumach attains here the height of a stately tree. North of the Great Kanawha the country improves. It is still hilly, but the slopes of the hills are not so steep, and the soil is more fertile. The higher grounds are overgrown with trees or bushes. The best portion of this region is the basin of the Monongahela. Though the river-bottoms are not so wide as those of the Ohio or Great Kanawha, they are very fertile, and produce abundant crops of wheat, maize, rye, oats, potatoes, and vegetables. In some places the higher grounds rise into mountains. In general the hills on the higher ground, though broken, have a good soil, which produces maize, rye, and oats. The higher grounds between the Laurel Chain and Chestnut Ridge are destitute of trees, but in summer they are covered with grass; the cultivated tracts are not very numerous. The most northern part of Virginia, or that narrow tract which lies between the western boundary-line of Pennsylvania and the Ohio, resembles the countries on the banks of the Monongahela, being much broken, but equally fertile.

Hydrography, Communications.—Virginia has numerous navigable rivers. They all originate within the Mountain Region or on the ranges which form the edges of that region. The greater number run east and south-east, and flow into the Atlantic. The others flow north or north-west into the Ohio.

The *Potomac*, from its source to its mouth, forms the boundary between Maryland and Virginia, and will be found described under MARYLAND. As there mentioned, ships of the line ascend it to the Washington navy yard, and large boats to Harper's Ferry, where the river breaks through the Blue Ridge. Its principal tributary in Virginia is the *Shenandoah*, which rises near 88° N. lat., and drains nearly the whole of the Mountain Region north of that parallel and between the Kittatinny Chain and the Blue Ridge. It flows 130 miles before it joins the Potomac.

The *Rappahannoc* rises on the eastern declivity of the Blue Ridge, with two branches called the Hedgeman and Rapid Ann, which unite after a course of about 50 miles. After the union of these streams the river becomes navigable, but 10 miles farther down it has some falls, and a short distance below them it meets the tide-water at Fredericksburg, up to which place vessels of 140 tons can ascend. In approaching the sea it widens to a narrow bay, which at its lower extremity is about 2 miles across. Its course is about 160 miles.

York River originates in the south-east mountains, with two branches, the Pamunkey and Mattaponi, each above 100 miles long. By their union the York River is formed, which is an estuary from one to three miles across. After a course of 35 miles it falls into Chesapeake Bay. The largest ships ascend to Yorktown, 12 miles from the sea, where it forms an excellent harbour. Up to the union of its two branches it has a depth of 3 fathoms, and admits coasting-vessels. The Pamunkey and the Mattaponi are navigable by boats for 70 and 50 miles respectively.

The *James River* is the principal river belonging wholly to Virginia. It rises in the Alleghany Mountains with several branches, of which

Jackson's River and Cow-Pasture River are the chief. The James River thus formed runs with great rapidity southward between high mountains, and turns to the east above Pattonsburg, at which place it is 806 feet above the sea-level, and begins to be navigated. It passes through the Blue Ridge at the Balcony Falls, which are avoided by a canal about six miles long which runs parallel to the river. At Lynchburg the level of the river is 500 feet above the sea. Below Lynchburg it turns to the north-east and runs with great rapidity, but is navigable. Above Scotsville it passes the south-east mountains, and at that place its level is only 255 feet above high water-mark, and at Columbia, at the mouth of the Rivanna, only 178 feet. Lower down the current of the river is gentle until it approaches the falls above Richmond, where it descends 80 feet within 6 miles, and immediately below the falls it meets the tide-water. A canal connects the tide-water below and the navigable water above the falls. Below the falls the river gradually widens and assumes the features of a bay, and after a course of 90 miles farther it merges in Chesapeake Bay. The wide expanse of its mouth, known as the Hampton Roads, affords a harbour for vessels of any size, but it is not safe in winter. Ships of the line can ascend more than 20 miles above Hampton Roads; vessels of 250 tons sail up to Warwick; and of 125 tons to Rocketts, a mile below Richmond. The whole length of James River is about 500 miles. The largest of its affluents is the *Appomattox*, which rises at the base of the South-East Mountains, and runs about 150 miles; vessels drawing 7 feet water can ascend to Petersburg, 20 miles above its confluence with the James, and the navigation is continued above the falls there by the Upper Appomattox Canal. Two others of the affluents of James River are navigable: the *Rivanna*, which joins it from the north, which by a canal is made navigable to Piræus, within one mile and a quarter of Charlottesville; and *Willis River*, which joins the James from the south a few miles below the embouchure of the Rivanna, and is navigable for 20 miles from its mouth.

Nansemond River, which flows only 15 miles and falls into Hampton Roads, is navigable for vessels of 100 tons as far as Suffolk, 10 miles from its mouth.

The *Nottoway* and *Meherrin* rivers drain a large part of the country south of the James River, each of them running about 100 miles, and uniting, after having entered North Carolina, to form the *Chowan River*.

The upper course of the *Roanoke* lies within Virginia. [CAROLINA, NORTH.] It is navigable in Virginia below Monroe. Its largest affluent, the *Dan*, belongs almost entirely to Virginia; it drains the most southern portion of the Atlantic Slope, and is navigable for boats as far as Danville.

The Ohio divides Virginia from the state of Ohio, having between these two states a course of 355 miles. It is navigable all this distance for steamers of light draught. [MISSISSIPPI RIVER.] The *Monongahela*, one of the principal branches of the Ohio, is also noticed under MISSISSIPPI RIVER. It is formed by three rivers, Cheat River, Tygart's Valley River, and West Fork, which rise in the Alleghany Mountains, and though not of much use for navigation, are of great value for the abundant water-power which they furnish. The *Monongahela* affords an easy navigation for steam-boats as far as Morgantown, about 10 miles from the boundary of Pennsylvania. The *Little Kanawha*, which joins the Ohio at Parkersburg, runs more than 100 miles, and with its principal affluent, Hughes River, is much used for bringing down lumber, &c. The *Great Kanawha* rises beyond Virginia, in the valley inclosed by the Blue Ridge and the Iron Mountains; it traverses the mountain region by a course of 120 miles, and is swelled by the confluence of its great branch, the Greenbrier River. After it leaves the mountain region its rapidity is so great that as far down as the mouth of Gauley River the stream flows between high rocks with such force as to render crossing it very hazardous. Two miles below that place are the Great Falls, a fine cataract of 22 feet over a natural dam of rocks which spreads irregularly across its bed. Below this place it becomes navigable, and from Charleston, 60 miles above its confluence with the Ohio, it is navigable for large steam-boats. Its affluents, the Elk River, which joins it at Charleston, and the Coal River, which joins it 12 miles lower down, are navigable during freshets for a considerable distance. The *Guyandotte* and the *Big Sandy River*, both of which flow above 100 miles, are chiefly valuable for their immense water-power.

The most southern portion of the mountain region is drained by several rivers, which by their junction, which takes place in the state of Tennessee, form the Tennessee River. These rivers are called, from east to west, Holston, Clinoh, and Powell's. They are the only rivers that drain the mountain region which are navigable in their natural state.

The canals of Virginia are very important and costly works. They are—the Alexandrian Canal, from Georgetown to Alexandria, $7\frac{1}{2}$ miles; James River and Kanawha Canal, which is completed from Richmond to Balcony Falls, 148 miles, but is eventually to be carried along the valley of the Kanawha to the Ohio; Dismal Swamp Canal, from Deep Creek to Joyce's Creek, 23 miles; and 11 miles of branch canals; total 189 $\frac{1}{2}$ miles.

The railways of this state are also on a very grand scale, being parts of the great lines which extend from the Atlantic to the West, and are connected with all the main lines of the neighbouring states. On the 1st of January 1855 there were in Virginia 23 lines of railways

having 837 miles of road in operation; and 1095 miles additional were in course of construction or projected.

Geology, Mineralogy, &c.—The geology of Virginia has engaged much attention, and been illustrated in the writings of many of the most eminent geologists of Europe and America. By far the larger part of it belongs to the Alleghany system, and is sufficiently described under ALLEGHANY MOUNTAINS. Here it will be enough to say that eruptive and metamorphic rocks traverse the state in a north-east and south-west direction, corresponding with that of the Alleghany range; and consist of granites, syenites, porphyries, gneiss, traps, &c. On the west of these igneous rocks, also traversing the state in the same direction, occur Lower Silurian strata, having a depth of 3000 feet, and consisting of limestones and sandstones. These are skirted by a broader band of Upper Silurian rocks, comprising three or four varieties of gray and blue limestones. Beyond these are beds of Devonian rocks, consisting of limestones crowned by vast beds of very thick old red-sandstones. West of the Devonian rocks we come upon the Carboniferous formation. The lower carboniferous strata occupy only a narrow belt, and are chiefly represented by red schist and siliceous conglomerates. But the upper carboniferous or coal-measures occupy the whole western side of the state, and form a portion of the great coal-basin of Ohio, Pennsylvania, and Virginia. New Red-sandstone occurs in small basins, whose general direction is parallel to the dislocation of the Alleghanies. Strata of lias also occur in a band of from 10 to 12 miles wide, and about 50 miles long, extending from Richmond to the neighbourhood of Washington; they are inclosed in a deep and narrow granitic furrow, and consist "of a coarse-grained sandstone, formed from the decomposition of the surrounding granite, a species of micaceous schist, often very clayey, and passing into black slate; and lastly, beds of coal placed chiefly at the lower part of the formation, 40 or 50 feet in thickness." The whole eastern side of the state consists of Eocene and Post-eocene strata. The post-eocene strata have a profusion of characteristic fossils, and Sir Charles Lyell assimilates them in age to the English crag and the faluns of Touraine.

Virginia is extremely rich in minerals. In the Upper Atlantic Slope, gold, iron, black-lead, copper, and limestone are found. Gold is found in a wide tract south of Fredericksburg, and extending parallel to the Blue Ridge, into North Carolina and Georgia: a considerable quantity has been obtained. Bituminous coal is found and extensively worked in the neighbourhood of Richmond, along the James and Appomattox rivers, at Wheeling on the Ohio, on the Kanawha, on the borders of Pennsylvania, and at several other places. Anthracite is obtained in the valley of the Potomac and elsewhere. In all there have been traced five tiers of coal-seams, with an average thickness of from 30 to 35 feet; and beds not directly connected with these occur elsewhere. Iron-ore is abundant along the base of the Blue Ridge, and in the mountain region iron-ore of very good quality occurs. Lead-mines are worked in the Iron Mountains. This region abounds also in limestone, sandstone, slate, gypsum, and other useful minerals. The country west of the Alleghany Mountains is richer in minerals than the other parts of the state. Besides abundance of bituminous coal and iron-ore, beds of limestone are extensively distributed, and the caverns, which are of frequent occurrence in the limestone rocks, furnish large quantities of nitre. The region west of the Blue Ridge contains several hot-springs and other medicinal springs, which are resorted to by invalids, and the inhabitants of the lower countries on the Atlantic, during the summer heats. Salt-springs are very numerous, and salt is made in sufficient quantities to furnish with this article most of the countries west of the Appalachian Mountains.

The climate, soil, and agricultural productions have been already noticed in describing the several geographical regions of the state. It will be enough to say here, by way of summary, that Virginia is one of the largest wheat-growing states of the Union; raising very large quantities of maize, oats, barley, and rye, and a considerable quantity of buckwheat. Very large crops of common and of sweet potatoes are also grown. Of tobacco, a larger quantity is grown than in any other state, though Kentucky has nearly reached to a level with it. The quantity grown in Virginia in 1850 was 56,803,227 lbs. Cotton is grown pretty largely in those parts which are suited to its culture. A little rice is raised. Of hemp a larger quantity was returned in 1850 than in any other state, but the returns of hemp are known to have been very inaccurate. Of flax, the only state which grows a larger quantity is Kentucky. A considerable quantity of maple-sugar is made. The forests, and the kinds of trees which grow in them, have been already noticed. The timber is of excellent quality in the mountain regions and in great abundance, but the cost of carriage interferes with its extensive export. A large quantity of lumber is however sent down the rivers annually.

Virginia ranks among the principal grazing states of the Union. It possesses a very large number of horses, horned-cattle, sheep, and swine. Increased attention has been paid of late years to the breeds, and the stock has been greatly improved. A large amount of wool of good quality is annually clipped. Butter is made to a great extent, also a good deal of cheese.

Wild animals are now rare on the east side of the mountains, but they are not uncommon in the western districts. The most common

are bears, wolves, deer, the racoon, squirrel, and opossum. The largest of the wild birds is the wild turkey, which is still met with in the western districts and in the Blue Ridge. There are also several kinds of water-fowl, among which are the canvass-back duck of the Potomac, and the sora, or American ortolan. Other remarkable birds are the turkey-buzzard, the mocking-bird, the red-bird, and the humming-bird. Partridges and quails, as they are called, are common. All the rivers abound in fish in the lower part of their course; in the rivers which fall into the Ohio are several kinds which are not found in Europe, as the black perch, the grennel, the blue cat, the buffalo, and the salmon-pike. There is also the soft-shell turtle, which surpasses in flavour the fine green-fat turtle. Oysters, lobsters, and other shell-fish are abundant on the coast. Bees are reared to a considerable extent.

Manufactures, Commerce, &c.—Virginia has considerable manufactures. In 1850 nearly 80,000 persons were employed in manufactures, mining, and mechanic arts, without including slaves, who are extensively employed in the tobacco manufactories, &c. The cotton manufacture employed about 3000 persons; the iron manufacture upwards of 3000; the woollen nearly 700; the salt 1300; and there are very important tobacco manufactories, extensive flour-mills, numerous tanneries, breweries, distilleries, machine shops, manufactories of hardware and cutlery, carriages, harness, &c.

In its foreign commerce Virginia has declined, and now ranks among the less important commercial states; a large proportion of its products is now exported through one or other of the northern ports, and foreign merchandise is received by the same channel; but it carries on a very large coasting trade. In the year ending June 30, 1853, the exports amounted to 3,306,791 dollars; the imports to 399,004 dollars, of which 255,863 dollars were carried in American vessels. There were in the same year 40 vessels built in the state of the aggregate burden of 6599 tons. The total shipping owned by the state in 1850 was 74,071 tons.

Divisions, Towns, &c.—Virginia is divided into 137 counties, 69 in Eastern and 68 in Western Virginia. Richmond is the political capital, and the largest town in the state. This and some of the other more important towns are noticed below; the population is that of 1850:—

Richmond, the capital, is beautifully situated on the ascending slope of the left bank of James River, 130 miles from the entrance of Chesapeake Bay, and 122 miles S.S.W. from Washington, in 37° 32' N. lat., 77° 27' W. long.: population 27,570. The ground on which the city is built is broken into several hills of different heights. The plan of the city is regular, the principal streets running parallel to the river, which are called A Street, B Street, &c., and crossed at right angles by others, which are called First Street, Second Street, &c. The chief public building is the State-House, or Capitol, a copy of the Maison Carrée of Nîmes, which is finely situated on the brow of a hill which overlooks the city. It contains a statue of General Washington by Houdon. The city-hall is a handsome edifice; there are besides a governor's house, court-house, and other state and civic buildings, including a state penitentiary, a poorhouse, and a female orphan asylum. There are 25 churches, some of them costly and handsome structures; 8 colleges; numerous schools; a philosophical institution, &c. The river flows over a channel of granite, of which material there are inexhaustible quarries in the vicinity of the city. Within a few miles of the city are large beds of coal, and the falls of the river, which extend from opposite the city for nearly six miles, afford water-power to any extent. There are several flour-mills, two of them among the largest in the world, and four cotton-mills; about 40 tobacco factories, employing over 2500 blacks; iron rolling-mills; cannon foundries; nail-works; machine shops; paper-mills, &c. The commerce consists chiefly in the exportation of tobacco and flour. Four railways unite here. There are seven daily and several weekly newspapers.

Alexandria, a city and port, on the Potomac, 7 miles S. by W. from Washington: population 8734. The city stands on high ground, contains some good buildings, and has a considerable commerce: ships of the largest size ascend to the town.

Charlottesville, on a branch of Rivanna River, 81 miles W.N.W. from Richmond: population about 2000. The town contains a court-house, several churches, schools, &c., but the place derives its chief importance from its connection with the University of Virginia, which is about a mile and a half distant from the town. The buildings of the University occupy an oblong quadrangle about 500 feet long by 150 feet wide. In the neighbourhood of Charlottesville is Monticello, formerly Jefferson's residence, on the summit of a hill about 500 feet above the Rivanna. It commands a magnificent view of the Blue Ridge and the surrounding country.

Fredericksburg, on the right bank of the Rappahannock, 110 miles from the mouth, and 66 miles N. from Richmond, population 4061, is a flourishing commercial town in a healthy and pleasant situation. It is near the head of the navigation of the Rappahannock, up to which town vessels of 130 tons burden can ascend. There are a court-house, a market-house, churches, banks, several factories, &c. It exports annually a large quantity of corn, flour, tobacco, &c.

Harper's Ferry, at the confluence of the Shenandoah and Potomac rivers, where the united stream forces its way through the Blue Ridge, 135 miles N. by W. from Richmond: population 1747. There are

here several factories, for which the rivers afford ample water-power; but the chief establishment is a national armoury on a very large scale for the manufacture of fire-arms, &c. The Potomac is navigable up to the village, and a canal and railway pass the town. The river and mountain scenery here is famous for its magnificence, and attracts a great number of tourists.

Of **James Town**, where the first colony was settled, and the chief seat of the colonial government from 1607 till 1798, though once a large place, not a single house remains.

Lexington is seated on the right bank of the North River, a tributary of the James River, 156 miles W. by N. from Richmond: population 1743. It is chiefly noteworthy as the seat of Washington College, which was founded and endowed by George Washington. It also contains a military institute, a court, &c.

Lynchburg, on the right bank of James River, 20 miles below the Great Falls where the river passes through the Blue Ridge, and 120 miles W.S.W. from Richmond: population, 8071. Lynchburg is one of the busiest commercial towns in Virginia. It has considerable trade, not only with Western Virginia, but with North Carolina, Tennessee, Kentucky, and Ohio; and its trading facilities will be greatly extended by railways now in course of construction. It contains several costly and substantial public buildings, banks, several very large tobacco warehouses and factories, cotton-mills, iron-foundries, flour-mills, &c.

Mount Vernon, the mansion of Washington, where he died, and near which he was buried, stands on a bold promontory overhanging the Potomac, which is here a mile and a half wide. The tomb is above ground, and his remains are deposited in a white marble sarcophagus, with a flat cover, on which is sculptured an eagle in relief, the American stars and stripes, and the name 'Washington.' A similar sarcophagus near it contains the remains of his wife.

Norfolk, situated on the right bank of Elizabeth River, about 8 miles from Hampton Roads, and 114 miles S.E. from Richmond, population 14,326, is the chief commercial port, and the second town in size, of Virginia. The harbour is easily accessible, sheltered from all winds, has depth of water for the largest vessels, and good anchorage for vessels of all sizes. The town is built on a plain, the streets are broad and well-paved, and the houses chiefly of brick. The public buildings are—a court-house, custom-house, market-house, almshouse, theatre, eight churches, schools, an atheneum, an orphan-house, &c. On the opposite bank of Elizabeth River, but distant nearly a mile, is **Portsmouth** (population, 8122), almost adjoining which is **Gosport** (population, 504), which may be regarded as parts of Norfolk. At Gosport is the United States navy-yard, the largest and finest in the Union. The dry-dock, constructed of granite, cost about 1,000,000 dollars. Opposite to it is the government naval hospital. Steamers ply regularly between Norfolk and New York, and the town has good railway accommodation.

Petersburg is situated on the right bank of the Appomattox, about 12 miles from its junction with James River, and 23 miles S. from Richmond: population, 14,010. The town is regularly laid-out, and the houses are substantial. It contains several public buildings, churches, schools, &c. The falls above the town, as at Richmond, are used for water-power; a canal continues the navigation round the falls, and four lines of railway meet here. There are several tobacco manufactories, cotton-, flour-, saw-mills, &c. The exports of tobacco and flour are very large.

Springs.—The medicinal springs of Western Virginia are in great repute, and have become watering-places which are resorted to from all parts of Virginia and adjoining states; and at most of these springs there are handsome establishments, hotels, &c. for visitors. The **Red Sulphur Springs**, 240 miles W. from Richmond; the **Gray Sulphur Springs**, about 9 miles E. from the Red Sulphur Springs; the **Salt Sulphur Springs**, 18 miles E. from the Red Sulphur Springs; the **White Sulphur Springs**, 38 miles N.E. from the Red Sulphur Springs; and the **Sweet Springs**, 204 miles W. from Richmond, are the most fashionable resorts, but there are besides the Berkeley, the Fauquier, the Shannondale, and several others which are much frequented.

Staunton, on Lewis Creek, 120 miles N.W. by W. from Richmond, population about 2500, is the centre of a fertile district, and contains two court-houses, a market-house, churches, the lunatic asylum for Western Virginia, &c.

Wheeling, on the Ohio, 357 miles N.W. from Richmond, population 11,435. The town is situated on a strip of land so narrow as only to allow of three principal streets between the river, with which they are parallel, and the steep hills at the back of the town. The place has an extensive trade, and there are several large manufactories of cottons and woollens, steam-engines, iron-castings, nails, white- and sheet-lead, glass, paper, silk, extensive flour-mills, &c.; and ship-building is carried on to a small extent. The city contains the usual county buildings, churches, &c. A wire suspension-bridge, of 1010 feet between the supporting towers, crosses the Ohio. The great National Road passes through Wheeling; and the town is becoming an important railway centre.

Winchester, the capital of Frederick county, nearly in the centre of which it is situated, 130 miles N.N.W. from Richmond, population about 4000, is an old town, but has of late risen considerably in manufacturing and commercial importance, and in population. It

contains some good public buildings, a lyceum, masonic-hall, 14 churches, and a medical school.

Government, History, &c.—The original constitution adopted in 1776 was superseded by the present one in 1851. By it the right of voting is vested in all white male citizens 21 years of age, who have resided for two years in the state. The legislature consists of a Senate of 50 members, called the General Assembly, elected for four years, and a House of Delegates, consisting of 152 members elected biennially. All elections are by open voting, and not by ballot. The governor is elected by the people for four years. His salary is 5000 dollars. The judges are also elected by popular vote.

The total net revenue obtained by taxes in the financial year 1853-4 was estimated at 1,281,047 dollars. The ordinary expenditure, exclusive of schools and debt, is about 600,000 dollars. The public debt Oct. 1, 1854, was 22,889,476 dollars; the interest on which was 1,825,000 dollars. The aggregate militia force of Virginia is 125,000 men, of whom 6492 are commissioned officers. The state has a large school fund; the educational returns of the state are however very imperfect. In 1850 there were returned in the state 18 colleges, with 110 professors and 1618 students, and 2980 public schools, with 2997 teachers and 67,853 scholars. Among the colleges is included the University of Virginia, at Charlottesville, a very celebrated institution which in 1854 had 16 professors, 466 students, and a library of 19,500 volumes.

The early history of Virginia is the history of the establishment of British colonies in North America. In 1584 Sir Walter Raleigh obtained a patent to colonise any unappropriated part of North America, and sent out two small vessels, which reached the coast of Florida, and sailed north as far as the island of Roanoke, in which neighbourhood they remained some time in friendly intercourse with the natives. On their return the country was named Virginia by Queen Elizabeth. The first actual settlement was made in NORTH CAROLINA. In 1606 James I. granted patents to two companies. To the one, called the London Company, he granted South Virginia; to the other, called the Plymouth Company, he granted New England. On the 19th of December, 1606, a small expedition of 105 men in three ships, the largest not more than 100 tons burden, having entered a river which was then called Powhatan, now the James River, they planted the first colony in the present state of Virginia, May 13, 1607, on a peninsula connected with the north bank, and named the place James Town, in honour of King James. But the colonists suffered much from sickness and disunion, and the whole would probably have perished if the management had not fallen into the hands of Captain John Smith, whose courage and prudence preserved the little colony from destruction. Smith's history, which is of the most romantic character, he has related in 'The True Travels, Adventures, and Observations of Captain John Smith, in Europe, Asia, Africa, and America, beginning about the year 1598, and continued to this present 1629;' and to one of the most romantic incidents in it the infant colony was indebted for its preservation. On an expedition up the James River and into the interior, in 1607, Smith was taken prisoner by the Indians, and two men who accompanied him were slain. He himself, after being several days in custody, was saved from the tomahawk by the entreaties and interference of Pocahontas, the daughter of Powhatan, the principal chief, and he was ultimately allowed to return to James Town. Two years later, when the Indians had plotted the destruction of the little colony, Pocahontas revealed their designs; and Smith having subsequently succeeded in establishing friendly relations with the natives, the country was gradually cleared, and under his active superintendance James Town began to assume the appearance of a fortified village. The value of his energy and influence was seen a year or two later on his departure from the colony. On finding themselves uncontrolled by any sufficient authority, the settlers abandoned themselves to improvidence and idleness; the store of provisions was rapidly consumed; and in consequence of their marauding habits, attacks were made by the Indians, who murdered many stragglers, and laid plans to destroy the whole colony. Smith had left nearly 500 persons; in six months the number was reduced to 60. These had resolved to abandon the settlement, and had actually embarked for Newfoundland, with a view to disperse themselves among the fishing-vessels there; but before they reached the mouth of the river they met the long-boat of Lord Delaware, who had been appointed governor, and who had arrived in Chesapeake Bay with supplies and emigrants. More colonists with liberal supplies arrived the next year (1611), and from this time the colony advanced in prosperity; their security being especially promoted by the curious circumstance of a marriage solemnised according to the rites of the Church of England between a young Englishman, John Rolfe, and Pocahontas, who had more than once saved the life of Smith. The consequence of this marriage was a confirmed peace with her father Powhatan, and with other Indian tribes under his influence. Pocahontas sailed with her husband to England, and became an object of admiration both at court and in London, which her conduct as a wife and mother afterwards confirmed and continued. There are families still in Virginia who are proud of their descent from that union.

The history of the colony during the next century exhibits it as engaged in frequent hostilities with the Indians; while from the time that it had attained to a certain degree of wealth and stability, the disputes and collisions between the colonists and the home govern-

ment and its representative, the governor of the colony, were almost continual, until the accession of William and Mary, when a more liberal and conciliatory policy was adopted towards the colony. From this time it continued to flourish till 1764, when the Stamp Act was proposed, and the American war, which broke out a few years afterwards, led to a separation of all the North American colonies from the parent state.

(Smith, *Generall Historie of Virginia, &c.*; Bancroft, *History of the United States*; Jefferson, *Notes on the State of Virginia*; Lyell, *Travels in America*, and *Geological Manual*; *Gazetteer of Virginia*; *Gazetteer of the United States*; Rogers, *Geological Survey of Virginia*; Marcou, *Geological Map of the United States*; *Seventh Census of the United States*; *Statistical View of the United States*; *American Almanac*, 1855.)

VIRIEUX. [AIN.]

VISTULA (Wislá, Weichsel), a large river of Europe, rises at the foot of the Carpathians, in the circle of Teschen in Austrian Silesia. Taking at first partly an eastern course, it enters Poland, passes Cracow, and then turning to the north-east divides Poland from Galicia as far as Sandomir. From Sandomir its course is north and north-west to Warsaw, then westerly and north-westerly till the river enters Prussia a little above Thorn, below which it flows northward to the Baltic. Before it reaches the Baltic however it divides at Montau, below Marienwerder, into two branches, the smaller of which, called the *Nogat*, discharges itself into the *Frisches-Haff*. The larger or western branch, after flowing about 40 miles farther, again divides at Fürstenwerder, 9 miles from Dantzic, into two branches, the smaller of which turns to the east, and empties itself into the *Frisches-Haff*, and the main stream taking the opposite direction falls into the Baltic at Weichselmünde, north of Dantzic. The principal feeder of the Vistula is the Bug which (fed by the *Narew*) joins it near Warsaw on the right bank. Another large feeder on the right bank is the *Sava*. The most important tributary of the Vistula on the left bank is the *Pilica*. [POLAND.] The whole course of the Vistula is about 460 miles, for above 300 miles of which, namely, from Cracow, it is navigable. The Bromberg Canal connects the Vistula with the Oder. The Vistula, being connected with so many navigable rivers, is a great channel for the conveyance of the productions of Poland, especially corn and timber, from the interior to the sea-coast. At the junction of the Bug with the Vistula stands the important fortress of Modlin: at Warsaw the river is commanded by Alexander's citadel.

VITEPSK, or WITEBSK, a government in the north-west of European Russia, which, with the government of Mohilev, forms the part of Poland that fell to Russia at the first partition of that country in 1772. Catherine II. divided it into two governments, which she united in 1796 under the name of White Russia; but in 1802 it was again divided into two, when Vitepsk was organised as at present. It is bounded N.W. by Livonia, N.E. by Pakow, E. by Smolensk, S.E. by Mohilev, S.W. by Minsk, and W. by Wilna and Courland. Its area is 17,145 square miles, and the population in 1846 amounted to 789,600, the great majority of whom are Rusniaks and Catholics.

The surface presents a vast plain diversified only by the banks of the rivers, which rise a little above the general level. The soil is sand mixed with clay, and with a very thin covering of vegetable mould. The principal river is the DUNA or Dwina, which enters the government from Pskow, makes a semicircular bend to Deena, from which place it runs along the western frontier, and is joined in its course by most of the rivers of the province: among these are the *Mesha*, the *Kasplia*, the *Ula*, the *Polota*, the *Drissa*, the *Drujs*, the *Saryja*, the *Feananka*, and the *Ewest*. There are numerous small lakes: the largest is that of Lubahn, on the frontier of Livonia. The climate is damp, but temperate and not very variable.

Though the soil is poor, agriculture is the chief occupation of the inhabitants, and, on account of the facility of exportation, very profitable. They cultivate rye, wheat, barley, oats, some pulse, flax, hemp, and hops. Horticulture is pretty well attended to, but there is no fruit except cherries. The bird-cherry is very common, as well as all sorts of wild berries (bilberries, cranberries, &c.) The immense forests, consisting both of pines and other timber-trees, afford ample employment to the inhabitants in felling and squaring timber. The pasture-lands are very extensive; horned-cattle and horses are bred in great numbers, but the former are small; the horses are partly of the strong Russian race and partly of the light Polish breed. There are large flocks of sheep, the wool of which is coarse. The inhabitants have abundance of goats, swine, poultry, and bees. In the forests there are bears, wolves, foxes, stags, wild boars, flying squirrels, hares, and game. The lakes and rivers produce various kinds of fish, especially smelts, of which immense quantities are dried and exported. The minerals are iron-ore, freestone, limestone, marl, and fuller's-earth.

The commerce of the government is greatly facilitated by the Duna, by which all its surplus produce is conveyed in light boats to Riga and Pernau; hemp is sent in sledges to St. Petersburg. Greater facilities have been given to commerce by the *Berezina Canal*, which connects the Duna and the Dnieper. The principal articles of export are hemp, dried fish, corn, flour, bristles, horses, square timber, masts, linned, flax, oxen, wool, hides, tallow, honey, and wax.

Vitepsk, the capital of the government, to which it gives its name, is situated on the Duna, at its confluence with the *Viteba*, in 55° 6'

N. lat., 30° 5' E. long., and has about 17,000 inhabitants. The town is surrounded with ancient walls and towers. The principal part of it is built on the left bank of the river. On the right bank is the old castle, surrounded with a very lofty rampart, and the handsomest buildings. The streets are on the whole narrow and irregular, and there are only a few stone houses. One of the finest edifices is the convent of Greek monks of the order of St. Basil. There are 14 churches; 8 monasteries, of which 6 are Roman Catholic and 2 Greek; and 2 nunneries. Vitepsk has many charitable institutions, a large bazaar, several woollen-cloth factories, and tanneries.

Welisch, or *Wieliz*, a town with 6800 inhabitants, of whom 1000 are Jews, also situated on the Düna, has a considerable trade in the produce of the country. The public buildings are—nine churches, a synagogue, and a citadel.

Polotsk, mentioned in the ancient Scandinavian traditions anterior to Rurik, is situated near the right bank of the Düna, north-east of Vitepsk, and is slightly fortified. The handsomest building in the town is the former college of the Jesuits, with a beautiful church. The population of Polotsk is about 10,000.

VITERBO, a province of Central Italy, in the States of the Church, is bounded N. by the province of Perugia, E. by those of Spoleto and Rieti, S. by the Comarca di Roma and the province of Civitá-Vecchia, and W. by the Tuscan Sea and Tuscany. The area is 1083 square miles: the population in 1850 numbered 129,074. The surface is hilly in the north. The eastern part of the province lies in the basin of the Tiber; the central part consists of the basin of the Lake of Bolsena, and its outlet the river Marta; and the western part consists of the lower valley of the river Fiora, which, rising in the Tuscan territory, enters the Papal State, and after a course of nearly 50 miles falls into the sea below Montalto. These three basins or valleys slope southward towards the sea, and merge in the unhealthy maritime plain of the Maremma, which extends along the sea coast. There is a good deal of fertile land in the province, which yields wine, oil, and corn. Great numbers of cattle are reared. Alum is very abundant.

The ridge called Cimino, the ancient Ciminus, of volcanic formation, runs from north to south for a length of about 30 miles, from Monte Soriano, north-east of Viterbo, which is its highest summit, being 4000 feet above the sea, to Monte Virginio near the lake of Bracciano, and divides the basin of the Tiber from that of the Lake of Bolsena. The Ciminus and its impervious forest arrested for many years the progress of Roman conquest on the side of Etruria. It is still a well-wooded and picturesque mountain. Between Ronciglione and Viterbo it is crossed by the high road from Rome to Florence. A succession of lower hills incloses the lake of Bolsena on three sides, leaving an opening to the southward, through which flows the river Marta. [BOLSENA.] On the south-east, between the lake and the Ciminian ridge, is a wide plain, at the south-eastern end of which is the town of Viterbo.

Viterbo, the capital of the province, a bishop's see, and the residence of the delegate or governor, is pleasantly situated at the northern base of the Monte Cimino, on the high road from Rome to Florence, 40 miles north-west of Rome, and has about 14,000 inhabitants. It is a large well-built town, inclosed by walls and towers; it has more than fifty churches, several convents, and other considerable buildings; the streets are well paved but narrow, and adorned with handsome fountains. The cathedral of San Lorenzo is adorned with some good paintings, and with the monuments of popes John XXI., Alexander IV., Adrian V., and Clement IV. Villani (vil. 40) says that Prince Henry of England, son of the Earl of Cornwall, was murdered at the high altar of the cathedral of Viterbo by Guy de Montfort, fourth son of Simon de Montfort, who fell at the battle of Evesham. Dante alludes to this tradition in the 12th canto of his 'Inferno.' In the piazza before the cathedral Pope Adrian IV., an Englishman, compelled the emperor Frederick Barbarossa to hold his stirrup while he dismounted from his mule. The episcopal palace annexed to the cathedral dates from the 13th century; it contains the great hall where the conclaves of the sacred college were held for the election of several popes in the 13th century. The other ecclesiastical edifices worthy of notice are—the church of Santa Rosa, where the body of that saint is preserved. The church of Santa Maria della Verità, outside of the walls, which has a very good fresco painting representing the 'Spasazio,' or Marriage of the Virgin Mary, by Lorenzo di Giacomo of Viterbo, a pupil of Masaccio, and the church of San Angelo in Spata, which contains a Roman sarcophagus with a basso-relievo, and an inscription, which says that it was used as a sepulchral urn for the fair Giuliana, a beauty of the 12th century, whose charms are said to have caused a war between Rome and Viterbo, in which the Romans were defeated.

The Palazzo Publico, or town-hall, begun in 1264, has some good paintings and a collection of Etruscan sepulchral monuments and other antiquities. The old palace of the Farnese family is now a founding hospital. Viterbo is celebrated by old Italian writers for the beauty of its women and its fountains.

It is the commonly received opinion that the *Fœderus Volturnæ*, at which the ancient Etruscans held the general meeting of deputies of the different states of their confederation, was on the site of Viterbo. The name indicates that there was a temple on the spot, but the meetings were of a political nature, although originally they may have been of a merely religious character. There was no town in ancient

times on the spot, but a large fair seems to have been held simultaneously with the meetings of the deputies. Viterbo is said to have been built, or inclosed, by Desiderius, the last king of the Longobards, and to have been peopled by the inhabitants of several ruined towns of the neighbourhood. It governed itself for a long time during the middle ages as a free municipality, and was often at war with the people of Rome, to which it was obliged at last to make its submission about the year 1200.

The population of Viterbo and its neighbourhood are supported chiefly by agriculture; wine and oil are the principal produce of the country. There are however some manufactures of woollens. Many of the landed proprietors and local nobility reside at Viterbo.

VITORIA, a town of Spain, in the Basque Provinces, capital of the province of Alava, or Vitoria, is situated on an eminence overlooking an extensive plain, through which, at a short distance to the north, flows the river Zadorra. It is on the main road from France to Madrid, from which city it is distant about 190 miles N.N.E. The population in 1845 was 14,901. The town consists of an old part, with narrow tortuous streets and a curious old plaza, and of a modern part, with wide and regular streets of good houses, and a modern plaza, which is an arcaded square of 220 feet each side, with shops beneath, the town-hall forming the southern side, and the centre being used as the market-place. The town contains a collegiate church and four parish churches, a custom-house, a handsome general hospital, of classical architecture, an orphan asylum, a small theatre, a public library, and a museum of antiquities. The manufactures consist of iron-ware, earthenware, linen-cloths, leather, and candles. The town is also an important centre of trade between Bilbao, San Sebastian, Bayonne, and Castilla la Vieja. The alamedas El Prado and La Florida are delightful public walks. Vitoria is an ancient town, and was probably occupied by the Romans. Sancho el Sabio of Navarra, about 1180, named it Vitoria in commemoration of a victory gained over the Moors. The French occupied it from 1808 till June 21, 1813, when they were defeated by the British under the Duke of Wellington, who soon afterwards followed the retreating army over the Pyrenees into France. (Ford, *Handbook of Spain*.)

VITRÉ. [ILLE-ET-VILAINE.]

VITRY. [MAINE; PAS-DE-CALAIS.]

VIVARAIS, LE, a province of the former government of Languedoc in France, lay chiefly between the Cévennes and the Rhône, from Mont Lozère to a little north of Annonay, and took its name from its chief town, Viviers. It now forms the department of ARDÈCHE. The remaining part of the Vivarais extended west of the Cévennes, and is now included in the southern part of the department of the Haute-Loire.

VIVIERS. [ARDÈCHE.]

VIZAGAPATAM. [CIRCARS, Northern.]

VIZCAYA. [BASQUE PROVINCES.]

VIZEU. [BEIRA.]

VIZILLE. [ISÈRE.]

VLAARDINGEN. [HOLLAND.]

VLADIMIR, or WLADIMIR, a government in the centre of European Russia, is bounded N. by Twer, Yaroslav, and Costroma, E. by Nischnei-Novgorod, S. by Riäsan, and W. by Moscow. Its area is 18,240 square miles; the population in 1846 was 1,246,500. The face of the country is an undulating plain, diversified by low hills, by the steep banks of the rivers, and extensive forests; there are also many heaths and morasses.

The principal river is the Oka, which traverses the south-west of the government. It is joined by the Kliazma, which comes from the government of Moscow, crosses this province nearly in the middle, and joins the Oka in Nischnei-Novgorod. Its affluents are the Nerl, Sudogda, Sobitka, Kolokscha, Kamanka, Tessa, and some others. There are 22 large and small rivers, all of which have very pure water, and abound in fish. Among the numerous lakes, the two largest and most remarkable are the Peganowoe, in which floating islands are sometimes seen; and the Fleschtæhejew, which is about 5 miles long and 4½ miles broad, and is celebrated on account of the nautical exercises of Peter the Great.

The rivers freeze in the middle of November, and thaw in March. The winter is very cold; the summer is very hot; the spring and autumn are variable. Night-frosts continue till May, and return at the end of September. The climate on the whole is healthy.

Agriculture is the chief occupation of the inhabitants; but though the soil is in some parts fertile, the heaths, marshes, sandy tracts, and forests cover so great an extent of surface, that the produce of the harvest is not sufficient on an average for the home consumption. Wheat, rye, barley, oats, millet, and peas are cultivated. The gardens produce all kinds of vegetables common in Russia, and most of them are full of apple- and cherry-trees; amongst the former is the beautiful transparent apple called Nakiwni. Some hops, flax, and hemp are also grown. Game, except hares and partridges, is rare; but bears, wolves, and lynxes are still met with. Wild berries of various kinds abound. The breed of horned cattle is merely sufficient for the wants of the province; the breed of horses is excellent. The peasants breed plenty of domestic poultry. The principal fish are sturgeon and shad: what is not consumed in the provinces is sent to Moscow. The minerals are iron, alabaster, good potter's-clay, and freestone.

Besides the manufacture of thread, worsted, linen, and coarse woollens for home use, the government has important manufactures of linen, cotton, leather, iron-ware, glass, and crystal. The exports comprise the products just named, and paper, soap, potashes, fruit, timber, fire-wood, stone for building and millstones, and lime.

Vladimir, the capital, is situated in the centre of the government, in 56° 17' N. lat., 40° 20' E. long., on a group of hills which rise above a fertile plain on the left bank of the Kliazma, which flows under the walls. It is one of the oldest cities in Russia, and from 1157 to 1828 was the residence of the grand-dukes and the capital of Great Russia. With the exception of its numerous churches and stone houses Vladimir has few traces of its former greatness; there are no vestiges of the palace of the princes, and the Golden Gate has nothing magnificent except its name. The city is still large, but ill built, and has 6 gates, terminating the 6 principal streets. Of the 25 churches, the cathedrals of St. Mary and Demetrius are remarkable in the history of Russia. There are 2 convents, an ecclesiastical seminary, and several crown buildings. The bishop of Vladimir and Susdal has a palace here. The inhabitants manufacture silk veils and handkerchiefs, and have some tanneries and soap manufactories.

Pereaslavl-Zaleskoe is situated on the river Trubesch, where it empties itself into Lake Plechtachejew. It is an old town with several churches and convents, which are the only important structures in the place. The population is 4000, who manufacture linen, silks, and woollen-cloths. They have a profitable transit and commission trade.

Murom, with 6500 inhabitants, an ancient town, was once the capital of the Mordwins, and afterwards the residence of Russian princes; it has 3 convents, 18 stone and 7 wooden churches, and several crown buildings. The inhabitants have some manufactures and considerable trade.

VLIELAND. [HOLLAND.]

VLISSINGEN. [FLUSHING.]

VOGHERA, a province of Piedmont, in the administrative division of Alessandria, is bounded N. by the Po, which divides it from the province of Mortara and from the Austrian crownland of Lombardy; E. by the duchy of Parma and Piacenza; S. by the provinces of Tortona and Bobbio; and W. by the provinces of Tortona. Its area is 308 square miles, and its population in 1848 was 101,695. It lies mostly in the plain of the Po, but the southern part of it includes the northern slope of the Ligurian Apennines, from which the Staffora and other torrents descend and cross the plain to join the Po. The country produces much silk. The head town, *Voghera*, originated in a suburb of the ancient town of Iria, and this circumstance seems also to have given origin to the name, which is a corruption of *Vicus Iriae*. *Voghera* has 11,000 inhabitants, who manufacture woollens and silks; the only building in it worthy of notice is the collegiate church, which is of good architecture. *Voghera* is in a plain on the Staffora (which as well as the town was in ancient times called *Iria*), at the intersection of the high roads from Turin to Modena, and from Genoa to Milan by Pavia. The town is begirt with walls.

The other towns of the province are—*Stradella*, with 5000 inhabitants, situated on the high road from *Voghera* to Piacenza, and near the borders of the duchy of Parma; *Broni*, or *Bronsi*, a post-town on the same line of road, with 3000 inhabitants; and *Catoggio*, which has 2500 inhabitants.

VOIGTLAND, or VOGTLAND, is the land formerly possessed by the officers called Voigte (advocates) of the empire, the predecessors of the present princes and counts of Reuss. Their country comprehended the present circle of Voigtland in the kingdom of Saxony, the bailiwick of Weyda in the grand-duchy of Saxe-Weimar, the possessions of the princes and counts of Reuss, the lordship of Hof (now belonging to Bavaria), and the bailiwick of Ronneburg in the duchy of Saxe-Altenburg. The descendants of Henry the Elder, Voigt of Plauen, sold or mortgaged various portions of these possessions; and at length, in consequence of such a mortgage, the Elector Augustus of Saxony, who in 1560 had acquired by purchase the bailiwick of Weyda, Arnschank, and Ziegenrück, purchased in 1569 the lordships of Plauen, Voigtberg, and Pausa. They were formed into two circles: that of Neustadt, which was ceded to Prussia by the treaty between Prussia and Saxony concluded at Presburg, May 18, 1815; and the circle of Voigtland, which remained to Saxony, and forms the most western part of that kingdom. This circle has an area of 556 square miles. According to the nature of the country, it is divided into two portions, the Mountain and Forest Region, and the Land Region. The first is the mountainous and thickly-wooded tract on both sides of the Mulda next the circle of the Erzgebirge, which it greatly resembles. The climate is cold and the soil stony; the only kind of grain produced is oats, and the only vegetables are potatoes. In the other portion, called the Land Region, the surface of the ground is covered with a rich mould, the climate is milder, and the weather and temperature much less variable. The highest mountains are the Schneckenstein and the Rammelsberg, on the frontiers of Bohemia: the principal rivers are the Elster, the Mulda, and the Gölsch. In the valleys most agricultural products are successfully cultivated. Flax is a very important crop. The circle has a very fine breed of horned cattle and sheep. Game and fish abound, and pearls are found in the Elster. One of the chief productions is timber, of which large quantities are exported. The minerals are copper, iron, alum, lime,

and slate. The chief occupation of the inhabitants is the manufacture of linen, cotton, woollen-cloth, and muslin. The chief town of the Voigtland is PLAUEN.

VOIRON. [ISÈRE.]

VOLCHOW, or WOLCHOW, RIVER. [NOVOGOROD.]

VOLGA, called by the Tartars *Etch*, that is, 'the bountiful,' is the longest river, and, with the exception of the Danube, has the largest volume of water of any river in Europe; and its entire course is within the Russian empire. It rises in 57° N. lat., on the frontier of the governments of Twer and Novogorod, near the village of Wochina-Werchowia, issuing from a small lake formed by several springs, and it flows through the lakes of Oselok, Plara, and Volga, which it quits about 90 miles above Twer. Near Ostuschkof it receives the Selicharowka, which issues from Lake Seeliger, and attains the breadth of 150 feet; at Rahew-Vladimirov it becomes navigable for small boats, and at Twer, where it is 700 feet broad, for large barges. Having traversed the government of Twer in an easterly direction, it turns to the north-east to Yaroslav, then south-eastwards to Kostroma and to Nischnei-Novgorod, where it receives the Oka; thence to Casan, where, having been joined by the Kama, it becomes 1000 yards broad, and having passed Simbirak, Saratov, and Astrachan (where in time of floods it is above 10 miles across), it divides into eight branches, which inclose 70 islands, and discharges itself by 65 mouths into the Caspian Sea. The rivers which join it, with the exception of the Oka, before it reaches Casan, are of no great magnitude; but the Kama, which joins it at Casan, after a course of 1000 miles, makes a vast accession to its waters.

The Volga is of the utmost importance for the facility which it affords to the trade of the interior of the empire, and also to its foreign commerce; the Russian government having, by a judicious system of canal navigation, so connected the various navigable rivers, that the Polar Sea communicates with the Caspian by a navigation of 4000 miles on the Dwina, the Volga, and canals. The entire length of the Volga is above 2000 miles, and its total fall is only about 60 feet. It flows with a slow regular current uninterrupted by rapid or cataract. It is stated that the volume of its waters is gradually decreasing: at the beginning of the 18th century it had depth enough for freights of 1600 tons; it does not now bear vessels of more than 1200 tons.

The banks of the Volga are extremely fertile, even the yet uncultivated parts; and there is no other part of Russia where so much oak timber grows as in the vicinity of this river. The navigation of the Volga is much obstructed, in the dry season of the year, by shallows and islands; but in May and June the melting of the snow and ice swells its waters, and often causes extensive inundations. At this season its depth is so increased that large ships can pass over the sand-banks and low islands (which are then completely under water), and descend it in safety from Twer to Astrachan. The Volga, especially from Astrachan to the Caspian, is more abundant in fish than perhaps any other river in the world. Immense numbers penetrate from the Caspian Sea to a considerable distance into the several mouths of the Volga, and many thousand small vessels are employed in the fisheries. The fish taken in the largest quantities are sturgeon, carp, and pike of extraordinary size. Caviar is made of the roe of one species of sturgeon, and isinglass from the skin and entrails of another, which is called by the Russians *Beluga*. Seals also come from the Caspian into the mouths of the Volga, where they are taken. Steam-boats ply on the Volga from the Twer to the Caspian.

VOLHYNIA (Wolynsk), a government of West Russia, is bounded N.W. by Grodno, N. by Minak, E. by Kiew, S. by Podolia, and W. by Galicia and Poland. Its area is 27,434 square miles; the population in 1846 was 1,445,500.

The country is an elevated level extending at the foot of the Carpathian chain. On the northern frontier there are extensive peat moors and morasses, and where there are hills they are clothed with the finest forests, chiefly of pine, though there are some which consist entirely of oaks, beeches, and limes. The southern portion is undulating, and has two ridges of low hills, which enter it from Podolia and decline towards the centre of the province. These chains of hills (generally not more than 300 feet high), are covered with forests, and are to be considered as the extreme offsets of the Carpathians on this side. In the southern district they rise to the plateau of Awratyn, to which some give an elevation of 1000 feet. This plateau extends from Awratyn to Bieloserka (from the north to the south-west) for about one degree; and forms part of the watershed between the Baltic and the Euxine. There is no great river in the government. There are great numbers of large ponds, and several mineral-springs. The climate resembles that of Southern Germany, only that the winter is rather more severe, and the night frosts protracted to a later period, so that the rivers are every year frozen. There are no prevalent endemics except the *Plica Polonica*. Locusts periodically desolate the fields.

Volhynia is one of the most fertile provinces of Russia, and there is perhaps no other in which agriculture is so general and so flourishing. But agriculture is still in a backward state, and farming implements are rude. The rich crops of grain are to be attributed to the fertile soil. In the northern border, where there are many marshes, there are the most luxuriant pastures. Besides rye, barley of several

kinds, oats, millet (which thrives especially in the heavy marsh-lands), the farmers cultivate several species of wheat of the finest quality. A large surplus of corn is annually exported. Flax and hemp are grown in great abundance, and here and there rapeseed, tobacco, and pulse: linseed, hempseed, and oil are exported. All the ordinary vegetables are cultivated in the gardens. Mustard, saffron, capsicum, hops, and tobacco are commonly grown; and chamomile, panic-grass (*Manne de Pologne*), and wild asparagus, are gathered in the fields and meadows.

The forests are very extensive. Great quantities of timber and firewood are conveyed to the Dnieper, partly by rafts, partly by land-carriage; the forests also furnish much pitch, tar, charcoal, and potash. The wild animals found in them are stags, elks, fallow-deer, wild boars, hares, squirrels, martens, polecats, weasels, beavers, and otters, a few bears, lynxes, and wild-cats, and many wolves and foxes. Wild berries of various kinds abound, and truffles and mushrooms are commonly met with.

The rich pastures are very favourable to the breeding of cattle. The Volhynian oxen are fine animals, and great numbers are exported. The management of the dairy is not well understood. The horse, when properly tended, is larger and stronger than the other Polish horses, though of the same breed: the horses of the peasants and poor Jews are in general inferior. The sheep are mostly of the Polish breed. The farmer has fewer goats than swine; poultry is very abundant; great numbers of bees are kept, and the honey is very fine. The rivers furnish abundance of fish, and on all the estates there are regular carp-ponds.

Bog-iron, saltpetre, building-stone, millstones, potter's-clay, porcelain clay, and limestone are found.

The women in the villages knit, spin, and make coarse linen and woollen cloth; the men prepare potash, pitch, tar, and charcoal. Manufactures have greatly extended in Volhynia since the commencement of the present century. The principal products are linen, leather, woollen-cloths, earthenware, porcelain, and paper.

The Dnieper is near enough to afford easy communication with Odessa. The articles exported are the products already enumerated, and some manufactured goods. The cattle, horses, honey, and wax find a ready market in Austria and Poland, whither they are conveyed by the Jews, who have the whole trade of the province in their hands. There are great fairs at Dubno and Ostrog.

The principal towns are—*Schitomir* (in Polish, *Zytomiers*), the capital of the government, situated on the river Teterow. Before it came under the dominion of Russia it was an insignificant place, with less than 2000 inhabitants. It has now a population of about 12,000, who have a considerable trade in woollen-cloths, linen, silks, calicoes, leather, wax and honey, and Moldavian and Hungarian wines. *Berdykiew*, an ugly ill-built town, is one of the most considerable in the country; it has several churches, and a large fortified Carmelite convent. The population is stated to be between 30,000 and 40,000, of whom a great proportion are Jews. There are several respectable Christian merchants, who carry on a considerable trade in the productions of the country. *Iaslau*, with 5000 inhabitants, has four Greek churches, one Roman Catholic church, a monastery, and a synagogue. *Ostrog*, on the Wellija, consists of the old and the new towns; it contains an ancient castle, several Greek and Roman Catholic churches, a Basilian convent and school, and about 5000 inhabitants, of whom many are Jews. *Kremenetz* is situated at the foot of a high mountain, on which there is a castle or citadel. It has several Greek churches, a monastery, and 8000 inhabitants.

VOLOGDA, an extensive government of European Russia, extends from 58° 30' to 64° 40' N. lat., 38° 20' to 59° 40' E. long. It is bounded N. by Archangel, N.E. by Tobolsk, S.E. by Perm and Viatka, S. by Kostroma, S.W. by Yaroslav, W. by Novgorod, and N.W. by Olonetz, and comprises an area of 147,422 square miles.

The surface of this government is an immense plain, which extends on the east to the Ural Mountains, and is only traversed by a lateral branch of that chain, which crosses the north-eastern part: it contains vast forests, extensive morasses, and some lakes. The soil is very various: there are however large tracts in which the surface is covered with a rich mould, and in most parts the soil is susceptible of cultivation. The most fertile part is the south-west.

Besides the Ural and its north-western offset, which runs along the bank of the Petschora, there is here and there a hill, which is called a mountain. The north-eastern chain, here called *Pojas-Kamennoi*, or the Stony Girdle, evidently forms the watershed between the Dwina and the Petschora. It is thickly wooded, about seven miles broad, and continues to rise as it runs to the north.

The principal rivers are—the DWINA, which is formed by the union of the Jug and the Suchona. The *Vaga*, a feeder of the Dwina, which issues from a morass, where it is already above 1200 feet in breadth. The *Petschora*, which rises in the Ural Mountains at the point where the governments of Vologda, Tobolsk, and Perm meet. This province has also a canal, called the North Catherine Canal, begun in 1736 and completed in 1817. It is 12 miles in length. It unites two rivers, both called *Keltma*, one a tributary of the *Wytschegda*, and the other of the *Kama*, a tributary of the *Volga*, by which the *Wytschegda* communicates with the *Kama*, or the Dwina, and the Frozen Ocean with the Caspian Sea.

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The most considerable lakes are—the Kubenskoe, which receives the Kubana and 20 other small rivers, and from which one branch of the Suchona issues. The island of *Kamennoi* is on this lake. The two lakes called *Piätisorskoi* are very deep. Lake *Sandor*, 10 miles long and 3 miles broad, the waters of which are said to heal wounds and ulcers. Lake *Kondas*. There are numerous morasses in this government, some of which are 25 to 45 miles in circumference.

The climate is cold but very salubrious: it however varies considerably in different parts of the province. The winter is much longer in the north-eastern than in the south-western portion. The rivers generally freeze in November and thaw in May.

Agriculture requires the utmost care, and the ground requires to be well manured. Rye, barley, and oats are grown. Flax and hemp are extensively cultivated; and likewise some hops, peas, and beans. In the south-western circles the produce is sufficient for the home consumption; but towards the north and north-east it gradually diminishes, and a considerable quantity is imported. In the north-east cabbages, turnips, and garlic thrive; in the south-west the gardens produce not only most of the vegetables common in Russia, but also apples and cherries. The forests constitute the wealth of the province. The chase furnishes many valuable articles both for the inland and foreign trade. The wild animals are elks, reindeer, ermines, martens, weasels, squirrels, hares, gluttons, bears, wolves, lynxes, foxes and wild-cats, various kinds of birds and water-fowl, among which are twelve species of ducks. Horses, oxen, sheep, goats, and swine are numerous. The rich pastures east of the Dwina and the many salt-springs are favourable to the rearing of cattle, and the breed both of horses and oxen is in great repute.

The minerals are iron, copper, granite, freestone, quartz, felspar, whetstones, limestone, and salt. The salt-springs are very important, and supply almost the whole consumption of the province.

There are manufactories of woollen cloth, linen, glass, iron-ware, and paper. There are also brandy distilleries, tanneries, and manufactories of candles. Vologda may be regarded as the centre of the trade of Siberia with Archangel, being situated on the great road between them, and a very active trade is carried on in the summer on the rivers, and in the winter on sledges. The principal trading towns are Vologda, Totma, and Ustiug. The several annual fairs are very well attended.

The population of this government, amounting to 822,200 in 1846, consists chiefly of Russians. There are also some Syrians, who are a remnant of the ancient Finnish inhabitants; and Samoiedes, who wander in the inhospitable deserts of the north-east, on the banks of the *Petschora*.

Vologda, the seat of government, and the see of the bishop, is situated in 59° 12' N. lat., 40° 10' E. long., on both sides of the river Vologda. The population is about 14,000. Vologda is an open town, consisting of two principal parts, each of which is divided into four quarters. The town contains about 50 churches, 6 of which are of stone; a monastery; a nunnery; a theological seminary for 600 priests' sons; a gymnasium; a district school; and many buildings and magazines belonging to the crown. The inhabitants manufacture linen, silks, leather, sealing-wax, white-lead, colours, vitriol, and have very extensive tanneries and candle manufactories; they likewise make superior articles in gold, silver, enamel, and lacquered ware. The merchants trade extensively with St. Petersburg and Archangel, with China and the Aleutian Islands. They are also connected with Hanseatic merchants. The city is surrounded with gardens, which produce good vegetables and some fruit.

Totma, on the Suchona, consists of three broad streets, has 17 churches, 3 convents, several magazines, and 3000 inhabitants, among whom are many artisans and intelligent merchants, who have a profitable retail trade, and a considerable commerce with Archangel and Siberia.

VOLONNE. [ALPES, BASSES.]

VOLTAGGIO. [GENOA.]

VOLTERRA, a town of Tuscany, in the province of Pisa, is built on the sight of Volaterræ, one of the most ancient of the Etruscan cities. Volaterræ is first mentioned by Livy (x. 12) under the year B.C. 298, when the people fought bravely against the consul L. Cornelius Scipio. It became eventually a municipium. The people of Volaterræ, having espoused the party of Marius, were besieged by Sulla two whole years. The city suffered severely from the invasion of the Vandals; after them it came under the dominion of the Lombards, who were driven out in the 8th century by Charlemagne, and Volterra became an imperial town, governed by the counts, marquises, or officers of the emperors, who often deputed the bishops of the diocese to administer the government. Like other cities of Italy, Volterra was torn by the contending factions of the Guelphs and Ghibellines. The former having prevailed, the Volterrani were induced to unite themselves to the Pisan republic.

Volterra is 50 miles from Leghorn, about 40 miles from Florence, and 30 miles from Siena. It is situated on a hill, the west sides of which are extremely precipitous, and, owing to the soft nature of the material, a species of marl, are continually wearing away and encroaching on the site of the town. On the north are found the numerous sepulchral chambers, called by the Italians 'Ippogei,' to which Volterra owes its remarkable and unique museum of cinerary urns or sarcophagi.

A most interesting public Etruscan museum, consisting of cinerary sarcophagi, gold ornaments, gems, weights, bronzes, coins, and objects in terra-cotta, has long been formed in Volterra. Some fragments of walls and columns and an arched gateway of Etruscan workmanship are all that now remain of the ancient constructions. The huge blocks of stone in these remains are uncemented. The Etruscan arch is decorated with three sculptured human heads; one adorns the key-stone, and two are carved on the springing stones of the arch above the impost; the impost itself retains its mouldings in excellent preservation.

The modern city is walled, and possesses a fortress partly constructed on the site of the ancient Etruscan walls. Within the fortress is a circular tower called the Mastio, which has served as a state prison. Volterra contains a cathedral, several churches, a theatre, several palaces, a Monte-di-Pieth, and an antiquated town-hall, begun in 1208 and finished in 1257. In this building, on the ground-floor, is the museum of sarcophagi found in the tombs, and above is placed the public library. A gloomy palace, constructed in the 10th century, was the residence of the Capitano di Giustizia, when Volterra was a free and independent city: it afterwards became the residence of the podestà, or mayor. This building has been the theatre of many scenes of violence. The streets are narrow, and, except the main streets, badly paved; the houses are often of great antiquity, consisting in many instances of towers modernised. The population may be about 5000.

The chief business of the Volterrani is the carving of alabaster; they supply vast quantities of carved ware to the markets of Florence, Leghorn, and Pisa.

VOLTRI. [GENOA.]

VOLVIC. [PUY-DE-DÔME.]

VOORN. [BRILL; HOLLAND.]

VOORNE, ISLAND. [MEUSE, RIVER.]

VOREPPE. [ISÈRE.]

VORONETZ, or WORONESCH, a government of Russia in Europe, is situated between 48° 35' and 52° 50' N. lat., 37° 45' and 43° E. long. It is bounded N. by Tambov, N.E. by Saratov, E. and S.E. by the country of the Don Cossaks, S.W. by Ekaterinoslav, and W. by Charkow. Its area is 25,591 square miles, and it is divided into twelve circles.

The face of the country is an undulating plain traversed by low ridges and chalk-hills. The soil consists partly of clay, partly of sand, for the most part covered with a pretty thick layer of vegetable mould, which is so fertile that it requires only a periodical fallow.

The principal river is the DON, which comes from Tambov, and, traversing the government from north to south, receives most of the other rivers, such as the Voronetz, which is navigable by large barges, the Sosna, the Ikoretz, the Donez, and some others. The climate is temperate and healthy. The inhabitants live to a great age, and the productions of temperate climates flourish. Melons are raised in large numbers, and are sent to Moscow and St. Petersburg. The rivers freeze about December, and thaw in the beginning of March.

Voronetz is one of the great corn provinces of the empire. The farmers grow wheat of different kinds, barley, oats, buckwheat, millet, and maize—the last only in gardens; poppies, lentils, peas, flax, and hemp are grown in the fields. Horticulture is very carefully attended to; the gardens produce all the kinds of vegetables that are grown in Germany. Hops are grown in small quantities. The most common fruits are cherries and plums. Vines grow in sheltered situations, and the grape ripens in warm seasons. The forests are very nearly thinned. Pines are rare; but there are remarkably fine oaks. The rich pastures on the banks of the rivers and the extensive commons are favourable to the breeding of cattle, which is a very general occupation of the inhabitants. There are numerous flocks of sheep and herds of swine; oxen suffice only for the home consumption. There are many small studs of horses of the Russian race. The most common domestic poultry are geese and barn-door fowls; bees are very generally kept. The minerals are iron (but no other metal), chalk, limestone, freestone, and saltpetre.

The manufactures of the province are not of great importance. The exports are the natural productions of the country—corn, cattle, hides, timber, bristles, some coarse cloth, saltpetre, honey, and wax. The chief commercial cities are Voronetz and Ostrogobak; but there is great want of good water-carriage, the Don being navigable only in the spring, when the water is high. The Donez merely touches the frontier, and has not one town on its banks.

The population of this government was 1,657,900 in 1846. The inhabitants are in the northern part Great Russians, and in the southern Little Russians. Among the latter are included the Cossaks, or Tscherkassians, as they are here called, after their ancient capital; there are also some gipsies and Germans.

Voronetz, the capital of the government, the residence of the governor and of the Bishop of Voronetz, is situated in 51° 40' N. lat., 39° 23' E. long., on the river Voronetz, which falls into the Don two miles below the city. Voronetz is built on a very steep rock, and possesses strong natural defences. It is one of the oldest cities in the empire, and is mentioned in 1177. Peter the Great had a dockyard here for building ships, with which he intended to descend the Don to the sea. He often resided here, and built himself a palace, no vestige of which now remains. The city consists of three parts, the

upper town, the lower town, and the suburbs. The upper town contains the residence of the governor and the public offices, the bishop's palace, the cathedral, the bazaar, and the town-hall. In the city are 18 stone churches, 2 convents, a poor-house, a gymnasium, an ecclesiastical seminary, an arsenal, and several schools. The population is probably over 20,000. The streets are very broad, but not paved. The manufactures are cloth for the army, leather, soap, and vitriol. There are some breweries and brandy-distilleries. The merchants of Voronetz trade with all parts of the empire.

Ostrogobak, about 60 miles S. from Voronetz, is a small commercial town with several churches. The population is about 4500, who carry on an extensive trade. The three annual fairs are visited by merchants from the most distant parts, and even by Greeks, who bring many Turkish goods. At a distance of about 10 miles there is a small colony of Germans, whose chief occupation is agriculture.

VOSGES, a department in the eastern part of France, is bounded N. by the department of Meurthe, N.E. by that of Bas-Rhin, E. and S.E. by that of Haut-Rhin, S. by Haute-Saône, W. by Haute-Marne, and N.W. by the department of Meuse. Its form is that of an irregular quadrangle, of which the northern side measures 35 miles, the southern 45 miles, the eastern 53 miles, and the western 41 miles. The department is comprehended between 47° 48' and 48° 33' N. lat., 5° 27' and 7° 20' E. long. Its area is 2347 square miles. The population in 1851 was 427,409.

The surface is mountainous in the east, in the other parts (which constitute what is called the Plain) hilly. The Vosges Mountains, from which the department takes its name, extend along the eastern boundary; and the Faucilles traverse the department from west to east, and unite with the branches of the Vosges about Plombières, in the south-eastern part of the department. The Vosges Mountains present a great variety of picturesque and delightful scenery. The Ballon-d'Alsace, one of their highest summits, at the point where the branch which joins the Faucilles diverges from the main chain, is 4124 feet high; Le-Bressoir, a neighbouring summit, is 4049 feet; and Le-Grand-Donnon, farther north, is 3314 feet.

The Vosges, and that part of the Faucilles which is nearest to the Vosges, are composed chiefly of granitic rocks. Upon the granite rests the red and the variegated sandstone; upon these sandstones lie fossiliferous limestone and variegated marl; and above these lies the lower oolitic rocks. [VOSGES MOUNTAINS.] These formations cover the whole of the department; the upper formation, the oolitic, occupying the western side, and the others successively cropping out as we advance eastward. The mineral treasures of the department are considerable. Granite, porphyry, freestone of a black colour, millstones, slates, coal, gypsum, and agates are found. Iron-stone is procured. There is a great number of iron-works for the manufacture of pig-iron, wrought-iron, and steel. Copper, silver, and manganese, are also found among the minerals, but no mines are now worked.

The department belongs chiefly to the basin of the Rhine. A small portion, which extends in the north-eastern corner, across the ridge of the Vosges, is drained by the Bruche, which rises in those mountains and flows down into the Ill near Strasbourg. The central parts are drained by the MOSELLE [vol. iii. col. 874], one of the largest affluents of the Rhine, and its tributaries. It receives the Vologne and Durbion on the right bank. The Meurthe rises in the slopes of the Vosges, on the eastern side of the department, and flows north-west into the adjacent department of Meurthe, where it joins the Moselle. The Mortagne, a feeder of the Meurthe, and the Madon, a feeder of the Moselle, rise in the department of Vosges, but do not join their principal streams till they reach the department of Meurthe. The Plaine and the Rabodot, feeders of the Meurthe, rise in other departments, but join their principal stream in this. The north-west of the department is drained by the Meuse, which crosses it from south to north, and by its feeders. A very small district in the north-west is drained by the Ornain, which belongs to the system of the Seine.

The southern border of the department belongs to the basin of the Rhône, and is drained by the Saône, which rises on the southern slopes of the Faucilles, and by the Coney, the Angronne, and the Combautte, which flow directly or ultimately into the Saône.

None of these rivers is navigable in the department of Vosges. Irrigation is well managed; and the streams of the department are skillfully applied as a moving-power to the purposes of manufacture. There are several chalybeate, and also warm saline mineral-springs. There are also several small lakes in the east of the department. The department is traversed by 6 imperial, 23 departmental, and several communal roads.

The area of the department is about 1,450,000 acres, of which about 600,000 acres are under the plough. The soil of the Plain is tolerably fertile; but the produce in corn is inadequate to the supply of the dense population. The principal crop is of oats; barley, wheat, rye, and maalin (wheat and rye mixed), are also grown, and hemp and hops. The grass-lands amount to 180,000 acres, and the heaths and open pastures to about 90,000 acres. The number of horned cattle is very considerable. The dairy is well attended to, and cheese and butter are made in large quantities. Horned cattle are small. Horses too are of inferior size but numerous. A great number of pigs is reared.

The vineyards cover about 11,000 acres, and the orchards and gardens occupy about the same space. The produce of the vineyards is about 5 million gallons a year of ordinary red wine. The quantity of stone-fruits grown is considerable; among them are the quetch or German plum, and the cherry from which kirschwasser is made.

The woodlands have an area of above 300,000 acres, and the forests and wastes 170,000 acres. More than 300 saw-mills, moved by water, are employed in sawing deals, which are floated down the Meurthe and the Moselle to Metz; and staves, which are floated down the Coney into the Saône. Game and fish are plentiful.

The department of Vosges is one of the principal manufacturing departments in France. In the *arrondissement* of Epinal are iron-works, numerous paper-mills, saw-mills, potteries, and tanneries; in the *arrondissement* of Mirecourt are glass-works and iron-works, and a considerable manufacture of lace and musical instruments; in that of Neufchâteau are oil-mills, paper-mills, saw-mills, iron-works, and manufactures of musical instruments and shoes; in that of Remiremont, potash and other chemical products, kirschwasser, and paper are made; and in that of St.-Dié wooden shoes, wooden wares, cotton-yarn and other cotton goods, paper, and wrought iron. The exportation of cheese and timber from the department is very great.

The department is divided into five *arrondissements*, which, with their population, are as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Epinal . . .	126	6	99,585
2. Mirecourt . . .	142	6	73,951
3. Neufchâteau . . .	132	5	65,276
4. Remiremont . . .	37	4	71,256
5. St.-Dié . . .	109	9	117,341
Total . . .	546	30	427,409

1. In the first *arrondissement* the chief town is *Epinal*, which is also the capital of the whole department. [EPINAL.] *Rambervillers*, a well-built town with 4800 inhabitants, is situated on the right bank of the Mortagne, over which is a stone bridge communicating with a suburb on the opposite bank. The townsmen manufacture coarse woollen-cloth, linen, paper, leather, earthenware, madder, iron, and jewellery. Considerable trade is carried on in corn, hemp, iron, paper, and hops. The town has a hospital and a public library of 10,000 volumes.

2. In the second *arrondissement* the chief town, *Mirecourt*, on the Madon, 17 miles N.W. from Epinal, has tribunals of first instance and of commerce, a public library of 7000 volumes, and 5194 inhabitants. The town is in a pleasant and highly-cultivated district, but is ill built. The townsmen are chiefly engaged in the manufacture of musical instruments; a great number of church organs and bird-organs, and of base-violins, violins, guitars, and other stringed instruments are made. Lace, leather, and wooden wares are also manufactured; and trade is carried on in wine, brandy, and sheep. There are four yearly fairs. *Mirecourt* has several fountains, and a handsome hospital. *Charmes*, on the left bank of the Moselle, over which is a handsome bridge, has a population of about 2900, who trade in corn, wine, wood, hides, gypsum, and lace, and manufacture lace, kirschwasser, and leather. *Pontenois-le-Château*, on the Coney, and *Durney*, on the Saône, were formerly places of strength.

3. In the third *arrondissement* the chief town, *Neufchâteau*, on the Mouzon, near its junction with the Meuse, 37 miles N.W. from Epinal, has a tribunal of first instance, a college, a public library of 8000 volumes, and 3589 inhabitants. It is a well-built town, and stands on a small eminence surrounded by loftier hills. The townsmen manufacture coarse woollen-cloth, swanskin, cotton counterpanes, wicker wares, and nails and brads; and trade in wood, iron, and hardware. *La-Marche*, near the source of the Mouzon, has about 2000 inhabitants, wrought-iron works, and oil-mills. It was the native place of Guillaume de la Marche, who founded the college of La Marche at Paris. The village of *Domremi*, on the left bank of the Meuse, close to the north-west border of the department, possesses historical interest as the birth-place of Jeanne or Joan of Aro (1412): it takes from this circumstance the distinctive epithet of *Domremi-la-Pucelle*. The house in which Jeanne was born is still standing near the church, and is easily recognised by its gothic doorway surmounted by three escutcheons with fleurs-de-lis, and by an ancient statue representing the maid covered with her armour. It has become national property by purchase, and near it a school for the girls of the village has been built, and placed under the direction of the Sisters of Charity. A monument in honour of Jeanne d'Aro was inaugurated in 1820: it consists of a fountain with a quadrangular base, from which rise four isolated pilasters supporting an entablature with two fronts, and surmounted by a bust of the heroine. It stands in the public place of the village, and has this simple inscription: "A la mémoire de Jeanne d'Aro"—"To the memory of Jeanne d'Aro."

4. In the fourth *arrondissement* the chief town is *Remiremont*, which stands on the Moselle, at the foot of the Faucilles Mountains, 17 miles S.E. from Epinal, and has 5191 inhabitants. *Remiremont* takes its name from *Rozmaria*, a noble of the early Frankish period, who had a

castle on an eminence near the town. He founded on the eminence two abbeys (A.D. 820), one for monks, the other for nuns, and endowed them with all his possessions. These abbeys having been destroyed in the 10th century, were rebuilt in the plain. The most important of the two was that for lady-conventresses, who were not bound by a monastic vow, but none were admitted who could not prove the nobility of their family for four generations: the abbess was a princess of the empire, and enjoyed the prerogatives and maintained the state of a sovereign. The abbey was rebuilt in 1752, by Anne Charlotte of Lorraine, then abbess. The abbey church, now the parish church, is a handsome structure in the Italian style. The principal streets of *Remiremont* are watered by a brook which flows into the Moselle: the houses are old and not well built, but there are some pleasant promenades. There are a college, a public library of 5000 volumes, an hospital, and a tribunal of first instance in the town. The manufactures comprise cottons, paper, leather, wrought-iron, potash, and kirschwasser; the trade in wood, iron, hemp, cattle, cheese, and medicinal herbs is important. There are numerous saw-mills driven by water-power in the neighbourhood. *Plombières*, a small village situated in a vale-head of the Faucilles Mountains, is celebrated for its warm mineral springs, and for a beautiful church, built by Stanislas Leszinski, duke of Lorraine.

5. In the fifth *arrondissement* the chief town, *St.-Dié*, is situated on the Meurthe, and has a tribunal of first instance, a public library of 10,000 volumes, an ecclesiastical college, and 8692 inhabitants. The town, which is well-built and surrounded with a wall, gives title to a bishop, whose diocese is the department of Vosges. Cotton fabrics and potash are manufactured, and in the neighbourhood are paper-mills, iron-works, and wire-factories. Among the other towns, all of which are small, may be named *Raon l'Étape*, on the Meurthe, population 3500 for the whole commune; *Senones*, N. of St.-Dié, on the Rabodot, population 2500 for the whole commune; and *Gérardmer* or *Géromé*, on the Valogne, population 5625 for the whole commune. *Raon l'Étape* is an old town, poorly built, at the foot of a hill. *Gérardmer* has considerable trade in cheese, and in wooden wares and wooden shoes made in the neighbourhood. It consists of a number of hamlets and country houses built without regularity, in a valley on the eastern shore of the Lake of Gérardmer, 14 miles S. from St.-Dié. In the middle of a long irregular street stands a handsome parish church. In the commune are many saw-mills driven by water power.

The department constitutes the diocese of St.-Dié, the bishop of which is a suffragan of the archbishop of Besançon: it is in the jurisdiction of the Imperial Court, and within the limits of the University-Academy of Nancy, and is comprehended in the 5th Military Division, of which the head-quarters are at Metz. It returns three members to the Legislative Body of the French empire.

VOGSES MOUNTAINS (*Wassgau, Vogesen*), a chain of mountains bounding the valley of the Rhine on the west from the neighbourhood of Mühlhausen to that of Mayence. The chain is partly in France, and partly in the Rhenish province of Bavaria, and in the territory of Hesse Darmstadt in Germany.

The Vosges unite on the south-west with the Faucilles, and so with the Côte-d'Or, and ultimately with the Cévennes; and on the south they unite with the offsets of the Jura. Cæsar calls the range *Vosegi*, and evidently included the Faucilles under the name, since he places in them the source of the Mosæ, or Meuse, which is far westward of the Vosges in the present more limited acceptation of the name. The Vosges extend more than 170 miles from the depression through which the Rhône-and-Rhine Canal passes, between Bèfort and Aickirch, to the valley of the Rhine, at the elbow formed by that river between Mayence and Bingen. The breadth of the range varies. In the northern part, about Mont-Tonnerre, it is nearly 60 miles; but this breadth comprehends the lower slopes as well as the higher parts of the range. West of Strasbourg, between the valleys of the Rhine and the Saar, or Sarre, the breadth is about 20 miles. Between Colmar and Plombières, where a branch extends westward from the principal range, the breadth is nearly 40 miles. Another branch extends in a south-western direction from the southern extremity of the main chain in the direction of Vesoul.

The loftiest summits of the range are in a tolerably direct line, extending from Mont-Tonnerre, in the Rhenish province of Bavaria, to the Ballon-d'Alsace, near Girothagny, in the department of Haut-Rhin in France; and in a line extending nearly at right angles to the foregoing, from the Ballon-d'Alsace towards Plombières. The following are some of the principal summits, with their respective heights in feet:—Ballon-de-Lure, 8721; Ballon-de-Servance, 3970; Ballon-d'Alsace, 4124—all near the sources and upper waters of the Moselle and Oignon; Ballon-de-Soultz, or De Guebwiller, 4695; Le-Haut-d'Honec, 4391; Les-Chaumes, 4203; Le-Bressoir, 4049, near the source of the Meurthe; Le-Champ-de-Feu, 3537, near Schirmeck; Le-Grand-Donnon, 3314, at the source of the Saar, or Sarre; Mont-Tonnerre, 2924.

The part of the range which is north of the valley of the Bruche is sometimes termed *Les-Basses-Vosges*, or Lower Vosges, and is known to the Germans by the name of *Hardt*. The Rhine slope of the Vosges consists of a succession of steep declivities, and the valleys on this side of the range are deeper than those of the west side, where a slightly undulated surface gradually descends into the plain of Lorraine.

The highest summits of the Vosges are comprehended in a triangular space, of which the apex may be fixed at Schirmeck, in the valley of the Bruche, in the north-eastern corner of the department of Vosges, and the angles of the base at Plombières, in the department of Vosges, and Masvaux, in that of Haut-Rhin. In this triangular space the rocks are crystalline, intermingled with sedimentary formations belonging to the transition series. They comprehend granite, gneiss, mica-slate (but in small quantity), sienite, porphyry, serpentinite, talcose-slate, clay-slate, grauwacké, granular and compact limestone, and the formations of the carboniferous group. They ordinarily present rounded summits, called by the inhabitants of the district 'ballons,' or balls. They abound with springs and with deposits of peat, which are met with at various elevations. The transition rocks appear but rarely beyond the limits of the space defined above.

The three sides of the triangle above defined are skirted by ranges, more or less continuous, of mountains of a character altogether different, of square form and more horizontal outline. These are composed of a reddish quartzose sandstone, known as the sandstone of the Vosges. On the south side of the triangle the sandstone range is narrow and much interrupted. On the east side this sandstone is deeply intersected by valleys opening towards the Rhine. On the north-west of the triangle the sandstone occupies a much larger space and descends more gradually toward the plain of Lorraine. North of Schirmeck, as

far as the parallel of Mannheim, this sandstone forms the mass of the Vosges, and presents a range of heights of tolerably uniform elevation, but of unequal breadth.

The Vosges yield a variety of valuable minerals. Coal is found in various parts. Iron-ore is obtained, and a great number of iron-works are established in the neighbouring country. Other metallic ores found are copper, lead, manganese, and arsenic.

The summits of the Vosges are covered with snow during a part of the year. The greater part of the mountains are wooded to a certain height; their summits are covered with large spaces of green turf, to which, during six months of the year herds of cows are led to graze. The herdsmen dwell in huts, and make cheeses like those of Gruyère. The forests are chiefly composed of firs, pines, oaks, and chestnut-trees. The variety of vegetation which the mountains present renders them interesting to the botanist: and though little visited by the picturesque tourist, they present, in spots remote from the principal roads, scenery which may vie with that of Switzerland. Wine is grown in those parts of the mountains which present a favourable aspect.

VOUVRAY. [INDRE-ET-LOIRE.]

VOUZIER. [ARDENNES.]

VOVES. [EURE-ET-LOIR.]

VRANDUK. [BOSNIA.]

VULCANO. [LIPARI ISLANDS.]

W

WAAG, RIVER. [AUSTRIA.]

WAAL. [NETHERLANDS; RHINE.]

WABASH. [INDIANA; MISSISSIPPI, River.]

WADDESDON. [BUCKINGHAMSHIRE.]

WADEBRIDGE. [CORNWALL.]

WAIDHOFN. [ENS.]

WAIGATZ, a large island in the Russian government of Archangel, situated in the Frozen Ocean at the entrance of the Gulf of Kara. It is separated by the Strait of Waigatz from the continent, and by the Strait of Woronowakai from the island of Nova Zembla. It lies between 67° 20' and 68° 5' N. lat., 57° 30' and 59° 25' E. long. It is desolate, rocky, without wood, and almost without vegetation; but abounds in fur-bearing animals, snipes, plovers, and fish, and is inhabited by a few families of Samoides, and frequented by the Russians for the sports of hunting and fishing. The Strait of Waigatz was discovered by the Dutch in 1594.

WAINFLEET. [LINCOLNSHIRE.]

WAITZEN. [HUNGARY.]

WAKEFIELD, the capital of the West Riding of Yorkshire, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parish of Wakefield, is situated on the left bank of the river Calder, in 53° 41' N. lat., 1° 30' W. long., distant 27 miles S.W. by S. from York, and 182 miles N.N.W. from London by road and by the Great Northern railway. The population of the municipal and the parliamentary boroughs, which are co-extensive, was 22,065 in 1851. The borough is governed by 8 aldermen and 24 councillors, one of whom is mayor; and returns one member to the Imperial Parliament. The living is a vicarage in the archdeaconry of Craven and diocese of Ripon. Wakefield Poor-Law Union contains 18 parishes and townships, with an area of 34,662 acres, and a population in 1851 of 47,355.

Wakefield is a very ancient town. The Romans appear to have had a station in the township of Stanley, where some years since several moulds for coining their money (in some of which the coin was still remaining in the matrix) were found in a field; they are now deposited in the British Museum. A battle was fought at Wakefield in 1460, between the Yorkists and Lancastrians, at which Richard, duke of York, father of Edward IV., was slain. An ancient chapel ('of our Lady') occupies the site of one built by Edward III. The building projects over and partly rests on the starlings of the bridge. The bridge has eight arches, and was built in the reign of Edward III.

The town of Wakefield is paved, lighted with gas, and well supplied with water. The suburb called St. John's, at the northern extremity of the town, consists of handsome houses, with shrubberies, &c. A market-cross of the Doric order was erected early in the last century, with an open colonnade supporting a dome, the interior of which contains a spacious room for public business. The public rooms in Wood-street, built by subscription, comprise a library and news-room, with apartments for lectures, concerts, and assemblies. A corn-exchange was erected in 1823, and another on a larger scale was opened for business in 1837. The Tammy Hall, 210 feet long and 30 feet broad, erected many years ago as a place of sale for light woollen fabrics, has been converted into a power-loom factory for stuffs. The most important public buildings are those belonging to the county and the West Riding. The register-office was established in 1704, for the register of deeds relating to landed property. The court-house was erected in 1806. The house of correction is a very extensive pile. About a mile N.E. from the town is the West Riding Lunatic Asylum, erected in 1817, but since considerably enlarged.

The parish church, of which the oldest part was erected in 1470, is 156 feet long and 69 feet wide, with a tower surmounted with an octagonal spire 228 feet high. St. John's church was erected in 1795, and made parochial in 1815. Trinity church, opened in 1839, and St. Andrew's church, Warrigate Head, are the other churches of the Establishment. The Independents and the Wesleyan Methodists have each two chapels; and the Baptists, Quakers, Unitarians, Roman Catholics, and Primitive Methodists have one each. There are a Grammar school; a Green-Coat Charity school; National, British, and Infant schools; and the West Riding Proprietary school. There are a literary and philosophical society, a subscription library, a theatre, a savings bank, a mechanics institute, almshouses, and a dispensary and house of recovery.

The manufacture of woollen stuffs, which was once extensively pursued at Wakefield, is now almost entirely removed to Bradford and Halifax; but the woollen-cloth manufacture, and the spinning of woollen- and worsted-yarn, are carried on to some extent. The dyeing of woollen-stuffs is important as a branch of industry. There are rope-works, brick-kilns, iron-foundries, breweries, ship-yards, starch-works, and copper-works. The town is connected with a very rich and extensive district by numerous lines of river and canal navigation. [YORKSHIRE.] From the agricultural districts Wakefield receives large quantities of corn and wool; and coal and other commodities are exported to London, and to Lincolnshire, Norfolk, and Suffolk. The corn-market, held on Friday, is of great importance; it has frequently happened that for weeks in succession the quantity sold at Wakefield has exceeded the quantity sold at Mark Lane. Malt is made at Wakefield to a very large extent. The wool-fairs are on a large scale; and on alternate Wednesdays there is a great cattle and sheep fair. There are fairs in July and November for horses, cattle, and pedlery. A county court is held in the town.

WAKERING, GREAT. [ESSEX.]

WAKHAN. [BADAKSHAN.]

WALCHEREN. [ZEALAND.]

WALDAL. [NOVOGOROD.]

WALDECK, a principality in the north of Germany, consists of two parts: 1, the principality of Waldeck, which is situated between 51° 4' and 51° 31' N. lat., 8° 31' and 9° 12' E. long., and bounded W. and N. by Westphalia, E. and S. by Hesse-Darmstadt; 2, the principality of Pyrmont, which is situated on the left bank of the Weser, between the territories of Lippe, Hanover, and Prussia. The area of the whole is 459 square miles, of which 427 belong to Waldeck. It is a mountainous country, consisting of chains or of detached masses, without any wide valleys: it is perhaps the most elevated region of Western Germany. There is no large river, but there are several small streams. The climate is cold, but the air is pure and healthy. The soil is in general stony and sterile, yet corn, potatoes, and flax are raised sufficient for the consumption. There is a great quantity of timber, but there is no opportunity for exporting it. In some parts of the country there are good pastures, in which numerous herds of horned cattle are fed, and considerable quantities of butter and cheese are made. Sheep and swine are kept in great numbers. The minerals are copper, iron, lead, alabaster, marble, slate, freestone, and salt. The inhabitants manufacture some coarse woollen cloths, plush stockings, and sufficient linen for their own use. In Pyrmont there are five villages, the inhabitants of which derive their principal subsistence from the manufacture of thread stockings, which they export in large quantities. The population in 1852 amounted to 59,697, of whom 53,074 belonged to Waldeck. The prince and the great majority of

his subjects are Lutherans; the rest are Roman Catholics, Calvinists, Jews, and Quakers. The budget for the financial interval, 1854-56, estimates the annual revenue at 368,797 thalers, the annual outlay at 373,653 thalers. The revenue of the prince is about 45,000*l.* sterling, and the public debt about 180,000*l.* The prince is a member of the Germanic Confederation, and has in the Diet, with Anhalt, Lippe, Reuss, Schwarzburg, and Lichtenstein, a collective vote (the 16th), and in the general assembly a separate vote. His contingent is 519 men. The prince of Waldeck granted a constitution to his subjects in August 1852.

WALDEN, SAFFRON. [ESSEX.]

WALDOBORO. [MAINE, U.S.]

WALDSTÄDTER, and WALDSTÄDTER SEE. [LUZERN; SWITZERLAND.]

WALES, a principality of Great Britain, lies on the west side of that island, between 51° 20' and 53° 25' N. lat., 2° 41' and 4° 56' W. long. It is bounded W. and N. by St. George's Channel; E. by the English counties of Chester, Salop, Hereford, and Monmouth; and S. and S.E. by the Bristol Channel. Its greatest length from north to south is about 180 miles, and its breadth from east to west varies from 50 to 80 miles. It contains 4,793,975 statute acres, or 7398 square miles. The population of the principality in 1841 was 911,705; in 1851 it was 1,005,721. The general physical features of Wales are given in detail in the article GREAT BRITAIN.

The history of the island of Great Britain previous to and during the period of the Roman domination, is given in the article BRITANNIA; and as there are no materials for a history of Wales during that period distinct from the narrative of events in the island generally, we shall refer to that article and to ENGLAND, and proceed to give briefly the principal events connected with Wales from the time of the establishment of the Saxons, Angles, and other tribes in England, by which the ancient inhabitants of the island were gradually driven to the west.

Down to the Roman conquest the Welsh, under a variety of princes, were engaged in almost constant warfare with the Saxons and Angles. During the 6th and 7th centuries the country appears to have been divided into a number of petty kingdoms or principalities. As many as 14 co-existing kingdoms are mentioned. In the commencement of the 7th century, Ethelfrith, king of Bernicia, and the grandson of Ida, attacked the Welsh, assembled under Brochmael, king of Powys, and gained a decisive victory. About the same time Ceolwulf, from Wessex, penetrated into the province of Glamorgan; but the inhabitants, under Tewdric, their former king, drove the invaders across the Severn. Edwin, sovereign of Deira and Bernicia, subdued Anglesey and a considerable part of North Wales, and drove Cadwallon, the sovereign of North Wales, and whose father had been the protector of Edwin in early life, into Ireland. Cadwallon defeated and slew Edwin in 633, and penetrated into and desolated Northumbria. Successful in 14 great battles and 60 skirmishes, Cadwallon was regarded by the Cymri or Welsh as the deliverer of their country. He was however slain, with the flower of his army, in an engagement with Oswald of Northumbria.

Ethelbald, king of Mercia, in the early part of the 8th century, uniting with the king of Wessex, overpowered the Welsh. Dissensions between Mercia and Wessex led to a successful confederation between Roderic Molwynoc, the Welsh leader, and Cuthred, king of Wessex, against the king of Mercia, whom they defeated at Hereford. Cuthred in turn took up arms against and defeated the Welsh, and in 753 Roderic Molwynoc withdrew into North Wales. Towards the end of the 8th century the Mercians succeeded in driving the Welsh from the border territory, and Offa, king of Mercia, made an artificial boundary from the mouth of the river Dee on the north to the river Wye on the south, known by the name of Clawdd Offa, or Offa's Dyke, traces of which are still to be found along a great part of the line. Roderic, who had acquired the sovereignty of nearly all Wales, in 843 divided his dominions into three principalities, to which his three sons succeeded. One of these principalities was called by the Welsh, Gwynedd, and corresponded nearly to the present North Wales; another, Ceredigion and Dyved, or South Wales; and the third, Powys, comprising parts of Montgomeryshire, Shropshire, and Radnorshire. Early in the 10th century these three subdivisions of Wales became reunited under the sceptre of one king, Howel, who was surnamed Dda, the Good. He appears to have been an excellent king, and he reformed and digested the laws of his country. At a subsequent period Wales was divided into two principalities, North and South Wales, but the former seems to have had some predominance over the latter. During all these changes, however, some districts appear to have had their separate petty princes.

In the 10th century a fine or annual tribute was imposed on the Welsh by Athelstan, king of England, who had obtained the nominal dominion of Wales. On the accession of William the Conqueror, the Welsh refused to pay tribute. The Norman conqueror invaded their country with a considerable army, reduced them to submission, and compelled their princes to do homage and take an oath of allegiance as his vassals, and from this period the English kings preferred a claim to Wales as their dominion. During the reigns of his successors, the Welsh constantly united with the disaffected barons, and committed devastations and outrages on the English borders. William and his son had granted to their Norman followers all lands they

might acquire possession of in Wales, whence originated the Lords Marchers. In 1102 Henry I. bestowed several other lordships and castles in Wales on Englishmen and Normans; and for the purpose of still further repressing the spirit of the Cambrians, he introduced, in the year 1108, into Pembrokeshire, a numerous colony of Flemings. The principality of South Wales was for a time destroyed; Powys-land was also possessed by the English; and North Wales alone retained its independence.

In 1237 Gryffyth, the eldest son of Llewellyn-ap-Iorweth, prince of North Wales, rebelling against his father, that prince applied for the protection of Henry III. of England, which he received upon the terms of yielding vassalage to the English crown. David, the eldest son of Llewellyn, on the death of his father, renewed the homage to England, and taking his brother Gryffyth prisoner, delivered him to Henry, who imprisoned him in the Tower, where he lost his life in an attempt to regain his freedom. After the death of Gryffyth, Henry gave the principality of Wales to his eldest son Edward, afterwards Edward I. Llewellyn, the youngest son of Gryffyth, succeeded to the throne of North Wales on the death of his uncle David, and his brother Owen Goch to that of South Wales. Homage was now enforced by England as an established right. After the accession of Edward I. to the English throne, the Welsh prince was summoned to do homage, which he declined doing without having hostages for his safe conduct, and demanded that his consort, who was Edward's prisoner, should be restored. This Edward refused to comply with, and immediately proceeded to levy war against him, assisted by David and Roderic, brothers of Llewellyn, who had dispossessed them of their inheritance. The Welsh prince defended himself among the inaccessible mountains of Caernarvonshire, but Edward blocked up Llewellyn and his army so effectually, that after sustaining all the horrors of a siege they were obliged to yield to the wary English king. Llewellyn shortly afterwards rose against the English, and was joined by his brother David, but Llewellyn was slain in or immediately after an engagement with the Earl of Mortimer near Builth, in Brecknockshire, in 1284. David, who succeeded him in the principality, was soon after executed at Shrewsbury as a traitor for defending by arms the liberties of his native country and his own hereditary authority. The nobility of Wales submitted to the conqueror, and by the statute of Rhuddlan, passed in the 12th year of Edward's reign, Wales was incorporated and united with England.

Thus ended the existence of the Welsh as an independent nation. The title of Prince of Wales was bestowed by Edward upon his son, afterwards Edward II., and has ever since been the title conferred on the eldest son of the sovereign of England.

In 1295 insurrections broke out in various parts of Wales, but they were everywhere suppressed, and to prevent their recurrence Edward built castles at Rhuddlan, Conway, Beaumaris, Caernarvon, Harlech, and Aberystwith. The last effort by the Welsh to maintain an independent existence was under Owen Glyndwr, in the commencement of the 15th century. His career and brilliant success in opposing the English army are intimately connected with English history.

By the statute of Rhuddlan (12 Edward I., c. 5) a part of Wales was formed into the counties of Anglesey, Caernarvon, Merioneth, and Flint; and by a statute passed in the 27th year of the reign of Henry VIII., the counties of Monmouth, Brecknock, Radnor, Montgomery, and Denbigh were constituted; and by this statute one knight was directed to be chosen for each county in Wales, and a burgess for every borough being a county town, except the county town of Merioneth, and a member was subsequently given to Haverfordwest. By the Reform Act an additional member was given to the counties of Caermarthen, Denbigh, and Glamorgan; a member was given to Merthyr Tydvil, and one to Swansea, and numerous places were made contributory boroughs to each of the ancient boroughs returning members.

The laws and chief features of the constitution of the Britons when masters of the whole island seem to have been preserved in Wales for a considerable time; many of them indeed remained in full force until their abolition or alteration by express statutes at a comparatively recent period. The government from the earliest period appears to have been monarchical, but not following a strict rule of descent. An old code of laws compiled from those of Howel Dda states that no one is an "edling (heir to the throne) except that person to whom the king shall give hope of succession and designation." No power but the regal could either enact or abrogate a law. Traces of a popular representation are to be found in the formation of the digest of the Welsh laws by Howel Dda, in the 10th century. For this purpose six of the most intelligent and powerful persons were summoned out of every cynwd, or hundred, and also the nobles, bishops, and principal clergy, to assist that king in the great work of legislation. By these means the ancient laws were revised, others enacted, and all digested into one regular code, and a declaration made that they should not be altered, except by means of a similar national council. After the English conquest, and in consequence of the subsequent insurrections, several severe laws were passed against the Welsh; but these were gradually repealed or fell into abeyance; and the laws of Wales steadily approximated to those of England, until they became substantially the same. Since the passing of the 11th Geo. IV. and 1st Wm. IV., c. 70, Wales has no jurisdiction in legal matters distinct

from England. It is divided into two circuits, North and South, and one judge travels each.

Wales abounds in memorials of its past history. The cromlechs, earnedds, and barrows; camps, British and Roman; abbeys and castles of later periods; are all to be met with in various parts of the principality. Detailed notices of these will be found in this work in articles treating of each county.

Wales is divided into North and South Wales, each containing six counties. North Wales includes Anglesey, Caernarvonshire, Denbighshire, Flintshire, Merionethshire, and Montgomeryshire. South Wales includes Brecknockshire, Cardiganshire, Caermarthenshire, Glamorganshire, Pembrokeshire, and Radnorshire. To the articles on these several counties we refer for a more particular account of the physical geography, geology, mineralogy, products, manufactures, trade, &c. Over a large part of Wales the Welsh language is still generally spoken, but the use of the English language is steadily increasing. Wales contains four bishoprics—those of Bangor and St. Asaph in North Wales, and of St. David and Llandaff in South Wales.

WALES, NEW SOUTH, extends over the south-eastern portion of Australia. Its western boundary has been fixed by the grant of the colony of Southern Australia, whose eastern boundary extends from the shores of the Southern Sea along 141° E. long. to 26° S. lat. The northern boundary-line of New South Wales has not yet been definitely fixed, but is generally taken as 26° S. lat., the same as Southern Australia, as there are settlements, particularly since the gold discoveries, north of Moreton Bay, which is in 27° S. lat. On the east New South Wales is washed by the Pacific. On the south the Murray forms the boundary between it and the newly-constituted province of Victoria from South Australia to its source, whence the line turns southerly through the Australian Alps west of Mount Wellington, and then takes an arbitrary straight line south-easterly to Cape Howe, which is the most southerly point of the province, in 37° 5' S. lat., 150° E. long. The extreme length is 893 miles, the average breadth about 600 miles, which gives an area of 535,800 square miles. The most north-western portion of the country, extending over perhaps one-third of the whole surface, has scarcely been visited by any European. The population of the colony was estimated in December 1862 at 208,254.

Surface, Soil, and Climate.—The physical constitution of this country is very peculiar. The interior consists of wide plains, interrupted only by comparatively short ranges of high hills or low mountains. The waters collected in these plains are all united into one river, the Murray, which disembogues within the territories of South Australia. On the east and south the plains are surrounded by higher land, which constitutes the watershed between the rivers joining the Murray and those which run into the sea. This watershed is in general about 100 miles from the shores.

The Australian Alps commence at Wilson's Promontory, and extend into New South Wales by Mount Wellington. In this range rise the Murray and the numerous streams which, flowing more or less westward, ultimately fall into it and form it into a river, having abundance of water all the year round, whilst most of the large rivers which run into the interior become dry during the summer months. Farther north, in the Warragong Chain, the Murrumbidgee with its affluents takes its source, and is likewise a perennial river; east and north of this are Yass Plains and the hilly tract inclosing Lake George. The elevated plains extend, under the name of Goulburn and Breadalbane Plains, about 40 miles farther north, to the southern extremity of Cockbandoon Range, which constitutes the southern part of the Blue Mountains, east of which runs the Shoalhaven River to the sea. The Blue Mountains commence in 34° 30' S. lat., and run northward to the Monundilla Range, in 32° 40' S. lat. From the eastern side descend the Nepean, the Colo, the Wollondilly, and the Macdonald rivers, all of which find their way to the sea through the Hawkesbury at Bullen Bay; on the west side descends the Lachlan and its affluents, which join the Murrumbidgee. The mountains are of sandstone; the highest point, King's Table-Land, attains a height of 3400 feet above the flat country. At the distance of from 60 to 70 miles north of the Monundilla Range is the Liverpool Range, running east and west. This range extends to about 32° S. lat. On its northern side are Liverpool Plains, between 150° and 151° E. long. In these parts its southern slope rises with a precipitous acclivity, and in some places nearly perpendicular above the plains which lie south of it. Its elevation is probably 1500 or 2000 feet above the base. Where the slope is not too rapid, it is thinly wooded. On account of the steepness of the ascent, only two places have been found at which it can be traversed with ease: the western, called Pandora Pass, near 150° E. long.; and the eastern, called Hecknaduey, west of 151° E. long. When the summit of the passes is attained, a short descent brings the traveller to the Liverpool Plains. A ridge from the Monundilla Range to these mountains divides the affluents of Goulburn River, a tributary of Hunter River, which falls into the Pacific, from those of the Cudgong and Talbragar, which fall into the Macquarie. A considerable portion of this ridge is without trees, overgrown with bushes, and grassy; but on the rising grounds are forests, composed mostly of apple-trees, iron-bark, stringy-bark, and box.

The coast-line on the east extends in a general direction of north-north-east from Cape Howe to Cape Byron, when it recedes a little to

the west. There are numerous harbours formed by the mouths of the rivers flowing into the Pacific. The chief of these, proceeding from south to north, are—Twofold Bay, at the mouth of the Towamba, immediately north of Cape Green, one of the boldest promontories along the coast; Barmouth, Bateman Bay, Sussex Haven, Jervis Bay, Shoalhaven, Port Hacking, Botany Bay, Sydney, Port Jackson, Broken Bay, Port Hunter, Port Stephens, Farquhar and Harrington Inlets at the mouths of the Manning and Lansdowne rivers, Port Macquarie, Trial Bay, Shoal Bay at the mouth of the Clarence River, in 29° 5' S. lat., whence there is no other till we come to Moreton Bay, with its group of islands extending 70 miles from north to south. In this extent the shore presents every variety of appearance. From Cape Green to Shoalhaven River the cliffs are generally low; from Shoalhaven River, north of 30° S. lat., to Hunter River, north of 35° S. lat., they present a range of bold perpendicular cliffs of sandstone lying in horizontal strata, occasionally interrupted by sandy beaches, the high land retiring to a considerable distance. Numerous sand-hills occur along the remaining part of the coast. Port Stephens is a bar-harbour, so that small vessels only can enter it; those of larger description are compelled to anchor outside. In some parts, especially north of Trial Bay (30° 50' S. lat.) and south of the mouth of Clarence River, are tracts of coast many miles in length, where it is rocky and rises to a considerable elevation. The harbours are only found at the mouths of the numerous rivers.

Rivers.—The larger rivers which drain the country between the Pacific and the watershed have water all the year round. They generally flow in beds which are deeply depressed below the common level of the country, and between banks which rise perpendicularly, or nearly so, from 100 to 200 feet, and frequently higher; so that the streams are inaccessible, except at a few places. They are of little use either for irrigation or for transport. The *Shoalhaven River*, the most southern of the considerable rivers of this region, rises on the tablelands east of the Warragong Mountains, and runs about 90 miles northward, measured in a straight line, and then about 40 miles eastward. About 20 miles from its mouth occurs the last rapid, up to which the tide flows. The mouth of the river is much obstructed by shoals and sand-banks. The *Hawkesbury* falls into Broken Bay. It rises under the name of Wollondilly, on the connecting tablelands, and receives nearly all the waters which are collected on them. It flows in a deep bed, sinking into a deep ravine, when it is no longer accessible. The last rapids occur near Windsor, from which place it is navigable for moderate vessels. Windsor is only 40 miles from the sea in a straight line, but 100 miles at least following the windings of the river, whose waters are fresh for 30 miles below the town. Its estuary, Broken Bay, is surrounded by rocks, and has several good anchorages even for large vessels, the best of which is called Pittwater. The whole course of the river exceeds 250 miles. Sometimes the floods of this river rise to 90 feet above its usual level, and the inundations then lay waste the fertile tracts on its banks. *George's River* falls into Botany Bay. It runs hardly 60 miles, but is navigable for boats from Liverpool downwards, a distance of about 12 miles in a direct line, but 24 miles following the windings of its course. *Hunter River* disembogues into Port Hunter. It has two great branches, one called Hunter and the other Goulburn. The first rises in the Liverpool Range, the other in the connecting ridge, and both have very tortuous courses. The navigation begins at Maitland, about 20 miles from Port Hunter by land, but nearly 40 miles by water, and a steamboat plies regularly between that town and Sydney. This river often rises rapidly after heavy rains, and in some places to the height of 50 feet.

The navigable rivers which drain the countries north of the Hunter are the Manning, Hastings, Apsley, Clarence, and Brisbane. The Manning and the Hastings both fall into Port Macquarie, which is a bar-harbour, admitting only vessels of 100 tons burden; and it is dangerous to enter, except at full tide, on account of the rapid current, which sets the vessels ashore upon the shoals on the northern side of its entrance. Outside the bar is good anchorage for ships of the largest class, except when the wind blows strong upon the shore. Within the bar is secure anchorage for a great number of vessels.

North of Port Macquarie is the valley which is drained by the *Apsley* or *MacLeay River*, which divides about 12 miles from the sea into two branches, inclosing a large island. The main branch at the northern end forms the harbour of Trial Bay, which has a bar across, having from 12 to 17 feet of water upon it. This river is navigable to a distance of more than 50 miles from the sea, when farther progress is impeded by a fall, which occurs where the river issues from a narrow glen, whose sides rise 900 feet above its bed. Below this place the river runs through a wide valley, in which there are some plains destitute of timber, and gently-rising hills covered with open forests and grassy pastures. Farther north is the valley of the *Clarence River*. The mouth of the river is at Shoal Bay, 29° 20' S. lat. The bar across its entrance has 12 feet of water on it at high tides. *Brisbane River* falls into Moreton Bay, and is navigable by ships drawing 16 feet of water 20 miles up, at which point a ridge of rocks crosses the bed, but to a distance of more than 60 miles from the sea it may be navigated by boats. Several of its tributaries are also navigable for some miles from their mouths. The country on both banks of the river presents an alternation of hills and level tracts. The soil, which is very good, is overgrown with high trees, among which are cedars and cypres-

trees of great magnitude. The highest hills lie on the north side of the river, where some rise from 700 to 800 feet. The farthest sources of the Brisbane are in the Coast Range, which here offers an easy passage to the interior by a gap which occurs south of 28° S. lat., north of Mount Mitchell, which is 4120 feet above the sea.

All the rivers draining the interior of New South Wales, as far as it is known, appear to belong to the river basin of the Murray. The rivers composing this extensive system consist of numerous streams that flow westward from the high lands running north and south through New South Wales. The Murray itself we have noticed as dividing the colony from Victoria, and it enters South Australia at Table-Land Cliffs, and after flowing in a westerly direction about 90 miles in a direct line, it turns to the south and enters the sea at Encounter Bay. [SOUTH AUSTRALIA.] The Murrumbidgee, after it has itself received the Lachlan, falls into the Murray in 149° E. long. The Darling, by its upper branches, drains the country extending from 32° to 28° S. lat. Its most northern branch, the Condamine, rises on the Darling Downs, in 28° S. lat., runs northward as far as 26° S. lat., 151° 4' E. long., then turns westward to 149° E. long., and then south-westward till it joins the Darling on its left bank. From the south it receives the Bogan, a considerable stream, rising in the Harvy Range; and it is probable that the Macquarie, at least during the rainy season, discharges into it part of its water from the marsh in which it is lost.

Geology, Mineralogy, &c.—The general account of the geology of the island has been given under AUSTRALIA, in vol. I., cols. 695-699. Sir R. I. Murchison has asserted that gold must exist in the country in certain formations; and the same theory had been promulgated in the colony by the Rev. W. B. Clarke, on the ground that the strata of the Australian mountains running north and south through Victoria and New South Wales, were of the same formation as those of the Sierra Nevada in California, and the Ural Mountains in Russia, namely, granite mixed with quartz and schistose slate; but it was not till 1849 that the actual existence of gold was discovered. In 1851 further discoveries were made, Mr. Hargraves disclosed the places where he had found gold, and when the government officer was sent to examine the places, he found persons already working them. On May 22nd instructions were given by the governor to grant licences to diggers at the rate of 30s. per month. The first discoverers obtained the gold by washing the detritus from the beds of the creeks, and the earth from the shores; but it was soon found that the richest deposits were in the quartz, and means were found to crush the rock and obtain the gold. On August 5th the governor issued a notice that the licences would only apply to the gold-washers, and that on gold obtained by crushing, a royalty must be paid of from 5 to 10 per cent. Policemen were appointed to the various stations, and escorts furnished for bringing the gold from the diggings to the ports of Sydney or Melbourne. In a short time the towns and villages were deserted, all the usual avocations abandoned, the ships in harbour left unmanned, and every one capable of labour repaired to the diggings. An immigration ensued almost without a parallel. In the quarter ending the 30th of September, 1854, the total quantity of gold brought down to Sydney was 28,053 ounces, and the quantity of gold exported 49,893 ounces, valued at 162,153*l.*; 10,712 10s. licences were granted on Crown lands to mine and dig, 704 on Crown lands to erect buildings for trading purposes, and 12,157 5s. licences on private lands to mine and dig, making a grand total of 12,157 licences, for which 5893*l.* was received. Eight leases were granted to work auriferous quartz veins. The total quantity of gold exported up to the 30th of June, 1854, was 150,429 ounces, valued at 488,896*l.*; making a gross total of 1,661,355 ounces of gold exported in 1851, 1852, 1853, and the half of 1854, the value whereof was 5,399,350*l.* The estimated net quantity of gold exported from New South Wales and Victoria, from the 29th of May, 1851, to the 30th of June, 1854, was 7,318,482 ounces, valued at 25,630,232*l.*; and up to the 30th of September, 7,886,509 ounces, valued at 27,975,419*l.*

Respecting other metals we have little to add to what is said under AUSTRALIA.

Iron-ore is known to exist in several places, especially on the west of the Blue Mountains. Several extensive coal-measures have been found, two of which are worked. Those found near the mouth of the Hunter River, near Newcastle, are extensively worked, and their produce is shipped to Sydney. The coal-beds near Western Port are also very large, and have been worked for several years. Limestone is abundant in some places, and some kinds of marble are worked on the banks of the Wollondilly.

An account of the botany of New South Wales is given under AUSTRALIA, vol. I., col. 701-3. Many of the trees are used for domestic purposes, and some of them are exported as timber. The most valuable is the cedar (*Melia acedarack*), which is found especially at Illawarra, and on the banks of the Hunter, Hastings, and Clarence rivers. Several of the gum-trees, as they are called (*Eucalyptus*), are valuable. Timber is farther obtained from a kind of pine belonging to the genus *Callitris*. Most of the eucalypti yield a kind of gum, and therefore they have obtained the name of gum-trees. A summary account of the zoology of New South Wales is given under AUSTRALIA, vol. I., col. 703-9.

The climate is noticed generally under AUSTRALIA vol. I., col. 700

The rains are not, as between the tropics, limited to certain seasons, but fall all the year round; they are, however, most frequent in winter (June to August). The most characteristic peculiarities of the climate of New South Wales are the long droughts which occasionally prevail, and which are generally succeeded by excessively long and heavy rains. The winds are as variable as in England. Westerly winds, especially from the north-west, prevail in winter, and easterly winds are more frequent in summer (December to February). In summer, in the morning, the winds blow, almost every day, from west and south-west, but towards noon they pass to north-east and north. Dews are frequent and heavy. Hailstones are common in December and January, and are of much larger size than in England. Thunderstorms prevail from December to February, and occur also in November and March. On the Table-Lands and in the Plains of Bathurst, which are more than 2000 feet above the sea-level, the winters are much more severe than in the lower country. As in summer the heat is several degrees less on these elevated countries than at Port Jackson, the grass is not so quickly burned up, and thus the flocks of sheep find here, nearly all the year round, sufficient food for their sustenance.

Soil, Agriculture, and Agricultural Productions.—The soil of so extensive a country must necessarily vary greatly. Many parts are distinguished for their fertility, and it is probable that at least one-fourth part is well adapted for cultivation, and that one-half would afford good pasturage for sheep and cattle. In addition to the various species of grain and artificial European fruits and vegetables, that succeed well in various places, the sugar-cane, the vine, and tobacco are raised. Although the growth of grain has been constantly on the increase, New South Wales has always been an importing country, and the influx of population in consequence of the discovery of the gold-fields must render it for a considerable time still more so. In 1852 the total number of acres in crop was 152,057, of which the respective proportions were—wheat, 82,110; maize, 25,017; barley, 6725; oats, 2470; rye, 245; millet, 54; potatoes, 4079; tobacco, 731; wheat, barley, and oats, for hay, 27,598; and sown grasses, 3028. The produce was as follows:—Wheat, 1,407,465 bushels; maize, 717,053 bushels; barley, 133,944 bushels; oats, 49,069 bushels; rye, 4891 bushels; millet, 731 bushels; potatoes, 13,644 tons; tobacco, 12,530 cwt.; wheat, barley, and oats, for hay, 31,894 tons; and sown grasses, for hay, 4711 tons.

The colonists have been at some pains to introduce many kinds of fruit-trees and vegetables, and they have in most cases done it with tolerable success. There are oranges, lemons, citrons, nectarines, apricots, peaches, plums, cherries, figs, quinces, pears, apples, mulberries, pomegranates, grapes, raspberries, strawberries, bananas, guavas, pineapples, gooseberries, currants; almonds, walnuts, chestnuts, and filberts. Gooseberries succeed in the colder and more elevated countries, as near Bathurst. In the kitchen-gardens are raised melons, water-melons, pumpkins, capsicums, cabbages, turnips, and some other vegetables.

The first sheep introduced into the colony were from England, and the wool was of indifferent quality; but as soon as it became evident that wool might become a source of wealth, and yield an important article of export to the mother country, several landed proprietors were at considerable expense to get merino sheep. The quality of the wool has been much improved. The wool imported into Great Britain from New South Wales in 1853 amounted to 16,674,933 lbs.; the tallow received in British ports from the colony was 115,933 cwt.; of sheep skins undressed there were 8496. The breed of cattle is a mixture of the Bengal buffalo variety with humpy shoulders, and various English breeds which have been introduced. They are fine large animals. In some parts, especially on the Plains of Bathurst, the dairies are well attended to, butter being made to a great extent, and also cheese not inferior to the common cheeses of England. Bullocks are mostly used for draught. The horses are remarkably hardy and can undergo great fatigue. Pigs find abundant food in the uncultivated tracts, and are easily fattened with maize. Goats have been introduced, and thrive amazingly in those parts which have a barren soil, and are overgrown with shrubs. The number of untanned hides imported into Great Britain from New South Wales in 1853 was 40,328.

Poultry is in great abundance; geese, ducks, turkeys, guinea-fowls, and common fowls thrive surprisingly, without any particular care being taken of them.

Industry and Manufactures.—The manufacturing industry of the colony has made considerable progress, though the production and export of native commodities form the staple of the occupation of the inhabitants. The most numerous manufacturing establishments are the mills for grinding and dressing corn, turned by wind, water, horses, or steam. There are also manufactories of woollen-cloth, hats, soap and candles, and of articles of furniture; distilleries, breweries, iron- and brass-foundries, rope-yards, and ship-building yards. As sperm-ceti-whales and black whales frequent the sea adjacent to the eastern entrance of Bass's Strait and the strait itself, and a great number of seals are found on the islands in the same part of the sea, the whale and seal fishery became a source of gain to the colonists, and is still carried on, though it has fallen off considerably.

Commerce.—New South Wales, considered as a commercial country,

holds a very high rank among our colonies, if its population is taken into account. Besides the large quantities of wool, tallow, hides, and sheep-skins, already noticed, Great Britain imported from New South Wales, in 1853, the following, and various other articles:—347 tons of bones of animals and fish; 87 tons of copper-ore; 137 cwts. of undressed flax; 993 cwts. rough mother-of-pearl shells; 8331 cwts. cocoa-nut oil; 425 tons sperm-oil; 6933 lbs. quicksilver; 1835 lbs. tortoise-shell, or turtle-shell; 601 gallons wine, the produce of British settlements in Australia; and 1170 loads of wood. The declared value of the exports of British produce and manufactures from Great Britain to New South Wales, amounted to 4,527,776*l.* in 1853, including apparel, slops, and haberdashery to the amount of 1,202,673*l.*; cottons, 447,194*l.*; woollens, 506,178*l.*; linens, 124,825*l.*; silk manufactures, 176,209*l.*; hardware and cutlery, 189,871*l.*; iron, wrought and unwrought, 141,088*l.*; leather, saddlery, and harness, 334,361*l.*; machinery, 23,315*l.*; musical instruments, 29,804*l.*; plate, jewellery, watches, &c., 90,334*l.*; stationery, 75,364*l.*; soap and candles, 33,943*l.*; pickles and sauces, 69,926*l.*; beer and ale, 179,907*l.*; British spirits, 31,782*l.*; printed books, 50,225*l.*; and a variety of other articles, besides a large amount of foreign and colonial produce and manufactures. The number and tonnage of ships registered as belonging to the colony on December 31st, 1854, were as follows:—Of and under 50 tons, 161 vessels of 4107 tons burden; above 50 tons, 180 vessels of 32,082 tons; with 123 steam-vessels of 3050 tons.

Divisions of the Country.—The more closely-settled portion of the colony is divided into 37 districts, 21 of which were added in 1847. Out of these are formed 40 counties, of which the first settled 21 are conterminous with the districts. The other counties do not occupy the whole of the districts, nor do the districts occupy the whole of the territory, but it is a regulation of government that no land can be sold beyond their limits. The extreme boundaries of county lands have come therefore to be called the boundaries of location, and according as lands lie within or beyond these boundaries, a different system is followed in the management and civil government of them.

Within the boundaries the whole country is divided into police districts, each having a bench of petty sessions and a magistrate; and of these districts, which are of unequal size, there are at present about 40. Beyond the boundaries the country is also roughly divided into districts, in each of which there is a commissioner of crown lands, who is the chief magistrate of it, and has under his command a small force of mounted constables, who are called the Border Police. Within the limits of location, land is either sold or let on lease; beyond the limits it is neither sold nor let, but licences are granted, at the discretion of the crown commissioner, for the occupation of such portions of land as may be desired by proprietors of stock, on each of which licences a fee of 10*l.* is payable annually, and an assessment is levied on the stock depastured there. Each allotment of land for which a licence is thus given is called a station, and the stations may vary in extent from 5000 to 30,000 acres. The amount received for licences in 1852 was 36,928*l.*, and land was sold to the amount of 41,273*l.*

New South Wales is divided into two bishoprics, Sydney and Newcastle, the Bishop of Sydney being the metropolitan of Australia; the other bishoprics are those of Melbourne, Adelaide, Tasmania, New Zealand, and Christchurch, which forms a second bishopric in New Zealand. There is an archdeacon in New South Wales who is styled Archdeacon of Cumberland, one of the districts. In 1853 the number of clergymen in the colony was 163, of whom 47 were supported wholly by voluntary contributions. Of the whole number, 78 belonged to the Church of England, 32 were Presbyterians, 32 Roman Catholics, 16 Wesleyans, 4 Independents, and one was of the Jewish persuasion. The amounts paid by government to religious teachers were as follows:—Church of England 18,344*l.*, Roman Catholics 12,837*l.*, Presbyterians 5998*l.*, and Wesleyan Methodists 1013*l.*

There is a considerable number of roads within the boundary of location. Various lines of roads, which have been made at considerable expense, traverse these districts, and various others have been made or are making in consequence of the gold discoveries, to facilitate transport to and from the commercial towns and ports. A regular post is established, and all letters not exceeding half an ounce in weight are delivered at a uniform rate of twopence. In 1852 the income of the post-office was 18,174*l.* 1*s.* 11*d.*; the expenditure was 25,304*l.* 8*s.* Newspapers are exempted from postage.

Education.—Sydney University, incorporated and endowed by the Act of Council, 14 Victoria, No. 31, and inaugurated on October 11th 1852, had 38 students in 1852. Its expenses for that year amounted to 3860*l.* 11*s.* 7*d.* There are three colleges or Grammar schools—two at Sydney, called Sydney College and Australian College, and King's School at Paramatta. These high schools are supported by the payments of the students. The elementary schools are mostly maintained by government. In 1852 there were at school 11,387 male and 9678 female children; of these one half were at Church of England schools.

History.—The history of a colony so recently established may be soon told. New South Wales was discovered by Captain Cook in 1770, though the western and northern coasts of the island had been previously visited by Dutch navigators. In 1787 the British government decided to form a convict establishment in Australia, "to empty the jails and houses of correction" of the mother-country, and eleven

ships were therefore sent, which arrived at Botany Bay, where it was intended to form the settlement, on January 20th 1788. Botany Bay was found inconvenient, and the establishment was removed to Sydney by the governor, Capt. A. Philip, who had been sent out with the fleet. The early progress of the colony, owing to the circumstance that the first settlers were only convicts, was so slow that its population in 1810 did not exceed 10,000 individuals. About that time one of the landed proprietors ascertained that the climate and soil of the colony were favourable to the rearing of sheep, and many persons consequently went to the colony to settle; but they soon found themselves embarrassed for want of room, and it appeared impossible to extend the settlements farther westward, as several attempts to pass over the Blue Mountains had been frustrated by the nature of the range, which consists of sandstone masses, furrowed by numerous ravines, whose sides are so steep that it is impossible to ascend them. In 1813 three enterprising individuals, Blaxland, Wentworth, and Lawson, succeeded in passing over the mountains; and in the same year followed the discovery of that fine pastoral country the Downs of Bathurst. In the following year a practicable line of road was constructed over the mountain ranges by convict labour. Mr. Oxley, in 1817, began the task of exploring the interior. Since this period some portion of the country has been nearly every year discovered and explored. Among the discoverers may be particularly mentioned Allan Cunningham, Lieut. Sturt, Count Stretzki (who first asserted that gold was to be found in the mountains), Mr. Eyre, Mr. Windsor Earle, Messrs. Landor and Lefray, and Dr. Leichardt, who, leaving New South Wales, reached the Gulf of Carpentaria, and who, on a second journey, lost his life in the interior. The results of their discoveries have been given in the geographical notices of Australia and of the several colonies.

The system of transportation has been discontinued of late years.

Towns.—The capital is SYDNEY. Bathurst is a thriving town, 198 miles W.N.W. from Sydney, on the west of the Blue Mountains, situated on the upper part of the Macquarie. It derived its importance at first from being the chief place of trade of the rich pasturage, Bathurst Plains, which surround it. It has since become of still greater importance from its vicinity to the gold diggings of Ophir, which lie from 20 to 28 miles west from it. *Boyd*, or *East Boyd*, as it is sometimes called, is a small but rising port-town, near the southern border of the colony, on the mouth of the river Towamba, which here falls into Twofold Bay. *Brisbane* is at the northern extremity of the colony, situated on the river Brisbane, about 10 miles from its mouth. It is a flourishing town, in an agricultural district. Tobacco and wine are produced. *Campbellton* is on the coast, about 20 miles S. from Sydney, and has considerable trade and manufactures, particularly of leather. *Liverpool* is about 16 miles W. from Sydney, on the left bank of George's River. It is an inland town, surrounded by a rich and well cultivated country, which secures it much retail business. *Macquarie*, or *Port Macquarie*, is a small but increasing town, at the mouth of the river Hastings, which a little higher up receives the Wilson and Maria rivers, and forms a tolerably safe bay. It is about 120 miles N. from Hunter River. *Maitland* is on the right bank and about 40 miles from the junction of Hunter River, at the junction of the Wallis creek. The river here first becomes navigable for sloops. The coal-mines in the neighbourhood have greatly contributed to the prosperity and increase of this place, which is properly two towns, East Maitland and West Maitland. In East Maitland are a court-house and jail, and in West Maitland are numerous stores and some good hotels. A steamer runs regularly from Maitland to Sydney. *Newcastle*, about 70 miles N. by E. from Sydney in a direct line, is built at the mouth of the Hunter River, which forms a harbour deep enough for merchant vessels, but the entrance is narrow and crooked. The town owes its importance chiefly to the collieries in its neighbourhood, which are extensively worked. It gives title to a bishop. *Paramatta* is situated at the mouth of the small river Paramatta, and at the head of the harbour of Port Jackson. It is 18 miles by water and 15 miles by land from Sydney. The principal street is a mile long; at the end farthest from the harbour is the country residence of the governor of the colony. Daily communication is kept up with Sydney by means of stage-coaches and steam-boats. The observatory at Paramatta (founded in 1821) was the private property of Lieut.-General Sir Thomas Brisbane, an active and well-informed astronomer, during his residence in the colony as governor. At his return to England, the government adopted it as a public establishment, and it is now under the superintendence of an observer appointed by the Admiralty. At Paramatta are two lunatic asylums, one of which is for convict lunatics and invalids. *Windsor*, about 30 miles N.W. from Sydney, stands on the right bank of the Hawkesbury, which is navigable for a few miles above the town for coasting vessels. This circumstance and the fertility of the country which extends along both sides of the river above the town have raised it to some commercial importance. There are at Windsor mills for grinding grain, breweries, and tanneries.

The Government.—This consists of a governor-in-chief, with a secretary, treasurer, and auditor-general, with the necessary subordinates, and an executive council, all appointed by the imperial government at home. By the 18 and 19 Vict., cap. 54, passed in August, 1855, there are to be a legislative council, consisting of such number (not

fewer than 21) as the governor and council may determine. There is also to be a legislative assembly of 54 members. For the legislative assembly, the qualifications of electors are, that they must be natural-born or naturalised subjects of her Majesty, of the age of 21, possessing a freehold estate within the district of 100*l.* clear value above all incumbrances or charges on it, for at least six months before the date of the writ or the last registration, or occupying a dwelling-house for six months of the clear annual value of 10*l.*, or a lodging of 10*l.* yearly rent, or having a salary of 100*l.* a year, or holding a licence to depasture lands within the district, or holding a leasehold estate in the district of the yearly value of 10*l.* of which the lease has not less than three years to run, and on which in all cases the rates and taxes due to within three months of such election or registration have been paid, and who is not attainted of treason, or convicted of felony, &c. No minister of religion can be a member. The legislature, when constituted, is to administer, in conjunction with the governor, the affairs of the colony, without reference to the mother country, except in such cases as the governor may think doubtful or important enough to require to be brought under the special consideration of the home government. The amount of the civil list specified in the Act, including the expense of the civil and judicial establishments of the colony, is 64,300*l.*; and a sum of 28,000*l.* a year is likewise to be appropriated for the purposes of public worship. The waste lands in the colony are to be under the management of the colonial legislature.

The governor and council are empowered to levy customs on goods imported, but no duty is to be imposed on any article from one country that is not alike imposed on the same article from other countries. No duties however are to be levied on articles imported for the supply of her Majesty's land or sea forces; nor have they the power allowed them to grant any exemption, or impose any duty, at variance with any treaty concluded by her Majesty with any foreign power.

In the administration of justice there are a chief judge and three puisne judges, with an attorney-general, a solicitor-general, and a crown solicitor. Magistrates are appointed in the various districts by the governor, and quarter sessions and petty sessions are held in various places at frequent intervals.

WALKER. [NORTHUMBERLAND.]

WALLACHIA, or WALACHIA (*Zara Rumuniata*, in Wallachian, in Turkish *Bflak*), a principality and vassal state of Turkey-in-Europe, is bounded N. by the Carpathian Mountains (which divide it from Transylvania) and the principality of Moldavia, E. by that part of the Lower Danube, which, running from south to north, separates it from the Dobruddcha, S. by the Danube, and W. by the Danube and the south-eastern corner of Hungary. Its greatest length from west to east is 276 miles; its greatest breadth from south to north is 127 miles. The area is about 28,000 square miles: the population amounts to 2,324,484, all of the Greek Church, except a few Hungarian settlers, who are Catholics.

The Carpathians are the principal mountains. [CARPATHIANS.] Several ranges of lower mountains and hills stretch from the Carpathians in a parallel direction south and south-east, and contain valleys between them, the upper part of which is narrow, but the lower part becomes wider as the valleys approach the Danube. Along this river there is a broad level tract consisting near the Danube of lowlands and marshes, which are exposed to the inundations of the river. However the most western part of Wallachia is generally mountainous, and the hills reach to the banks of the Danube. A great part of the country, especially the northern part, is covered with forests of firs, oaks, and beeches. The soil, except in the mountainous districts, is a rich mould, and of extraordinary fertility. In the elevated part of the country there are extensive pastures covered with aromatic herbs, which feed a great number of sheep, the flesh of which is much esteemed. In the level and marshy parts there is excellent pasture for cattle, of which great numbers are annually fattened. The principal river is the Danube. [DANUBE.] The other rivers are tributaries of the Danube; their sources are all in the Carpathians, and their direction is south in the western part of the country, south-east in the middle part, and east in the eastern part. The principal are—the *Syll*, or *Schyl*, in the west; its sources are in Transylvania, but it soon leaves this country by a long and narrow defile called the Valkan Pass, where it enters Wallachia; it joins the Danube opposite the small town of Rahova in Bulgaria; its length is nearly 140 miles. The *Alt*, or *Aluta*, east of the *Syll*. [ALUTA; TRANSYLVANIA.] The *Telorman*; its sources are in 45° N. lat., between the Alt and the river Arjish, at the foot of the Carpathians; it joins the Danube opposite the town of Novograd in Bulgaria, after a course of 100 miles. The *Arjish*, *Argis*, or *Arj*, east of the Alt; its sources are in the Carpathians, 20 miles east of the Rothenthurm Pass, and it joins the Danube a little below Oltenitza, and opposite the Bulgarian town of Turtuki, after a south-eastern course of 160 miles. The *Dumbravitza*, a tributary of the Arjish, passes Bukharest, and joins the latter 16 miles north of the junction of the Arjish with the Danube; its course is almost parallel to that of the Arjish, and its length is 110 miles. The *Jalonitza* comes from the Carpathians near the Tomosh Pass; at first it runs south for 80 miles, and afterwards south-east, east, and north-east till it reaches the Danube a little below Hirsova; its whole course is nearly 170 miles. The *Buzeo*, north of the Jalonitza, comes from Transylvania, flows through the Buzeo Pass, GEOG. DIV. VOL. IV.

and joins the Sereth 12 miles above the junction of this river with the Danube, after an easterly course of 120 miles. All these rivers are navigable for barges, but little is done to facilitate the navigation, which is rendered impracticable in many places by rocks, shallows, and other obstacles. Besides the larger rivers, there are many smaller streams which traverse the country. In the marshy districts there are several large lakes formed by branches of the Danube; and in the rainy season, or when the snow on the Carpathians melts, the low tracts along the Danube are inundated for many miles in breadth.

Climate and Productions.—The summers are exceedingly hot and the winters very cold; but the climate is healthy, except in the marshes, where bilious fevers prevail, and mosquitoes swarm during the warmer months. The waters are abundantly supplied with fish. The mineral productions are iron, copper, lead, silver, rock-salt, and bitumen. Gold is found in the sands of several of the feeders of the Danube. Wallachia produces abundantly wheat, barley, rye, hemp, tobacco, maize, &c. The vine grows well, and the produce is excellent, and would be equal to the best Hungarian wines if the inhabitants had more skill. The French berry (*Rhamnus infectorius*) grows in many districts, and is exported chiefly to Transylvania, where it is used for dyeing. Sheep are very numerous in Wallachia, and a great quantity of excellent wool is exported. Cattle also are very numerous. There is abundance of game of every description. There is plenty of timber, but it rots in the forests. Only the third part of the country is cultivated. The navigation of the Danube by steamers puts Wallachia in communication with Vienna and Constantinople. Several foreign merchants reside at Bukharest, the capital, and at Brailow, the principal Wallachian port on the Lower Danube.

Government.—The government is in every respect like that of Moldavia, from which country the political history of Wallachia is inseparable. In the article MOLDAVIA reference was made to the present article with a view to supply some further information respecting the history of the countries, subsequent to their evacuation by the Russians, in the summer of 1854. But, with the exception of the return of the princes Stirbey and Ghika to Wallachia and Moldavia respectively, and the continued military occupation of both principalities by Austria, no events worth noticing have occurred. Wallachia is divided into 18 districts, administered by officers called *Isprovniks*. Ten of these districts are in the mountainous and hilly parts of the country; eight in the plain and low country along the Danube. The following table gives the districts, with the population and chief town of each:—

	Districts.	Population.	Chief Town.
Upper Wallachia.	Romnik Sarat	111,342	Romnik Sarat
	Buzeo	137,645	Buzeo
	Sacinezi	121,230	Bucova
	Fracova	130,434	Ploiesci
	Dambovitza	116,987	Turguviel
	Muscelu	123,438	Campulungo
	Arges	137,753	Pitești
	Romnik Valcea	126,928	Romnik
	Gordji	148,728	Turgudjilu
	Mehedinti	187,850	Cernets
Lower Wallachia.	Doldji	136,819	Krajova
	Romanati	128,432	Caracala
	Oltu	115,917	Slatina
	Tele-orman	116,453	Zimnicea
	Vlasca	102,310	Giurgevo
	Jalomitza	111,612	Calaras
	Ilfov	175,000	Bukharest
	Ibrafla	95,608	Ibrafla

Towns.—*Bukharest*, the capital, is described in a separate article. [BUKHAREST.] *Tergovist*, or more correctly *Turguviel*, N.W. of Bukharest, was the capital of Wallachia till 1698, when the seat of government was transferred to Bukharest. *Tergovist* is situated on the Jalonitza, and contains about 5000 inhabitants; the whole place is covered with ruins of houses and palaces, which were abandoned by the nobility after 1698. The road from Bukharest to Kronstadt in Transylvania, leads through *Tergovist*. *Giurgevo*, on the Danube, is noticed under RUTHENIA. *Arjish*, on the Arjish River, towards its source, lies on the road from Bukharest to the pass of Rothenthurm and Hermannstadt. There is a beautiful church in this thriving little town, which is said to be the finest in Wallachia. *Islas* is a small but busy town, a little west of the junction of the Aluta with the Danube. *Krajova*, a fine town with about 8000 inhabitants, has considerable commerce: it is situated on the Schyl, in the centre of *Little Wallachia*, or the western part of Wallachia, between the Aluta in the east, and Hungary and the Danube on the west. This district was the scene of the early struggle between the Turks and Russians at the commencement of the war in 1854. *Krajova* is the capital of *Little Wallachia*. To the south-west of *Krajova* opposite *Widin* is *Kalafat*, which was occupied and defended by the Turks against the Russians with great bravery. [WIDIN.] Not far from it is *Csitate*, where the Turks defeated the Russians with great loss, January 6, 1854. *Brailow*, or *Ibrafla*, on the Danube, 10 miles S. from the junction of the Sereth with the Danube, in the north-eastern corner of Wallachia, forms the subject of a separate article. [IBRAFLA.] *Romnik*, lies W. of Brailow

In its vicinity is Okna-Mare, where there are rich mines of rock-salt. The great road from Yassy to Bukharest leads through Romnik. *Fokahany*, or *Fokzan*, is partly in Moldavia: population, 25,060. [MOLDAVIA, vol. iii., col. 836.]

Inhabitants.—The majority of the inhabitants are Wallachians, besides whom there is a considerable number of gipsies, and some Jews, Armenians, and Greeks. Besides the Wallachs of Wallachia, there are many of the same people spread over Moldavia, south-western Russia, Transylvania, Hungary, the Bukowina, Thrace, Macedonia, Thessaly, and Epirus. As the Wallachian language is derived from the Latin, it is generally supposed that the Wallachians are descendants of the Roman colonists sent by Trajan into Dacia; and to this day they call themselves no other name than *Rómani*, *Rumani*, or *Romans*. The name Wallacha, which is given to the inhabitants of Wallachia by foreigners, belonged to some people in Thrace, Macedonia, and Thessaly, as we know from the Byzantine historians, who frequently mention the *Vlachi* (*Βλάχοι*), who lived chiefly in the country round Mount Pindus. In the 18th century a part of the *Vlachi*, who were oppressed by the emperor Manuel, concluded an alliance with the Bulgarians and the *Gumani*, who inhabited Bulgaria and Dacia, and, commanded by two brothers, *Aaan* and *Peter*, left Thrace and settled north of the Danube.

Three causes seem to have contributed to induce the *Vlachi* to settle north of the Danube—the oppression of the Greek emperors and nobles, the invasions of the Turks, and the opportunity of acquiring fertile lands and liberty in a country beyond the reach of the emperors and the Turks. Thus the inhabitants of Wallachia, Moldavia, and a great part of Transylvania and Hungary must be considered as descended from the *Vlachi* in Thrace, a Christian nation, belonging to the Greek Church, and who in the 12th century used a kind of Roman language, which the *Kutzo-Wallachians* (or that part of the race which remained in the more southern provinces of Turkey-in-Europe) still do. The name '*Vloch*,' or '*Wloch*,' is said to be Slavonic for '*Italian*,' or '*Roman*;' and thus Wallach is equivalent to the native name *Rómani*. In *Stritter's 'Memoria Populorum*,' vol. i., Thrace is spoken of as, "*Provincia Latinorum qui illo tempore Romani vocabantur, modo vero Morovlachi, hoc est Nigri Latini vocantur.*"

Slavonic tribes spread all over the European provinces of the empire south of the Danube, even to the remotest parts of the Peloponnesus in the 7th century, and no doubt mingled with the races already in possession of the soil. That the Wallachs are principally descended from Romans or a Romanised people is clear from their language, customs, costume, and name. The language shows a considerable admixture of Greek and Slavonic, with some Turkish and Albanian roots; but the auxiliary verbs, the pronouns, the greater part of the prepositions, and the adverbs of place and time, as well as the numerals, the declensions, and the conjugations, are all Latin, and so is generally the groundwork of the language.

The Wallachians use the Cyrillic alphabet, which consists of forty-two letters, and was invented by Bishop Cyrilus about 870, when he first wrote in the old Slavonic language in Servia. They have always had a written language, and the number of their chronicles, annals, and ecclesiastical works is considerable, but only a few of them are printed. Newspapers are published in the Wallachian language at Bukharest and Yassy. [See ROUMANIA, in SUPPLEMENT.]

WALLASEA ISLAND. [ESSEX.]

WALLASEY. [CHESHIRE.]

WALLENSTADT, LAKE. [GALL, ST.; SWITZERLAND.]

WALLINGFORD, Berkshire, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, is situated on the right bank of the Thames, in 51° 36' N. lat., 1° 7' W. long., distant 46 miles W. by N. from London by road, and 50 miles by the Great Western railway. The population of the municipal borough of Wallingford in 1851 was 2819; that of the parliamentary borough was 8064. The borough is governed by 4 aldermen and 12 councillors, of whom one is mayor; and returns one member to the Imperial Parliament. The livings are in the archdeaconry of Berks and diocese of Oxford. Wallingford Poor-Law Union contains 28 parishes and townships, with an area of 40,860 acres, and a population in 1851 of 14,112.

Wallingford was probably a Roman station. [BERKSHIRE.] There was a castle here at the time of the Conquest belonging to Wigod, a Saxon noble. In 1067 Robert D'Oyley, a Norman baron, who had married Wigod's only daughter, built a strong castle at Wallingford. In 1158, Henry, son of the Empress Maud, besieged a fort which Stephen had erected at Crowmarsh, on the opposite side of the Thames, and Stephen coming to its relief, a peace was concluded between the rival parties. In the civil war of Charles I., the castle was regarded as a post of importance: near the close of the war it surrendered to Fairfax, and was afterwards demolished. Scarcely any portion of the buildings remains. In the town are portions of several ancient buildings. A Benedictine priory was founded here in the reign of William I.

Wallingford has a remarkably neat and respectable appearance. The principal streets are paved, and lighted with gas. The stone bridge, which here crosses the Thames, connects the town with Crowmarsh-street. There are three churches, St. Mary's, St. Leonard's, and St. Peter's. St. Mary's, the principal church, is an ancient struc-

ture of early English character. St. Leonard's was rebuilt in great degree after the siege in 1646, in which it had sustained great injury; it has recently been restored and enlarged; this church is a fine specimen of Norman architecture. St. Peter's was also ruined in the siege, and remained in ruins more than a century; it has a spire of very singular form, erected at the expense of Sir William Blackstone, the author of the '*Commentaries*,' when the church was restored about 80 years back. Sir W. Blackstone is buried in the church. There are chapels for Independents, Baptists, and Primitive Methodists, National schools, a mechanics institute, and a savings bank. The chief trade of the place is in corn, flour, malt, and coal. Friday is the market-day; a fair is held yearly on September 29th. A county court is held. Wallingford is a borough by prescription.

WALLIS ISLAND is a small island in the Pacific, the centre of which is in 18° 18' S. lat., 176° 20' W. long. It is 5 miles long and 2 miles wide. The interior of the island is rather high, but along the shore it is low and rocky. The island is surrounded by a reef about two miles from the shore. In a break in the reef on the west side of the island a vessel may anchor in eight fathoms water. The island is covered with trees to the water's edge, and many of them are of large size. In some parts there are plantations of cocoa-nuts. There are several rills of water in the island. The inhabitants go naked.

WALLOOSTOCK, RIVER. [CANADA.]

WALLOP, NETHER. [HAMPSHIRE.]

WALLESD. [NORTHUMBRLAND.]

WALMER. [DEAL.]

WALMERSLEY. [LANCASHIRE.]

WALPOLE ST. PETER. [NORFOLK.]

WALSALL, Staffordshire, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parish of Walsall, is situated in 52° 35' N. lat., 1° 58' W. long., distant 17 miles S.S.E. from Stafford, 121 miles N.W. from London by road, and 128 miles by the London and North-Western and South Staffordshire railways. The population of the municipal and the parliamentary boroughs, which are co-extensive, was 25,680 in 1851. The borough is governed by 6 aldermen and 18 councillors, of whom one is mayor; and returns one member to the Imperial Parliament. The living is a vicarage, in the archdeaconry of Stafford and diocese of Lichfield. Walsall Poor-Law Union contains eight parishes and townships, with an area of 21,608 acres, and a population in 1851 of 48,044.

The town of Walsall is irregularly laid out, but contains numerous good houses. The parish church of St. Matthew is in the centre and highest part of the town. The tower is of fine proportions, and is surmounted with a lofty spire. St. Paul's chapel, a handsome Grecian building, was erected by the trustees of the grammar school. There are chapels for Wesleyan Methodists, Baptists, Independents, and Roman Catholics, a Free Grammar school, National schools, and an infant school. There are an old town-hall, a small borough jail, and a handsome public library and news-room, with a Doric colonnade.

Walsall is situated on the eastern border of the South Staffordshire coal-field, and of the Warwickshire and Staffordshire iron district. Many of the inhabitants are employed in the manufacture of guns, gas-tubes, chains, locks, keys, spades, shovels, hinges, screws, files, edge-tools, buckles, stirrup-irons, bridle-bits, and machinery. There are brass- and iron-foundries; and in the vicinity are coal-pits and freestone quarries. A market is held on Tuesday. There are three yearly fairs. A county court is held. Races are held about Michaelmas.

WALSHAM. [NORFOLK.]

WALSINGHAM, LITTLE or NEW, Norfolk, a town, and the seat of a Poor-Law Union, in the parish of New Walsingham, is situated on both sides of the river Stiffkey, in 52° 54' N. lat., 0° 54' E. long., distant 28 miles N.W. from Norwich, and 113 miles N.N.E. from London by road. The population of the parish in 1851 was 1207. The living is a perpetual curacy in the archdeaconry and diocese of Norwich. Walsingham Poor-Law Union contains 50 parishes and townships, with an area of 86,503 acres, and a population in 1851 of 21,857.

Great or Old Walsingham, and Little or New Walsingham, adjoin each other. Geoffroy de Favarches, in the reign of William the Conqueror, founded here a monastery for Augustinian or Black Canons. An image of the Virgin, belonging to this foundation, was held in the very highest regard; pilgrimages to the chapel or shrine of '*Our Lady of Walsingham*' were even more frequent than those to the shrine of St. Thomas à Becket, and the possessions of the priory were augmented by large endowments and costly presents. There are some fine remains of the convent:—a richly-ornamented lofty arch, supposed to have formed the east end of the conventual church; the western entrance-gateway to the monastery, having a broad flattened arch; and other interesting portions, yet remain. The principal part of these ruins is included in the pleasure-grounds of Walsingham Abbey, the seat of the lord of the manor. There was a house of Franciscan or Gray Friars at Little Walsingham; there was also a lazaret-house, founded in 1492, for two leprous persons. This lazaret-house has been enlarged, and is used as a bridewell. The parish church contains an ancient font of perpendicular character; its carving is among the richest in England, representing the seven sacraments of the Roman Catholic Church, and the Crucifixion. There are chapels for Wesleyan Methodists, Independents, and Baptists a Free Grammar school, and National schools.

There is a yearly fair. Quarter sessions for the county are held in the town by adjournment twice in the year.

WALSOKEN. [NORFOLK.]

WALTHAM. [ESSEX.]

WALTHAM ABBEY, or WALTHAM HOLY CROSS, Essex, a market-town, in the parish of Waltham Abbey, is situated on the river Lea, which is here separated into several channels, some of which flow through the town, in 51° 41' N. lat., 0° 1' W. long., distant 13 miles N. by E. from London by road, and 15 miles by the Eastern Counties railway. The population of the town in 1851 was 2329.

The first notice of Waltham occurs in the reign of Canute, whose standard-bearer, Tovi, founded here a religious house with two priests. Harold, afterwards king of England, enlarged the foundation of Tovi in 1062, rebuilt the church, and established a school of learning. When Harold fell in the battle of Hastings in 1066, his body was brought to Waltham for interment, and a tomb erected over his burial-place. In the reign of Henry II., in 1177, the dignity of abbot was conferred upon the head of the establishment. Henry III. frequently resided here, and granted to the inhabitants the privilege of a market and a fair. The town is lighted with gas. The nave of the conventual church, with its side-aisles, forms the body of the present church. The extent of the original fabric may be estimated by the fact, that Harold's tomb, which was in the choir or in a chapel beyond it, stood about 120 feet eastward from the termination of the present building. The church is about 90 feet in length, and, including the side-aisles, 48 feet in breadth. It is in the Norman style, with round massive piers dividing the nave from the side-aisles, semicircular arches, and zigzag enrichments. The roof is modern. At the west end of the church is a heavy square embattled stone tower, 86 feet high, bearing the date 1558. From the south side of the church projects a chapel, under which is a fine crypt. The building was repaired and restored a few years back; it is of great architectural and antiquarian interest. An entrance-gateway which remains is in a much later style of architecture than the church. There are chapels for Baptists and Wesleyan Methodists; National and British schools; a school, founded by Mr. Leverton, for the education and clothing of 20 boys and 20 girls; a literary and scientific institute; and a working-men's mental and moral improvement society. The powder-mills belonging to government employ many hands; there are also breweries, flour-mills, malt-kilns, and a manufactory of percussion-caps. A county court is held. The market is on Tuesday. Fairs are held on May 14th, and on September 25th and 26th.

WALTHAM CROSS. [HERTFORDSHIRE, *Cheshunt.*]

WALTHAM-ON-THE-WOLDS. [LEICESTERSHIRE.]

WALTHAMSTOW, Essex, a village in the parish of Walthamstow, is situated near the left bank of the river Lea, in 51° 35' N. lat., 0° 2' W. long., distant 26 miles S.W. from Chelmsford, and 7 miles N.E. from London. The population of the parish in 1851 was 4959. The living is a vicarage in the archdeaconry and diocese of London. Besides the parish church, a brick building with a square tower, there are chapels for Independents; National, British, and Infant schools; Sir G. Monoux's Grammar school; the Forest school, in connection with King's College, London; and a school for the education of the daughters of missionaries, in connection with the London Missionary Society. In the neighbourhood are copper-mills and oil-mills.

WALTON-LE-DALE. [LANCASHIRE.]

WALTON-LE-SOKEN. [ESSEX.]

WALTON-ON-THAMES. [SURREY.]

WALTON-ON-THE-HILL. [LANCASHIRE.]

WANDSWORTH and CLAPHAM, Surrey, adjoining villages and parishes, which jointly give name to a Poor-Law Union. The Union contains 6 parishes and townships, with an area of 11,693 acres, and a population in 1851 of 50,764. The villages of Wandsworth and Clapham are described under SURREY.

WANGARA, a country in Northern Africa, mentioned only by the Arabian geographers Edrisi, Abulfeda, and Leo Africanus. These authors agree in stating that in Wangara the Niger terminates, and Leo Africanus adds that it terminates in the sea. Thus Wangara appears to be the delta of the Quorra, and this supposition is supported by the description which is given of the country. The authors above mentioned describe it as an alluvial tract environed and intersected by the branches of the Niger, and annually overflowed in July, August, and September; they add that several fresh-water lakes are found in it. Leo Africanus says that the low tract is called Genni by the inhabitants, and that it is contiguous to Wangara, which thus would comprehend the mountainous tract about the confluence of the Quorra and the Tshadda. The name of Genni or Ginni appears even at present to be used in Northern Africa for the delta of the Quorra, and from this name appears to be derived that of Guinea, which Europeans have applied to that portion of the coast of Africa which extends from Cape Palmas to the Bight of Biafra. The Arabs arrived in Sudan by way of Nubia and Abyssinia, and as soon as they had advanced as far as 10° E. long. of Greenwich, they found that all the waters ran westward; and they must soon have been informed that they united in a large river, which farther down in Wangara reached the sea. They were therefore right in stating that the Niger runs westward.

WANGFORD, a hundred in the county of Suffolk, which gives name to a Poor-Law Union. Wangford hundred comprises 23 parishes and one hamlet, with an area of 33,187 acres, and a population in 1851 of 9618. Wangford Poor-Law Union contains 27 parishes, with an area of 35,079 acres, and a population in 1851 of 14,014.

WANLOCKHEAD. [DUMFRIESSHIRE.]

WANSDYKE. [SOMERSETSHIRE.]

WANSTEAD. [ESSEX.]

WANTAGE, Berkshire, a market-town and the seat of a Poor-Law Union; in the parish of Wantage, is situated in 51° 35' N. lat.; 1° 26' W. long., distant 10 miles S.W. from Abingdon, and 60 miles W. by N. from London by road. The population of the town in 1851 was 2951. The living is a vicarage in the archdeaconry of Berks and diocese of Oxford. Wantage Poor-Law Union contains 34 parishes and townships, with an area of 76,700 acres, and a population in 1851 of 17,438.

Wantage was a place of importance in the time of the Saxons, when it formed, with the neighbouring lands, part of the patrimony of the West Saxon kings, who had a residence here, in which Alfred the Great was born in 849. A public festival in commemoration of the birth of Alfred was held at Wantage on October 25th 1849.

Wantage had formerly a manufacture of woollen-cloth and sacking, but this having declined, the town was gradually decaying, when, on the opening of the Great Western railway, the leading inhabitants established a new pitched market, on Wednesdays, for the sale of agricultural produce, and the town has in consequence been greatly benefited. Among other improvements may be named the erection of a town-hall, a National school of a superior character, a Grammar or Middle school (the revival of an old and nearly obsolete foundation), a new cemetery and chapel, and two district chapels. The parish church is an ancient cruciform edifice of mixed styles, with a square embattled tower rising from the intersection. In the interior are some monumental brasses of the 14th and 15th centuries. The Wesleyan Methodists and Baptists have chapels; and there are the Alfred literary and scientific institute, the church library, and a savings bank. A county court is held. There is a market-cross, erected in 1580. A branch of the Wilts and Berks Canal comes up to the town. There are a monthly cheese-fair, two yearly fairs for cattle and cheese, one for cherries, and a statute fair.

WAPPING. [LONDON.]

WARASDIN. [CROATIA.]

WARBOYS. [HUNTINGDONSHIRE.]

WARDODJ, RIVER. [BADAKSHAN.]

WARE, Hertfordshire, a market-town and the seat of a Poor-Law Union, in the parish of Ware, is situated on the left bank of the river Lea, in 51° 49' N. lat., 0° 2' W. long., distant about 3 miles E.N.E. from Hertford, 20 miles N. from London by road, and 24 miles by the Eastern Counties railway. The population of the town in 1851 was 4832. The living is a vicarage in the archdeaconry of St. Albans and diocese of Rochester. Ware Poor-Law Union contains 15 parishes and townships, with an area of 35,747 acres, and a population in 1851 of 16,482.

Ware consists of one long street and several smaller streets. The Lea is crossed by a fine iron bridge, constructed in 1845. The parish church, a beautiful cruciform structure, was lately restored. The Wesleyan Methodists, Independents, and Quakers have places of worship. The Free Grammar school, founded in 1563, has been revived as a Middle school. St. Edmund's College, Old Hall Green, is an academy for the education of Roman Catholic clergymen. There are National schools, a British school, and a literary institute. The market on Tuesday is one of the greatest in the county for corn, and there is a yearly fair. Ware is one of the principal towns in England for the manufacture of malt. Brewing, rope-making, brick-making, and sack-making employ some of the inhabitants. The Danes, in the reign of Alfred, brought their vessels up the Lea to Ware, and protected them by a dam or weir across the river.

WAREHAM, Dorsetshire, a market-town, municipal and parliamentary borough, and, conjointly with Purbeck, the seat of a Poor-Law Union, is situated on an eminence between the rivers Frome and Piddle, in 50° 41' N. lat., 2° 6' W. long., distant 19 miles E. by S. from Dorchester, 115 miles S.W. from London by road, and 126 miles by the London and South-Western railway. The population of the parliamentary borough in 1851 was 7218. The municipal borough is governed by 7 aldermen and 21 councillors, one of whom is mayor, who acts as coroner for the whole Isle of Purbeck. The living is a rectory in the archdeaconry of Dorset and diocese of Salisbury. Wareham and Purbeck Poor-Law Union contains 27 parishes and townships, with an area of 96,309 acres, and a population in 1851 of 17,417.

The town of Wareham is within three miles of an arm of the sea, which forms a part of the bay called Poole Harbour. A town existed here in the time of the Britons, and it was subsequently occupied by the Romans. The town is nearly surrounded by an earthwork formed by the Danes in the time of Alfred. A priory was founded at Wareham in the 9th century, and there are some traces of an ancient castle. Much of the original area of the town is now covered with market-gardens. Three parishes, Lady St. Mary's, Trinity, and St. Martin's, now form one parish for ecclesiastical purposes. The church of St.

Trinity parish is used for the National school; and in that of St. Martin the burial service only is read. Lady St. Mary's church is a large and ancient edifice, and belonged to the priory. The nave was rebuilt in 1842. There are chapels for Independents, Wesleyan Methodists, and Unitarians; National, British, and Infant schools; almshouses; a mutual improvement society; a news-room; and a savings bank. Wareham returned two members to Parliament from the reign of Edward I. to the passing of the Reform Act, under which it now returns one member.

Wareham is a member of the port of Poole. The principal trade consists in the export of a peculiar kind of clay found in the parish of Corfe Castle and in the neighbourhood, which is in demand for the manufacture of common earthenware in Staffordshire. The market-day is Tuesday; and there are fairs for cattle, cheese, and hogs on April 7th and September 8th, and six cattle-fairs in the spring.

WAREKAURI. [CHATHAM ISLANDS.]

WARENDORF. [MÜNSTER.]

WARGRAVE. [BERKSHIRE.]

WARK. [NORTHUMBERLAND.]

WARKWORTH. [NORTHUMBERLAND.]

WARMINSTER, Wiltshire, a market-town and the seat of a Poor-Law Union, in the parish of Warminster, is situated in 51° 12' N. lat., 2° 10' W. long., distant 47 miles S.W. by S. from Devizes, 96 miles W. by S. from London by road, and 114 miles by the Great Western railway. The population of the town in 1851 was 4220. The living is a vicarage in the archdeaconry and diocese of Salisbury. Warminster Poor-Law Union contains 21 parishes and townships, with an area of 56,356 acres, and a population in 1851 of 17,067.

The town is in a very healthy situation, close to the western border of Salisbury Plain, in the valley of the Wily. The principal street is well paved. The parish church is a spacious and handsome structure; the tower is of the time of Edward III.; the body of the church was rebuilt early in the last century. Christ church was built a few years ago. An ancient chapel in the centre of the town is now used as a chapel of ease. There are chapels for Baptists, Independents, Wesleyan Methodists, and Unitarians; Lord Weymouth's school; National and Infant schools; and a savings bank. The town-hall, erected by the Marquis of Bath, contains a handsome suite of rooms for assemblies, public meetings, &c. The market for corn is held on Saturday, and there are three yearly fairs. A county court is held.

WARNETON. [FLANDERS, West.]

WARRAGONG MOUNTAINS. [AUSTRALIA.]

WARRENPOINT. [DOWNSHIRE.]

WARRINGTON, Lancashire, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parish of Warrington, is situated on the right bank of the river Mersey, in 53° 24' N. lat., 2° 36' W. long., distant 53 miles S. by E. from Lancaster, 184 miles N.W. from London by road, and 182 miles by the London and North-Western railway. The population of the parliamentary borough of Warrington in 1851 was 28,363. The borough is governed by 9 aldermen and 27 councillors, one of whom is mayor; and returns one member to the Imperial Parliament. The living is a rectory in the archdeaconry of Liverpool and diocese of Chester. Warrington Poor-Law Union contains 16 parishes and townships, with an area of 29,984 acres, and a population in 1851 of 36,164.

The town consists of several narrow streets irregularly laid out, which are well paved and lighted with gas. Two or three excellent examples of ancient half-timber houses are in the market-place. The parish church is a large cruciform building of various dates. Under the eastern end of the church is a Norman crypt. St. Paul's church, finished in 1831, is of gothic architecture; Padgate church is of later erection. There are places of worship for Roman Catholics, Wesleyan and Primitive Methodists, Independents, Baptists, the Countess of Huntingdon's Connexion, Quakers, and Unitarians. There are a Free Grammar school; National, British, Orphan, and Infant schools; a Blue-Coat school, a school of the Educational Society, a Diocesan Model school, Wesleyan and Roman Catholic schools, an institution for the education of clergymen's daughters, a mechanics and a church institute, a museum, a town library, a dispensary, a savings bank, and public baths. A town-hall, a market-hall, two cloth-halls, a bridewell, assembly-rooms, and a theatre are in the town.

Warrington was among the earliest seats of manufactures in Lancashire. Coarse linens and checks were the fabrics first made in the town, after which huckaback was manufactured, and then sailcloth and sacking. At present the chief branches of industry are—cotton-spinning and power-loom weaving, the weaving of fustians, the manufacture of flint-glass and glass bottles, machinery and mill-work, wire, pins, files, nails and tools, spades, rope, sail-cloth, soap, glue, size, and hats. There are steam flour-mills, malt-houses, brick-fields, tan-yards, a paper-mill, an iron-foundry where large iron steamers are built, and several breweries. The market is on Wednesday for corn, vegetables, and butcher-meat; a less important market is held on Saturday. There are two yearly fairs for woollen-cloth, Irish linens, Welsh flannels, horses, horned cattle, pigs, sheep, and pedlery. Potatoes and vegetables are cultivated to a considerable extent around the town. The navigation of the river Mersey and its feeder the Irwell is continued upward to Manchester. The Mersey and Irwell Canal joins the river Mersey near Warrington; and the Sankey Canal, the Duke of

Bridgewater's Canal, the London and North-Western railway, and the Lancashire and Cheshire Junction railway pass near the town.

WARSAW, the capital formerly of Poland, now of the province of Warsaw in European Russia, is agreeably situated on an eminence on the left bank of the Vistula, in 52° 10' N. lat., 21° E. long., and had 164,115 inhabitants in 1851. It consists of the city itself, which is divided into the Old and the New Town, and of several suburbs. The city is surrounded with ramparts, and defended by a citadel and other fortifications. The circumference of the city and suburbs (including Praga, a suburb on the right bank of the Vistula) is 10 miles, but there are many gardens and open spaces in this area. The city itself is irregularly built and the streets narrow, but the suburbs are distinguished by their regularity and fine buildings, and entitle Warsaw to rank among the handsomest cities in Europe. These suburbs are adorned with splendid edifices, with broad, well-lighted, and paved streets; the mean wooden houses which formerly stood here have gradually disappeared, and others of stone taken their place. Among the public structures are—the royal (now the imperial) palace, built by King Sigismund III., who transferred his residence from Cracow to Warsaw; the Saxon palace, with a fine garden; the palace, formerly the residence of the primate, since occupied by the commissariat department; the Krasiński palace, a very fine building, now the palace of the government; the palaces formerly belonging to Prince Radzivil and Count Brühl; the buildings of the former university; the arsenal; the mint; the Marieville bazaar, an imitation of the Palais Royal in Paris; the military hospital; and the great barracks. There are besides above a hundred palaces of the Polish nobles, and 18 convents (some of these have been suppressed), each with its own church. Among the other churches of Warsaw the most remarkable are—the Catholic cathedral of St. John, the church of the Holy Cross, that of St. Alexander (built by means of contributions which were collected for the purpose of erecting a triumphal arch in honour of the emperor Alexander's first entry into Warsaw); the church of St. Borromeo, and a beautiful Lutheran church. Warsaw has five theatres; numerous useful and charitable institutions; a National bank, established by order of the emperor Nicholas in 1828; a foundling hospital, six other hospitals, an agricultural academy, a deaf and dumb asylum, and numerous schools. Of the population about 30,000 are Jews. The manufactures of Warsaw comprise broadcloth, cotton-prints, linen, woollen-stuffs, hosiery, hats, gold- and silver-ware, paper, tobacco, saddlery, beer, chemicals, &c.; and the trade of the city is considerable, being favoured by the Vistula, five annual fairs, and by a railway, which joins the Cracow-Vienna line at Granica.

Before the Cracow gate stands the gilt bronze statue of King Sigismund III. on a marble column 26 feet high. The emperor Nicholas caused a splendid monument to be erected in the church of the Capuchins, in honour of King John III. (Sobieski), the conqueror of the Turks. In 1830 the statue of Copernicus was erected before the palace of the Royal Society of Friends of the Sciences, and the statue of Prince Joseph Poniatowski, who lost his life in the battle of Leipzig, was set up in the Cracow suburb. Another statue of Copernicus, by Thorwaldsen, was erected in 1849.

The University of Warsaw, abolished in 1834, has been replaced by two colleges; but its library of 150,000 volumes and all its other valuable collections were transferred to St. Petersburg. Warsaw has also a theological seminary, a rabbinical college, an observatory, a botanic garden, two gymnasia, numerous Russian schools, libraries, and literary associations. Warsaw became the capital of Poland in 1566, of the Grand Duchy of Warsaw in 1807, and of Russian Poland in 1815. The Poles drove the Russians out of it in 1830, but the latter recovered it a few months after; and since this insurrection the most persevering efforts have been made by Russia to abolish the nationality, the religion, and the language of the Poles. [POLAND.]

WARSOP. [NOTTINGHAMSHIRE.]

WARTHA, RIVER. [BRANDENBURG.]

WARWICK, the county town of Warwickshire, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, is situated chiefly on the right bank of the river Avon, in 52° 17' N. lat., 1° 33' W. long., distant 90 miles from London by road, and 105 miles by the London and North-Western railway. The population of the borough in 1851 was 10,973. The borough is governed by 6 aldermen and 18 councillors, of whom one is mayor; and returns two members to the Imperial Parliament. The living is a vicarage in the archdeaconry and diocese of Worcester. Warwick Poor-Law Union contains 34 parishes and townships, with an area of 66,639 acres, and a population in 1851 of 41,934.

Warwick is a place of considerable antiquity. It was ruined in the early wars of the Danes, and restored by the Lady Ethelfleda, daughter of Alfred the Great, and governor of Mercia, who built a fort here in 913. In the time of Philip and Mary the town received its first regular charter of incorporation.

The principal part of the town is separated from the Avon by Warwick Castle and the castle grounds. Its site is a solid rock, in which the cellars are excavated. Above the castle the Avon is crossed by a stone bridge of one arch 100 feet in span. The streets are spacious, well paved, lighted with gas, and in general lined with modern well-built houses. The castle is one of the finest specimens of the ancient residences of our feudal nobles in the kingdom. One of the

towers in the castle, known as Caesar's Tower, which is 147 feet high, is the most ancient part of the whole building, and is of uncertain date; another, known as Guy's Tower, 128 feet high, is of the latter part of the 14th century and is of decorated English character. The length of the entire suite of apartments is 333 feet. The great hall of the castle, a noble room, 62 by 37 feet, retains, in its appearance and furniture, much of its ancient character. The other apartments contain a number of portraits and other paintings by the old masters, and a valuable collection of ancient and modern armour. The grounds are extensive and beautiful, and one of the greenhouses contains the capacious and beautiful ancient vase brought to England by the late Earl of Warwick, known as the 'Warwick Vase.' St. Mary's church is a cruciform edifice, of which the choir and its adjuncts, especially the chapel of St. Mary, usually termed Beauchamp Chapel, are ancient; the nave and transept are modern, and are of barbarous architecture, with a mixture of different styles. The chancel is a beautiful specimen of perpendicular architecture, and the east front is remarkably fine. The tower, which is 130 feet high, is surmounted at the angles with lofty pinnacles. In the centre of the chapel is a very rich altar-tomb, with the figure, in latten, of Richard Beauchamp, Earl of Warwick, who died in 1439. St. Nicholas's church is a small modern building. There are places of worship for Wesleyan Methodists, Independents, Baptists, Quakers, Roman Catholics, and Unitarians. There are the King's school, founded by Henry VIII., National, British, and Infant schools; an Industrial school for girls; an Endowed school for boys and girls; a savings bank, and a dispensary. The public buildings include a spacious and handsome county-hall; a neat court-house; a large modern jail; a county house of correction; a town-hall; and a substantial market-house. 'Leicester Hospital,' or almshouse, is for a master and 20 brethren, impotent or infirm men. An ancient place of worship, called St. Peter's church, over the east gate of the town, is used as a free-school. On the west side of the town is a race-course.

An extensive hat manufactory and some large flour-mills afford considerable employment. There are malt-houses, rope-walks, and lime-, timber-, and coal-wharfs on the bank of the Warwick and Napton Canal. The market is held on Saturday. There are 12 yearly fairs, some of which are considerable cattle-fairs. The assizes and quarter sessions for the county, quarter sessions for the borough, and a county court, are held at Warwick.

WARWICKSHIRE, a midland county of England, is bounded N. for a very small space by Derbyshire; N.E. by Leicestershire, the line of separation being formed in great part by the ancient Watling Street; E. by Northamptonshire; S.E. by Oxfordshire; S. and S.W. by Gloucestershire; W. by Worcestershire; and N.W. by Staffordshire. It lies between 51° 58' and 52° 42' N. lat., 1° 10' and 2° 0' W. long. The greatest length is 50 miles; the greatest breadth is 33 miles. The area of the county is 881 square miles, or 563,946 acres. The population in 1841 was 401,703; in 1851 it was 475,018.

Surface and Geology.—Warwickshire has no lofty hills, but the whole county is occupied by gentle eminences with intervening vales. The south-eastern border is skirted by hills composed of the lower formations of the oolitic series, overlooking the valley of the Stour and the 'Vale of Red Horse,' so called from a colossal figure of a horse carved in the ferruginous sands of the slope of Edge Hill, now obliterated by the progress of inclosures, and replaced by one of much smaller dimensions. Of these oolite hills the chief portion in Warwickshire consists of two ridges separated from each other by a narrow valley drained by a small brook which joins the Cherwell near Banbury in Oxfordshire. The northernmost ridge, comprehending the Burton Hills, Gredenton Hill, Bitham Hill, Compton Hill, Farnborough Hill, Mollington Hill, and others, runs from north-west to south-east, dividing the valley just mentioned from a parallel valley drained by another small feeder of the Cherwell, and through which the Oxford Canal passes. The other ridge consists of two parts or branches, meeting at Knowle Hill: one part runs parallel to that just described, and overlooks the valley between them; the other is nearly at right angles to the former, and runs southward, overlooking the valley of the Stour. This latter part of the ridge, known in one part as Edge Hill, possesses considerable interest as overlooking the scene of the first pitched battle in the civil war of Charles I.: it consists of an elevated platform with a steep escarpment, commanding an extensive prospect over Warwickshire and Worcestershire as far as the Malvern and Abberley Hills west of the Severn. The southern prolongation of Edge Hill consists of detached summits, such as Tysoe Hill, Broom Hill, Mine Hill, and Long Compton Hill. Brailes Hill is detached from the principal chain of hills, and is more advanced into the valley of the Stour; it has two rather lofty summits.

The valley of the Stour and the Vale of Red Horse, which skirt the foot of the oolite hills, are occupied by the beds of the lias formation. The lias forms towards its north-western limit a range of high ground, including Walton or Bath Hill, Morton Hill, Bromston Hill, Harbury-upper-Field, and Dunsmore Heath, at the foot of which range the formations of the red marl and new red-sandstone group crop out, and occupy the valley of the Avon nearly as far as Rugby. The lias forms the cap or summit of several hills, Red Hill, Bardon Hill, Welcome Hill, Rime Hill, Black Hill, and others, north-west of the Avon, between Stratford, Alcester, Warwick, and Henley-in-Arden.

The marlstone of the lias beds is quarried at Binton and Grafton, between Stratford and Alcester, and is used for paving, for stone seats, and as marble for chimney-pieces; it is not variegated in colour, but presents dendritical appearances.

The rest of the county, with one or two exceptions, is occupied by the formations of the red marl and new red-sandstone group; and forms part of the great midland red marl and new red-sandstone district. There is a range of high ground in Feckenham Forest, west of Alcester, along which the Ridge-way runs. Another range of high ground forms a semicircle north of Henley-in-Arden, inclosing the valley drained by the Alne (a small feeder of the Avon), which passes Henley and Alcester. A third range extends across the northern part of the county, forming a crescent, and passing by Solihull, Coleshill, and Dosthill, to the border of the county between Atherstone and Tamworth; and a fourth runs northward from the lias-capped hills near Warwick, by Hatton, Berkswell, Meriden, and Maxtoke to Whitacre, where it unites with the third range. None of these high grounds are of much elevation. A range of hills runs eastward from Warwick, or rather from Leamington Priors, by Dunchurch and Rugby to the border of the county, separating the valleys of the Leam and the Avon.

There is one coal-field in Warwickshire: it extends in length 16 miles from Wicken and Sow, two villages close to Coventry on the east, to the border of Staffordshire east of Tamworth: it has an average breadth of about three miles. The coal district is hilly, and the outcrop of the strata on the east forms a well-defined low escarpment, presenting in some places the coal-measures, in others the subjacent strata of the millstone-grit. At the foot of the escarpment is a level plain, where the lower formations are covered by the red marl and new red-sandstone, which completely encircle the coal-field. The principal coal-works are at Griff and Bedworth, in the southern part of the field, between Nuneaton and Coventry. Greenstone is found at Griff.

Hydrography and Communications.—The greater part of Warwickshire belongs to the basin of the Severn; a considerable portion in the north is included in the basin of the Trent; and a small portion in the south-east in the basin of the Thames. The drainage of the county is conveyed into the Severn by the *Upper Avon*, one of its most important tributaries. The Avon rises at Naseby in Northamptonshire, and enters Warwickshire about 12 miles from its source. Its course in this county is westward, passing Brownover, Rugby, Wolston, and Ryton-on-Dunsmore, below which it turns south-west and flows through Stoneleigh Park by Warwick, through Warwick Castle Park, by Barford, Charlecote, and Stratford-upon-Avon; and thence partly within, partly upon the border of the county, by Weston-upon-Avon and Bidford, till it quits the county just above Harvington mill. Its course through the county is about 57 miles. [AVON.] The navigation commences at Stratford. The feeders of the Avon are the Swift, the Sow, the Leam, the Dene, the Stour, and the Arrow. The *Swift* is a small stream which rises in Leicestershire, 4 miles from Lutterworth, passes that town, and after a course of 10 miles joins the Avon on its right bank near Rugby. The *Sow* rises near Astley, 5 or 6 miles north of Coventry, and flows 18 or 20 miles by Bedworth, Foleshill, Sow, and Stoneleigh, into the Avon, which it joins on the right bank in Stoneleigh Park. The *Leam* rises near Shuckburgh Park, flows in a very winding channel by Wolfhamcote, Leamington, Hastings, Radford, and Leamington Priors, and joins the Avon just above Warwick. Its receives on the left the *Ichene*, or *Ichens*, which rises at the foot of Hardwick Hill, near Prior's Hardwick, and joins the Leam at Marton. The *Dene* rises at the foot of the Burton Hills, and flows west and north-west by Kineton and Wellesbourne Hastings into the Avon, which it joins on the left bank at Charlecote. The *Stour* rises near Tadmarton and Swalcliffe in Oxfordshire, flows west to Burmington, then north and north-west by Shipston-on-Stour and Preston-upon-Stour into the Avon, which it joins on the left bank below Stratford. The *Arrow* rises in the Waste Hills, or West Hill, about 3 miles east of Bromsgrove Lickey in Worcestershire, and flows by Alvechurch, Redditch, Studley, Alcester, where it receives the Alne on its left bank, and Arrow, into the Avon below Bidford. The *Alne* rises near Lapworth, and flows by Preston Bagot and Great Alne into the Arrow at Alcester. None of the feeders of the Avon are navigable.

That part of the county which belongs to the basin of the Trent is drained by the *Tame*, which rises in Kesington Wood, near Bloxwich, flows between Walsall and Wednesbury to Aston, near Birmingham, above which it enters Warwickshire, and below which it receives the Rea from Birmingham on the right bank. It then flows by Castle Bromwich and Water Orton to the junction of the Blyth and the Bourne, both on the right bank, and turns northward, flowing partly within, partly on the border of the county, to the junction of the Anker at Tamworth, where it quits Warwickshire. The *Blyth* rises just within the border of Worcestershire, and has a winding course, by or near Solihull, Hampton-in-Arden, and Coleshill, below which it receives on the left bank the little river Cole. The *Bourne* rises near Arley, and flows first south-west, then west, 10 miles into the Tame. The *Anker* rises in Wolvey Fields, and flows by Nuneaton and Polesworth into the Tame at Tamworth. It receives the Griff Brook on the left bank at Nuneaton, and the Sence, from Market Bosworth in Leicestershire, on the right, below Witherby. Part of the course of the Anker

is on the border of Warwickshire and Leicestershire. Neither the Tame nor any one of its affluents is navigable.

The small portion of the county which belongs to the basin of the Thames is drained by a small stream which rises near Burton Dassett, and flows south-east by Warmington into the Cherwell, below Banbury in Oxfordshire.

The deficiency of river navigation, which in Warwickshire is limited to a small part of the course of the Avon below Stratford, is compensated by the number and importance of its canals. The Coventry Canal commences in the Grand Trunk Canal, on Fradley Heath, near Alrewas, in Staffordshire, and runs southward, nearly parallel to the river Tame, to Fazeley, near Tamworth; afterwards it proceeds by Polesworth, Nuneaton, Bedworth, and Foleshill to Coventry. The whole length of the canal is nearly 38 miles, 27 miles of which are in Warwickshire. The Oxford Canal commences in the Coventry Canal at Longford, and has a winding course past Newbold-upon-Avon and Hill Moreton to Brantton, where the Grand Junction Canal opens into it; then to Napton-on-the-Hill, and into Oxfordshire. It opens into the Thames at Oxford. The whole length of this canal is about 84 miles; of which about half is in Warwickshire, or in Northamptonshire, one or two small projecting parts of which it crosses before finally quitting Warwickshire. The Ashby-de-la-Zouch Canal commences in the Coventry Canal, 3 miles S. from Nuneaton, and quits the county near Hinckley; it is continued to the collieries in the coal-field west of Ashby. The Old Birmingham Canal belongs chiefly to Staffordshire, little more than two miles being in Warwickshire. The Birmingham and Fazeley Canal, 15 miles long, belongs almost entirely to Warwickshire, only two miles being in Staffordshire. There is a junction between this and the Old Birmingham Canal on the west side of the town of Birmingham. The Worcester and Birmingham Canal commences at the junction of the Old Birmingham and Birmingham and Fazeley canals, and runs southward and south-westward into the Severn at Worcester. Of its whole course, 29 miles long, only the three miles nearest to Birmingham are in Warwickshire. The Stratford-upon-Avon Canal commences in the Birmingham and Worcester Canal at King's Norton in Worcestershire, and runs into the Avon at Stratford. Of its whole course, 23½ miles, by far the greater part belongs to Warwickshire. There are three or four short branches. The Warwick and Birmingham Canal commences at Saltisford, on the north-west side of Warwick, and runs north-west by Hatton and Knowle to Birmingham, where it joins a branch of the Birmingham and Fazeley Canal, on the east side of the town of Birmingham. It is 22½ miles long, and belongs almost entirely to Warwickshire. A short branch joins this canal with the Stratford-upon-Avon Canal. The Warwick and Napton Canal commences in the Warwick and Birmingham Canal near Warwick, and runs eastward by Leamington Priors and Long Itchington to the Oxford Canal at Napton-on-the-Hill. It is 14 miles long, and belongs entirely to Warwickshire. The great system of internal navigation which brings the principal ports of England into communication with each other, and with the manufacturing districts, has greatly promoted the manufactures of Warwickshire, especially the silk and ribbon manufactures of Coventry.

Of the coach roads, the most important is the parliamentary road to Shrewsbury and Holyhead, which enters the county between Daventry and Dunchurch, and passes through Coventry and Birmingham. There are two other main lines of road to Birmingham: one by Buckingham, Banbury, and Warwick, and the other by Oxford, Stratford-upon-Avon, and Henley-in-Arden. A road from London to Liverpool crosses the northern part of the county, passing through Atherstone; and the principal road between Bristol and the north of England passes through Birmingham and Sutton Coldfield. Roads lead from Warwick by Southam to Daventry, and by Kenilworth to Coventry, and there are others of less importance.

The county is amply furnished with railways. The main line of the London and North-Western railway enters the county near Rugby, and passes by Rugby and Coventry to Birmingham, a short distance beyond which it quits the county. The Trent Valley branch runs from the main line at Rugby, in a north-westerly direction to Tamworth. Another branch runs from Rugby to Leamington Priors, 15 miles. From Leamington a branch is carried northward to Coventry, and from Coventry it is continued to the Trent Valley line at Nuneaton. The west branch of the Midland railway connects Birmingham with Tamworth, and a branch from it at Whitacre junction joins the main line of the North-Western at Hampton. The Midland South branch runs for a short distance in the county north from Rugby. The Bristol and Birmingham branch of the Midland just enters the county near Birmingham. The Birmingham and Oxford branch of the Great Western railway enters the county by Farnborough a few miles from Banbury, and traverses the county in a north-westerly direction past Warwick to Birmingham. The Rugby and Stamford railway runs for a short distance in the county north-east of Rugby.

Climate, Soil, and Agriculture.—This county, being situated nearly in the centre of England, has a comparatively mild and healthy climate. Except in the higher and more exposed situations, where the soil is cold and heavy, the harvest is as early as in more southern counties. The soil varies extremely, so that two or three different kinds of soil are often found in a field of no great extent. The red loam, which

is found to a considerable extent across the centre of the county, and especially between Warwick and Coventry, and from the borders of Worcestershire to Leicestershire, is mostly of a superior quality; all of it is very fit for white crops, and much of it capable of bearing both beans and turnips. Where the loam inclines to sand, the subsoil is chiefly limestone, marl, or sandstone; and under the colder and heavier loams the substratum is clay. There is also a fertile clay on limestone. There is a great extent of excellent pasture-land in Warwickshire, but there are not many water-meadows. In the neighbourhood of Warwick, Coventry, and especially Birmingham, much land is laid out in gardens, at a high rent, and well cultivated; pieces of meadow-land, likewise, for feeding milk cows, are let at very high rents near these manufacturing towns.

The county of Warwick is extremely well timbered: on every estate of any extent, besides hedgerow timber, there are woods and coppices. At one time the *Forest of Arden* occupied a large portion of the centre of the county. Several places preserve the name, as Henley-in-Arden, Hampton-in-Arden, &c.; and although there is no longer a continuous forest in this district, it is still the best-wooded part of the county, affording plenty of timber, consisting of almost all kinds of forest-trees, but especially oaks.

There is no breed of cattle peculiar to the county. The dairy cows are chiefly long-horns, crossed in every possible way: short-horns have been introduced, and are preferred by many, especially for feeding, although the Herefords are in great repute with the graziers; as well as Scotch, when they can be bought in at a reasonable price. The old Warwickshire sheep is nearly forgotten, having been superseded by the New Leicester and a cross of the two breeds; for feeding the South Downs are preferred.

Divisions, Towns, &c.—The county is divided into four hundred each of which contains several divisions. These hundreds and their respective divisions are as follows:—Barlichway, west—divisions: Alcester, Henley, Snitterfield, and Stratford; Hemlingford, north—Atherstone, Birmingham, Solihull, and Tamworth divisions: Kineton, or Kington, south—Brails, Burton Dassett, Kington, and Warwick divisions: Knightlow, east—Kenilworth, Kirby, Rugby, and Southam divisions. The borough of Warwick is included in Kineton hundred; Birmingham in Hemlingford; and the city of Coventry, formerly a county in itself, is now included in the hundred of Knightlow.

Warwickshire comprehends the city of COVENTRY; the county town and municipal and parliamentary borough of WARWICK; the municipal and parliamentary borough of BIRMINGHAM; the municipal boroughs of STRATFORD-UPON-AVON and Sutton Coldfield; and the market-towns of ALCESTER, ATHERSTONE, Colleshill, Henley-in-Arden, KENILWORTH, Kington, or Kineton, LEAMINGTON PRIORS, NUNEATON, RUGBY, SOLIHULL, and SOUTHAM. Of these the places printed in small capitals are noticed under their respective titles, the others we notice here:—

Colleshill, population of the parish 1980 in 1851, is situated near the river Cole, about 10 miles E. by N. from Birmingham, and 18 miles N.N.W. from Warwick. The town consists principally of one long street, which contains many handsome houses. The church occupies a lofty site, and has a square western tower with buttresses, surmounted by a crocketed octagonal spire of late perpendicular character. There are chapels for Wesleyan Methodists and Independents, a Free Grammar school, a Commercial Free school, and National and Infant schools. The market is on Wednesday; and there are five annual fairs for cattle and horses.

Henley-in-Arden, population of the chapelry 1143 in 1851, about 11 miles W. from Warwick, consists chiefly of one street along the road between Stratford-upon-Avon and Birmingham. The town appears to have been of some importance at an early period. Overlooking the town is the site of an ancient castle, formerly the seat of the Montfort family. In the market-place are the remains of a cross. The parochial chapel is small, but of good perpendicular character. There are a school for boys; a Free school, partly endowed; a school supported by Roman Catholics; a savings bank; and Randal's charity for apprenticing poor children. Brick-making, rope-making, malting, and brewing are carried on, and there are some flour-mills.

Kineton, or Kington, population of the parish 1270 in 1851, about 11 miles S.S.E. from Warwick, formerly had a market, which has been disused. A castle once stood on a hill west of the town; the ruins are popularly termed King John's Castle, and at the foot of the hill there is a well commonly called King John's Well. The church retains some ancient portions; it is cruciform, with a square embattled tower. The western door has a richly-moulded Norman archway. The Wesleyan Methodists and the Independents have chapels. There are National schools. Fairs are held in February and October.

Sutton Coldfield, population 4574 in 1851, is about 7 miles N.N.E. from Birmingham. The church is handsome, and comprehends a modern nave with side aisles and a chancel, which contains the effigy of Bishop Vesey, a benefactor of the town in the time of Henry VIII., who died in 1555, at the age of 103. The Roman Catholics have a chapel. There are a Free Grammar school, a day-school, an Infant school, and a savings bank. On the town-hall, a neat brick building, are the arms of Bishop Vesey emblazoned on a shield, surmounted with a mitre. South-west of the town is 'the Coldfield,' a bleak and cheerless tract of 13,000 acres, extending into Staffordshire; and

north-west and west of the town is Sutton Park, containing about 8500 acres, granted to the poor of the town as pasturage by Bishop Vesey. Branches of the hardware manufacture afford considerable employment. The weekly market is on Monday, and there are fairs for cattle, sheep, and pedlery in March, September, and November.

The following are some of the more important villages, with the parish population in 1851, and a few other particulars:—

Alceston, population 769, stands in a very healthy situation, about 2 miles E. from Stratford, near the right bank of the Avon. A new church has been recently built; of the old church only the chancel remains. There are National schools and an Infant school. Malting, basket-making, and the manufacture of agricultural implements afford some employment. *Aston Cantlows*, or *Cantelups*, population 1111, about 14 miles W.S.W. from Warwick, had once a market and a yearly fair, which have long been discontinued. The parish church is an ancient structure, with an embattled western tower. There are National schools. *Bedworth*, population of the town 3012, is about 4 miles S. by E. from Nuneaton, on the road to Coventry. The church is a modern building, enlarged in 1837. The Independents have a chapel. There are endowed National schools, and almshouses for 20 aged women. A yearly fair for cattle is held. *Bidford*, population 1537, is about 7 miles W.S.W. from Stratford, on the left bank of the Avon. The church has been recently rebuilt in the gothic style. There are National schools. Bidford had formerly a market; fairs are still held on April 9th and September 8th. *Brailes*, population 1808, about 17 miles S.E. by S. from Stratford-on-Avon, has a commodious church, in various styles of gothic, with a lofty tower. The Quakers and Roman Catholics have places of worship; and there are a National school, partly endowed; an Infant school; a school supported by Roman Catholics; and a library and reading-room. The village possesses a manufactory of plush for liveries, a manufactory of agricultural implements, and several flour-mills. *Bulkington*, population 2005, stands on an eminence, about 6 miles N.N.E. from Coventry. The church has been recently enlarged. There are a chapel for Independents, and National schools. Many of the inhabitants are employed in the ribbon manufacture. *Chilvers Coton*, population 2613, about a mile S. from Nuneaton, has a parish church, places of worship for Wesleyan Methodists and Independents, a Free school, and an Infant school. The Coventry Canal passes the village. The ribbon manufacture employs many of the inhabitants. *Compton, Long*, population 845, about 16 miles S.S.E. from Stratford-on-Avon, had a charter from Henry III., for a weekly market and an annual fair. The Common, containing about 2300 acres, has been inclosed. Besides the parish church, there are chapels for Wesleyan Methodists and Independents, and National schools. *Dunchurch*, population 1135, about 11 miles E.S.E. from Coventry, was once a market-town, and still has several yearly fairs. The church is a handsome building. The chancel is early English, with some good decorated windows inserted; the nave is decorated, and the tower is perpendicular in style. There are a Free Grammar school; and several National and Infant schools. In the centre of the village is an obelisk. *Foleshill*, population 7810, about 2 miles N.E. from Coventry, is one of the principal seats of the ribbon manufacture. Besides the parish church, and another Episcopal church, there are places of worship for Wesleyan and Primitive Methodists, Independents, and Baptists; National schools; and an Infant school. There are collieries and an iron-foundry. *Hampton-in-Arden*, population 3094, about 12 miles N.N.W. from Warwick. Besides the parish church, a very ancient edifice, consisting of a chancel, three aisles, and a low tower, there are a chapel for Independents, and Fensham's Charity school. There are four annual fairs. *Hartshill*, population of the hamlet 1108, about 3 miles N.W. from Nuneaton, has a church recently built; chapels for Independents and Quakers; and a Free school. The ribbon manufacture employs many of the inhabitants. In the neighbourhood are the ruins of a Norman castle. *Ipsley*, population 1099, about 16 miles W. by N. from Warwick, near the Worcestershire border, has an ancient church, with a handsome square embattled tower. Many of the inhabitants are engaged in the manufacture of needles and fishhooks. *Polesworth*, population 2104, about 10 miles N.W. from Nuneaton, had a Benedictine nunnery, originally founded early in the 9th century by King Egbert. A few picturesque fragments of the buildings remain. There are here a parish church, an Episcopal chapel, chapels for Baptists and Independents, and Free schools. The making of watches and clocks employs some of the inhabitants. *Sowe*, population 1586, about 4 miles N.E. from Coventry. Many of the inhabitants are engaged in the ribbon manufacture. There are National and Infant schools. *Stoneleigh*, population 1289, is situated on the river Sow, just above its junction with the Avon, about 6 miles N.N.E. from Warwick. There was anciently a Cistercian abbey here. The gateway of the abbey is still standing in Stoneleigh Park, the seat of Lord Leigh. The church of Stoneleigh is a large irregular building, partly of Norman architecture. There are here National schools, and almshouses. Stoneleigh House is a noble mansion, standing in an extensive and well-wooded park. *Studley*, population 2133, is about 16 miles W. from Warwick. There are here some considerable remains of the conventual buildings of an Augustine priory. A considerable manufacture of needles and fish-hooks is carried on. Besides the parish church, there are chapels for Wesleyan Methodists and Baptists; and National schools. Studley Castle is an extensive modern mansion,

erected by Sir F. T. A. Goodrich, Bart. *Wellesbourne Hastings*, population 797, about 6 miles S. from Warwick, had in the reign of Edward I. a charter for a weekly market, and a yearly fair. Besides the parish church, there are a chapel for Wesleyan Methodists, a Free school, and an Infant school. *Willoughby*, population 378, is about 14 miles S.E. from Coventry, close to the Northamptonshire border. To the north of the village is a spa, called the Bath, not now visited. In the vicinity are stone quarries.

Divisions for Ecclesiastical, Legal, and Parliamentary Purposes.—This county is wholly included in the diocese of Worcester. It comprehends the whole of the archdeaconry of Coventry and a part of the archdeaconry of Worcester. The county is included in the midland circuit; the assizes and quarter sessions for the county are held at Warwick; those for the city of Coventry are held at Coventry. County courts are held at Alcester, Atherstone, Birmingham, Coventry, Nuneaton, Rugby, Solihull, Southam, Stratford-on-Avon, and Warwick. There are a county jail and a house of correction at Warwick; a jail and house of correction at Coventry for the city; lock-up houses at Leamington and Birmingham; a debtors or Court of Requests prison at Birmingham; and a county asylum for discharged juvenile prisoners at Stretton.

Before the Reform Act Warwickshire sent only six members to the House of Commons, namely, two for the county, two for the city of Coventry, and two for the borough of Warwick. By the Reform Act the number was increased to ten, namely, four for the county, which was divided into two parts; two each for Warwick and Coventry, as before; and two for Birmingham, which was made a parliamentary borough. By the Poor-Law Commissioners Warwickshire is divided into 13 unions—Alcester, Aston, Atherstone, Birmingham, Coventry, Foleshill, Meriden, Nuneaton, Rugby, Solihull, Southam, Stratford-on-Avon, and Warwick. These unions include 225 parishes and townships, with an area of 529,720 acres, and a population in 1851 of 458,423.

History and Antiquities.—In the Roman division of Britain, Warwickshire appears to have been included in the province of Flavia Cæsariensis. Several Roman or other ancient roads cross the county or pass along its borders. Among these may be named the ancient Watling-street, the Foss Way, and the Ryknield Way. Some Roman towns and stations, in the county or on the border, may be identified. The Tripointum of Antoninus is fixed by Dugdale at Dove Bridge, or Dowbridge, on Watling-street, at the junction of the three counties of Northampton, Leicester, and Warwick; or at Lilbourne in Northamptonshire, close by, where there are some ancient trenches and one or two tumuli. The Venons of the same writer is fixed by Camden and others at or near High Cross, where the Watling-street and the Foss Road intersect. The Manduessedum of the same writer is fixed at Mancetter or Manchester, near Atherstone. Here are evident remains of a Roman station; the ditch and vallum being in many parts very perfect. Alcester may be identified with the Alauna of the 14th Iter of Richard of Cirencester. Near Chesterton, on the Foss Way, is an encampment, evidently Roman. Roman coins or other antiquities have been found near Birmingham, Hampton-in-Arden, Willoughby near the Leam, on the eastern border of the county, and Warwick; and a Roman pavement at Coventry. There are some earthworks at Brinklow, near Monk's Kirby, on the line of the Foss, which appear to be Roman.

In the earlier Saxon period Warwickshire formed part of the kingdom of Mercia. The southern part of the county, which has been all along included in the diocese of Worcester, appears to have formed part of the subordinate kingdom of Hwiccas, or, as it is termed by Bede ('Hist. Eccles.', lib. iv., c. 13, 23), 'provincia Huiccorum,' which was in existence as early as the middle or latter end of the 7th century. Under Alfred Warwickshire came, with the rest of Mercia south-west of Watling-street, into direct subjection to the West Saxon crown (about 886), and during part of the reign of Alfred and his son Edward the Elder it was governed by the alderman Æthered, and after his death by his wife, the lady Æthelflæd, or Ethelfleda, Alfred's daughter. During this and the subsequent reigns it was the scene of war with the Danes or Northmen.

In the civil troubles of Henry III., after the defeat and death of Simon de Montfort, earl of Leicester, the castle of Kenilworth held out for the insurgents for six months (1266); and in the reign of Edward II. the murder of Gaveston, the king's minion, took place at Blacklow Hill, near Warwick. In the war of the Roses the inhabitants of the county were divided between the two parties; the Warwick men, swayed by their earl, the celebrated 'king-maker,' were Yorkists; the men of Coventry were supporters of the house of Lancaster. In the civil war of Charles I. the county generally embraced the cause of the Parliament. The first great battle of the war was fought at Edge Hill, in the southern part of the county, in 1642.

Statistics: Religious Worship and Education.—According to the Returns of the Census in 1851, it appears that there were then in the county 593 places of worship, of which 278 belonged to the Church of England, 133 to six sections of Methodists, 64 to Independents, 50 to four sections of Baptists, 26 to Roman Catholics, 10 to Unitarians, 7 to Quakers, 5 to Mormons, and 3 to Irvingites. The total number of sittings provided was 208,713. The number of Sunday schools

was 418, with 49,411 scholars; of these 224 schools with 24,571 scholars belonged to the Church of England. Of day schools there were 1101, of which 337 were public schools with 34,295 scholars, and 764 were private, with 16,866 scholars. Of evening schools for adults there were 12, with 498 scholars. In the county there were 12 literary and scientific societies, with 1873 members and 11,628 volumes in their libraries.

Savings Banks.—In 1853 the county contained eight savings banks, at Alcester, Atherstone, Birmingham, Coventry, Rugby, Stratford-on-Avon, Sutton Coldfield, and Warwick. The amount owing to depositors on November 20th, 1853, was 754,947*l.* 11*s.* 8*d.*

WASHINGTON, a territory of the United States of North America, lies between 45° 25' and 49° N. lat., 110° 30' and 124° W. long. It is bounded E. by the Rocky Mountains, which separate it from the territory of Nebraska; N. by the parallel of 49° N. lat., which separates it from British North America; W. by the Pacific Ocean; and S. by the territory of Oregon. The area is estimated by the United States authorities at 123,022 square miles. At the Census of 1850 Washington formed a part of the territory of Oregon, which contained 13,294 inhabitants: the country separated from Oregon, in order to form the territory of Washington, then contained less than 2000 inhabitants, exclusive of the native Indians, who probably number about 7000 or 8000.

In its general character Washington has a marked resemblance to OREGON. The surface is greatly broken, it being traversed from south to north by three parallel ranges of mountains, the northern prolongation of the Oregon ranges, while the Rocky Mountains, as in that territory, form its eastern boundary. The coast from the mouth of the Columbia to the entrance of Gray's Harbour, or, as it was named by Vancouver, Whidbey's Bay, a distance of 45 miles, is rocky and almost unbroken. The entrance to Gray's Harbour is about 2½ miles across, but the harbour itself opens to a width of 5 or 6 miles, and is 12 miles deep. It affords well-sheltered anchorage in some places, but it is everywhere encroached on by sand-banks, and its mouth is obstructed by a bar, which only admits the passage of vessels drawing under 10 feet of water. From Gray's Harbour to Cape Flattery, or Cape Classet, a lofty promontory at the southern side of Juan de Fuca Strait, a distance of about 80 miles, the coast is high, rocky, and only broken by two or three unimportant streams. The Strait of Juan de Fuca, which forms the northern boundary of the coast of Washington, is a vast arm of the sea, about 10 miles wide at its mouth and 100 miles deep. [VANCOUVER ISLAND.] The southern coast consists of perpendicular sandy cliffs of moderate elevation, from which the land gradually rises towards the craggy mountains of the interior. About 70 miles from the mouth of the strait is a long low sandy point which forms a good anchoring-ground; and beyond this is a deep bay about 9 miles across, and 3 miles from its eastern point is Protection Island, so named by Vancouver from its position at the entrance to Port Discovery. Immediately beyond Port Discovery is Port Hudson, an equally safe and good though somewhat smaller harbour: Vancouver and Wilkes unite in describing these as among the very finest harbours on the western coast of North America. Beyond this harbour is a deep inlet named Admiralty Inlet, which soon divides into two arms—the smaller one, named Hood's Canal, bearing to the south-west, and stretching far into the interior; while the main arm proceeds due south for about 40 miles, where it terminates in a broad sound named Puget's Sound. Both these branches afford good anchorage, but Puget's Sound is broken by several inlets, and affords the greatest possible security and ample space. Vancouver speaks of these harbours and the contiguous country in such terms as might suggest the suspicion that he had been carried away by the ardent feelings of a discoverer; but Mr. Wilkes, the commander of the U.S. Exploring Expedition, fully corroborates all that Vancouver had asserted: he says, that "nothing can exceed the beauty of these waters and their safety: not a shoal exists within the straits of Juan de Fuca, Admiralty Inlet, Puget's Sound, or Hood's Canal, that can in any way interrupt their navigation by a 74-gun ship. I venture nothing in saying there is no country in the world that possesses waters equal to these." It is around Puget's Sound that the commerce of the territory is chiefly establishing itself. Numerous settlements have been already formed along its shores. The tides rise 18 feet in Puget's Sound. The sound is full of islands, and receives several small rivers.

Like Oregon, this territory is naturally divided into three nearly parallel districts, determined by the course of the mountain ranges: a western, or coast section; the middle section, lying between the Cascade and the Blue Mountains; and the Rocky Mountains region. The western section lies between the Cascade Mountains and the sea, and is much broken in surface, being intersected by spurs from the Cascade Mountains. The greater part of this section is covered with forests of lofty trees; pines often occur from 200 to 300 feet in height, and of corresponding girth, and some of the pines rise to a height of 200 feet without a branch. The most prevalent trees besides pines are fir, oak, ash, spruce, cedars, arbor-vita, &c., with a dense undergrowth of hazels, roses, &c. The hills are generally of basalt, and some, like Mount Olympus, near Juan de Fuca Strait, are of considerable altitude. The soil is in parts a light brown loam, in others a light vegetable mould with a sandy and gravelly subsoil. Generally

it has considerable fertility. The river-bottoms afford good farming land, the prairies and the uplands excellent pasture-ground. The climate is mild and salubrious, though somewhat moist; the winters are short, and snow seldom lies long on the ground. Game abounds.

The Cascade Mountains continue, as in Oregon, in a generally northern direction, and about 150 miles from the coast. The highest cones rise to an altitude of upwards of 13,000 feet, and they form a barrier of very difficult passage between the western and middle sections of the territory. The country between the Cascade and the Rocky Ranges is wider than the corresponding district in Oregon. Between the Snake and the Flathead or Clarke rivers is a plain, or rather rolling prairie, which extends nearly 200 miles in length and 100 miles across in its widest part. The soil is arinaceous, and the country is fitted for tillage; but the plain is covered with a good grass, and affords pasturage for immense flocks and herds. The river-bottoms have an alluvial soil of various quality, but generally productive. The hills are comparatively bare of wood, and infertile. The climate of this middle section is cooler, drier, and more salubrious than in the western section; but the varieties of temperature are much greater. No dew falls here.

The Blue Mountains are considerably broken and interrupted, but generally run north and south. The country east of them to the Rocky Mountains is interrupted throughout by offsets from the Rocky range, and transverse ranges connecting the main chains. Nothing can well exceed the wild magnificence of much of this country, with its vast and snow-clad mountainous tracts, deep valleys, tremendous gorges, lofty cataracts, and rushing torrents. It is of course little suited for agricultural operations, but the basis of the hills are generally covered with timber, and about the lakes, from which flow the head streams of the Columbia, the Spokane, and the Flathead rivers, are spots of remarkable fertility as well as of surpassing beauty. But all this district is left to the native Indians, who are a warlike and implacable race. The chief dependence of these Indian tribes is on hunting, and they barter the furs to the servants of the Hudson's Bay Company: tobacco and articles of European manufacture; but the fur-bearing animals are rapidly decreasing in number. The Rocky Mountains are described elsewhere. [ROCKY MOUNTAINS; NEBRASKA.] There are two or three practicable passes in this range along the territory of Washington, but they are much more difficult than the Great Salt Pass.

The principal river is the Columbia, which belongs equally to Washington and Oregon; it is described under OREGON. Its northern branches rise in the Rocky Mountains within the Hudson's Bay Territories, and unite in Washington; the united stream traversing the territory in a generally southern direction, and receiving numerous tributaries. It forms the Columbia by the junction of the Saphin or Lewis River. The principal tributaries of the northern branch of the Columbia are the Kootanie or Flat Bow, the Flathead or Clarke, and the Spokane rivers: they are all very rapid streams, but navigable by boats for some distance. The chief river north of the Columbia is the Chehalis, which rises in the Cascade Mountains, and pursues a very tortuous course to its outfall in Gray's Harbour. Its course is very rapid, and it is only navigable by canoes; it receives several small streams from the high grounds about Hood's Canal and Puget's Sound. The Nisqually and Tenalquit, or Shute's rivers, fall into Puget's Sound; they are both navigable for some distance, but will probably prove of greater value for their mechanical power. In the interior are numerous lakes, the larger being chiefly expansions of the northern branches of the Columbia, the Spokane, and the Cascade rivers.

At present the rearing of horses and cattle have attracted most attention from the settlers, but agriculture is rapidly extending. The productions are similar to those of OREGON: wheat is the chief grain crop; maize has not been much grown hitherto. The forests will for many years supply an unlimited quantity of fine timber. Coal is found in the neighbourhood of Puget's Sound, and on the Chehalis and Monticello rivers. Iron and other metals have been found; but mining operations have as yet been little heeded. A few manufactures have sprung up. The fisheries will probably become an important part of the industry of Washington. All the rivers abound in fish; salmon being especially abundant. Fish also abound on the coast. Whales frequent the coasts and the mouth of Juan de Fuca Strait. Shell-fish are very abundant. The commerce of Washington is yet in its infancy, but it is steadily increasing; nearly all the commerce centres in the district of Puget's Sound.

Washington has as yet no town of many inhabitants. The political capital, principal commercial town, and port of entry is Olympia, on the right bank of the Tenalquit or Shute's River, at its entrance into Puget's Sound. This town boasts of its hotel, stores, saw- and grist-mills—the first in the territory—newspaper, &c.; and contains 800 inhabitants. The other more important places are:—Columbia City, on the right bank of the Columbia, below Fort Vancouver; Monticello, the capital of Lewis county, and the place where the convention was held which led to the separation of Washington from Oregon; Nisqually, on the east side of Puget's Sound, the property chiefly of the Puget's Sound Agricultural Company, whose farms supply provisions to the servants of the Hudson's Bay Company west of the Rocky Mountains; and Pacific City, on the right bank of the Columbia at its entrance

into the Pacific Ocean, which appears likely to become a place of some trade.

Washington was separated from Oregon, and received a territorial constitution, by Act of Congress, March 2, 1853. By this act the right of voting is vested in every free white male 21 years old then resident in the territory. The Legislative Assembly consists of a council of 9 members, chosen for three years, but one-third to vacate their seats each year; and a House of Representatives of 18 members, elected annually. The governor is appointed by the president and senate for four years. All laws passed by the legislature must be submitted for confirmation to Congress. No law can be passed interfering with the primary disposal of the soil; or taxing the property of non-residents higher than that of residents. Sections 16 and 36 in every township are to be reserved for schools.

(Vanconver; Wilkes; Lewis and Clarke; Fremont, &c.; *Gazetteers of United States; United States Census; American Almanac, &c.*)

WASHINGTON, a city in the district of Columbia, and the capital of the United States, is situated on the left bank of the Potomac, and on the right bank of the Anacostia, or Eastern Branch. The capitol, which occupies the central site of the city, is in 38° 53' 20" N. lat., 77° 0' 15" W. long. The population of the city in 1840 was 23,364, and 40,001 in 1850. By an act of Congress, passed in 1790, it was decreed that the seat of government should be established at some place on the Potomac, and the district around Georgetown was ceded to the United States by Virginia and Maryland for this purpose. The city was founded by laying the corner-stone of the capitol, Sept. 18, 1793. The name of Washington was ultimately bestowed upon 'the federal city,' and the seat of government was transferred to it from Philadelphia in 1800. The president and other chief executive officers of the federal government have since resided at Washington: Congress meets there every year on the first Monday of December, and the Supreme Court of the United States holds its annual sittings, beginning on the second Monday of January.

Washington is separated from Georgetown [COLUMBIA, DISTRICT OF] by Rock Creek, over which there are several bridges, and from Alexandria [VIRGINIA] by the Potomac, over which is a bridge upwards of a mile in length. There are also several bridges over the Anacostia. Frigates ascend the Anacostia above the navy-yard. Vessels drawing 14 feet water can ascend to Potomac Bridge, whence to the mouth of the Tiber, a small stream which flows through the middle of the city, there are 9 feet of water at ordinary high tides. A spacious canal unites the Anacostia with the Potomac. Washington is situated near the head of the tide-water navigation, and is connected with the interior by the Chesapeake and Ohio Canal, as well as by excellent coach-roads and railways. The city is well supplied with water, and has in front (south) the Potomac, nearly a mile in width, and a range of heights in the rear (north), affording many fine sites for villa residences.

The city was regularly laid out, according to the design of Major L'Enfant. It extends from N.E. to S.W. about 4½ miles, and from E. to S. about 2½ miles, but only a comparatively small part of the ground embraced within the plan is built upon. The capitol is the central site: 15 avenues from 120 to 160 feet wide, named after so many states of the Union, extend from it towards the states after which they are named. These avenues intersect diagonally square blocks formed by streets crossing each other at right angles. The streets north and south of the capitol are designated by the letters of the alphabet, A north, A south, &c.: those east and west of it are numbered, 1st street east, 1st street west, &c. The streets are from 70 to 100 feet wide. The effect of the at present very partial filling up of the magnificent plan of the city is generally felt to be cheerless and unimpressive: but every year is doing something towards removing the unfinished and somewhat desolate aspect of this 'city of magnificent distances,' as it has been not inaptly designated.

The most striking and important of the public buildings of Washington is the Capitol. It stands within an inclosed area of 30 acres, on a rising ground at the eastern termination of Pennsylvania avenue, which is 4 miles in length, spacious, and planted with trees. The building is constructed of freestone, and composed of a centre, from which rises a lofty dome to a height of 145 feet, and two wings. The length of the whole is 352 feet, the depth of the wings is 121 feet, but it is to be extended by two new wings, each 238 feet by 140 feet: when these are completed the Capitol will occupy an area of more than four acres. A Corinthian portico extends the length of the centre, which is occupied by the rotunda, 96 feet in diameter and 96 feet in height. The rotunda is ornamented with rilievs, busts, and statues, and contains seven paintings representing subjects connected with American history. Adjoining to this, on the west, is the library of Congress, a hall 92 feet in length by 34 feet in width, and 36 feet high, containing about 50,000 volumes. The Senate Chamber is in the north wing: it is a semicircle of 75 feet long and 45 feet high. Over the president's chair is a portrait of Washington. The Hall of Representatives in the south wing, is also a semicircle: it is 96 feet long and 60 feet high. The dome is supported by twenty-six columns and pilasters of variegated Potomac marble. A colossal statue of Liberty, a statue of History, and portraits of Washington and Lafayette, are the principal ornaments of the hall. Immediately below the senate chamber, and nearly of the same form and dimensions, is the hall in which the sessions of the Supreme Court are held. Below the Hall of Represent-

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tives are committee-rooms and other places of business. Apartments for the vice-president and other state officers are also included in the building. The grounds of the Capitol command some very fine prospects: they are well laid out, are adorned with statues, and afford a favourite promenade.

The Executive Mansion, or official residence of the president of the United States, occupies the centre of a plot of 20 acres, at the opposite extremity of Pennsylvania avenue from the capitol. It is a handsome building two stories high, with a lofty basement, 170 feet long by 85 feet wide. In convenient proximity to the mansion are four spacious and commodious edifices, known as the State, the Treasury, the Navy, and the War Departments; a fifth building, the Department of the Interior, is as yet unfinished: these, as their names imply, contain the offices of the principal executive departments. The General Post-Office is built of white marble, in the Corinthian order; it is 204 feet long, 102 feet deep, and three stories high. The building is surrounded by an ample lawn. At the home office are shown the autographs of all potentates who are or have been in alliance with the Union, and the presents made by foreign courts to American ambassadors, with several relics of General Washington; Franklin's printing press; various objects of interest obtained by Wilkes in the United States Exploring Expedition, &c. At the office for Indian affairs are the portraits of all chiefs who have from time to time come to negotiate with the president. This quarter of the city contains many elegant private dwellings, most of which are occupied by the foreign ministers.

The Navy Yard, and the Arsenal immediately to the north of it, are situated on the Anacostia, just below the long bridge which spans the Potomac and connects the Columbian and the Virginian shore of the river. To the navy yard are attached the marine barracks, and to the arsenal very extensive public manufactories of arms and military stores. The works at the navy yard are on a very important scale, and in the anchor and chain cable manufactories, machine shops, &c., every approved contrivance for assisting human labour has been introduced. The slips and ship houses are very spacious and well arranged. The river, on arriving at Washington, makes a beautiful sweep, forming a bay, on which the city stands. The navy yard and arsenal follow the curve.

The National Observatory occupies an elevated site on the Potomac, between the president's house and Georgetown. Its exact site is 38° 53' 39.3" N. lat., 77° 2' 48" W. long., and from it is measured the first meridian of American geographers. It contains a very extensive and valuable collection of instruments, and ranks among the first institutions of the kind in existence: it is now under the direction of Lieut. M. F. Maury, U.S.N., so well known by his investigations of oceanic winds and currents. As at Greenwich the observatory announces mean time daily by the fall of a large ball.

One of the most striking of the public buildings of the city is the Washington Monument, which stands on the Mall, between the president's house and the Potomac. It is a vast circular structure 250 feet in diameter, and 100 feet high, surmounted with an obelisk 70 feet at the base, and 500 feet high. The building is surrounded by a colonnade of 30 pillars, each 12 feet in diameter and 45 feet high, and is elevated upon a base 20 feet high, and 300 feet square. The pediment of the front portico has a triumphal car, with a statue of Washington; another statue of Washington stands opposite the principal entrance; and around the building are statues of the 'Fathers of the Revolution,' and of the signers of the Declaration of Independence; with sculptured representations of some of the principal events in Washington's career, emblematical designs, &c. The centre is to be occupied by the tomb of Washington, a sculptural structure of unusual magnitude and very ambitious design, which has been for several years in process of execution, and which will comprise a large number of statues of heroic size. Statues of Jefferson, Jackson, &c., and one or two monumental erections are the only other specimens of the sculptor's art which adorn the public places of the city.

The remaining public buildings in Washington are a city-hall, several market-houses, a penitentiary, nearly 40 churches, some of them very costly edifices; an orphan asylum, almshouses, &c. Columbian College, which was incorporated by Congress in 1821, is a spacious brick building situated a little to the north of the city; it has 10 instructors, 55 students, and a library of 6000 volumes. The National Medical College, previous to 1840, formed the medical department of this college. The public and private schools and academies are very numerous, and bear a high character. Among literary institutions the first place is due to the Smithsonian Institution, which was founded under the will of an Englishman named Smithson, who bequeathed above half a million dollars for the purpose. The building stands on the Mall, in the midst of extensive grounds. It is Romanesque in design, is 450 feet long, 140 feet wide, and has 9 towers, ranging from 75 to 150 feet in height. It contains a spacious library, museum, gallery for works of art, a lecture room, capable of accommodating 1200 persons, a chemical laboratory, &c. The National Institute holds its meetings at the patent-office. There are several other literary and numerous benevolent institutions.

Washington is neither a commercial nor a manufacturing city, and the legislative sessions and the residence of the executive have failed to attract the wealthy to it as a place of permanent abode. The population of Washington consists of members of the legislature and

of the executive departments of state and of foreign diplomatists, with the addition of such professional, trading, mechanical, and menial persons as are required to minister to their comfort. The tone of society, as might be anticipated from this circumstance, differs considerably from that which prevails in other parts of the Union. Owing to the influence of the example of the foreign diplomatists, it approaches more nearly in some respects to that of Europe. In external appearance and the arrangements of domestic and social intercourse, Washington reminds the European of a second-rate Continental capital; in its business habits, political clubs, and government and parliamentary offices, of Westminster. There is nothing scholastic or commercial in its character: that consists rather of a mixture of politics and pleasure. The highest intellects, the best-educated, and most influential gentlemen of America are to be met with in the circles of Washington. The fashionable amusements are as in Europe—balls, soirées, dinner parties, &c., which in costliness are on a level with those of the most courtly cities of the Old World. The city affords every accommodation to the temporary residents. The boarding-houses of Washington form quite a feature of the city; and the hotels are numerous and on a scale of great magnitude and splendour. Some have marble fronts of considerable architectural pretensions.

WASHINGTON. [DURHAM; INDIANA; PENNSYLVANIA.]

WASSELONNE. [RHIN, BAS.]

WASSIGNY. [AISE.]

WATCHETT. [SOMERSETSHIRE.]

WATEOO, the largest of Cook's Isles, a small group situated in the Pacific between the Society Islands on the east and the Friendly Islands on the west. It lies between 18° and 22° S. lat., 157° and 160° W. long. Wateoo, or Atioo, occupies nearly the centre of the group, being traversed by 20° S. lat., 158° 5' W. long.; it is about 18 miles in circumference. The surface is composed of hills and plains, and the soil is light and sandy along the beach, but better farther inland. The shores are lined with reefs or rocks, so that they cannot be approached by vessels. The island has abundance of cocoa-palms, plantains, and sweet potatoes; and of hogs. A great part of it is covered with trees. The number of inhabitants is perhaps about 4000, and that of the whole group is estimated at 16,000.

WATERBEACH. [CAMBRIDGESHIRE.]

WATERBURY. [CONNECTICUT.]

WATERFORD, a maritime county in the province of Munster, Ireland, is bounded N. by the counties of Tipperary and Kilkenny, E. by the county of Wexford, S. by the Atlantic Ocean, and W. by the county of Cork. It lies between 51° 56' and 52° 20' N. lat., 6° 58' and 8° 8' W. long. Its greatest length from east to west is 52 miles, from north to south 28 miles. The area is 721 square miles, or 461,558 acres. The population of the county, exclusive of Waterford city, in 1841 was 172,971; in 1851 it was 188,764.

Coast-line.—From Blackball Head, near the entrance of Youghal Harbour, the western extremity of the coast of Waterford, the general direction of the coast is east for three or four miles, when it trends to the north-east to Helwick Head, the western head of Dungarvan Harbour. This harbour does not afford very good anchorage. From the opposite headland the coast runs more easterly to Tramore Bay, which has a level beach three miles in extent. The coast is flat and very dangerous to shipping. There are beacons on the eastern and western headlands of the bay. Between Tramore and Dungarvan, a distance of 20 miles, the whole coast is rocky, and often unsafe from the want of shelter. About 5 miles east of Tramore is Red Point, the south-western extremity of Waterford Harbour; and a mile farther, within the harbour and about 14 miles below Waterford, is the port of Dunmore. The width of Waterford Harbour is here about 2 miles. There is a lighthouse on Hook Head, at the entrance of the harbour on the eastern side. There are some remarkable caverns on the coast.

Surface, Hydrography, and Communications.—The general character of the county is mountainous. The great mountain-tract which extends from Waterford on the east coast to Dingle Bay on the west, comprehends the whole of the county of Waterford; it is interrupted on a line from Dungarvan to the valley of the Suir, west of Clonmel, by the southern extremity of the great plain which occupies the central part of Ireland. The Cumeragh Mountains, which occupy the part of the county west of Dungarvan, are among the highest and wildest in Ireland. There are four small lakes among the Cumeragh Mountains.

The *Suir*, which rises in the north-east of Tipperary, after being joined by the Nier from the Cumeragh Mountains, forms the boundary-line between Waterford and Tipperary and Kilkenny. The united waters of the Suir and Barrow form the estuary called Waterford Harbour. The Suir is navigable for large vessels up to Waterford city, and to Carrick-on-Suir for those of which the draught does not exceed 11 feet. The *Blackwater*, which rises in the Kerry Mountains, enters the county on the west, and runs due east to Cappoquin, where it turns southward, and discharges itself into Youghal Harbour, after receiving midway the river Bride. The Blackwater is navigable for vessels of 100 tons to its confluence with the Bride, and for vessels of 70 tons as far as Cappoquin. The *Bride*, a sluggish stream, is affected by the tide for the whole of its course within the county, and

is navigable for small craft. From Cappoquin to Lismore there is a canal 3 miles long, made at the expense of the Duke of Devonshire. The Licky, Brickly, Colligein, Mahon, Phinisk, Clodagh, and some other streams, none of them of importance, except for drainage, reach the sea at various points of the southern coast.

The mail-coach road from Dublin to Waterford, 75 miles, enters the county within two or three miles of Waterford city. The mail-coach road from Waterford to Cork, 71½ miles, passes through Kilmacthomas, Cappoquin, and Tallow, between which place and Youghal it leaves the county, but again touches Waterford before it finally leaves the county a short distance before reaching Youghal. The other important roads are—from Dungarvan to Youghal, through Clashmore; also from Dungarvan to Youghal, through Pilltown, both over the mountains; and from Dungarvan to Clonmel by Ballinacult; one from Cappoquin to the mountains; one from Waterford to Tramore. The railways which are wholly or partially in the county are the Waterford and Kilkenny, the Waterford and Limerick, and the Waterford and Tramore railways.

Geology and Mineralogy.—The Waterford Mountains contain two varieties of slate. The first is the old transition-slate, coloured gray, which is quarried at Glenpatrick, and is extensively used for roofing. The second or newer slate rests on the older; the lower portions of its strata consist of alternating beds of brownish-red quartzose conglomerate and coarse red slate. These strata are succeeded by alternations of red and gray quartz rock, red quartzose-slate, red clay-slate, the grain becoming gradually finer as the beds accumulate and recede farther from the conglomerate, till at length the upper beds produce varieties of purple, brownish-red, and reddish-gray clay-slate, which are quarried and used as roofing-slate, particularly in the valley of the river Blackwater near Lismore. The newer series contains abundance of marine and even vegetable organic remains. The limestone in the valleys contains all the fossils of the carboniferous limestone; and the gray-slate, which sometimes alternates with the lower beds of the limestone, also contains fossils similar to those found in the limestone. Slate, iron, and lead are found at various places in the clay-slate district. At Knockmahon and Bonmahon, two adjoining places near the coast, about equidistant from Tramore and Dungarvan, copper-mines have been successfully worked for some years. Good potters'-clay occurs about Dungarvan. A black marble is quarried at Kildrum, about 5 miles from Dungarvan, and marbles of various colours are likewise met with in the county. A good sandstone for buildings, as well as a kind resembling Portland-stone, is found in several places.

Climate, Soil, and Agriculture.—The climate is moist, but is not considered unhealthy. Much of the soil is marshy, and there is a considerable quantity of bog, but a large part of the cultivated districts is what is called good light turnip land. The pastures are excellent, and much butter is exported, the breed of cows yielding rich milk, but not fattening well for the butcher. Bacon is also made and exported largely. In 1853 there were 117,800 acres under crop of which 21,946 acres grew wheat; 33,484 oats; 11,186 barley, bere, rye, beans, and peas; 19,944 potatoes; 11,233 turnips; 3334 other green crops; 103 flax; and 16,070 acres were in meadow and clover. The plantations in 1841 covered 26,536 acres. On 9220 holdings in 1852, there were 12,430 horses, 4520 mules and asses, 66,122 cattle, 31,934 sheep, 45,114 pigs, 5990 goats, and 151,150 poultry, of the total estimated value of 637,423*l.*

The fishery district of Waterford comprises 76 miles of maritime boundary, extending from the east bank of Barrow Bay to Ballyvoola Head. In 1853 it had 401 registered fishing-vessels, employing 1656 men and boys.

The county is in the dioceses of Waterford and Lismore, and, including the city of Waterford, contains 82 parishes. It is divided into eight baronies—Coshmore and Coshbride, Decies within Drum, Decies without Drum, Gualtier, Glenahiry, Middlethird, Uppertthird, and Kilcullibeen. The principal towns are WATERFORD, DUNGARVAN, PORTLAW, LISMORE, Tallow, Carrickbeg, which is part of CARRICK-ON-SUIR, CAPPOQUIN, and part of CLONMEL. The places printed in small capitals are noticed under their respective names. The following are the smaller towns and more important villages, with the population of each in 1851:—

Ardmore, population 836, a village and post-town, about 4 miles N.E. from Youghal, is admirably adapted for a bathing-place. There is some fishing carried on. The remains of an old church are in the village. Ardmore Head and Ramhead are rocky eminences rising to a height of above 200 feet. In the neighbourhood are the Slieve Gran or Drum Mountains, of which one of the heights exceeds 900 feet. *Bonmahon*, a sea-bathing village, about 5 miles S.E. from Kilmacthomas, at the mouth of the river Mahon, is the chief place of the district where copper is procured: population, 1142. Some lead is also found. At Bonmahon are a dispensary and loan-fund office. *Cappoquin*, a small post-town, prettily situated at the southern foot of the Knockmeledown Mountains, on the left bank of the Blackwater, about 3 miles E. from Lismore: population, 2145. There are a new church, a large Roman Catholic chapel, a dispensary, and a loan-fund office. Five fairs are held in the course of the year. The Blackwater is here navigable for barges. Near the town is the large Trappist establishment of Mount Melleray. *Dunmore*, a sea-port and post-

town at the entrance of Waterford Harbour, about 9 miles from the town: population, 313. It is in a sheltered bay, and great efforts have been made to render it effective as the mail-packet harbour, for which purpose a mole has been built 800 feet long, and a quay or pier 900 feet, and the packets ply regularly between it and Milford. It is also a coast-guard station and a bathing-place. Much of the improvement in the place has been effected by the Marquis of Waterford. KILMACTHOMAS, the seat of a Poor-Law Union, is noticed in a separate article. *Passage* is a sea-port and post-town on the right bank of the Suir, or rather of Waterford Haven, about 5 or 6 miles below Waterford, and about the same distance from the mouth of the river: population, 664. The town is irregularly built. There are a church, a Methodist and a Roman Catholic chapel, and a dispensary. A court of petty session is held weekly. A quay was built in 1836, which affords accommodation to steam-vessels, and there is a ferry to Cork. Some ship-building is carried on. *Portlaw*, a small manufacturing and post-town, on the road from Kilmarden to Carrickbeg, stands upon the Clodagh, a small mountain-stream: population, 4351. It is clean, respectable, and flourishing, chiefly in consequence of the establishment of a cotton manufactory by the Messrs. Malcolmson, the machinery of which is worked by the Clodagh. There are a parish church, and chapels for Presbyterians and Roman Catholics. Three fairs are held yearly. *Stradbally*, a village and post-town, about 4 miles S.W. from Bonmahon, on the road to Dungarvan: population, 665. There are a modern church, a Roman Catholic chapel, and a dispensary. *Tallow*, a post- and market-town, and a parliamentary borough prior to the Union, stands near the right bank of the navigable river Bride, an affluent of the Blackwater, on the road from Waterford to Cork, about 5 miles S.W. from Lismore: population 1986, besides 687 in the workhouse. There are a well-built modern church, a large Roman Catholic chapel, a market-house, a sessions-house, a convent, a fever hospital, a dispensary, several schools, and a jail. There are five fairs yearly. *Tallow Bridge*, which has a population of 181, is the port of Tallow lying on the Bride, about half a mile from Tallow. In the neighbourhood are the ruins of Kilmacov Castle and Moygeely Abbey. *Tramore*, an irregularly-built but neat market- and post-town on the Bay of Tramore, is about 9 miles S. from Waterford: population, 1882. It is much resorted to by the inhabitants of Waterford as a bathing-place. The bay is dangerous for shipping. There are beacons on Newtown Head and Brownstown Head, and a lightship is stationed north of the Saltees Islands. The town has a church, a chapel, a market-house, an assembly-room, a dispensary, and a loan-fund office. Races are run in the summer.

The county returns five members to the Imperial Parliament—two for the county, two for Waterford city, and one for the borough of Dungarvan. It is in the Leinster circuit. The assizes are held at Waterford, where is the county jail. Quarter sessions are held at Carrickbeg, and in Dungarvan and Lismore, which two towns have bridewells. Petty sessions are held in 16 places. The lunatic asylum, which admits 73 patients from the county, is in Waterford city. There are fever hospitals in Dungarvan, Lismore, Tallow, and Waterford; and dispensaries in 23 places. There are a savings bank and a loan-fund at Waterford, and loan-funds in Cappoquin, Newtown, and Tallow. The Union workhouses are at Waterford, Dungarvan, Lismore, and Kilmacthomas. The county is in the military district of Kilkenny, and the barracks stations are at Dungarvan and Waterford. The militia staff is stationed at Waterford. The police force, of 264 men and officers, is distributed over 7 districts, comprising 37 stations, of which Dungarvan is head-quarters. The districts are Dungarvan, Cappoquin, Portlaw, Ballinamult, Clashmore, Waterford, and Tramore. In September, 1852, there were in the county 93 National schools, attended by 6486 male and 6890 female children.

History and Antiquities.—According to Ptolemaeus, the Menapii, a Belgic colony, were the ancient inhabitants of Waterford and the adjoining county of Wexford. The Desii, from the county of Meath, were a powerful clan at the period of the English invasion, when their importance was nearly destroyed. In 1171 Henry II. granted the city of Waterford and the adjacent province to Richard le Poer, and by marriage the estates and honours of his descendants came to the Beresford family, who still retain large possessions in the county. The county suffered little during the rebellion in 1798. Waterford city has been the chief scene of most of the historical events of importance.

Many remains of antiquity, both military and ecclesiastical, are found in the county; most of them are noticed in the accounts of the towns and villages where they are situated. A large double trench, called by the Irish 'the trench of St. Patrick's cow,' may be traced for 17 or 18 miles across the Blackwater towards Ardmore; it corresponds with the work called 'Dane's Cast,' in the counties of Armagh and Down. A second trench runs westward from Cappoquin into Cork.

WATERFORD, the capital of the county of Waterford, Ireland, a county of a city, a market- and post-town, a sea-port, a parliamentary borough, an episcopal city, and the seat of a Poor-Law Union, is situated on the river Suir, in 52° 16' N. lat., 7° 8' W. long., distant 94 miles S.S.W. from Dublin. The population of the city in 1851 was 25,297. The city is governed by 10 aldermen and 30 councillors one of whom is mayor; and returns two members to the Imperial

Parliament. Waterford Poor-Law Union contains 30 electoral divisions, with an area of 125,719 acres, and a population in 1841 of 71,223; in 1851 of 69,033.

The city itself is entirely on the right bank of the Suir, and is about a mile long; a suburb lies on the left bank of the river. A noble quay, 120 feet in width, except at each end, where it narrows, extends for nearly a mile along the bank of the river, from which the city rises gradually. Waterford is about 12 miles from the sea, and vessels of 800 tons burden can lie by the side of the quay, but larger ships anchor about 6 miles lower down, opposite the village of Passage. The river is crossed at the upper end of the city by a very long wooden bridge, which opens in one part to allow vessels to pass.

The principal public buildings are—the cathedral, an elegant modern structure; the bishop's palace, which is of hewn stone, with a double front, and commands an extensive view across the river into the county of Wexford; the dean's house; two parish churches; several Roman Catholic chapels, one of which has a handsome Ionic front, and is said to be the largest in Ireland; and places of worship for Quakers and other sects. The other public buildings are—a town-hall, a market-house, an exchange, a custom-house, a theatre, an assembly-room, a jail, and artillery and infantry barracks. Among the charitable institutions are a house of industry, a hospital for the poor, a fever hospital, a dispensary, and a lunatic asylum.

The commerce of Waterford is chiefly with England, and consists for the most part of agricultural produce—butter, pork, bacon, grain, flour, and meal, and, since the introduction of steam-vessels, of livestock. On December 31st 1854, the number and tonnage of vessels registered as belonging to the port were, sailing-vessels under 50 tons 62, tonnage 1602; above 50 tons 98, tonnage 13,663; steam-vessels 19, tonnage 5861. During 1854 there entered and cleared at the port as follows:—Inwards, sailing-vessels 1147, tonnage 99,149; steamers 192, tonnage 55,660; outwards, sailing-vessels 925, tonnage 74,670; steamers 200, tonnage 56,977. There is a packet-station at Waterford for conveyance between Waterford and Milford daily.

Waterford was originally founded by the Danes about 850, and it was their chief possession in Ireland for some centuries. In 1170 it was taken by assault by Strongbow, earl of Pembroke, who afterwards restored and enlarged the town. Waterford received its first charter from King John, who resided there for some time. All its charters were seized and annulled by James I., on the ground of the nonconformity of the chief magistrates, and Waterford remained without a charter from 1617 to 1626, when it received one from Charles I. Waterford was unsuccessfully besieged by Cromwell, but it was afterwards taken by Ireton. Some remains of the old fortifications still exist, and there are a few relics of some of the ancient monasteries. *Cwraghamore*, the magnificent domain of the Marquis of Waterford, is in the neighbourhood of Waterford; it contains 4,600 acres.

WATERGRASSHILL. [CORK.]

WATERINGBURY. [KENT.]

WATERLOO. [BRABANT, SOUTH; LANCASHIRE.]

WATERTOWN. [NEW YORK.]

WATERVILLE. [KERRY.]

WATFORD, Hertfordshire, a market-town, and the seat of a Poor-Law Union, in the parish of Watford, is situated on the right bank of the river Colne, in 51° 39' N. lat., 0° 24' W. long., distant 18 miles S.W. from Hertford, 15 miles N.W. from London by road, and 17½ miles by the London and North-Western railway. The population of the town of Watford in 1851 was 8300. The living is a vicarage in the archdeaconry of St. Albans and diocese of Rochester. Watford Poor-Law Union contains 6 parishes and townships, with an area of 36,520 acres, and a population in 1851 of 18,800.

Watford consists principally of one main street, about a mile and a half in length. The parish church has at the west end a fine embattled tower, surmounted with a spire 100 feet high. The Wesleyan Methodists, Independents, and Baptists have places of worship. There are National, British, and Infant schools; an old established Free school; a literary institute; and a savings bank. The market-house, a long building resting on wooden pillars, is situated near the church. There is here a bridge over the river Colne. The market is held on Tuesday; fairs are held on Whit-Tuesday and September 9th. There are silk-, paper-, and flour-mills; breweries, tan-works, and a manufactory of agricultural implements. Cashiobury Park, adjoining the town, is the seat of the Earl of Essex.

WATLINGTON. [OXFORDSHIRE.]

WATTON. [HERTFORDSHIRE; NORFOLK.]

WAVENEY, RIVER. [NORFOLK.]

WAVRE-ON-THE-DYLE. [BRABANT, SOUTH.]

WAYLAND, a hundred in the county of Norfolk, which gives name to a Poor-Law Union. The hundreds of Wayland and Shropham, the greater part of which is included in the Union, include together 37 parishes, with an area of 80,734 acres, and a population in 1851 of 17,488. Wayland Poor-Law Union contains 25 parishes, with an area of 51,068 acres, and a population in 1851 of 12,141.

WEALD, THE. [KENT; SUSSEX.]

WEALD, NORTH AND SOUTH. [ESSEX.]

WEAR, RIVER. [DURHAM.]

WEARDALE, a district in the vale of the river Wear, in the county of Durham, the parishes in which have been constituted a Poor-Law

Union. The market-town of Stanhope, at which the Union workhouse is situated, and the small market-town of St. John's, Wearside, are described under DURHAM County. Weardal-Poor-Law Union includes two parishes, a township, and a chapelry, with an area of 90,533 acres, and a population in 1851 of 14,567.

WEARWOUTH. [SUNDERLAND.]

WEAVER, RIVER, and WEAVERHAM. [CHESHIRE.]

WEDMORE. [SOMERSETSHIRE.]

WEDNESBURY (commonly pronounced Wedgebury), Staffordshire, a market-town in the parish of Wednesbury, is situated in 52° 33' N. lat., 2° 1' W. long., distant about 21 miles S.S.E. from Stafford, 119 miles N.W. by W. from London, and 124 miles by the London and North-Western and the South Staffordshire railways. The population of the town of Wednesbury in 1851 was 11,914. The living is a vicarage in the archdeaconry of Stafford and diocese of Lichfield.

Wednesbury lies at nearly equal distances from the towns of Birmingham and Wolverhampton, Walsall and Dudley. Ethelfleda, 'Lady of Mercia,' sister of Edward the Elder, built a castle here in 914. The church occupies the summit of the hill where Ethelfleda's castle formerly stood: it is a tolerably spacious building, chiefly perpendicular in style. The Wesleyan and Primitive Methodists, Baptists, and Independents have places of worship. There are National, British, Infant, and Juvenile schools, and a mechanics institute. The market is held on Friday; there are two annual fairs. The inhabitants are employed in the various branches of the iron manufacture. Limestone, clay, and peat are found, besides iron-ore and excellent coal.

WEDNESFIELD. [STAFFORDSHIRE.]

WEEDON-BECK. [NORTHAMPTONSHIRE.]

WEENER. [AUBURN.]

WEIGHTON, MARKET. [YORKSHIRE.]

WEIMAR, the capital of the grand-duchy of Saxe-Weimar-Eisenach, is situated in 51° N. lat., 11° 20' E. long., on the Ilm, and on the railway from Halle to Eisenach, from which towns it is distant 53 and 49 miles respectively, and has about 10,000 inhabitants. It stands in a pleasant valley, with a wooded mountain to the north and low hills to the south and east. The river, over which there are two bridges, winds along the south side of the town. Weimar is illustrious in the annals of German literature by the names of Göthe, Herder, Schiller, Wieland, Kotzebue, and others. It is an open town with irregular streets; there are however many agreeable houses, but the general appearance is plain and rather antique. The palace is beautifully situated, and the interior is fitted up with great elegance and taste. The adjoining park would be an ornament to any city. The chief public buildings are the workhouse, the hospital, the library, the museum, and two churches. The houses of Göthe and Schiller are shown to the public. The Court Theatre was built in 1825, and, under the management of Göthe and Schiller, greatly contributed to improve the public taste. The grand-ducal library contains above 130,000 volumes, besides manuscripts, copper-plates, and drawings. The principal church deserves notice as containing the sepulchres of the grand-ducal family, and being adorned with several fine paintings by Lucas Kranach. A colossal bronze statue of Herder was erected in the cathedral square, August 25, 1850. Weimar has a gymnasium, a training school, a house of correction, an orphan asylum, and a benevolent ladies' institution for the instruction of girls in female work. Falk's establishment for destitute children was converted by the grand-duke, in 1829, into a public school for education by the name of Falk's Institution. The manufactures are of small importance: the inhabitants derive their chief support from the residence of the court. The chief articles of trade are broadcloth, linen, leather, room-paper, books, maps, colonial produce, &c. A fine avenue connects the town with the mansion and park of Belvedere, about two miles and a half from Weimar.

WEISS KIRCHEN. [MORAVIA.]

WEISSENBURG. [RHIN, BAS.]

WEISSENFELS. [MERSEBURG.]

WEISSENSEE. [ERFURT.]

WELFORD. [GLOUCESTERSHIRE; NORTHAMPTONSHIRE.]

WELLAND, RIVER AND CANAL. [CANADA.]

WELLINGBOROUGH, Northamptonshire, a market-town and the seat of a Poor-Law Union, in the parish of Wellingborough, is situated in 52° 19' N. lat., 0° 42' W. long., distant 9 miles N.E. from Northampton, 67 miles N.W. by N. from London by road, and 78½ miles by the London and North-Western and Northampton and Peterborough railways. The population of the town of Wellingborough in 1851 was 5061. The living is a vicarage in the archdeaconry of Northampton and diocese of Peterborough. Wellingborough Poor-Law Union contains 26 parishes and townships, with an area of 54,909 acres, and a population in 1851 of 21,356.

Wellingborough is situated on an eminence above a little brook which flows into the river Nene. The town is lighted with gas. The houses are for the most part built of red-sandstone. The church is large and handsome, and of various styles of architecture. The Independents, Wesleyan Methodists, Baptists, Calvinistic Baptists, and Quakers have places of worship. There are Free schools; a Freeman's school; National, British, and Infant schools; a mechanics institute; a parochial reading-room and lending library; a savings bank; and an

agricultural society. The town-hall is a neat building. The principal manufacture of the place is that of boots and shoes. The market is on Wednesday, and is a considerable market for corn; there are two yearly fairs for live stock and cheese. Petty sessions and a county court are held in the town.

WELLINGTON, Shropshire, a market-town, and the seat of a Poor-Law Union, is situated near the base of the Wrekin, in 52° 42' N. lat., 2° 30' W. long., distant 11 miles E. by S. from Shrewsbury, 142 miles N.W. by W. from London, and 146 miles by the London and North-Western and the Shrewsbury and Birmingham railways. The population of the town of Wellington in 1851 was 4601. The living is a vicarage in the archdeaconry of Salop and diocese of Lichfield. Wellington Poor-Law Union contains 11 parishes and townships, with an area of 83,528 acres, and a population in 1851 of 20,729.

Wellington is situated in the populous coal and iron district of Shropshire. The town is neat in its appearance, and is lighted with gas. It possesses a handsome modern church, chapels for Wesleyan and Primitive Methodists, Independents, Baptists, and Roman Catholics. National and Free schools; a dispensary; a mechanics institute; a savings bank; and a neat market-hall. The market is held weekly on Thursday; there are numerous fairs and cattle markets in the course of the year. Petty sessions and a county court are held.

WELLINGTON, Somersetshire, a market-town, and the seat of a Poor-Law Union, is situated on high ground near the right bank of the river Tone, in 50° 58' N. lat., 2° 30' W. long., distant 56 miles S.W. from Bath, 148 miles W.S.W. from London, and 170 miles by the Great Western and Bristol and Exeter railways. The population of the town in 1851 was 3926. The living is a vicarage in the archdeaconry of Taunton and diocese of Bath and Wells. Wellington Poor-Law Union contains 24 parishes and townships, with an area of 60,454 acres, and a population in 1851 of 22,121.

The manor of Wellington was bestowed by Alfred the Great on his friend and biographer Asser, bishop of Sherborne, and on his death was transferred to the bishop of the newly-erected diocese of Wells, by whose successor it was held at the time of the Domesday survey, in which it is written *Walintone*. The church is a fine gothic building; it contains a fine monument of Chief Justice Sir John Popham. There are an Episcopal chapel, places of worship for Baptists, Independents, Wesleyan Methodists, and Quakers; National schools; and several almshouses. The woollen manufacture is carried on. The market is held on Thursday. There are fairs on March 29th, June 22nd, September 29th, and November 17th. A county court is held. The Date of Wellington's title was derived from this town. A lofty pillar in commemoration of the battle of Waterloo, erected by subscription, stands on Blackdown Hill, near the town.

WELLINGTON. [ZEALAND, NEW.]

WELLS, Somersetshire, an ancient city, the seat of a bishopric, a municipal and parliamentary borough, and the seat of a Poor-Law Union, is situated in a valley at the foot of the Mendip Hills, in 51° 12' N. lat., 2° 38' W. long., distant 19 miles S.W. from Bath, and 120 miles W. by S. from London. The population of the borough of Wells in 1851 was 4736. The borough is governed by 4 aldermen and 12 councillors, of whom one is mayor; and returns two members to the Imperial Parliament. The living is a vicarage in the archdeaconry of Wells and diocese of Bath and Wells.

The founder of the first church at Wells is said to have been Ina, king of Wessex, in 704. In the reign of Edward the Elder, in the beginning of the 10th century, the town became the seat of a bishopric. About 1091 John de Villula obtained the bishopric, and having removed the episcopal seat to Bath, called himself bishop of Bath only. About 1139 Bishop Roberts, the successor of Villula, determined that the diocesan should be styled Bishop of Bath and Wells. Wells has returned two members to Parliament since the reign of Edward I.

The town is cleansed, lighted with gas, paved, and supplied with water. There is a jail. The town-hall was built in 1780, and stands on one side of an extensive area which communicates by an ancient gateway with the cathedral close. The cathedral is one of the finest structures of the kind in England. It is in the usual form of a cross, the extreme length from east to west being 415 feet and the transept measuring 165 feet. The tower, which rises from the intersection, is 165 feet high, and two other massive towers, each 126 feet in height, crown the extremities of the west front. This western facade is remarkable for its tracery and sculptured figures: there are about 150 statues of the size of life, and above 300 of smaller size; and among many of them are a good deal mutilated, the effect is very striking. The Lady chapel is the most beautiful part of the cathedral, and is one of the best specimens of ecclesiastical architecture in England. There are several ancient monuments. The cathedral has for some time past been undergoing the process of restoration. The cloisters form a quadrangle attached to the south side of the cathedral, the sides severally measuring about 160 feet. The chapter-house is a handsome octangular building, 52 feet diameter in the interior, the roof being supported by a single central pillar. The episcopal palace, which is of the 14th century, stands at a short distance south from the cathedral, and with its lofty and embattled wall, inclosing an area of about seven acres, and surrounded by a broad moat filled with water, resembles an old baronial castle. The parish church of St. Cuthbert is a large and handsome edifice in the later pointed style.

with a fine embattled tower crowned with pinnacles. The Wesleyan Methodists, Independents, and Baptists have places of worship. The Chapter Grammar school is free to choristers. The Diocesan central schools, which are conducted as National schools, are partly supported from endowment; there are also an Endowed Blue-Coat school, Infant schools, several almshouses, and a savings bank.

The corn-market has decayed, but the market for cheese is still important. The market-days are Wednesday and Saturday. Fairs are held on January 6th, May 14th, July 6th, October 25th, and November 30th. The summer assizes for Somersetshire are held alternately in Wells and Bridgewater. A county court is held. Races are run annually in the vicinity of Wells.

The see of Bath and Wells is in the province of Canterbury. The diocese comprises the county of Somerset, except Bedminster, and contains 460 benefices: it is divided into the archdeaconries of Wells, Bath, and Taunton. The chapter consists of the dean, archdeacons, chancellor, precentor, and four canons. The income of the bishop is fixed at 5000*l.* a year.

WELLS. [MAINE, U.S.; NORFOLK.]

WELS. [ENS, Upper.]

WELSHPOOL. [POOL.]

WELWYN, Hertfordshire, a small town, and the seat of a Poor-Law Union, is situated on both sides of the river Maran, a feeder of the Lea, in 51° 50' N. lat., 0° 13' W. long., distant about 8 miles W. by N. from Hertford, 24 miles N. by W. from London by road, and 22 miles by the Great Northern railway. The population of the parish in 1851 was 1557. The living is a rectory, in the archdeaconry of St. Albans and diocese of Rochester. Welwyn Poor-Law Union comprises four parishes, with an area of 6457 acres, and a population in 1851 of 2225. The parish church is situated in the middle of the town; the Independents and Wesleyan Methodists have chapels. Besides an Endowed school for boys, founded by Dr. Young, author of the 'Night Thoughts,' who was rector of the parish, there is a school for girls.

WELZHEIM. [JAXT.]

WEM, Shropshire, a market-town and the seat of a Poor-Law Union, is pleasantly situated near the source of the river Roden, in 52° 51' N. lat., 2° 42' W. long., distant 10 miles N. by E. from Shrewsbury, and 163 miles N.W. by W. from London. The population of Wem parish in 1851 was 3747. The living is a rectory, in the archdeaconry of Salop and diocese of Lichfield. Wem Poor-Law Union contains 11 parishes and townships, with an area of 51,197 acres, and a population in 1851 of 10,625.

The town of Wem consists principally of one spacious street, which is lighted with gas. The church is a handsome structure with a fine chancel and a lofty spire. The Independents, Baptists, Primitive Methodists, and Irvingites have places of worship. There are—a Free school, and National, British, and Infant schools. Malting is carried on, and there are corn-mills, tan-yards, and rope-walks. The market is held on Thursday; cattle fairs are held six times in the year. Petty sessions and a county court are held.

WEMYSS, EAST and WEST. [FIFESHIRE.]

WENDEN. [LIVONIA.]

WENDOVER, Buckinghamshire, a market-town, is situated near the base of the Chiltern Hills, in 51° 45' N. lat., 0° 44' W. long., distant 5 miles S.E. from Aylesbury, and 35 miles N.W. from London. The population of the parish in 1851 was 1937. The living is a vicarage, in the archdeaconry of Buckingham and diocese of Oxford.

Wendover was formerly a parliamentary borough, but it was disfranchised by the Reform Act. Besides the parish church, which stands a short distance from the town, there are places of worship for Baptists and Independents, and National, British, and Infant schools. Lace-making, straw-plat-making, malting, coach-building, and rope-making are carried on. The market is held on Tuesday; and there are fairs on May 13th and October 2nd. The celebrated John Hampden represented Wendover in five parliaments. A branch of the Grand Junction Canal comes to the town.

WENER, LAKE. [SWEDEN.]

WENERSBERG. [SWEDEN.]

WENLOCK, sometimes called GREAT or MUCH WENLOCK, Shropshire, a market-town, and municipal and parliamentary borough, is situated near the north-eastern extremity of the Wenlock Edge Hills, in 52° 35' N. lat., 2° 38' W. long., distant 12 miles S.E. from Shrewsbury, and 148 miles N.W. by W. from London. The population of the parish in 1851 was 2398; of the municipal borough 18,728; of the parliamentary borough 20,588. The living is a vicarage, in the archdeaconry of Salop and diocese of Hereford. The borough is governed by six aldermen and 18 councillors, one of whom is mayor; and returns two members to the Imperial Parliament.

The town of Much Wenlock consists of only two streets. Besides the parish church the town contains National schools, and a savings bank. The market is held on Monday; five fairs are held yearly.

Wenlock Abbey was founded about 680 by Millburga, of the family of one of the kings of Mercia. It was on two occasions destroyed by the Danes, but subsequently restored. The ruins of the abbey are considerable; they are of the 13th century. The whole length from east to west was 401 feet, and the breadth of the nave and aisles 66 feet.

WENSUM, RIVER. [NORFOLK.]

WENTWORTH. [YORKSHIRE.]

WEOBLEY, Herefordshire, the seat of a Poor-Law Union, and formerly a market-town and borough, is situated in 52° 9' N. lat., 2° 51' W. long., distant 11 miles N.W. from Hereford, and 141 miles W.N.W. from London. The population of the parish in 1851 was 908. The living is a vicarage, in the archdeaconry and diocese of Hereford. Weobley Poor-Law Union contains 25 parishes and townships, with an area of 48,959 acres, and a population in 1851 of 8718.

Weobley formerly returned two members to Parliament, but it was disfranchised by the Reform Act. Many of the old wooden houses are extremely picturesque in appearance. The church is a commodious and handsome gothic edifice, with a fine tower and spire. There are a chapel for Primitive Methodists, an old Endowed Grammar school, and a Charity school. A yearly fair is held in October.

WEREJA. [MOSCOW, Government of.]

WERNIGERODE, the capital of a county in Prussian Saxony, the property of Count Stillberg Wernigerode, of which the Brocken is the centre, and which is about 90 square miles in extent. The town is situated on the northern slope of the Harz and on the Zillertal, is a walled town, with four gates, and a suburb called Nesenrode. The mansion of the count is an ancient castle, built on a rock 827 feet above the level of the sea, and 400 feet above the town. It commands a very fine prospect, and contains a library of 30,000 volumes. The town has woollen and linen manufactories, tanneries and brandy distilleries, a paper-mill, several oil-mills, saw-mills, &c.; 4 churches, an orphan asylum, a poorhouse, a gymnasium, and considerable trade in corn. Population 5600.

WERWICK. [FLANDERS, West.]

WESEL (Ober-), a walled town in the government of Coblenz, on the left bank of the Rhine, the bed of which is deep and narrower here than at any other point. There are two churches and three chapels, of which St. Werner's chapel is worthy of notice. The inhabitants, 2600 in number, are engaged in the manufacture of woollen-cloth and the salmon fishery on the Rhine. Wine of superior quality is produced in the adjacent country. On a steep mountain without the town are the ruins of the great and very strong castle of Schönberg, and below the town on the right bank of the Rhine is the perpendicular Lurley rock, celebrated for its echo, which is said to repeat sounds fifteen times.

WESEL. [DÜSSELDORF.]

WESER, the Roman *Vesurgis*, one of the largest rivers of Germany, is formed by the junction of the Werra and the Fulda: the Werra rises in Saxe-Hildburghausen, and the Fulda in the Rhön-gebirge in Bavaria. The course of the Werra is 175 miles, and that of the Fulda 125 miles, to their junction at Münden in Hanover, where their united streams take the name of the Weser. The Weser then passes through the principality of Göttingen, the duchy of Brunswick, the principality of Calenberg, the county of Schaumburg, the Prussian province of Westphalia, the Hanoverian provinces of Hoya, Verden, and Bremen, and the territory of the city of Bremen, from which, to its very broad mouth beyond Bremerlehe, it forms the boundary between Hanover and Oldenburg, and falls into the North Sea 45 miles below the city of Bremen: its entire course from Münden is 225 miles. Its principal affluents are, on the right hand, the Aller, with the Ocker and the Leine; the Wumme; the Lune; and, on the left, the Au; the Delme; the Hunte. The general direction of its course is from south to north, at first through a mountainous country, to the celebrated Porta Westphalica (between four and five miles above Minden), which is a gap in the Sünt-l-gebirge, through which it flows, having Jacobsberg (528 feet high) on the right, and Wittekindenberg (807 feet high) on the left bank. After passing the Porta Westphalica it flows through a wide valley with low banks. The facilities afforded by the navigation of the Weser, the Werra, the Fulda, and some of the other tributary streams, as the Aller and the Hunte, are of the highest importance to the commerce of the countries on their banks. The upper and middle portions of the Weser however are often rendered impassable in summer by sand-banks. Five miles below Bremerlehe a harbour was constructed, in 1818, at the mouth of the river. [BREMEN.]

WESPRIM. [HUNGARY.]

WEST BROMWICH. [BROMWICH, West.]

WEST DERBY, Lancashire, a suburb of LIVERPOOL, and the seat of a Poor-Law Union, is situated in 53° 28' N. lat., 2° 55' W. long., distant 3 miles N.E. from Liverpool, and 204 miles N.W. from London. The population of the ecclesiastical district of West Derby was 32,978 in 1851. West Derby Poor-Law Union contains 23 parishes and townships, with an area of 49,614 acres, and a population in 1851 of 153,238.

WEST FIRLE, Sussex, a village and the seat of a Poor-Law Union, is situated in 50° 50' N. lat., 0° 6' E. long., distant 4 miles S.E. by E. from Lewes, and 54 miles S. by E. from London. The population of the parish in 1851 was 701. The living is a vicarage in the archdeaconry of Lewes and diocese of Chichester. West Firle Poor-Law Union contains eight parishes, with an area of 14,494 acres, and a population in 1851 of 2590. The parish church is a spacious gothic structure. There are National schools.

WEST HAM, Essex, a village and the seat of a Poor-Law Union, is situated near the left bank of the river Lea, to the south of the main road from London to Chelmsford, in 51° 32' N. lat. 0° 1' W.

long, distant 26 miles S.W. from Chelmsford, and 5 miles N.E. from London. The population of the parish of West Ham in 1851 was 18,817. The living is a vicarage, in the archdeaconry and diocese of London. West Ham Poor-Law Union contains seven parishes and townships, with an area of 19,477 acres, and a population in 1851 of 34,395. West Ham had at one time a market. The villages of Plaistow and Stratford, which are in the parish, are noticed under Essex. The works of the Eastern Counties railway at Stratford have led to a great increase of population in that part of West Ham parish. The church of West Ham is an ancient and commodious structure, consisting of nave and chancel, with aisles. The Independents and Baptists have places of worship. There are National, British, Free, and Infant schools. On the river Lea are corn-mills, distilleries, a gutta-percha manufactory, brick-works, and market-gardens.

WEST HAMPNETT, Sussex, an agricultural village, and the seat of a Poor-Law Union, is situated in $50^{\circ} 50' N. \text{ lat.}, 0^{\circ} 46' W. \text{ long.}$, distant one mile and a half N.W. from Chichester, and 60 miles S.S.W. from London. The population of the parish in 1851 was 637, of whom 225 were in the Union workhouse. The living is a vicarage, in the archdeaconry and diocese of Chichester. West Hampnett Union contains 37 parishes and townships, with an area of 72,409 acres, and a population in 1851 of 14,649.

WEST INDIES, a term applied to the archipelago which separates the Atlantic from the Caribbean Sea and the Gulf of Mexico. The name perpetuates the notion of Columbus that by sailing west he should reach India, or Hindustan; it was for some time synonymous with America. Geographers sometimes call these islands the *Columbian Archipelago*, because nearly all the islands were discovered by Columbus. On the continent of Europe the name ANTILLES has been generally retained. Various names are given by seamen of different nations to different portions of the archipelago. The Spaniards introduced the distinction of Windward and Leeward Is. s (Barlovento and Sotavento). By *Windward Isles* English navigators mean the group that lies south of, and includes, Martinique; while the *Leeward Isles* comprise the islands between Martinique and Puerto Rico: these two groups, together with a series of islets along the north coast of Venezuela, constitute the *Lesser Antilles*. The most northerly of the Leeward Isles form the group of the VIRGIN ISLANDS. The larger islands—Puerto Rico, San Domingo, Jamaica, and Cuba—which bound the Caribbean Sea on the north, are called the *Greater Antilles*; and outside these towards the Atlantic, on the north-east, are the great banks on which rest the *Lucayas*, or BAHAMAS.

The archipelago of the West Indies extends from 10° to $27^{\circ} 30' N. \text{ lat.}, 59^{\circ} 30'$ to $85^{\circ} W. \text{ long.}$, and the islands are divided into three groups: the Bahamas, lying between $27^{\circ} 30'$ and $20^{\circ} N. \text{ lat.}, 70^{\circ}$ and $80^{\circ} W. \text{ long.}$; the Greater Antilles, between $23^{\circ} 30'$ and $18^{\circ} N. \text{ lat.}, 65^{\circ}$ and $85^{\circ} W. \text{ long.}$; and the Lesser Antilles, extending from 19° to $10^{\circ} N. \text{ lat.}, 59^{\circ} 30'$ to $66^{\circ} W. \text{ long.}$ The most northern portion of this archipelago, or that part which is north of $20^{\circ} N. \text{ lat.}$, is noticed under BAHAMAS; the Greater Antilles are described under CUBA, HISPANIOLA, JAMAICA, and PUERTO RICO; the British West India Islands are severally noticed under their proper heads, as are also the more important of the islands belonging to France, Denmark, and Holland. Lists of the islands belonging to these different states are given under ANTILLES. The gross area of the West Indies is estimated at 86,023 square miles, that of the British possessions at 13,272 square miles. It remains in this article to take a brief glance at the formation, climate, and products of the archipelago.

The islands dispersed over the Bahama banks are low, with the exception of the islands of Heneagua, or Inagua, and Mayaganga, or Marignana, both situated in a wide opening to the north of the Windward Passage which separates Cuba from Hispaniola. They hardly rise more than six feet above high-water mark, and their shores are formed by madrepores or coral. They are all long, and very narrow. Towards the centre of the islands the soil is composed of sand and calcareous rocks, with an intermixture of shells. It is generally hard, and partially covered with shrubs or with low trees, some of which produce dye-woods. The banks themselves rise nearly perpendicularly from an unfathomable depth. Where their edges are not formed by islands there is a depth of three to ten fathoms of water on them, but this depth decreases gradually towards the interior of the banks, where it is frequently only a few feet. There are also large tracts which are dry at low-water, and in other places there are single rocks or cliffs. The surface of the banks is composed of calcareous sand intermixed with shells.

The extensive banks which surround the greater part of the island of Cuba prove that this island rests on a bank similar to the Great Bahama Bank. These banks surround the island so as to leave only a few places of comparatively small extent, where large vessels have access. [CUBA.] The eastern portion of Cuba however is free from banks, and in these districts alone the mountains rise to a considerable elevation, whilst those parts which are surrounded by banks contain only hills.

The mountainous portion of Cuba evidently belongs to another region, which extends far to the east, comprehending the three other Larger Antilles and the Virgin Islands, so as to terminate near $64^{\circ} W. \text{ long.}$ In the most western parts the mountains rise to a great elevation. The Montañas del Cobre in Cuba rise to 7200 feet; the

Blue Mountains in Jamaica to 7150 feet; and those of Cibao in Hispaniola to about 8000 feet. Farther to the east the mountains decrease in height. In Puerto Rico they do not attain 4000 feet, and in the Virgin Islands probably not 2000 feet. Those of Virgin Gorda perhaps do not much exceed 500 feet. These mountains exhibit the usual formation of most mountains of Europe, but primitive rocks are prevalent in the highest ranges. Between them there are valleys of considerable width, and on their sides smaller ones, all of which are very fertile. There are considerable plains, as in Jamaica and Hispaniola, which however are destitute of trees and less fertile. The mountains, their declivities, and the valleys are thickly wooded in their natural state.

The strait which lies between Virgin Gorda and Anguilla, and is traversed by the meridian of $64^{\circ} W. \text{ long.}$, separates this region from the islands of volcanic origin, which extend from $18^{\circ} 20'$ to $12^{\circ} N. \text{ lat.}$ and between $60^{\circ} 50'$ and $63^{\circ} 10' W. \text{ long.}$ in a curved line. These islands consist either entirely or for the greater part of mountains and rocks of volcanic origin. Anguilla however, which lies at the most northern extremity, and Barbuda and Barbadoes, which lie farther to the east, are not much elevated, and they exhibit no traces of volcanic action, but consist mostly of limestone rocks. The greater number of the others are entirely composed of lava or other rocks of volcanic origin; but in St. Martin, St. Bartholomew, Guadeloupe, Martinique, and Granada are tracts consisting of limestone or sandstone. Two of these islands, Guadeloupe and St. Vincent, have active volcanoes; the others contain extinct craters, or solfatarae, in different degrees of activity. The surface of these islands, like that of all countries consisting of volcanic rocks, presents great and sudden irregularities. The mountains rise from 2500 to more than 5000 feet above the sea. The highest are the Morne Diablotin in Dominica (5316 feet) and the Soufrière in Guadeloupe (5118 feet), both of which lie nearly in the centre of the chain. Proceeding south and north they become lower, but Mount Misery in St. Christopher is still 4454 feet, and Morne Rouge in Grenada 3840 feet high. On the eastern shores of the islands, which are exposed to the strong currents from the Atlantic, the rocks rise with a very steep ascent, and the indentations between them are generally too short and too much exposed to the trade-wind to constitute harbours. On the western shores the mountains are less elevated and their declivities gradual; and here the inlets are of great extent, and form good harbours.

The islands of Tobago and Trinidad chiefly consist of primitive rocks, and resemble in their formation the north-eastern coast of Venezuela. There are no traces of volcanic action on them, except some mud-volcanoes on Trinidad.

All the islands of the Columbian Archipelago, with the exception of the most northern Bahamas, are within the tropic; and their climate, as in other countries thus situated, is regulated by the progress of the sun, and the trade-winds, which depend on that progress. The year is divided into two seasons, the dry and wet. All the islands which are south of $18^{\circ} N. \text{ lat.}$ have two dry and two wet seasons, and this is also the case with the southern shores of the islands of Puerto Rico, Hispaniola, and Jamaica. The long dry season sets in when the equator approaches the southern tropic, about the end of November or the beginning of December. In this season the weather is generally very constant. Showers of rain indeed occur, but not frequently; and the sky is cloudless for several weeks and even months in succession. This weather lasts till the sun approaches the equator. Towards the end of March a change in the atmosphere takes place in the most southern islands, but it occurs about a month later in those near $18^{\circ} N. \text{ lat.}$ The short rainy season begins, which in the southern islands lasts about six weeks, but in the northern only 15 or 20 days. Showers are then frequent, and sometimes several occur in one day; but they hardly ever continue for an hour. When the sun passes over the zenith of the islands, the short dry season begins, and it lasts till the sun has reached the northern tropic. In July the long rainy season sets in, and continues to the month of November. These rains, which are ushered in by violent gusts of wind, and accompanied by terrific thunder-storms, are generally not heavy in July; but they become so in August in the southern, and in September in the northern islands. They then descend in torrents, and sometimes continue for 24 hours without interruption; but they usually fall in showers, several of which occur in one day, and sometimes as many as twenty. In the southern islands they begin to diminish in September, and in the northern in October. In November the showers are moderate and less frequent.

On the island of Cuba and on the northern coasts of the other Greater Antilles and in the Bahamas, the seasons are not so distinctly marked. Though fine weather prevails during the long dry season, it is frequently interrupted by rain. It must however be observed that the heaviest rains fall in those months when the rainy season is at its height in the islands lying farther south. The quantity of rain which annually falls in the Greater Antilles is less than in those islands where the seasons are more regular. In the former it amounts to between 48 and 60 inches, and in the latter to 60 or 70 inches.

The mean annual temperature differs very little in places situated between the tropics. In the West Indies it is about 78° . The greatest heat experienced at Puerto d'España does not exceed 98° , or 15 degrees above the mean annual temperature. At the Havana the thermometer sometimes rises to 92° ; but it sometimes descends as low as 45° , and

in its vicinity ice is occasionally formed, after a long continuance of northerly winds in December or January. With this exception it is stated that no frost is experienced even on the summits of the high mountains of Cuba or Jamaica.

When the sun is in the southern hemisphere the Archipelago enjoys the full benefit of the trade-winds, blowing from north-east and east-north-east, and diffusing over it a refreshing coolness. But when the sun has passed the equator, the trade-winds retire to the northward as far as 15° or 16° N. lat., and are replaced by south-eastern winds, which are warm and usually gentle; they continue to blow with diminishing force till June, when they are frequently interrupted by calms. During the long rains the wind blows from all the points of the compass, and frequently in very violent gusts. This is also the season of the hurricanes, which rarely occur in July, but generally in August or September. They are not experienced in Trinidad and Tobago, and are more frequent and destructive on the Lesser Antilles than in Jamaica or Cuba. In Cuba they usually occur in October. When the trade-winds are not strong, the heat is moderated by the daily alternation of the sea- and land-breezes, the first blowing by day and the land-breeze by night. The calms between the breezes are the hottest part of the day, but they last only from one to two hours.

All the islands are subject to earthquakes; but they are not violent, except on the islands of volcanic formation, where they prove sometimes very destructive. The climate is considered healthy from November to June, but during the great rains various diseases, especially fevers, are prevalent.

The navigation of the Archipelago is much affected by the currents which prevail in the surrounding seas. The principal of these, the Gulf Stream and the Guyana Current, are noticed under ATLANTIC OCEAN. Another current prevails along the north-eastern edge of the Bahama Banks. It sets along the banks to the east-south-east, and varies much in strength according to the seasons. In the sea between this current and the Guyana Current the extraordinary phenomenon occurs which is called the 'Ground-Sea,' or in Jamaica the 'North Sea.' It is a swell of the sea, to which the south-eastern Bahamas, the north-eastern coast of Jamaica and Hispaniola, but chiefly Puerto-Rico and the Virgin Islands, and in a less degree the northern Caribbee Islands, are subject. This heavy swell sets in generally in October and continues, though with some intermission, till April and May. During June, July, and August it appears only occasionally, and for a short time. It takes place when the air is calm, or even after the prevalence of light winds from the southward of east. The sea approaches from the north the shores of the islands in undulating masses, which suddenly rise to large ridges created with foam, and form billows which burst upon the beach with great impetuosity. The sea for many miles assumes a peculiar aspect. Different tints of blue, from the lightest to the darkest, form a strong contrast with the snowy foam of the breaking waves when they strike against the hidden rock, or with the white line which is visible along the whole coast.

The grains, plants, vegetables, and fruit-trees, which are cultivated either for the purpose of obtaining articles of export or as food, are enumerated in the articles on the several islands. The most important products are sugar, coffee, tobacco, indigo, cotton, ginger, cacao, manioc, maize, &c., vast quantities of delicious fruits and vegetables, and hard strong timber. The wild animals which existed on the Archipelago when the Europeans first arrived were—the agouti, peccary, racoon, alou, or native Indian dog, and the wild boar—are now all extinct or nearly so, with the exception of the wild hog, which is still common on most islands. Monkeys are still found on several islands, and in Jamaica there is a smaller kind. Birds are numerous, and nearly all of them are fit for food. There are macaws, parrots, wild guin-a-fowls, quails, several species of wild-pigeons and partridges, snipes, wild-ducks, gray-ducks, teal, plovers, widgeons, mocking-birds, or nightingales, curlews, spoonbills, divers, herons, rails, and sand-pipers. The most remarkable of the birds are the humming-bird and the carrion-crow: without the last-mentioned bird, it is said that these islands would hardly be habitable.

Fish are abundant and excellent. Madden enumerates 24 species in Jamaica, all of which are excellent food. In the sea surrounding Cuba and Jamaica the manatee and the remora, or sucking-fish, are met with, but very rarely. Turtles are abundant on the Bahamas and other low islands. In Jamaica is the mountain-crab, which is one of the delicacies of the island. The cotton-tree worm, or casu, is eaten by the negroes. There are several kinds of large lizards, among which is the guana, which is eaten. Alligators are numerous. There are also several kinds of snakes, and some are large, but they are innoxious. The mosquitoes, cockroaches, and ants are troublesome. Fire-flies are very abundant.

The original inhabitants found by the Spaniards on the Greater Antilles and the Bahamas were a gentle and timid race. They were all exterminated in a few years. The Little Antilles on the other hand were inhabited by a courageous and robust race called Caribs, from whom this part of the West Indies is still sometimes called the Caribbean Islands. But this warlike race is also extinct in the islands, which are now peopled entirely by Europeans, Creoles, and negroes. A few families of Caribs still exist on the islands of St. Vincent and Trinidad. The present population, amounting to between three and four millions, is composed of whites and negroes, and the offspring of

these two races. In the British islands the negroes constitute about three-fourths of the population; in Cuba, about one-half; in Puerto Rico, only one-sixth. The proportion between the two races in the islands which belong to other European nations is nearly the same as in the British islands. In Hispaniola both races are so mixed, that the bulk of the people are considered mulattoes.

History.—The greater number of the islands composing the Columbian Archipelago were discovered by Columbus. On his first voyage he first fell in (12th Oct., 1492) with the island of San Salvador, one of the Bahamas, which the natives called Guanahani. He afterwards visited the Bahama Islands, which lie between San Salvador and Cuba, and sailed along the north-east coast of the last-mentioned island from Punta Maternello to Cape Maysi, whence he passed to Hispaniola, of which he discovered a great part of the northern coast. In his second voyage (1498) he discovered all the Lesser Antilles north of 15° N. lat., and also Puerto Rico, and in the following year the southern coast of Cuba. In his third voyage (1498) he discovered Trinidad and the adjacent part of Venezuela, with the islands of Margarita and Cubagua. In his fourth voyage he discovered the Bay of Honduras, the whole of the coast of Central America from Cape Gracias à Dios to Puerto Bello, and, in returning from this coast to Hispaniola, also the island of Jamaica. The other islands were discovered either at the same time or soon afterwards. Columbus formed the first settlement on his second voyage, and in the beginning of the 16th century the other Greater Antilles were occupied and settled by the Spaniards, who attempted to exclude Europeans from having any commercial intercourse with these islands. But as the Spaniards did not think it worth their while to occupy the smaller islands, they became the resort of the pirates called Buccaneers, who infested the Spanish possessions during the 16th and 17th centuries. With the assistance of the Buccaneers several nations settled permanently in them. Other islands were wrested from the Spaniards by war, as Jamaica by the English; or by treaty, as the western portion of Hispaniola by the French. After the extermination of the Buccaneers the islands began to enjoy peace, and soon rose to great importance, as the demand for their principal produce, sugar and coffee, increased rapidly in Europe, and most of the other countries in which those articles might be obtained were shut out from a free commercial intercourse. Thus the English islands, as also those of other European nations, with the exception of those of Spain, had risen to a high degree of cultivation at the end of the 18th century. Several events which have taken place since 1800 have considerably affected the condition of the English possessions; such as the abolition of the slave-trade, the emancipation of the slaves, and the free intercourse not only of England, but also of other European nations, with countries producing similar articles. Slavery has been abolished, and the slaves made free in the French West India islands since 1848. Slaves now exist only on the islands still belonging to Spain.

(Bryan Edwards, *History of the West Indies*; Humboldt; *London Geographical Journal*; *Parliamentary Papers*.)

WEST KILBRIDE. [AYBSHIRE.]

WEST WARD, Westmorland, is the north-western division of the county, and gives name to a Poor-Law Union. The ward contains an area of 120,523 acres, with a population in 1851 of 8156. It is bounded N.W. by Cumberland, E. by East Ward, and S. by Lancashire and the ward of Kendal. West Ward Union, which contains 22 parishes and townships, is co-extensive with West Ward division of the county.

WESTBOURNE, Sussex, a village and the seat of a Poor-Law Union, is situated on the left bank of a small stream which divides Sussex from Hampshire, in 50° 51' N. lat., 0° 56' W. long., distant 8 miles W. by N. from Chichester, and 70 miles S.W. from London. The population of the parish in 1851 was 2178. The living is a vicarage, in the archdeaconry and diocese of Chichester. Westbourne Poor-Law Union contains 12 parishes and townships, with an area of 32,866 acres, and a population in 1851 of 6944. Besides the parish church, Westbourne has National and Infant schools. Brick-making, rope-making, and mast and block making are carried on.

WESTBURY, Wiltshire, a market-town and parliamentary borough, and the seat of a Poor-Law Union, is situated in 52° 15' N. lat., 2° 9' W. long., distant 12 miles S.W. from Devizes, 100 miles W. by S. from London by road, and 109½ miles by the Wilts and Somerset branch of the Great Western railway. The population of the parliamentary borough of Westbury in 1851 was 7029. The living is a vicarage, in the archdeaconry and diocese of Salisbury. The Poor-Law Union, which is called the Westbury and Whorwelsdown Union, from the two adjoining hundreds so named with which its area is nearly co-terminous, contains 10 parishes and townships, with an area of 30,944 acres, and a population in 1851 of 12,580.

Westbury is a place of considerable antiquity, and numerous Roman coins have been dug up in the neighbourhood. Westbury Leigh forms a street, separated by an interval of open road from the principal street of Westbury. The church is a large ancient building, with a central tower, and a fine west window. There are chapels for Independents and Baptists, and National and Infant schools. The town-hall is a handsome building. The clothing manufacture is carried on. The market is on Friday, and there are four yearly fairs.

WESTBURY-ON-SEVERN, Gloucestershire, a village and the seat of a Poor-Law Union, is situated on the right bank of the river Severn,

in 51° 50' N. lat., 2° 24' W. long., distant 9 miles S.W. from Gloucester, and 111 miles W. by N. from London. The population of the parish of Westbury-on-Severn in 1851 was 2498. The living is a vicarage, in the archdeaconry of Gloucester and diocese of Gloucester and Bristol. Westbury-on-Severn Poor-Law Union contains 14 parishes and townships, with an area of 43,246 acres, and a population in 1851 of 18,124. Westbury stands at the north-eastern corner of the Forest of Dean. Besides the parish church, there is a chapel for Independents. National schools are supported partly from endowment.

WESTBURY-ON-TRYM. [GLOUCESTERSHIRE.]

WESTCHESTER. [PENNSYLVANIA.]

WESTERAAS. [SWEDEN.]

WESTERHAM, Kent, a market-town, in the valley of Holmesdale, near the western border of the county, in 51° 15' N. lat., 0° 4' E. long., distant 21 miles W. from Maidstone, and 21 miles S. by E. from London. The population of the town of Westerham in 1851 was 1247. The living is a vicarage, in the archdeaconry of Maidstone and diocese of Canterbury. The parish church is a handsome edifice, chiefly in the perpendicular style, with a spire. In the interior is a cenotaph to the memory of General Wolfe. The Independents have a chapel, and there are National schools. Wednesday is the market-day. An annual fair is held on May 8rd.

WESTERN AUSTRALIA, in its widest sense, extends over the western portion of the Australian continent, and comprehends all the countries lying west of 132° E. long., the boundary west of South Australia and North Australia; so that the boundary-line between it and the other parts of the continent joins the Indian Ocean east of Cambridge Gulf, and the Southern Sea near the Australian Bight, at Cape Adieu. Thus Western Australia contains about one-fourth of the whole continent, and lies between 35° and 14° S. lat., 115° and 132° E. long. The limits of the British colony, originally established under the name of the Swan River Settlement, are much less, but the boundary has not been definitely settled, and is constantly being extended. It may be said to lie between 30° and 35° S. lat., 115° and 119° E. long., or about 400 miles from south to north, and about 250 miles in breadth.

Coast.—The coast-line presents a much greater variety than most other parts of Australia. In some parts the sea to some distance from the shore is covered with numerous islands, islets, and rocks, which render these countries difficult of access. From this cause an extent of coast-line, about 500 miles in length, has not been surveyed. Tasman Land, between Point Gantheaume and Cambridge Bay, to the northward, has a coast more broken than any other part of Australia, and indented with wide bays, and some narrow inlets, which penetrate a considerable distance into the interior. The coast of Tasman Land has been but slightly examined, so that our information in respect of the natural products of the country is very limited. Within the confines of the colony there are numerous estuaries, each of which receives several rivers. Of the few good harbours along this coast the best are Rockingham in Cockburn Sound, Albany in King George's Sound, Bunbury in Port Leschenhault, and Augusta, near Cape Leeuwin, on the southern side of the south-western promontory of the island. At the mouth of the Swan River, and at the head of the Melville Water, which runs inland for nearly 80 miles, is the port of Perth, the capital of the colony of Western Australia. The entrance is encumbered and rendered dangerous by several rocks. A lighthouse is placed on Rottenest Island at the entrance, and on some of the more dangerous rocks there are beacons.

Mountains, &c.—A range called the Darling Mountains extends along nearly the whole length of the colony. Its distance from the coast varies from 50 to 150 miles, and its height is from 800 to 3000 feet. It is generally sterile; the granite appears in some places in masses. A profusion of coarse herbage appears on the surface, and plants which resemble the English heath grow in considerable numbers. There are forests of large mahogany and blue gum-trees. In the Darling Mountains have been found roofing-slate, limestone, marl, selenite, siliceous and calcareous petrifications, magnetic iron-ore, chromate of lead, galena, and copper. Wide valleys bordered by fertile plains occur where basaltic rocks are developed. Columnar basalt is found around Geographe Bay, and from thence to Shark Bay a band of coal has been traced a distance of 600 miles.

In that part of Western Australia which borders on the south coast, there are three distinct parallel ranges of mountains running from north to south. The highest and most eastern of these has its southern termination near to King George's Sound, in 35° 6' S. lat. The second terminates at Cape Chatham, 35° S. lat.; Cape Leeuwin, which is inferior in altitude, as well as in extent, to the other two; it terminates on the north at Cape Naturaliste, 33° 27' S. lat. The highest point is Tulbanop, which is stated to attain an elevation of 5000 feet. On the mountains and higher hills the surface is rugged and stony; on the lower sides of both the soil is excellent; but in the principal valleys and the lower grounds, where the sandstone formation prevails, it is of a very inferior description, except where the rivers have brought down an alluvial deposit.

Rivers.—The rivers on the west coast of Australia generally rise at no great distance from the sea. Near their sources they are mountain torrents, but in the lowlands they become slow streams. They are

liable to rise suddenly, owing, it is supposed, to the rain which falls near their sources. At other times their channel, in some places may be quite dry, is quite dry. They offer little or no facility for inland navigation. The Swan River rises on the western side of the Darling Range. At its mouth is a bar, after passing which the river is navigable, though with difficulty, for some distance. The other rivers are the Avon, the Murray, the Canning, the Harvey, the Preston, the Collic, the Vasse, the Blackwood, the Donnelly, and the Kalgan. The Canning rises in the Darling Range: it is smaller than the Swan, and only navigable for a few miles. Shoals impede the navigation, and dry weather boats must be pushed over them for fully half a mile. The Murray takes its rise also in the Darling Range, and empties itself into Peel's Inlet. The Preston and the Collic unite about 50 miles south of the Murray, and the united stream runs into an estuary called Leschenhault, and forms a bar, over which the river is very shallow.

For the botany and zoology of Western Australia, see AUSTRALIA. *Climate.*—The climate of Western Australia has the same general character as that of Eastern Australia. [AUSTRALIA.] It has generally been found prejudicial to Europeans, while in the case of some persons it has proved highly favourable. Though variable, the western part of this colony is not so uncertain as New South Wales in the supply of rain and moisture. The average winter temperature is about 58°, that of the summer about 76°.

The wet season begins generally in March and ends in November, the rain being most abundant in August and September. The driest of the dry season is during the harvest, in January, when the nights are distinguished by heavy dews. The seed-time lasts from early in May to the end of August. By December the grain is ripe; hay is cut in November. Tomatoes, pumpkins, gourds, vegetable-marrows, chillies, egg-plants, besides every English vegetable, ripen in the open air; and also the following among other fruits—melons, bananas, almonds, figs, grapes, peaches, and strawberries. The olive, pomegranate, apricot, plum, mango, lemon, and orange; the mulberry, apple, nectarine, pear, and several others are grown. Fig-cutting produce fruit the first year, and vines the second or third.

Population.—The aborigines do not amount to more than 1700. The European population here increases very slowly. In 1852 it amounted to 8711, including 705 enumerated among the military, 1432 bond, and 6574 free. Schools are provided at the government expense for children of all religious denominations, as well as for natives, those who are able paying a small sum; and there are other schools in connection with the Wesleyan Methodists. There are about 70 churches and chapels in the colony, of which 20 belong to the Church of England, 4 to Presbyterians, and 3 to Roman Catholics.

Government.—There is a lieutenant-governor, with his staff of officials. The colony is divided for government purposes into 21 counties. On the first establishment of the colony in 1829, it was decided that no convicts should be sent thither, and a system of colonisation was projected, to be carried forward by means of land-sales, but it did not work well. The labourers sent out became landowners, and hired labour became excessively dear. Convict labour has since been requested by the colonists, and has succeeded well. In November 1854, four years after the formation of a convict department, 2930 convicts had been sent. Of these 553 were then in prison, either as probation prisoners, or as reconvicted ticket-of-leave men; but of the last there were only about a hundred. There were 1523 ticket-of-leave men, 622 employed on public works, 891 in private service, and 10 in hospital. There had been 113 deaths, 723 conditionally pardoned, and 18 either free by servitude, escaped, or missing. The public works had been executed under the superintendence of the Royal Sappers and Miners, and consisted of the permanent prison at Fremantle; commissariat stores and offices at Fremantle, Guildford, York, Toodyay, and Bunbury; jails at York, Toodyay, and Bunbury; 272 miles of road, 50 of which are 30 feet wide, and the remainder 18 feet, 27 miles graded and levelled, 5 miles macadamised, and 50 miles repaired; 28 bridges built, one of which, over the Swan at Guildford, is 480 feet long and 30 feet high, and several others of considerable size; a jetty 216 feet long, built at Fremantle as a landing from the river, and another 455 feet long, as a landing from the harbour, in progress; the lakes at the back of Perth drained, and the swamps in Fremantle filled up; with some minor works. The conduct of the convicts had on the whole been good, and considerable improvement had been developed in their characters.

Commerce.—Though most of the English grains are grown, and the soil is tolerably productive, the exertions of the settlers are chiefly directed to the raising of stock. Wool is one of the chief articles of export; horses, which are sold to supply the cavalry at Madras, are another large article of export; as is sandal-wood, and a species of mahogany, of which there are large forests in the interior. Guano has been found on the islets that lie around Shark's Bay. Attempts have been made to prosecute the whale fishery; and something is done in fishing off the coasts to furnish provisions for the inhabitants. There are many salt-lakes and springs in the colony, and a considerable quantity of salt is manufactured. The amount of tonnage inwards in 1852 was 25,326. The imports in 1852 amounted to 97,804. The colonial revenue for 1852 was 87,022; the expenditure was 34,774. *Towns.*—Perth, the capital, is situated on the right side of the

estuary of the Swan River, near its junction with the Canning. The population is small; the town is however improving, but the houses are scattered over a large area. A bridge has been built across the Canning, another over the Swan, and there is a new jail. *Fremantle* is on the opposite side of the Swan River estuary, a few miles lower down. It is the seat of the convict establishment, and there is a jail. A lighthouse has been erected upon Arthur's Head, a promontory in front of the town. There is a jetty for the convenience of the port. *Albany* is a port-town, in the south-eastern part of the colony, in King George's Sound. It has a jail, and some trade in timber. *Augusta* is a small port on the eastern side of Cape Leeuwin, on the estuary of the Blackwood River. *Bunbury* is the port town of a district formerly called Australind, of which a small village still retains the name. The harbour of Port Leschenault, upon which it stands, is a good and large one, but it has little commerce. *Geraldton* is an inland town on the Murchison River, founded in consequence of the commencement of the working of lead-mines there by a company. *Guildford* is a small inland town, a few miles east of Perth. *Northam* is a small inland town, in an agricultural district, east of the Darling Range, on the river Mortlock, and is about 60 miles in a direct line E.N.E. from Perth. *Rockingham* is on Cockburn Sound, and has a good port, and some trade. *Toodyay* is an inland town, about 20 miles N.W. from Northam, and about 50 miles N.E. from Perth, upon the river Toodyay, which pierces the Darling Range, and falls into the Melville Water, but is not navigable. *Vasse* is a small port on Vasse Inlet, in the centre of Geographe Bay, about 20 miles S.S.W. from Bunbury, about 50 miles S. from Vasse, across a fine country, forming the promontory bounded by Cape Leeuwin and Cape Naturaliste. Other small towns of little importance are named York, Picton, Clarence, and Waterloo.

WESTERVIK. [SWEDEN.]

WESTERWALD. [PRUSSIA.]

WESTMEATH, an inland county in the province of Leinster, Ireland, is bounded N. by the county of Cavan, N.E. and E. by the county of Meath, S. by King's County, W. by the county of Roscommon, and N.W. by the county of Longford. It lies between 53° 8' and 53° 48' N. lat., 6° 54' and 7° 55' W. long. Its greatest length east-north-east and west-south-west is 35 miles, its greatest breadth at right angles to that line 25 miles. The area is 708 square miles, or 453,468 acres, of which 365,218 acres are arable, 56,392 acres uncultivated, 8803 acres in plantations, 628 acres in towns, and 22,427 acres under water. The population in 1841 was 141,300; in 1851 it was 107,510.

Surface, Geology, Hydrography, and Communications.—The county has for the most part a gently-undulating surface, not rising anywhere to a very great height. Knock Eyne, or Ion, on the border of Lough Deveragh, is about 702 feet high; Benfore, or Ben of Fowre, near the village of Fowre, not far from Lough Lane, or Lene, is 710 feet high. These, with the other principal elevations, are in the northern part of the county. The whole belongs to the central carboniferous limestone district of Ireland. There are two small districts, one just round Moate-a-Gronogue, and the other in the same neighbourhood, but rather more to the south-west, which are occupied by the yellow sandstone. These beds are considered to belong to the same period as the carboniferous limestone, of which series of formations they constitute the lowest members.

The western side of the county belongs immediately to the basin of the Shannon, which forms its western boundary, separating it from the county of Roscommon. Lough Ree, the largest of the series of lakes into which the Shannon expands, is also on the western border. This noble sheet of water is 16 miles long from north to south, and of a varying breadth, above 7 miles in one part. Its outline is exceedingly broken and irregular, and its surface is studded with a number of small islands finely wooded. Those adjacent to Westmeath are, Innismore, or Inchmore, containing 104 acres, once the site of a monastery; Hare Island, 57 acres, with the ruins of an abbey; Innisturk, or Inchturk, 24 acres; and Innisboffin, or Inchboffin, 27 acres, formerly the site of an abbey; besides a number of smaller islands. An inlet at the southern extremity of Lough Ree, connected with it by a strait so narrow as properly to constitute it another lake, is almost entirely inclosed within the county. This subordinate lake, which is about 2 miles long from east to west, and in one part above a mile and a half wide, contains a large island called Friar's Island, well wooded at its western extremity. The streams which flow into the Shannon or into Lough Ree are all small. A stream, which rises 3 miles north of Moate, and several other streams in the north-west, flow into the Inny, which joins Lough Ree on the border of the county of Longford. There are several small lakes on this side of the county, some of which communicate by small streams with Lough Ree. Bogs are numerous.

The central part of the county is drained by streams that empty their waters into several inland lakes, which are connected by small streams with each other, and ultimately with the Shannon. The northernmost of these is Lough Sheelin, or Shillin, on the north border of the county, from which lough a small stream communicates with Lough Keinal, also on the border. From Lough Keinal the connecting stream flows southward, first along the border, separating Westmeath from Longford, and then through the county into Lough

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Deveragh. This sheet of water extends 5 or 6 miles in length from north-west to south-east, and has a breadth varying from 2½ or 3 miles near the north-west end, to little more than a quarter of a mile near the south-east extremity. The banks are hilly, and some of the loftiest elevations in the county are in the surrounding district. There are plantations or other woodlands on some parts of the shore. Lough Deveragh receives some small streams: and others, including the Glore, which is the outlet of a small lake (Lough Glore), north-east of Lough Deveragh, fall into the connecting stream. A small brook forms a communication between Lough Iron and Lough Owhele, or Hoyle, 3½ miles long from north-west to south-east, and about one mile and a half broad. The banks rise gently from the lake, and are fertile and well wooded. On a small islet in the lake is a rude chapel with a burial-ground, once much resorted to by pilgrims. A supply of water is drawn from Lough Hoyle for the Royal Canal. From Lough Hoyle a small stream flows in a winding channel southward past Mullingar into Lough Ennel, 4½ or 5 miles long from north-east to south-west, and above 2 miles broad at the widest part. This lough, sometimes called Belvidere, is studded with small islands. A number of streams flow into the lough. These lakes communicate with the Shannon by two different streams, the Inny and the Brosna.

All that part of the county which we have described is included in the basin of the Shannon, though for convenience the central lake district has been described separately. The eastern side of the county belongs to the basin of the Boyne. A number of small streams rise on that side of the county and flow eastward into the Boyne: the most important is the Deel, one branch of which rises near Mullingar, and another is the outlet of a small system of lakes near the north-east border of the county. The lakes of this system are, Lough Bawn, the White Lake, and some very small ones on the borders; and Lough Lene, Lein, or Lane, and Lough-a-Deel within the border; Lough Lene, the largest of the group, is about 2½ miles long from west-north-west to east-south-east, and nearly a mile broad. Its waters are peculiarly clear, and it contains several islets.

The eastern and south-eastern sides of the county abound with bogs, and some of them are of very considerable extent.

The county of Westmeath is among the most beautiful in Ireland, but its beauty is of a peculiar character, consisting of rich undulating scenery, and not entering into rivalry with the more romantic beauties of Kerry and Wicklow.

The Shannon is navigable for steam-boats throughout that part which borders on this county. The Royal Canal, which connects Dublin and the east coast with the upper part of the Shannon at Tarnonbarry, crosses this county from east to north-west, passing near Killucan, Mullingar, and Ballinacargy. A branch from the Grand Canal between Philipstown and Tullamore in King's County, to Kilbeggan, is partly in this county.

The principal roads are those from Dublin to Longford and Athlone respectively. The Longford road enters this county from that of Meath near Kinnegad, and runs north-west by Mullingar and Rathowen into the county of Longford. A branch from this at Mullingar takes a rather more westerly direction from Ballinacargy to Ballymahon. The Athlone road branches from that to Longford just after it enters the county at Kinnegad, and runs westward by Rochford Bridge, Tyrrell's Pass, Kilbeggan, and Moate to Athlone. The road from Dublin to Granard runs through the northern part of the county by Castle Pollard; and a branch from Kinnegad joins this road near Castletown-Delvin.

The Great Western railway from Dublin to Galway enters the county at Killucan, runs westward to Mullingar, then turns southward to Castletown, Streamstown, and Moate, and then westward to Athlone, where it leaves the county.

Climate, Soil, and Produce.—The climate, which is mild and equable, frosts seldom occurring, resembles that of Dublin, but is perhaps a little drier, having few lofty hills, and lying inland; it is considered very healthy. The soil in the eastern parts is a heavy loam from 7 to 12 inches deep. The more hilly parts in the north afford excellent grazing, and the black cattle of this county are considered among the best in Ireland; sheep are also fed, but not so largely. In the western parts the soil is light, and there is a good deal of bog; it is however well suited to the growth of potatoes and flax. The breed of horses is good, and many are reared for the Dublin market. Pigs also are kept in considerable numbers. The principal grain cultivated is oats, but grazing is the chief agricultural pursuit. Dairy farming is practised to some extent, and a considerable quantity of good butter is made and sold in Dublin. Plantations of wood have been increased of late years, but turf is the chief fuel. The agriculture of the county is still behind that of England or Scotland. The number of acres under crop in 1853 was 127,214, of which 2797 acres grew wheat; 56,064 acres oats; 3621 acres barley, bere, rye, beans, and peas; 16,200 acres potatoes; 7014 acres turnips; 3248 acres other green crops; 280 acres flax; and 38,010 acres were in meadow and clover. In 1841 the plantations covered 11,790 acres, yielding oak, ash, elm, beech, fir, mixed timber, and fruit. In 1852 on 10,157 holdings there were 13,603 horses, 3554 mules and asses, 68,356 cattle, 116,748 sheep, 17,353 pigs, 8616 goats, and 209,559 head of poultry. The total value of the stock here enumerated was estimated at 720,1554.

Divisions and Towns.—The county is in Meath diocese, with a small portion in that of Ardagh, and contains 63 parishes. It is divided into 12 baronies—Brawny, Clonlunan, Corkaree, Delvin, Farbill, Fartulagh, Fore, Kilkenny West, Moyashel and Magheradernan, Moycashel, Moygolsh, and Rathconrath. The principal towns are MULLINGAR, ATHLONE, and Moate, of which the first two are noticed under their respective titles. Moate and some of the smaller towns and principal villages are noticed here; the population being that of 1851.

Ballinacargy is a small post-town on the banks of the Royal Canal, nearly 10 miles W.N.W. from Mullingar: population, 386. In the town is a Roman Catholic chapel. Petty sessions are held here monthly. There are a dispensary and a Free school. *Ballinalack*, is situated on the river Inny, between Lough Iron and Deveragh, nearly 10 miles N.N.W. from Mullingar: population, 222. In the vicinity is Wilson's hospital and school, in which 134 boys are maintained and educated; and there is also a Charter school. *Ballymore* is a market- and post-town on the road from Mullingar to Athlone, about 15 miles S.W. from Mullingar: population, 520. It is an irregular ill-built town, and contains a church and a Roman Catholic chapel. Petty sessions are held monthly. Near the town are remains of a castle. *Castle Pollard* is a market- and post-town on the Dublin and Granard road, about 10 miles N. from Mullingar: population, 1052. The market-house stands in a square in the middle of the town. There are a handsome modern church, a Roman Catholic chapel, a fever hospital, a dispensary, a savings bank, a parochial school, and a bridewell. Quarter sessions and petty sessions are held monthly; and four annual fairs are held. *Castletown* is a very small and poor post-town, about 5 miles N. from Kilbeggan: population, 249. There are a neat church, a Roman Catholic chapel, a National school, and a Roman Catholic school. In it is a station of the Dublin and Galway railway. There are the ruins of an ancient castle and of a monastery in the neighbourhood. *CASTLETOWNDELVIN*, the seat of a Poor-Law Union, is noticed in a separate article, in which by mistake it is stated to be in the county of Meath, instead of Westmeath. *Clonmellon* is a market- and post-town on the border of the county, about 5 miles N. from Castletowndelvin: population, 626. It is a neat little town, with a handsome church, and a dispensary. There are a considerable corn-market on Tuesday and four yearly fairs. Petty sessions are held monthly. *Kilbeggan*, a municipal borough, a market-town and post-town, and prior to the Union a parliamentary borough, stands on the Upper Brosna River, on the road from Dublin to Galway, about 5 miles W. from Tyrrell's Pass: population, 1442. There are an ancient church, a handsome Roman Catholic chapel, a Wesleyan Methodist meeting-house, a neat market-house, and a dispensary. A branch canal runs from the town to the Grand Canal, and a considerable trade is carried on by it in corn and butter. There are a brewery, a distillery, a flour-mill, and a snuff-mill. Petty sessions are held monthly. *Kinnegad* is a market- and post-town at the junction of the roads from Athlone and Galway to Dublin, about 12 miles E. from Mullingar: population, 684. There are a modern built church, a Roman Catholic chapel, a dispensary, and a National school. Kinnegad has some trade, particularly in cheese; and the market and an annual fair are well supplied with agricultural produce. *Moate-a-Grenogue* is a market- and post-town on the road to Athlone, from which it lies 10 miles E.: population, 1979. The town consists almost entirely of one street, and is a neat and clean-looking place. There are a church; a Roman Catholic chapel and convent; places of worship for Wesleyan Methodists, Baptists, and Quakers; a neat court-house; a dispensary; and a bridewell. The trade of the place is considerable. The market is important for oats; there are four yearly fairs. The quarter sessions for one division of the county are held here, and also petty sessions fortnightly for the district. *Multifarnham*, a village and post-town, about 9 miles N.W. from Mullingar: population, 241. Petty sessions are held monthly, and there are four yearly fairs. The picturesque ruins of a Franciscan abbey, founded in 1236, were formerly objects of much interest, but their effect has been marred by a portion having been rudely covered in to form a chapel for some Franciscan friars settled in the vicinity. *Rathowen* is a post-town, 13 miles W. from Mullingar, on the Sligo road: population, 337. It is a decaying place, but it contains a church, a Roman Catholic chapel, a court-house, a school, and a police barrack. Petty sessions are held here monthly, and two fairs yearly. *Tyrrell's Pass* is a market- and post-town on the road to Athlone, about 5 miles E. from Kilbeggan: population, 526. It is a clean and well-built little town, with a handsome modern church, a Wesleyan Methodist chapel, a school-house, a dispensary, and a savings bank; and has two yearly fairs for cattle. Just outside of the village are the remains of an old castle. The town has taken its name from a neighbouring pass, formerly guarded by the castle just mentioned, where the English were defeated during Tyrone's rebellion by a party of Irish, who were commanded by an English partisan of the name of Tyrrell.

Westmeath returns to the Imperial Parliament two members for the county at large and one for the borough of Athlone. It is in the Home circuit. The assizes are held at Mullingar, where are the county jail and the county infirmary. Quarter sessions are held there, and at Moate and Castletowndelvin, in which towns there are bridewells. Petty sessions are held in 16 places. There is a fever hospital at Castle Pollard, and there are 18 dispensaries in the county. The

District Lunatic Asylum, to which the county is entitled to send 48 patients, is at Maryborough, in Queen's County. A savings bank is at Castle Pollard, and loan-funds are at Castletowndelvin, Killucan, Mayne, Moate, Mullingar, Portneshangan, and St. Mary's (Athlone). The union workhouses are at Athlone, Castletowndelvin, and Mullingar. The county is within the military district of Dublin. There is a barrack station at Mullingar. The staff of the county militia is stationed at Moortown. The police force, consisting of 296 men and officers, is distributed over seven districts, comprising 48 stations, of which Mullingar is head-quarters. In September, 1852, there were 105 National schools in operation, attended by 5033 male and 5004 female children.

History and Antiquities.—This county was included in the kingdom of Meath, of which it formed the western division. In common with the rest of that kingdom it suffered severely both from the ravages of the Danes and from civil dissensions, and was included in the county palatine of Meath, granted by Henry II. of England to Hugh de Lacy, one of the Anglo-Norman barons who assisted in the reduction of the county. It was the scene of frequent hostilities for several centuries between the native Irish, who were not entirely expelled or subdued, and the English. Westmeath was separated from Meath or Eastmeath in the 34th of Henry VIII.; at its first separation it included Longford, which was not detached from it and formed into a separate county until the reign of Elizabeth. King's County, which was partly taken from Westmeath, had been formed into a county in 1557, in the 5th of Philip and Mary.

Many vestiges of antiquity are scattered through the county. There are numerous ruins of ancient castles, including some erected by the De Lacys. Sonnagh Castle, one of these, stands on the verge of a small but picturesque lake. Of monastic buildings there are several ruins; and some churches, formerly conventual, are still used for divine worship by Catholics or Protestants.

WESTMORLAND, a northern county of England, bounded N. and N.W. by Cumberland, S. and S.W. by Lancashire, S. S.E., E., and N.E. by Yorkshire, and for a short distance N.E. by the county of Durham. It lies between 54° 10' and 54° 42' N. lat., 2° 9' and 3° 10' W. long. The form of the county is irregular: the greatest dimension or length is from north-north-east to south-south-west, a little more than 41 miles: the greatest breadth, measured at right angles to the length, is about 32 miles. The area of the county is 758 square miles; the population in 1841 was 56,454; in 1851 it was 68,287.

Surface and Geology.—Westmorland is wholly mountainous. The eastern side is traversed by the great Pennine Chain, and the western side and the centre are occupied by the mountains of the Cumbrian group, which are separated from the Pennine Chain by the valley of the Eden.

The principal ridge of the Pennine Chain enters the county across its northern border just to the south of Cross Fell, and extends across Milburn Forest to the border of Yorkshire: it then turns south-south-west, and runs, above Kirby Stephen, to the head of the valley of the Eden. On the west side of this ridge the mountains have a steep and almost precipitous descent into the valley of the Eden; on the east they extend a considerable distance, far beyond the boundaries of Westmorland, subsiding more gradually into the wide valley or plain of the Tees, which occupies the south-east of the county of Durham and the north of Yorkshire. On each side of the ridge numerous transverse valleys are drained by small streams: those on the west side falling into the Eden; those on the east forming the upper waters of the Tees, the Swale, and the Ure or Yore. The principal mountains of the Pennine Chain in Westmorland, from north to south, are Dun Fell, Dufton Fell, Eagles' Chair, Seordale Head, Wareop Fell, Middle Fell, Musgrave Fell, and Helbeck Fell, all north of the depression through which the river Below passes. South of that depression is a number of summits grouped together, and forming the district of Arkengarth Forest, of which the Nine Standards (2136 feet high), Dowphin Seat, Brownber Fell, and Hugh's Seat, the last on the border of Westmorland and Yorkshire, are among the principal.

The principal ridge of the Cumbrian Mountains reaches the border of the county on the west side near Helvellyn (3055 feet high), which is just within the border of Cumberland, and runs south-east to Kirkstone Fell, at the head of the valley drained by the Coldrill, or Goldrill, otherwise the Hartsop Beck, which flows into Ulleswater: from Kirkstone Fell it runs east by south, to the head of the valley of the Eden, on the eastern side of the county; by which valley, here very narrow, it is separated from the Pennine Chain. The ridge about midway between Kirkstone Fell and the valley of the Eden is divided into two parts by a depression through which the Lune passes. Among the principal mountains along the ridge are Grisedale Brow (988 feet high), and Dow Crag, between Helvellyn and Kirkstone Fell; High-street and Harter Fell, near the head of Kentmere; and Birkbeck Fells and Hause Hill, near the head of Borrowdale.

On the north side a principal branch is thrown off from the main ridge at High-street, a short distance east of Kirkstone Fell, of which branch Dod Hill, Place Fell, Alday Pike, Kidsty Pike, the peaks in Martindale Forest, and Swarth Fell are summits. This branch extends nearly to the bank of the Eamont, a principal feeder of the Eden, opposite Penrith. Ulleswater Lake, the upper part of which belongs wholly to Westmorland, while its lower part is on the border of

Cumberland and Westmorland, is about 7 miles long, with an average breadth of half a mile. The upper part of the lake is in the valley of Patterdale, into which open other dales or valleys, including Glen-coin, Glenriddan, Grisedale, and Deepdale, which are formed by the short branches thrown off towards the lake by the semicircle of mountains which here surrounds it. Martindale opens at its northern end upon the south-east side of Ulleswater; it lies between the hills of Martindale Forest on the east, and a detached mountain or hill on the west. These dales are watered by mountain streams flowing into Ulleswater, from the lower extremity of which the Eamont flows.

From the main ridge near Birkbeck Fells an important branch is thrown off in a north-east direction; but between this and the branch ridge, which has been described as parting from the main ridge at High-street, are two shorter branches separated from the High-street branch by the valley of Mardale, from each other by the valley of Swindale, and from the Birkbeck Fells branch by the valley of Wet Sleddale.

The branch from the principal ridge of the mountains at Birkbeck Fells is known in the part nearest the ridge as Shap Fell. It extends northward in several ridges, separated by intervening vales. Knipe Scar, and the hills of Shap Moor, Newby High Moor, Ravensworth and Meaburn Moors, and Colby Common, all belong to this branch. The intervening valleys have a general direction north and south, and the waters which drain them unite to form a stream which joins the Eden between Kirkby Thors and Temple Sowerby.

The branches from the main ridge on the south side extend on the western side of the county a very short distance from the main ridge, subsiding in the valley of Grasmere, by which they are separated from a detached group of the Cumbrian Mountains, which occupies the western extremity of the county. Numerous branch ridges and groups of hills extend in various directions, including many forests, fells, and crags, separated by valleys, drained by numerous streams, and presenting varieties of picturesque scenery.

The western extremity of the county is occupied by part of another group of the Cumbrian Mountains divided into two parts by the valley of Great Langdale. Langdale Pikes, Silver How, and Loughrigg Fell are between Grasmere and Great Langdale; and Bow Fell (2911 feet high), on the border of Westmorland and Cumberland, and Wrey Nose, or Wrynose, form the western termination of the valleys of Great and Little Langdale, which are separated from each other by a ridge called Lingmire. The two lakes of Grasmere and Rydal Water form the Rothay, which flows into the Windermere.

Geologically the county may be regarded as consisting of three parts. The slate rocks of the Cumbrian Mountain group form the first part or division; the formations of the great carboniferous and mountain limestone series of the north of England, of which formations the Pennine Chain forms the western outcrop, constitute the second part or division; and the new red-sandstone of the Valley of the Eden the third.

If a line be drawn in a south-easterly direction from the foot of Ulleswater, passing a little to the south-west of Shap and Orton, and thence to Ravenstonedale, at that place bending to the south till it reaches the border of the county at the point where the road from Sedburgh to Kirkby Stephen enters it; and if another line be drawn nearly at right angles to the former, commencing at Shap Wells, passing by the south side of Wardale Crags, and crossing the Valley of Long Sleddale at the hamlet of Little London, the Valley of Kentmere near the Hall, and the Valley of Troutbeck a little above Town Head, and thence, skirting the southern flank of Wanafell, to Pool Wyke, near the north-west angle of Windermere, the whole county will be divided into three irregular and unequal districts, each marked by peculiar geological features. We shall consider them in the following order:—

1. The green-slate and porphyry of the north-western district.
2. The upper slates of the south-east.

3. The carboniferous rocks of the north-east, and the new red-sandstone of the basin of the Eden.

1. *Green-Slate and Porphyry.*—This, the middle term of the series into which the Cumbrian slates have been divided, and overlying the lowest member of that series in the adjoining county (the Skiddaw slate of Sedgwick), occupies the whole of the north-western portion of the county, and is bounded on the south by the range of a series of overlying beds of calcareous slates (Coniston limestone, &c.), and on the north-east by the carboniferous rocks. It comprehends two distinct classes of rocks, igneous and aqueous, yet so blended and interjected, that they must be considered as the effects of two distinct causes acting together and continued during a lengthened geological period. The igneous rocks include almost every variety of felsone and felsone-porphyry, occasionally passing into greenstone: they more rarely put on a columnar form like that of basalt. The aqueous rocks are composed of quartz in an extremely fine state of comminution, and obtain their typical colour from earthy chlorite derived from the Plutonic silt. All these rocks have in a greater or less degree a slaty structure, and from them the finest roofing-slates are quarried. The rocks of this division rise into the highest and most rugged peaks of the whole lake district, constituting the main ridge of the mountains west of High-street, those between Grasmere and Great Langdale, &c. The prevailing strike of the rocks is north-east, and they dip at a high

angle to the south-east. Garnets are found in some abundance in the brecciated rocks of this division, and agates and other minerals occur in the cellular Plutonic silt. No organic remains have been discovered in any part of the group. Metallic veins occur in some places; amongst others, a lead-mine is worked south-west of Ulleswater.

2. *Upper Slates of the South-Eastern District.*—This formation is divided by Professor Sedgwick into three ill-defined groups: 1, the fossiliferous rocks south of Kendal and of Kirkby Moor; 2, a lower group, like the former in lithological structure, but with a more decided slaty impress and fewer traces of fossils; 3, a complicated group of calcareous slates, alternating with hard coarse siliceous beds, and several bands of fine roofing-slates, all resting on the fossiliferous limestone of Coniston. Mr. D. Sharpe also separates this division of the slate rocks into three groups ('Proceedings of Geological Society,' London, 1848), and seeks to identify them with the three principal groups of Sir R. I. Murchison's Silurian system; and his division has been followed by subsequent writers. Mr. Sharpe's division will be found in the following descending order on making a traverse from the south-east to the north-west; as, for instance, from Kirkby Lonsdale, where the uppermost beds underlie the old red-sandstone, to the Coniston limestone above Low Wood, at the head of Windermere. First, the Upper Ludlow rocks, occupying the greater part of the district between the lower parts of the Kent and Lune, succeeded by a band of Lower Ludlow rocks; next, a series of unfossiliferous beds (of considerable thickness when expanded in the district of Furness), which are provisionally named Windermere rocks, and are the assumed equivalents of the Wenlock formation; and, lastly, a series of slates (Kirkby Ireleth), gray slaty grits, blue flagstones, and Coniston limestone—the four last being the supposed equivalents of the Caradoc sandstone.

The Coniston limestone forms a well-defined though irregular base to this division of the slates on the north-west (this boundary being rudely marked by the line we supposed to be drawn from Shap Wells to Windermere Head). On the south and south-east it is bounded by Morecambe Bay and the carboniferous rocks, and it extends eastward as far as the border of the county, except where it is overlaid by the carboniferous series of Yorkshire. The rocks on the east bank of the Lune are separated from those on the west bank by an enormous fault, which ranges in the direction of that river. Middleton and the other fells on the eastern side of the Lune are composed of the beds of the middle group of this division. The rocks to the east of Kendal, and those which break out beneath the western escarpment of the carboniferous limestone of Underbarrow Scar, abound with Upper Silurian fossils, and the Coniston limestone is charged with Lower Silurian crustacean shells and corals. The middle term is unfortunately without organic remains, and in the absence of separating calcareous bands (Aymestry and Wenlock limestones), Professor Sedgwick's recommendation to separate the whole upper division of the slates of Westmorland into two groups, an upper and a lower, seems to be as yet the safest plan. These uppermost slates are harder than those of the lowest series, and give to the mountains formed of them a more angular and picturesque outline and rugged surface; but they do not in these respects equal the middle series of slate rocks, which form mountains of greater elevation and more picturesque character. The mountains formed by the uppermost slates rarely have a height of 1000 feet, being inferior not only to the middle slate mountains (Helvellyn, Langdale Pikes, &c.), but also to the limestone mountains of the Pennine chain. Valuable flagstones are obtained from these rocks in many places, and copper is found in some parts of them.

3. *Carboniferous Rocks, &c.*—The inspection of any accurate geological map of the lake district will at once point to the fact that a mantle of carboniferous rocks has at one period continuously extended round the whole of the Cumbrian slates. On the north-east of the line we have supposed to be drawn from the foot of Ulleswater to Ravenstonedale, the belt of carboniferous rocks is still unbroken, and resting on the slates.

The mountain limestone occupies all the county north-east of the line of junction except the valley of the Eden, which is chiefly occupied by the new red-sandstone; a small district between Appleby and Shap, where the limestone is covered by the coal-measures; and a portion of the county east of the upper valley of the Eden, where the limestone is covered by the millstone-grit and shale. The mountain limestone forms the mass of the Pennine chain, attaining in Cross Fell, which is in Cumberland, but close upon the border of Westmorland, a height of 2901 feet. The formations of the mountain limestone observed in this county are among the lowest in the series. Among them occurs a stratum of whin, or basalt, 60 feet thick. On the steep western escarpment of the Pennine chain the subjacent beds of old red-sandstone appear, and even the slate rocks beneath the old red-sandstone. There is a remarkable cavern in the mountain limestone at Dunall, five miles from Dufton; and there are several lead-mines near Dufton, where antimoniated lead-ore, lead-ore with such a superabundance of sulphur as to take fire and burn on being held in the flame of a candle, and small quantities of malachite, are obtained. Beautiful specimens of flos-ferri, or arragonite, of snow-white colour and satiny-like lustre, and witherite, of clove-brown colour and striated texture, have been found in Dufton mine. There are copper-mines near Orton and Kirkby Stephen.

The mountain limestone has been said to rest commonly on the slates. On the western escarpment however of the Pennine Chain, from Cross Fell, 15 miles southward, to Highoupe, near Murton, the old red-sandstone or conglomerate intervenes, having a dip conformable to that of the limestone. It is observed also in the valley of the Lune near Orton, and lower down near Kirkby Lonsdale, and in the valley of the Mint and several other places near Kendal. It appears here in its common form of a coarse pudding-stone. The subjacent slate, which is co-extensive with the old red-sandstone, forms a kind of broken under-terrace along the escarpment, and is bounded on its west side by a narrow and irregular but nearly parallel line of greenstone. This small slate and greenstone district is distinguished by three lofty conical summits or pikes; Knock Pike, the most northerly, is chiefly composed of greenstone; Dufton Pike, near Knock Pike, contains both greenstone and slate; and Murton Pike, the southernmost and the loftiest, appears to be almost entirely composed of slate. Imperfect roofing-slate is dug on Langdon Moor, near Murton Pike, and at Middle Rig; and slate-pencils are obtained in several places. Coal is not very abundant, and is seldom worked.

The millstone-grit is found only on the eastern border of the county, covering the mountain limestone, and forming the summit of Browner Fell, Nine Standards, and Hanging Stones, in Arkengarth Forest, in the Pennine Chain, in the east side of the valley of the Eden near its head; and of Wild-Boar Fell, on the west side of the same valley, at the eastern end of the main ridge of the Cumbrian Mountains. In the coal-measures which rest on the mountain limestone between Appleby and Shap there are several coal pits.

On the southern side of the county the carboniferous limestone appears broken up by enormous faults into detached portions with wide valleys between them; one large mass, with several outliers, commences about two miles north of Kendal, and extends as far south as the shores of Morecambe Bay, resting on the Silurian rocks, with the interposition here and there of the old red-sandstone (Plumgarth, Laverock Bridge, &c.); opposite to its long south-western escarpment of Underbarrow Scar is another mass of limestone (Whitbarrow). The limestone at Kendal is extensively quarried for building purposes, and many of the beds polish into beautiful marble, which is in great demand for ornamental purposes. Another mass of limestone of some extent lies to the south-west of Kirkby Lonsdale.

The new red-sandstone is the most recent formation of this county, and fills all the lower part of the basin of the Eden, from near Brough to the shores of the Solway Frith. It usually appears here as a strong thick-bedded sandstone, and is much used as a building-stone. It rests upon the carboniferous rocks on its south-western side, and spreading wide on both sides of the Eden, abuts against the upraised terrace of Cross Fell elevated by the great 'Pennine fault.' Gypsum is obtained in many parts of the saliferous district in Westmorland.

Proofs of igneous action are abundant in many parts of this county, porphyritic dykes being found in various parts; there are five which may be observed not very far distant from the Shap Granite in Wet Steddale, in the valley above High Barrow Bridge, on the crest of the hill from that place to Shap, and in two places farther north and near the roadside. But the well-known Shap Fell red porphyritic granite forms the largest portion of erupted rock in the county. It rises at the base of the upper division of the slates, and appears to have cut off the Conistone limestone for some distance; altering, tilting off at high angles, and indurating all the neighbouring rocks. The boulders from this granite are easily recognised, and are found to have travelled in one direction as far as the Yorkshire coast. They are seen resting at the height of several hundred feet above the level of the plain of Eden, against the steep sides of the great ridge of Cross Fell, and they have travelled down the valley of the Kent to Morecambe Bay. The mode of their transport, whether by water, or by ice, or by ice floating in water, is yet an unsolved problem in geological dynamics; but what is called the glacial theory is that which is now most generally received by the best geologists.

Hydrography and Communications.—The Pennine chain of mountains separates the waters which flow into the Irish Sea from those which flow into the German Ocean. Westmorland is chiefly on the western side, but a small portion is on the eastern side of the ridge, and in this some of the upper waters of the Tees have their source. The Tees itself rises just beyond the northern border at the foot of Cross Fell, but its course as far as the fall at Cauldron Snout is on the border of Westmorland. On the western side of the Pennine Chain the county is divided by the principal ridge of the Cumbrian Chain into two basins—the basin of the Eden on the north, and the basin of Morecambe Bay on the south, drained by the Kent, the Lune, and other streams, which flow into that estuary. The Eden rises on the border of Westmorland and Yorkshire, on the side of Hugh's Seat, one of the mountains of the Pennine Chain. It passes Kirkby Stephen and Appleby, and shortly afterwards quits the county for Cumberland. Its course in Westmorland is 30 miles, no part of which is navigable. It has numerous affluents, among which may be named the Beelah or Belay, the Helbeck, the Troutbeck, and the Crowdundale on the right bank, and the Leeth and the Eamont on the left bank. All the larger affluents of the Eden which join it on the left bank rise on the northern slope of the Cumbrian ridge.

The Lune, the Kent, the Winster, and the Leven drain the basin of

Morecambe Bay. The Lune rises on the northern side of the Cumbrian ridge. It passes Orton and Kirkby Lonsdale, a little below which it passes into Lancashire. No part of its course of 27 miles in Westmorland is navigable. The Kent rises at the foot of High-street in the Cumbrian ridge, and after receiving the Sprint and the Burns-dale, or Mintbeck, it flows into Morecambe Bay, along with the rivers Pool and Beelo, or Betha, which there join it. Its whole course of 23 miles belongs to Westmorland: it is not navigable. The Winster, also called the Pool, rises in Westmorland, and flows some 10 miles, along the border of Westmorland and of Furness in Lancashire, into Morecambe Bay. The Leven, which flows out of Windermere, belongs to Lancashire; but the Rothay, or Rainedale, which drains the valley of Grasmere, the streams which drain the valleys of Great and Little Langdale, and the Troutbeck, which flow into Windermere, and may be regarded as the upper waters of the Leven, belong to Westmorland. Elterwater, Grasmere, Ryk Water, and some other small lakes, or tarns, are connected with the streams which flow into Windermere. Windermere belongs by its position rather to Lancashire, under which county it has been described; but the fisheries (which comprise all the lake) are held under the barony of Kendal by the payment of certain lord's rents, and they are also rated and pay to the relief of the poor in Westmorland.

For economical or commercial purposes the rivers and lakes of Westmorland are of little importance; but in combination with the rugged mountains and the secluded valleys amid which they are found, they give to the county a high degree of picturesque beauty. "The forms of the mountains," says Wordsworth, in his 'Scenery of the Lakes,' "are endlessly diversified, sweeping easily or boldly in simple majesty, abrupt and precipitous, or soft and elegant. In magnitude and grandeur they are individually inferior to the most celebrated of these in some other parts of the island; but in the combinations which they make, towering above each other, or lifting themselves in ridges like the waves of a tumultuous sea, and in the beauty and variety of their surfaces and colours, they are surpassed by none." The mountains are generally covered with turf, rendered rich and green by the moisture of the climate; forming in some places an unbroken extent of pasturage, in others laid partially bare by torrents and burblings of water from the mountains in heavy rains. Wood is not abundant: the want of timber-trees is particularly felt, but coppices are tolerably numerous. The trees are chiefly oak, ash, birch, and a few elm, with underwood of hazel, holly, and white and black thorns. Scotch fir, beeches, larches, and limes have been introduced of late years. Fern is commonly found on the mountains; heath and furze are only occasionally found.

The valleys are for the most part winding, and in many the windings are abrupt and intricate; the bottom of the valleys is most commonly formed by a comparatively spacious gently-declining area, level as the surface of a lake, except where broken by rocks and hills that rise up like so many islands from the plain.

The small size of the lakes is favourable to the production of varied landscapes, and their boundary-lines are either gracefully or boldly indented; in some parts rugged steeps, admitting of no cultivation, descend into the water; in others, gently sloping lawns and rich woods or flat and fertile meadows stretch between the margin of the lake and the mountains. The margin of the lakes is generally lined either with a fine bluish gravel thrown up by the water, or with patches of reeds and bulrushes; while the surface is variegated by plots of water-lilies. The disproportionate length of some of the lakes would, by making their appearance approximate to that of a river, injure their characteristic beauty, were not this effect prevented, especially in Ulleswater and Haweswater, by the winding shape of the lakes, which prevents their whole extent from being seen at once. The islands are neither numerous nor very beautiful. The water is remarkably pure and crystalline. What are locally termed tarns are small lakes, belonging mostly to small valleys or circular recesses, high up among the mountains. Loughrigg Tarn, near the junction of the valleys of Great and Little Langdale, is one of the most beautiful. The mountain tarns are difficult of access, and naked, desolate, and gloomy, but impressive from these very characteristics.

The streams of Westmorland are rather large brooks than rivers, with a very limpid water, allowing their rocky or gravelly beds to be seen to a great depth. The number of torrents and smaller brooks, with their waterfalls and waterbreaks or rapids, is very great. The wide estuary of the Kent presents at low water a vast expanse of sands.

The lakes and tarns abound with various species of fish, as trout, eel, bass, perch, tench, roach, pike, char, and others. Sea-fish are also abundant on the shore of Morecambe Bay.

Westmorland has only one canal, the Lancaster Canal, which commences on the east of Kendal, at a height of 144½ feet above the level of the sea, and runs southward with some bends by Burton-in-Kendal to Lancaster and Preston in Lancashire. About 12 miles of the canal are in Westmorland.

The principal coach-roads in the county are the main road from Lancaster to Carlisle and Glasgow; and the road (formerly a mail-road) through Stamford, Newark, Doncaster, and Greta-bridge, to Carlisle and Glasgow. The Carlisle road enters the county on the north side, at Burton-in-Kendal, 11 miles from Lancaster, and runs north-

ward by Kendal, Shap, and Brougham, to Penrith; before reaching the last-mentioned town it crosses the Eamont into Cumberland. Roads lead from Kendal south-westward to Ulverstone and Dalton-in-Furness; westward to Bowness and across Windermere by the ferry to Hawkshead, and Coniston-Water in Furness, and to Egremont and Whitehaven in Cumberland; north-westward by Ambleside to Keswick, Cockermouth, and Workington in Cumberland; north-eastward by Orton to Appleby, with a branch road to Kirkby Stephen and Brough; eastward to Sedbergh, Hawes, Askrigg, and Richmond, all in Yorkshire, with a branch from Sedbergh to Kirkby Stephen, and south-eastward by Kirkby Lonsdale to Settle, Skipton, Otley, and Leeds.

The Preston, Lancaster, and Carlisle railway enters Westmorland near Burton, and proceeds in a generally northern direction to Kendal, where it turns north-west for a few miles to Bank Mills, whence it again proceeds northward till it quits the county at Penrith. Its length in Westmorland is about 41 miles. The Windermere railway quits the above at Kendal, and runs in a north-westward direction, 10½ miles, to Bowness on Windermere.

Climate, Soil, Agriculture.—Although this county, from its mountainous nature, is more interesting in a picturesque than in an agricultural point of view, it contains some very fertile valleys, in which there are many well-cultivated farms. The climate is mild and moist in the valleys; the high hills condense the clouds which come over the Atlantic, and cause frequent and abundant rains, which keep the pastures green, but are not so favourable to the ripening of the corn. Much snow often accumulates in winter.

The soil in the valleys is mostly a dry gravelly mould, composed of different earths washed down from the hills, and forming a soil well fitted for the cultivation of turnips, of which great crops are raised on some well-managed farms. Towards the east and north of the county the soil is more inclined to clay; and, unless this be well drained, the land is too wet, in spring and autumn, to admit of clean and careful cultivation. Wherever the water has no sufficient outlet, basins of peat are formed.

There were formerly a great many small proprietors in Westmorland who were called 'Statesmen,' that is, 'Estate-men'—men who held land of their own, either as freehold, or by a customary tenure, somewhat resembling copyhold, under some great landlord. With the exception of a fine or heriot on the death of a tenant or on alienation, they were held free. The proprietors of these very small farms were an independent set of men, who worked hard and lived frugally. They often joined the trade of weaver to that of farmer, and thus their whole time was usefully employed. The increase of wealth and consequent luxury gradually led to a greater expense of living than the small farms, imperfectly cultivated, could support; and these small proprietors gradually decreased, their farms being absorbed into the greater estates which surrounded them. The larger farms are now usually let on lease for various terms. Of late years considerable improvement has taken place in the cultivation of the county. Draining the heavy lands has been much attended to; manuring is better understood; more careful rotations of crops have been introduced; and better implements of husbandry employed; but much yet remains to be accomplished.

From Kirkby Stephen to Brough and Appleby and thence to Temple Sowerby the soil is a deep sand, which the moisture of the climate of Westmorland renders more compact on cultivation. Turnips and potatoes grow well here, when plenty of manure is put on. Near Kendal a great breadth of potatoes is planted for the supply not only of the immediate neighbourhood, but also of the adjacent counties, many thousand loads being annually sent into Lancashire and Yorkshire.

Grass-land being abundant and the climate favourable to pastures, a great portion of the soil is devoted to the maintenance of cattle. Good meadows let at a high rent, and are carefully manured. Great crops of hay are made in favourable years, and, as those who keep horses generally hire a meadow to make hay of, it is seldom sold in the dry state. Young cattle are kept on inferior lands in summer, and have hay and straw in winter, with turnips where these are raised: a few are fattened at three years old, but most of them are sold to graziers in Yorkshire and Lancashire. Scotch cattle are purchased in September, at the great fair at Brough-hill, held in that month: they are wintered in coarse pastures and occasionally in straw-yards; the next year they are put on the best grass and are fit for the butcher in October. A few horses are reared, but not to any extent. The sheep are of a hardy kind, fit for the mountain-pastures; they are brought down to the valleys at the approach of winter and kept in the inclosed grounds till April. The fattening of hogs and the curing of bacon and hams are well understood in Westmorland, and many hams are sent to other parts of the country. The breed is not large. The hogs are not made so fat as they are in some places; the hams are more delicate, and are very well cured and smoked. They are often sold as York hams, whereas the latter are much larger and fatter, the Yorkshire breed of hogs being large and fattening very readily.

The plantations are extensive in most parts of the county; they are chiefly of oak, ash, elm, beech, sycamore, Scotch fir and larch, which last thrive best. Many ornamented cottages and villas have been built on the borders of the several lakes; and men of talent, reputation, and wealth, have taken their temporary and some their

permanent abode there. This has tended to improve the immediate neighbourhood more rapidly than would otherwise have been the case.

Divisions, Towns, &c.—The county is divided into two baronies—the barony of Kendal, which appears to have been anciently a part of Lancashire, and comprehended, so late as the time of Henry VIII., several places now in Lancashire; and the barony of Westmorland—sometimes called the barony of Appleby, sometimes the bottom of Westmorland—which now comprehends some places formerly included in the barony of Kendal. There is some diversity in the customs of inheritance in the two baronies of Kendal and Westmorland: in other respects the division into baronies is little used. The usual division is into four wards:—East ward, north-east; Kendal ward, south-west; Lonsdale ward, south-east; West ward, north-west. The town of Kendal is included in Kendal ward. Kendal and Lonsdale wards are in the barony of Kendal; the East and West wards in the barony of Westmorland.

Westmorland has no city; it contains the county-town of APPLEBY, the parliamentary borough of KENDAL, and the market-towns of Ambleside, BROUGH, BURTON-IN-KENDAL, Kirkby Lonsdale, Kirkby Stephen, Milnthorpe, Orton, Ravenstonedale, and Shap. The places printed in small capitals are noticed under their respective titles; the others are noticed here:—

Ambleside is a small market-town, 14 miles N.W. from Kendal: population of the chapelry 1592 in 1851. Ambleside lies in a beautiful valley near the upper end of Windermere, and on the left bank of the little river Rothay. The streets are partially paved. The chapel is a plain but commodious and substantial edifice, rebuilt in 1812. There are an Independent chapel; a Free Grammar school; National, British, and Infant schools; and a savings bank. Ambleside is a place of considerable resort for visitors to the lakes of Cumberland and Westmorland. The market, which is chiefly for provisions, is on Wednesday; fairs are held on the Wednesday in Whitsun week; October 13th, the principal one, called the tip (that is, tup) fair; and October 29th for cattle. Slate quarries are in the vicinity. A county court is held in the town.

Kirkby Lonsdale (that is, a church-town in the dale or valley of Lon or Lune) is on the right bank of the Lune, 15½ miles N.E. from Lancaster, and 11½ miles S.W. from Kendal. The population of the township in 1851 was 1875. The market-place is in the centre of the town; the streets are lighted, but not paved. The houses are well-built of freestone and roofed with slate. The church is 120 feet long and 102 feet broad, and is divided into four aisles or portions by three rows of pillars; it has a square tower 68 feet high, with a peal of six bells. The Wesleyan Methodists, Independents, and Sandemanians have places of worship. There are a Free Grammar school, National and Infant schools, and a savings bank. At Casterton are a Clergy Daughters' school, a Preparatory Clergy Daughters' school, and a Servants' school. Some of the females employ themselves in knitting stockings. The market is on Thursday; and fairs for cattle are held on Holy Thursday, the third Thursday after October 5th, and December 21st. A county court, a court leet, and petty sessions are held in the town.

Kirkby Stephen, 11 miles S.E. from Appleby, on the left bank of the Eden: population of the township 1339 in 1851. The church is a large ancient building with a square tower. The Wesleyan Methodists and Independents have places of worship. An endowment provides for the support of a Grammar school, an hospital for twelve aged and infirm men and as many women, and four preparatory schools. There is a modern market-house. In the vicinity are copper- and lead-mines, slate quarries and coal-pits. Upon the Eden are corn-, woollen-, and saw-mills. The market is on Monday for corn and provisions; fairs or great markets for cattle and sheep are held five times in the year.

Milnthorpe, or Millthorpe, population 1534, is situated near the left bank of the estuary of the Kent, 7 miles S. from Kendal. The principal street runs from east to west, nearly parallel to the little river Beels, over which is a bridge of one arch. In the town are chapels for Episcopalians and Independents, and a National school. Milnthorpe is a member of the port of Lancaster; small vessels by the help of the tide get up the river to the town. There are a corn-mill and a paper-mill; some twine and sacking are made. The market is on Friday, and there are fairs for cattle and sheep on May 11th and October 17th.

Orton (anciently Scar Overton), 14 miles N.N.W. from Kendal: population of the parish 1456. The church is an ancient building with a low embattled tower. There are a Grammar school, and a branch savings-bank. The market is held on Friday; fairs are held four times in the year. The remains of a beacon, and of an old fort or encampment, a large tumulus, and some other antiquities are in the neighbourhood.

Ravenstonedale, 5 miles S.W. from Kirkby Stephen, population of the parish 939, is situated in a mountainous district near the confluence of Scandale-Beck and Cold-Beck. There are a spacious church, places of worship for Wesleyan and Primitive Methodists, Independents, and Quakers; and a Grammar school. A small market is held on Thursday; fairs are held four times in the year. Many of the inhabitants are engaged in knitting. Stone quarries are in the neighbourhood.

Shap (anciently *Hep* or *Heppe*), 15 miles N. by W. from Kendal: population, 1009. There was anciently in this parish a Premonstratensian abbey, founded originally at Preston-in-Kendal (now Preston Patrick), by Thomas, son of Gospatric or Cospatric, in the reign of Henry II.; it was removed in the lifetime of its founder to the secluded valley of Wet Sleddale, in the parish of Shap, watered by one of the streams that form the Lowther. Some picturesque ruins of this abbey still remain on the west bank of the stream. The tower and some fragments of the chancel of the conventual church, which was very spacious, remain, as well as the foundations of the cloisters and the offices. The parish church is on the east side of the town, and retains some ancient parts amid many alterations. Fairs for cattle and pedlery are held on May 4th and September 28th. There are limestone and slate quarries. Near Shap is a prehistoric stone circle.

The following are the more important villages; the population is that of 1851:—

Bowness, population of the township of Undermillbeck, in which Bowness is situated, 1421, is built on the left bank of Windermere, about 5 miles S. by E. from Ambleside. The Windermere railway terminates at Bowness. The village, which is beautifully situated, is much frequented by lake tourists. It is the chief boating station on the lake, and the head-quarters of the annual Windermere regattas. The parish church of Windermere, which stands in the village, has some interesting architectural features. There is a Free Grammar school. A small customary market for meat and vegetables is held on Wednesday. Some boat-building is carried on. *Dufton*, population of the township 488, is situated at the foot of Dufton Fell, 4 miles N. from Appleby. Besides the church, which was rebuilt in 1775, there are places of worship for Wesleyan and Primitive Methodists, and a Free Grammar school. Many of the inhabitants are employed in lead-mines. *Grasmere*, population of the township 445, stands in a picturesque situation at the head of Grasmere Lake, and in the midst of very fine scenery. The church is small. The place is a favourite summer resort. A sheep fair is held on the first Tuesday in September. *Holme*, population of the township 1154, lies between the Preston and Carlisle railway (which has a station here) and the Lancaster and Kendal Canal, 2 miles N. from Burton-in-Kendal. The district church, which is in the early English style, was erected in 1839. There is a National school. A flax- and linen-mill is in the village. *Kirkby Thore*, population of the township 412, is situated at the confluence of the Troutbeck with the Eden, 6 miles N.N.W. from Appleby. Besides the church there are chapels for Wesleyan Methodists and Independents in the village. A great portion of the village has been built out of the ruins of the Roman station known as Whelp Castle. *Langdale*, population of the chapelry 580, is about 5 miles W. from Ambleside. The village of Langdale is of little importance, the houses being scattered in a straggling manner along the picturesque dale from which it receives its name. The dale is very narrow, and the mountains at the head of it, the Langdale Pikes, 2400 feet high, are not only lofty, but of remarkably bold and rugged character. The scenery of Langdale is among the most striking in the Lake district. Two celebrated waterfalls, Skelwith and Colwith forces, are in the vicinity. Besides the chapel there is a parochial school. *Lowther*, population of the parish 494, is about 4 miles S. from Penrith. The place is only note-worthy on account of Lowther Castle, the magnificent seat of the Earl of Lonsdale. The mansion was erected in 1810 from the designs of Robert Smirke. It is a castellated edifice, standing on an eminence; the north front is 420 feet long. It stands in a park of 800 acres, the scenery of which is of the most picturesque character. Brougham Hall, the seat of Lord Brougham, is about 3 miles N. by E. from Lowther. *Long Marton*, population of the township 762, is a neat modern village, on the right bank of the Troutbeck, 4 miles N. by W. from Appleby. Besides the church, which is a spacious edifice standing on the south of the village, there is a Dissenting chapel. *Morland*, population of the township 894, is 5 miles N.W. from Appleby. The church is ancient; the Wesleyan Methodists and Quakers have places of worship, and there is a Grammar school. *Over Staveley*, population of the township 732, is 4½ miles N.W. from Kendal, on the Windermere railway, which has a station here. There are a chapel and a Free school. In the village are turning-mills, and mills for spinning woollen and yarn. *Patterdale*, population of the chapelry 686, is picturesquely situated at the head of Ulleswater, about 9 miles N. from Ambleside. The chapel is a small old building. A sheep fair is held in October. The scenery of Patterdale and its vicinity forms a splendid combination of lakes and mountains, and the place is a favourite station of tourists. *Pooley Bridge*, at the foot of Ulleswater, is another tourists' station. The village is small; the population is not given. *Temple Sowerby*, population of the chapelry 872, is 7 miles N.N.W. from Appleby, near the right bank of the Eden, which is here crossed by a handsome stone bridge erected in 1748. The chapel is modern. There is a tanyard, and a good deal of trade is carried on. Fairs for cattle and sheep are held on the last Thursdays in February, March, and October, and the second Thursday in May. In the neighbourhood are many good residences. *Warcop*, population of the parish 740, is on the right bank of the Eden, 3 miles W. by N. from Brough. The church is ancient; there are a Wesleyan Methodist chapel and a National school. In the village is an ancient manorial cross. Lead-mines are in the parish.

Divisions for Ecclesiastical, Legal, and Parliamentary Purposes.—Westmorland is divided between the dioceses of Carlisle and Chester: the East and West wards, constituting the ancient barony of Westmorland, are in the archdeaconry and diocese of Carlisle; Kendal and Lonsdale wards are in the archdeaconry of Richmond and diocese of Chester. The number of parishes in the county is only 32; but as many of the parishes, from their great extent, which averages more than 15,000 acres, or nearly 24 square miles each, and rises in some instances (Kirkby Stephen and Kirkby Lonsdale) to above 30,000 acres, and in one instance (Kendal) to near 70,000 acres, have been divided into chapelries, the number of ecclesiastical charges is much greater. By the Poor-Law Commissioners the county is divided into three Poor-Law Unions:—East Ward, Kendal, and West Ward. These unions include 110 parishes and townships, with an area of 437,567 acres, and a population in 1851 of 58,337. The county is included in the northern circuit. The assizes are held at Appleby. The quarter sessions for the county are held at Appleby, and by adjournment at Kendal. County courts are held at Ambleside, Appleby, Kendal, and Kirkby Lonsdale. A county jail and house of correction is at Appleby, and a county house of correction at Kendal. Before the passing of the Reform Act four members were returned to parliament from the county of Westmorland, namely, two for the county itself, and two for the borough of Appleby. By the Reform Act Appleby was disfranchised, and Kendal made a parliamentary borough, to return one member.

History and Antiquities.—In the earliest historical period this county appears to have been included in the extensive territory of the Brigantes; and upon the subjugation of South Britain by the Romans, it was comprehended in the province of Maxima Caesariensis.

A Roman road ran through the county nearly in the line of the old mail-road by Greta Bridge to Carlisle. At Brougham it crossed the Eamont into Cumberland. Between Brough and Kirkby Thore it is six yards wide, and on level ground is formed of three layers of stone of the aggregate thickness of a yard, the lowest layer being the largest. In other places it was sometimes made of gravel or of flint. A road called the Maiden Way branched off from this at Kirkby Thore and ran northward over the moors to Caerboron, one of the stations on the Roman Wall in Northumberland. An ancient camp, or fort, an oblong quadrangle of irregular form, stands on the line of the Roman Way (which passes through the camp) east of Stainmoor, and on the border of Yorkshire and Westmorland, part of the camp being in each county. The fragment of Re-Cross, or Rere-Cross, the ancient boundary-mark of the Scottish principality of Cumberland, and now of Westmorland and Yorkshire, stands inside the camp. A square stone fort, called Maiden Castle, defended by two ramparts, an inner one of stone with a small ditch, and an outer one of earth with a ditch, stands on the line of the road, about two miles west of the camp just noticed.

The Antonine station or town *Verteræ* is generally fixed at Brough, and *Brovanacæ* at Kirkby Thore, to the south-east of which village, on Speedy Moor, are the remains of a camp or fort called Whelp Castle, at the place seemingly where the Maiden Way diverged from the principal Roman road. The *Brovacum* of Antoninus is fixed at Brougham. Of several other stations the sites have not been definitely ascertained. A number of Roman inscriptions have been found in Westmorland, several of which are given in Horsley's 'Britannia Romana.'

There are several camps and earthen forts in different places, though it is doubtful to what period some of them are to be referred. Near the south end of Dun Fell, on Milburn Forest, is a round camp or fort surrounded with deep ditches, called Green Castle. An altar, with the inscription 'DEO SILVANO,' was found here. There are several appearances of camps and roads on the waste ground of Milburn Forest. At the end of Yanwathwood, on the west bank of the Lowther, opposite Lowther Hall, is another round fort called Castlesteads; and at the south end of Eamont Bridge is a circular inclosure, formed by a lofty embankment with a ditch inside; it is known as Arthur's Round Table. At Sayle Bottom near Great Asby are a number of barrows, with a deep trench and a breastwork on two sides of the ground which they occupy; and at Sandford, between Warcop and Appleby, near the line of the Roman road, are some more barrows, two small camps, and the ruins of a small round fort, the walls of which are of immense thickness, and built with red stone strongly cemented with lime and sand.

There are some monuments of the prehistoric period. Near Arthur's Round Table was found in 1800, under an artificial hillock, a complete circle of stones inclosing an area nine feet in diameter, and having in the centre a slab of stone supported on blocks or pillars of the same material. Mayborough Castle, in the same neighbourhood, is a circular inclosure of loose stones, having an entrance on the east. On the waste near Helton, between the rivers Lowther and Eamont, is a remarkable upright stone called Helton-Copstone; and about a quarter of a mile to the north of it is a circle of stones, 10 yards in diameter, called the Druids' Cross. Another circle, 21 yards in diameter, called the Cock-Stones, stands at the head of Ellerbeck, in the neighbourhood of Ulleswater; and there is a large cairn on the descent from the moor towards Pooley, at the lower end of Ulleswater. On Lowther Soar is a circle 70 feet in diameter, formed of large stones; and near Shad

are the remains of two converging lines of huge stones of unhewn granite, called Carl Lofte. In Gunnerkild Bottom, near Shap, is a circle of stones called the Druids' Temple, but which was unquestionably used for a burying-place.

Westmorland was probably conquered by the Angles of Northumbria under Egfrid, who took several districts between the Ribble and Cartmel and Carlisle from the Cumbrian Britons, about A.D. 685. It became part of the kingdom of Northumbria, of which it shared the fate. The county is mentioned only once in the Saxon Chronicle, where it is called Westmoringaland. In the later Anglo-Saxon and in the earlier Anglo-Norman period it is said to have been included in the kingdom or principality of Cumbria, held by the heir-presumptive of the crown of Scotland. William the Conqueror erected the baronies of Westmorland and Kendal. Appleby Castle was taken by William of Scotland and the town destroyed in 1173, and the town was again destroyed by the Scots in the reign of Richard II.

The castles of APPLBY, KENDAL, BROUGH, Buley, Howgill, and Brougham, with Shap Abbey, are the principal remains of the buildings of the middle ages. Buley, or Bewley Castle, is on the left bank of the Eden below Appleby, and is a mere ruin, showing little remains of its former strength. Howgill Castle, near Milburn, on the northern border of the county, is occupied as a farm-house; some of the walls are more than 10 feet thick. Of Brougham Castle there are considerable remains. The keep is standing, but all the inner apartments are destroyed, except one vault, the roof of which is formed of groined arches, supported by an octagonal pillar in the centre.

In the civil war of Charles I., Appleby Castle was occupied by a royalist garrison, but was obliged at last to surrender. One of the islands in Windermere was the stronghold of Colonel and Major Philipson, brothers, royalists. In the rebellion of 1745-46 there was some fighting at Kendal (14th December, 1745), between the townspeople and a party of the rebels then on their retreat toward Scotland; and a few days after there was a rather severe skirmish at Clifton, on the road to Penrith, between the rear-guard of the insurgents and the forces of the Duke of Cumberland.

Statistics: Religious Worship and Education.—According to the Returns of the Census for 1851 it appears that there were then in the county 165 places of worship, of which 78 belonged to the Church of England, 29 to Wesleyan Methodists, 18 to Primitive Methodists, 18 to Association Methodists, 9 to Independents, 4 to Baptists, 4 to Quakers, and 2 to Roman Catholics. The total number of sittings provided was 37,138. Of Sunday schools there were 121, of which 74 were in connection with the Church of England. The total number of Sunday scholars was 7516. Of day schools there were 214, of which 119 were public schools with 6594 scholars, and 95 were private schools with 2384 scholars. There were 5 evening schools for adults, with 157 scholars. Of literary and scientific institutes there were 5, with 348 members, and libraries containing 2545 volumes.

Savings Banks.—In 1858 the county possessed two savings banks, at Kirkby Lonsdale and Kirkby Stephen. The amount owing to depositors on November 20th 1858 was 35,511l. 16s. 4d.

WESTON. [BUCKINGHAMSHIRE; CHESHIRE.]

WESTON-SUPER-MARE. [SOMERSETSHIRE.]

WESTPHALIA, erected a kingdom by the emperor Napoleon I. on the 15th of November, 1807, consisted of the territories of Brunswick-Wolfenbüttel and Hesse-Cassel (with the exception of Hanau and Katzenelnbogen), the Prussian provinces of Magdeburg and the Old Mark on the left bank of the Elbe, Halberstadt with Hohnstein, Hildesheim with Goslar, Mansfeld, Quedlinburg, Eichsfeld with Trefurt, Mühlhausen and Nordhausen, Stolberg-Wernigerode, Paderborn, Minden and Ravensberg, the Hanoverian provinces of Göttingen, Grubenhagen, and Osnaburg, the principality of Corvey, belonging to Nassau-Orange, and the county of Rietberg. The area of this new kingdom was 14,500 square miles, with 1,947,000 inhabitants. Napoleon I. appointed his youngest brother, Jerome, king, who made Cassel his capital. After the battle of Leipsig, king Jerome having retired into France, the Prussians returned into Cassel, and in a few days the former governments were restored in almost the whole of the kingdom.

WESTPHALIA, a province of Prussia, constituted in 1815 out of the former duchy of Westphalia and of several small principalities, is situated between 50° 43' and 52° 30' N. lat., 6° 25' and 9° 20' E. long. Its area is 7786 square miles; the population in 1852 numbered 835,841 Catholics, 652,801 Protestants of different sects, 15,499 Jews, 109 Mennonites, and 1 Greek; in all 1,504,251 inhabitants. Westphalia is bounded N.W. by Holland; N. by Hanover; E. by Hanover, Brunswick, and Hesse-Cassel; S.E. by Hesse-Cassel, Waldeck, and Hesse-Darmstadt; and S.W. and W. by Rhenish Prussia.

The northern half of the province, north of the Lippe, belongs to the great plain of Northern Germany, and has no mountains properly speaking, though some low eminences run from the Egge to the Weser and to the Porta Westphalica, and pass through the government of Minden into Osnaburg; the other half, to the south of the Lippe, consists of small chains of mountains and hills, which contain many valleys. In the northern half the soil is in general sandy, with extensive heaths and morasses, and scanty forests; in the southern half the soil is firm and sand is rare: it is not always productive, but the forests are very fine. The mountains in the province are all offsets

of the Harz. To these belong:—1. The Weser chain. 2. The Teutoburgerwald, a remarkable chain which traverses the province like a wall towards the Netherlands, from the Rhine to the middle of the Ems. It has only one opening or break till it comes to Bielefeld. The chain forms the watershed between the Rhine and the Lippe, and is covered with fine forests of oaks, beeches, and other trees. 3. The Suntegebirge, a beautiful picturesque chain, which forms a semicircle of 45 miles in diameter, extending from the neighbourhood of Osnaburg, through the district of Minden, to the Steinhuder Lake in Lippe-Sohaumburg. There is a pass through this chain, exactly in the centre, about 5 miles below Minden, and this is the celebrated Porta Westphalica. [WESER.]

The principal rivers are the Weser, the Ems, the Lippe, the Rôhr, and the Vechta. There are no lakes, but marshes are numerous, especially in the northern part: the principal mineral-waters are those of Driburg and Schwelm.

The climate is temperate and healthy: the air is purer, but colder in the southern than in the northern part, where fogs, caused by the marshes, are frequent. The winter is cold and wet, and the heat in summer is often very great in the flat extensive heaths.

The vegetable products are, corn of all kinds; peas and beans, garden vegetables, fruit, hemp and flax (which are staple articles), some hops, and in the mountainous part timber in great quantities. The minerals are iron, copper, lead, calamine, marble, slate, freestone, salt, and coals: there are extensive turf-moors. The manufactures are of considerable importance, especially those of linen, cotton, woollen-cloth, silk, leather, hosiery, and paper. There are numerous iron, copper, and steel-works, and manufactories of all kinds of cutlery, and copper, brass, and iron goods. There are also many sugar-refineries, brandy-distilleries, and tanneries in the province. Cotton factories have been recently established at a few places in the circle of Hagen. The trade of the province consists in the exportation of its own natural productions and manufactures.

The province is divided into three circles—MÜNSTER, MINDEN, and ARNBERG, which form subjects of separate articles. In these articles or under independent heads all the towns of the province are noticed. Münster is the capital. The province is traversed by the Cologne-Minden railway, which connects the Hanoverian and Prussian lines with the Rhine and Belgian railroads. From Hanover lines run to Münster and to Cassel.

The name *Westphalia* was originally given to the country in the north-west of Germany between the Weser, the Rhine, and the Ems. The country between the Weser and the Elbe was called *Ostphalia*, or *Eastphalia*; but this name has fallen into disuse. The whole was included in the great duchy of Saxony, and was sometimes called *Sauerland*. The archbishops of Cologne held a portion of it, which constituted the duchy of Westphalia from 1179 till 1802, when the duchy was given to Hesse-Darmstadt, which ceded it to Prussia in 1815.

Westphalia gave name also to a large circle of the German empire, with an area of about 27,000 square miles, and comprehending the bishoprics of Münster, Paderbogh, Osnaburg, Liege, and Corvey; the duchies of Jülich, Cleves, Berg, and Oldenburg; the principalities of Minden, Verden, and Friesland; the counties of Ravensburg, Mark, Hoya, Diepholz, Schaumburg, Lippe, Bentheim, Tecklenburg, Lingen, Steinfurt, Rietberg; and many ecclesiastical and temporal lordships.

WESTPORT, county of Mayo, Ireland, a market-town, and the seat of a Poor-Law Union, is situated near the southern extremity of the head of Clew Bay, in 58° 48' N. lat., 9° 28' W. long., distant 10½ miles W.S.W. from Castlebar, 170 miles W. by N. from Dublin. The population of the town in 1851 was 4815, besides 2991 inmates of the workhouse. Westport Poor-Law Union comprises 20 electoral divisions, with an area of 175,508 acres, and a population in 1851 of 36,202. The town, which owes its plan and chief improvements to the first Marquis of Sligo, is well built and regularly laid out. At the foot of the Mall, or principal street, which is lined with large and handsome houses, is the entrance to the beautiful demeane and fine mansion of the Marquis of Sligo, proprietor of the town. Besides the parish church there are chapels for Roman Catholics, Presbyterians, and Methodists, a convent of the Sisters of Mercy, and a Roman Catholic Free school for boys and girls. The court-house is a neat substantial building, having a bridewell connected with it. There are also a market-house, a linen hall, a dispensary built and liberally aided by the Marquis of Sligo, military and constabulary barracks, and the Union workhouse. There are various manufactories in the town, and a weekly market is held on Thursday for linen, corn, and provisions. The harbour, which is at *Westport Quay*, a village about a mile west from the town, has a custom-house and large bonding warehouses. The port has a considerable fishery and an extensive trade. Quarter and petty sessions and a manor court are held in the town. Fairs are held four times in the year.

WETHERAL. [CUMBERLAND.]

WETHERBY. [YORKSHIRE.]

WETHERSFIELD. [ESSEX.]

WETTERN, LAKE. [SWEDEN.]

WETUMPKA. [ALABAMA.]

WETZLAR, the chief town of a circle in the government of Coblenz in Rhenish Prussia, is situated in a romantic country 36 miles E. by N. from Coblenz, on the banks of the Lahn, over which there is a stone

bridge, and which is there joined by the Dill and the Wetzsch. The town is surrounded with walls, has six gates and two suburbs, and is built on the side of a hill. The cathedral of St. Mary is a very spacious and fine edifice, with 28 altars; it is divided between the Catholics and Protestants; the portal entrance is said to date from the 8th century. The Jews have a synagogue. The town has an hospital, a gymnasium, a school of industry, and about 5500 inhabitants. The houses are built in the old-fashioned German style. The inhabitants have some manufactures of stockings, gloves, and tobacco, some tanneries and oil-mills, and a trade in iron. Wetzlar was formerly a free imperial city, and, from 1698 to 1806, the seat of the imperial chamber, or supreme court of appeal of the empire. By the Congress of Vienna it was assigned in 1815 to Prussia. The town derives some celebrity also from being the scene of Göthe's 'Sorrows of Werter.' The circle of Wetzlar lies on both sides of the Lahn, and is inclosed by Nassau and Hesse-Darmstadt.

WEXFORD, a maritime county in the province of Leinster, Ireland, is bounded N. by the county of Wicklow, E. by St. George's Channel, S. by the Atlantic Ocean, and W. by the counties of Waterford, Kilkenny, and Carlow. It lies between 52° 6' and 52° 48' N. lat., 6° 8' and 7° 2' W. long. Its greatest length from north to south is 55 miles; from east to west 34 miles. The area is 900 square miles, or 576,588 acres. The population in 1841 was 202,038; in 1851 it was 180,159.

Coast-line.—Owing to the position of Wexford at the south-east corner of Ireland, more than half of its boundary is formed by the sea. Kilmichael Point is the easternmost point in the county, and the northern extremity of its coast-line. The whole line of coast from Arklow, which lies a little north of the northern boundary of Wexford, to Wexford Harbour, presents no opening which can afford shelter from foul weather, except to small craft; and the danger to shipping is increased by a range of sand-banks which lie parallel to the shore at the distance of a few miles, towards the northern extremity of which the Arklow light-ship is stationed. Wexford Harbour is large, and of very irregular form; but the navigation is dangerous, and the entrance is obstructed by a bar. The entrance is between the extremities of two long narrow sandy peninsulas—the Raven Point on the north and Roselare Point on the south; and though it is less than a mile wide, the harbour almost immediately expands to a width of more than eight miles. The town of Wexford lies opposite to and about four miles from the entrance of the harbour, which contracts so suddenly opposite the town as to be crossed by a bridge 1571 feet long, a portion of the roadway of which is made moveable, to allow the passage of masted vessels into the inner portion of the harbour, which again extends, though only for a short distance, to the width of about two miles. A bank of shifting sand outside the entrance to the harbour leaves so little depth of water as to render the entrance to the harbour inconvenient for any vessel above the burden of 200 tons, and the navigation of the interior is both intricate and shallow. The harbour contains a few small but inhabited islands. In two of these, called Beg Erin (or Little Ireland), and Great Island, there are remains of monastic buildings. From Roselare Point to Greenore Point, nearly 7 miles in a south-easterly direction, the coast forms another bay, called Greenore Bay, and opposite the point, about 3 furlongs from the shore, is a detached rock called Carrick Beacon. From this point, for rather more than 5 miles, the coast again trends a little westward in an irregular line to Carnore Point, which forms the south-eastern angle of the county and of the whole of Ireland. Opposite to this portion of the shore, about 7 miles S.E. from Greenore Point, is the Tuscar rock, the position of which is marked by a revolving light, and by a bell in foggy weather. On the southern coast, from Carnore Point to Crossfarnogue Point, a distance of between 9 and 10 miles in a straight line, is a shallow bay, into which two considerable lakes, called Lady's Island Lake and Taumshin Lake, open, the former by an artificial communication which is cut every three or four years through the sand-bank which separates it from the sea; this lake is remarkable for the circumstance that while it receives several small rivulets it has no natural outlet. South of Crossfarnogue Point are the Great and Little Saltee islands, the nearest of which is rather more than two miles from the shore. From Little Saltee Island, which lies nearest to the mainland, a ridge of rocks called St. Patrick's Bridge, having only from 7 to 10 feet of water at low tide, extends to the adjoining shore, presenting an exceedingly dangerous obstacle to the navigation. Several small rocky islets occur about this part of the coast, and a floating light is stationed a few miles south of Great Saltee Island. Along the remainder of the coast-line occur a succession of bays, headlands, islands, and small harbours and inlets. At Hook Head is a lofty lighthouse with a stationary light, and, as the shore is rugged and dangerous, lights have been placed at various points of the coast. From Templetown Bay, about four miles from Hook Head (within Waterford Harbour), the shore trends towards the west for about five miles, to the estuary of the Suir. The Wexford coast of Waterford Harbour is indented by numerous small bays.

Surface, Hydrography and Communications.—The county of Wexford is in a great measure cut off from the rest of Ireland by natural boundaries. From the extremity of its sea-coast in Waterford Harbour, the estuary of the Suir and the river Barrow, which flows into it, form the boundary of the county for a distance in a straight

line of about 16 miles, to the point of junction of the counties of Carlow, Wexford, and Kilkenny. For 12 or 13 miles farther, in a north-easterly direction, the boundary is pretty distinctly marked by the ridge called Blackstairs Mountain (2409 feet), which rises in seven points along the boundary-line of the counties of Wexford and Carlow to elevations of from 1520 to 2409 feet above the level of the sea; and the Mount Leinster ridge, which attains the elevation of 2610 feet. Three remarkable summits upon this ridge of mountains, between Wexford and Carlow, are distinguished as 'The Leaps of Omeau Grayhounds.' The small river Clody, which rises on the slope of Mount Leinster, forms the boundary of the county to the town of Newtownbarry, where, after a rapidly descending course, it falls into the Slaney. From Newtownbarry the boundary-line runs for a short distance up the course of the Slaney, towards the north-west, at which it turns north-east along the tributary river Derry to a point a little beyond the junction of the counties of Carlow, Wexford, and Wicklow. After leaving the course of the Derry the boundary-line turns abruptly south for a short distance, and then, again turning north-east, runs over an elevated ridge which forms the southern termination of the mountains of Wicklow. The last portion of the boundary-line is formed by a small stream which falls into the sea near Kilmichael Point.

Wexford contains many single hills of considerable elevation, among which are the Forth Mountains, a range which extends in a south-westerly direction for five or six miles from the neighbourhood of the county town. Of the detached hills may be noticed Camaroes Hill, 767 feet high, and Carrickbyrne, 767 feet, in the middle of the county; Tara Hill, near the northern extremity, and not far from the coast, which it forms a striking landmark, 826 feet high; and the Lakin Hill, near New Ross, 629 feet high.

The principal river of the county is the *Slaney*, which enters from the county of Carlow a short distance north of Newtownbarry, and flows in a tolerably direct course past that town and Enniscorthy to Wexford Harbour. It is navigable for large boats as far as Enniscorthy, to which place the tide flows. On the left bank it receives a few miles north of Enniscorthy, the river *Bass*, which rises in the north-eastern part of the county, and two or three minor streams; and on the right bank its principal tributaries are the *Urn* and the *Boro*, both of which descend from the Blackstairs Mountains. Among the other streams in the county are the *Owenavorrage* and its tributary the *Banoge*, the waters of which enter the sea north of Courteenure Harbour; the *Owenduff*, the *Corock* or *Corug*, and some other small streams, which flow into Bannow Bay; and several rivulets which empty themselves into the lakes on the southern coast.

The principal communication between Wexford and the interior of Ireland is by the river Barrow, which communicates with the Grand Canal. The principal roads in the county are—the mail-coach road from Dublin, which enters the county from Arklow, near its northern extremity, and passes by Gorey and Enniscorthy, and thence along the western side of the Slaney to Wexford; a post-road on the eastern side of the Slaney from Wexford by way of Oulart, which joins the preceding at Enniscorthy; a mail road which branches from this road a little north of Enniscorthy, and leaves this county for Carlow a few miles north of Newtownbarry; and the mail road across the county from Wexford to Waterford by New Ross; a road from Enniscorthy to New Ross; and a mail road from New Ross to Fethard by Arthurs-town. The county is however well supplied with roads in every direction; and the harbours of Waterford and Wexford afford ample facilities for communication by sea.

Geology, &c.—The county of Wexford forms part of the clay-slate tract which extends along the eastern portion of Ireland from the northern part of Wicklow to the Atlantic Ocean. Though considerably inflected in some of the southern parts of the county, the strata generally maintain, in the northern parts, a tolerably uniform direction from north-east to south-west, with a dip to the south-east. The clay-slate is found in immediate contact with granite, which forms the chief component of the ranges that separate this county from Carlow. The Forth Mountain consists principally of quartz rock, with occasional laminae of clay-slate, and the strata are in some places broken by fissures and veins of quartz, which occasionally show indications of the presence of lead, copper, and iron. Quartz-rock and clay-slate form also the lower grounds in the vicinity of the Forth; and the former, which is sometimes iron-shot and of a deep-reddish hue, extends under and to the north of the town of Wexford, and also considerably to the south of the Forth Mountains. Granite appears about Carnore Point, in the south-east, and at the Carrickbyrne and Camaroes Hills; and blocks of that substance are found strewn between those mountains and Bannow, on the south-west. Beds of greenstone also occur in a few places among the clay-slate, which, near Enniscorthy and in several other places, is much intermixed with quartz-rock. The principal ranges of elevated land however consist of clay-slate, and good slates are quarried near Newtownbarry, and in other parts adjacent to the granitic chain. A black and slightly carbonated clay is found near Enniscorthy, and has been mistaken for coal. That part of the county which borders on Waterford Harbour consists principally of clay-slate in nearly vertical strata, and is mounted in two or three places with a cap of sandstone. From Templetown Hill, near the Hook promontory, such a cap declines

until it underlies a tongue of stratified limestone, which extends to the extremity of Hook Point, and is arranged in thin strata dipping at an angle of 4° to 8° towards the south. This limestone contains numerous bivalves and corallites. The sandstone rocks form the precipitous coast about Baginbun Point, and appear in several detached spots in the county, among which is the inner haven of Wexford Harbour. The rugged eminence called Tara Hill, alluded to above, consists of porphyry, with a base of compact felspar, occasionally passing into hornstone with inlaid crystals of glassy felspar. Greenstone also appears here occasionally. In addition to the limestone at Hook Point, some is found a little south of Wexford town, and also at Duncormuck, about the middle of the southern coast. The Saltee Islands are clay-slate surmounted by beds of sandstone. Lead has been found and worked at Caim, or Cairne. Silver was formerly raised near Clonmines, where there are the remains of an ancient mine; galena has also been found there. Copper-ore exists at Kerlogue, near Wexford; and plumbago and asbestos have been recently discovered at Greenfield, near Ennisoorthy. Horns and bones of the moose-deer have been discovered in the alluvial districts on the east and south, where marl occurs; and some years ago a perfect fossil specimen of the *Cervus Megaceros*, or gigantic deer of Ireland, of extraordinary dimensions, was found at Ballyhuskard, near the Bog of Itty.

Climate, Soil, and Produce.—In climate, those parts of Wexford which lie open to the sea are milder in temperature than the adjacent counties of Carlow and Kilkenny. Snow seldom remains on the ground in these districts, and agricultural operations may often be carried on without interruption while lands 10 miles inland are covered with snow or locked up with frost. The southern district is exposed to storms in spring and autumn, and to heavy rains in winter; but the climate is peculiarly favourable to the perfection of grain crops.

In 1853 there were in the county under crop 247,510 acres, of which 17,014 acres grew wheat, 88,218 acres oats, 49,730 acres barley, bere, rye, peas, and beans; 25,608 acres potatoes, 15,355 acres turnips, 6247 acres other green crops, 461 acres flax, and 44,882 acres were in meadow in clover. Of plantations, there were 24,343 acres in 1841, yielding oak, ash, elm, beech, fir, mixed timber, and fruit. The stock, on 16,732 holdings in 1852, was 24,465 horses, 7480 mules and asses, 78,172 head of cattle, 81,598 sheep, 63,930 pigs, 9346 goats, and 331,415 head of poultry. The total value of the stock here enumerated was estimated at 900,072*l.*

The manufactures of the county are of little importance. The principal external commerce of the county is in agricultural produce, especially barley, of which great quantities are sent to England, Wexford being the port through which the trade of Ennisoorthy and Castlebridge passes. New Ross also exports the like produce to a considerable extent. Butter is sent through Gorey to Dublin, and through Wexford and Waterford to Bristol, Liverpool, &c.; and cattle, pigs, and poultry are sent to England by steam-boats from the same ports.

The county belongs to the fishery districts of Gorey and Wexford, which together comprise 108 miles of maritime boundary, and in 1853 had 577 registered fishing-vessels, employing 3233 men and boys.

Divisions, Towns, &c.—The county is in the diocese of Ferns, with a very small part in that of Dublin, and contains 144 parishes. It is divided into nine baronies—Ballagh Keen, Bantry, Bargo, Forth, Gorey, Scarawalsh, Shelburne, and Shelmaliave east and west. The principal towns are WEXFORD, ENNISOORTHY, GOREY, and NEW ROSS, which are noticed under their respective names.

Of the following towns and villages the population given is that of 1851:—

Arthurstown, or King's Bay, is a small port and post-town on the left bank of the Nore, where it falls into Waterford Harbour: population, 309. There are a fever hospital, a dispensary, and a convenient pier, at which vessels of 100 tons can unload or load. *Ballycanow* is a post-town about 4 miles S. from Gorey, on the road to Wexford Bridge, near the Awin-Banna River: population, 361. There are an ancient church, a Roman Catholic chapel, and two schools. Five fairs are held annually. *Bannow*, population 104, a small post-town on Bannow Harbour, about 6 miles N.E. from Fethard across the harbour, contains the ruins of an old church, a dispensary, a Roman Catholic chapel, and a school. Two stations of the preventive service are in the neighbourhood. It was formerly the site of an ancient borough, of which scarcely a trace is left. *Bridgetown* is a small post-town near Tacumshin Lake, about 10 miles S. from Wexford: population, 244. In it are a small church and a ruined castle; another ruined castle is about three miles distant. *Camolin* is a post-town on the Bann, about 7 miles S.W. from Gorey, on the road to Ennisoorthy: population, 713. It contains a Roman Catholic chapel and a dispensary. Six yearly fairs are held. Near it is Camolin Park, the seat of the Earl of Mountnorris. *Castlebridge* is a village and post-town at the junction of the Sow with the estuary of Wexford Harbour, about 4 miles N. from Wexford: population, 473. In it are a Roman Catholic chapel and a dispensary. Eight annual fairs are held. *Clonroche* is a small thriving post-town about 9 miles S.W. from Ennisoorthy: population, 420. It has a dispensary and a savings bank, and petty sessions are held here monthly. There are eleven yearly fairs, and the town

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has a considerable trade. *Courtown* is a small sea-port and post-town, at the head of Courtown, or Kilbride Bay, at the mouth of the Awin-Banna River, about 3 miles S.E. from Gorey: population, 259. The hamlet of *Riverchapel* almost joins it however, with a population of 348. The places are neatly built, and together form a rising town. Close to it are the mansion and demesne of the Earl of Courtown, and the church stands in the demesne. *Duncannon* is a fishing village and post-town on the east side of Waterford Harbour, about a mile and a half S. from Arthurstown: population, 460. The shore is here flat and shallow, and consequently dangerous, but it is broken by a small creek, which, at high-water, can be entered by vessels of 100 tons burden, and a pier has been built. Near the village is a fort, placed on a rocky headland, and within the fort is a lighthouse. The fortifications occupy about 3 acres; 30 pieces of cannon are mounted on them, and a garrison is maintained. It was held for James II., and hence he embarked on his final departure for France. *Ferns*. *Fethard* is a small but neat fishing-port and post-town, situated on a small inlet of the sea running up from Bannow Bay, about 16 miles S. from New Ross: population, 326. A branch of the coast-guard department is stationed here, and a small trade is carried on from the port in the importation of coal and timber, and the exportation of corn: there are also four cattle fairs held yearly. The harbour was constructed by government in 1798. The town was incorporated by James I., but the corporation is now extinct. It sent two members to the Irish Parliament. In the principal street is an ancient church, and an Anglo-Norman castle, now adapted as a residence. A Roman Catholic chapel and a dispensary are in the town. *Kilmore* is a fishing village and post-town, having a small harbour on the eastern side of Ballyleigue Lough, which is separated from the sea by a long sand-bank. The fishermen have constructed a pier for the accommodation of their craft, which, in sailing- and rowing-boats, number from 60 to 70. A Roman Catholic chapel is in the village, and there is a coast-guard station. *Newtownbarry*, a market- and post-town, is situated at the confluence of the Clody with the Slaney, about 22 miles N.W. from Wexford: population, 1307. Newtownbarry was formerly called Bunclody, from its situation at the junction of the Clody and Slaney. The town forms an irregular square, and a western suburb extends into the county of Carlow, with which Newtownbarry is connected by a wooden bridge over the Clody. A stone bridge of seven arches crosses the Slaney. The market is well attended, and there are 13 annual fairs. The church is a neat structure, with a square tower surmounted by a spire. In the town is a handsome Roman Catholic chapel, three public schools, a dispensary, a fever hospital, a constabulary police force, and a detachment of the revenue police. Petty sessions are held monthly. Near the town is a strong chalybeate spring, but it has fallen into disuse. Slate of excellent quality, building-stone, and granite, as well as limestone, and marl for manure, are found in the vicinity. *Taghmon*, a market- and post-town, and, until the Union, a parliamentary borough, stands on the road from Wexford to New Ross, about 7 miles W. from Wexford: population, 1082. It contains a church, a Roman Catholic chapel, a fever hospital, a dispensary, a savings bank, and a police barrack, and petty sessions are held monthly, but it is a poor and decaying place, though in a rich and fertile country, and now chiefly owes what trade it has to its market, at which butter is sold to a considerable extent, and to its fairs, of which it has 19 every year. The place derived its name, which was originally *Theagh Munno*, or 'the House of Munno,' from St. Munno, who founded an Augustinian monastery here, in the 6th century, to which the origin of the town is attributed.

The county returns four members to the Imperial Parliament—two for the county at large, and one for each of the boroughs of Wexford and New Ross. It is in the Leinster circuit. The assizes are held in Wexford, where is the county jail; quarter sessions are held there, and at Ennisoorthy, New Ross, and Gorey, in which three towns there are bridewells. Petty sessions are held in eleven places. The District Lunatic Asylum, to which the county is entitled to send 44 patients, is in Carlow. The county infirmary is in Wexford. The fever hospitals are in Wexford, Arthurstown, Ennisoorthy, Gorey, New Ross, Newtownbarry, and Oulart; 28 places have dispensaries. There are savings banks in Wexford and Gorey; and two loan-funds in Wexford, two in New Ross, and one each in Boro, Ennisoorthy, and Gorey. The union workhouses are at Wexford, Ennisoorthy, Gorey, and New Ross. The county is in the military district of Kilkenny; the barrack-stations are at Wexford, Duncannon Fort, and New Ross. The staff of the county militia is stationed at Wexford, which is also the head-quarters of the county police. The police force consists of 256 men and officers, distributed over 43 stations, in 7 districts. In September 1852, there were in the county 117 National schools, attended by 7229 male and 7440 female children.

History and Antiquities.—In the time of Ptolemy the greater part of the present county of Wexford was inhabited by the Menapii, whose chief town, Menapia, is supposed to have occupied the site of the present town of Wexford. The county was anciently styled *Corteigh, Moragh, and Leighion*. The term *Leinster* was chiefly applied to Wexford by Irish, Danish, and Latin writers towards the close of the middle ages. The present name appears to come from *Weisford*, a name given by the Danes to the chief town, when, after predatory incursions in the county, during which they burnt the

previous capital, Ferns, they chose that as the centre of a permanent settlement. Wexford is distinguished as containing the first landing-place used by the English, when, in 1170, or, according to other authorities, 1169, they invaded Ireland under the command of Robert Fitz-Stephen. The English armament landed at Baginbun, near Fethard, and shortly afterwards attacked the Danes at Wexford, of which place, after a contest of four days, they obtained possession. MacMurrough then confirmed a grant which he had previously made of Wexford and some adjoining parts to the English adventurers, whose settlement in the country so alarmed the other native princes, that they formed a confederacy for driving out MacMurrough and his English allies. But the invaders had obtained too firm a footing to be thus got rid of, and their conquests were soon greatly extended by the prowess of Richard de Clare, surnamed Strongbow, who married Eva, the daughter of MacMurrough, after whose death, in 1172, he became Lord of Leinster, a title which was confirmed to him as palatine by Henry II. of England, when he visited Ireland shortly after. Wexford was formed into a county by King John in 1210, and it formed part of the possessions inherited by William le Marshal through his marriage with the daughter of Strongbow. On the extinction of the male line his possessions were divided among his daughters, and subsequently underwent frequent changes of proprietorship.

In 1641 the Royal forces, under Ormond, were defeated in an attempt upon New Ross in the early part of the war, and subsequently Duncannon Fort was taken by the Catholics. In 1649 the whole county was reduced to subjection by Cromwell, who put the garrison of Wexford to the sword. This county was the chief seat of the rebellion of 1798, and the scene of many severe conflicts. The insurgents possessed themselves of Enniscorthy and Wexford. The head-quarters of their army were formed at Vinegar Hill, near Enniscorthy; but in their attack on New Ross they were repulsed with much loss, and the Royal forces having collected their strength from various quarters, made a simultaneous attack upon Vinegar Hill, and forced the insurgents to retreat. Wexford was afterwards retaken; and this complete defeat of the main body of the rebels put an end to the insurrection in this district.

The county of Wexford, especially the southern part, abounds with antiquities of Danish, Saxon, and Norman origin, though comparatively few can be assigned to a period prior to the arrival of the English in the country. Two tumuli, or raths, remain in the neighbourhood of Enniscorthy, at Salville or Montabeg, and Donamore; two others, of considerable size, near Dunbrody; and one near New Ross. There are remains of monasteries at Wexford, Enniscorthy, St. John's (south of Enniscorthy), Ferns, Dunbrody (near the confluence of the Suir and the Barrow), Ross, and Clonmines. Of other ecclesiastical edifices, Tintern Abbey, near the Bannow, has been converted into a dwelling; Ballyback, Carnsore, and Clonmore are turned into parish churches; and the ruins of Glasarrig are partly used as a farm. There are ruins of an ancient chapel, called St. Vaughn's, near Carnsore. Ruins of castellated buildings are numerous; we have mentioned many in our notices of the towns and villages; 130 are said to exist in only four of the baronies. Among other military remains is Strongbow's fort or camp, near Duncormuck Castle, on Baginbun Head, where intrenchments are yet visible. Of more recent objects of interest in the county may be mentioned a great pile of stones at Wicklow Gap, near its northern extremity, marking the burial-place of those who fell in a sanguinary conflict between the insurgents and the Royal troops in 1798.

WEXFORD, the capital of Wexford county, a parliamentary borough, a municipal borough, a port, a market- and post-town, and the seat of a Poor-Law Union, is situated upon the south-western shore of Wexford Harbour, at the embouchure of the river Slaney, in 52° 20' N. lat., 6° 27' W. long., about 74 miles S. from Dublin by road, and 80 miles E.N.E. from Waterford. The population of the borough in 1851 was 12,471. The borough is governed by 8 aldermen and 18 councillors, of whom one is mayor; and returns one member to the Imperial Parliament. Wexford Poor-Law Union comprises 83 electoral divisions, with an area of 128,801 acres, and a population in 1851 of 52,872.

The town consists chiefly of three nearly parallel streets, of which one, called the Quay, is a wide terrace, fronting the harbour, while the other two run in crooked lines behind it; and of two wide and well-built streets on the west and north-west extremities of the town. The town is well provided with water, and is lighted with gas. Towards the centre the Quay is broken by the Crescent, which is indented in a semicircular form. Nearly opposite to the Crescent, at some distance from the quay-line is a kind of breakwater, called the Ballast-Quay, or Bank, formed by the ballast deposited there by ships which frequent the port. The haven contracts abruptly opposite to the northern end of the town; and at the narrowest point is a timber bridge, constructed in 1795 of American oak, at a cost of 17,000*l.* by Lemuel Cox, an engineer from the United States; but it has been reconstructed, and now consists of two causeways, projecting 650 feet and 188 feet from the north-eastern and south-western banks respectively, united by a timber bridge of 733 feet, supported by 23 piers of the same material, and having a drawbridge for the passage of masted vessels into the inner haven, which expands considerably a little above the bridge. To its entrance into the sea between Rosslare Point and Raven Point,

the length of the haven is above six miles, at low water leaving an expanse of mud, through which the stream winds, and at the mouth is a bar which prevents ships of more than 200 tons ascending. The control of the harbour is vested in a body of commissioners.

The town of Wexford was a maritime settlement of the Danes, and was formerly called Weisford. It was besieged for three days by Fitz-Stephen, soon after he landed, and surrendered on condition of recognizing the sovereignty of Dermot MacMurrough, king of Leinster. During the contention between the houses of York and Lancaster it was seized by Sir John Butler, brother to the Earl of Ormond. He was soon afterwards defeated by the Earl of Desmond, who, in the following year, held a parliament in the town. Wexford was one of the first places which fell into the hands of the insurgents in 1641, and formed the port from which they received their principal supplies from other countries. In 1649 Cromwell obtained possession of the place, and nearly destroyed it, levelling six of the parish churches, and mining another. After the battle of the Boyne the town took part with William III., and was garrisoned by his troops. A monument obelisk on the Windmill Hill commemorates the death of a Captain Valloton in 1793, in a conflict between the military and a party of Whiteboys. During the insurrection of 1798 the town was evacuated by the garrison, and the rebels immediately made it their head-quarters. After the defeat of the insurgents at Vinegar Hill the rebels fled precipitately from the town. There are now only two parish churches—St. Iberius and St. Selsker, both modern, the former a plain building with a cupola, the latter in the early English style of architecture, connected by a vestibule with the massive square tower and raised walls of St. Selsker Abbey, founded it is said in 1190, on the site of an earlier church built by the Danes, or Ostmen. Some of the churches still present some interesting ruins, particularly that of St. Mary's. There are three Roman Catholic chapels, one of which, St. Peter's, is a handsome structure in the decorated style, with a large rose window at the east end. The Presbyterians, Wesleyan Methodists, and Independents have each a meeting-house. The public buildings of the town consist of a neat court-house, a jail, a fever hospital, an infirmary, a house of industry; the buildings belonging to the corporation, the offices connected with the revenue; the barracks; the Union workhouse; and St. Peter's College, on Summer Hill, a magnificent building for Roman Catholic students preparatory to their going to Maynooth, and attached to St. Peter's chapel. There are also a Diocesan Protestant school, Erasmus Smith's school, the Parochial school of St. Patrick, the Redmond Female Orphan-house, National schools, a savings bank, a mechanics institute, and a lying-in-hospital.

Wexford has a considerable retail trade; its markets, twice a week, and its nine yearly fairs, are well supplied and well attended. Corn, poultry, butter, and fish, particularly oysters, are furnished in considerable quantities, not only for home consumption, but for the English market. Ship-building is carried on. On December 31st, 1854, the number of vessels registered as belonging to the port was—28 under 50 tons, 71 above 50 tons, of the aggregate burden of 8461 tons. The number and tonnage of vessels entered and cleared at the port during 1854 were as follows:—Sailing-vessels, inwards, 54, tonnage 31,095; outwards, 395, tonnage 22,856; steam-vessels, inwards, 54, tonnage 12,172; outwards, 52, tonnage 11,254.

The assizes for the county are held in this town, as are also the quarter sessions for the district; petty sessions are held every week. The staff of the county militia is stationed in Wexford.

The environs of the town, particularly towards the Forth Mountains, are picturesque. At Carriga-Damon a handsome column was erected in 1841 by General B. Clayton to commemorate the actions of the British army in Egypt under Abercromby.

WEXIO. [SWEDEN.]

WEYBRIDGE. [SURREY.]

WEYHILL. [HAMPSHIRE.]

WEYMOUTH and MELCOMBE REGIS, Dorsetshire, form together a municipal and parliamentary borough, market-town, and sea-port. They together also form a part of the Weymouth Poor-Law Union, which consists of 18 parishes and townships, with an area of 37,282 acres, and a population in 1851 of 22,017. The borough is situated on the shore of Weymouth Bay, in 50° 37' N. lat., 2° 26' W. long., distant 8 miles S. from Dorchester, and 128 miles S.W. from London. The population of the borough in 1851 was 9458. The borough is governed by 6 aldermen and 18 councillors, of whom one is mayor; and returns 2 members to the Imperial Parliament. The living of Weymouth is a perpetual curacy in the parish of Wyke Regis, that of Melcombe Regis is a rectory, in the archdeaconry of Dorset and diocese of Salisbury.

Weymouth and Melcombe Regis were formerly distinct municipal and parliamentary boroughs, but were united in 1571, and Weymouth is now the general name for both places. Weymouth Bay here communicates by an arm of the sea with a small internal bay, about two miles long, called the Backwater, which may be regarded as the estuary of the small river Wey. The harbour is in the arm of the sea, which connects the Backwater with Weymouth Bay. Weymouth is on the south side of the harbour, and Melcombe Regis on the north side; the two towns are connected by a handsome stone bridge.

Weymouth proper is a very ancient place, and was of considerable

commercial importance in the 14th century. It has now the appearance of an old fishing-town. Melcombe is situated on a tongue of land between Weymouth Bay and the Backwater, very narrow on the north-east, but becoming wider towards the harbour, where the width is about a third of a mile. The ground on which it stands is low, a considerable part of it having been reclaimed from the Backwater by embankment. In front of Weymouth Bay a broad terrace, called the Esplanade, extends nearly a mile, with a gradual slope towards the shore; the ranges of houses which face this Esplanade are handsome, and many of them large.

Weymouth was brought into repute as a bathing-place about 1768 by Ralph Allen of Bath. The Duke of Gloucester went there in 1780, and had a house built for his residence. George III. paid his first visit in 1789; he had a royal lodge erected, and went there frequently. The climate is very mild, Weymouth Bay being sheltered to the north by surrounding hills, which have a gradual slope to the south towards the beach. There are two churches, one of which is in Weymouth; places of worship for Wesleyan Methodists, Independents, Baptists, Quakers, and Roman Catholics; National, British, and Infant schools; and a savings bank. Ship-building and rope-making are carried on. The construction of the Portland breakwater, which will afford shelter to vessels entering Weymouth Bay, is being proceeded with, and the works already afford much of the required protection.

The number and tonnage of vessels registered as belonging to the port of Weymouth on December 31st 1854 were:—Sailing-vessels under 50 tons 23, tonnage 705; above 50 tons 57, tonnage 6834; with 2 steam-vessels of 63 tons, and 1 of 61 tons. The number and tonnage of vessels which entered and cleared at the port during 1854 were:—inwards, 441 sailing-vessels, tonnage 81,680; outwards, 118 sailing-vessels, tonnage 6644.

WEYRE. [BUXTON.]

WHAPLODE. [LINGOLNSHIRE.]

WHEATENHURST, or WHITMINSTER, Gloucestershire, a village and the seat of a Poor-Law Union, in the parish of Wheatenhurst, is situated near the left bank of the river Severn, in 51° 47' N. lat., 2° 20' W. long., distant 9 miles S.S.W. from Gloucester, and 110 miles W. by S. from London. The population of the parish in 1851 was 380. The living is a perpetual curacy in the archdeaconry of Gloucester and diocese of Gloucester and Bristol. Wheatenhurst Poor-Law Union contains 14 parishes and townships, with an area of 24,471 acres, and a population in 1851 of 7987. Besides the parish church there is a school supported by subscription.

WHEATHAMSTEAD. [HERTFORDSHIRE.]

WHICKHAM. [DURHAM.]

WHISSENDINE. [RUTLANDSHIRE.]

WHITBURN. [DURHAM.]

WHITBY, North Riding of Yorkshire, a market-town, parliamentary borough and sea-port, and the seat of a Poor-Law Union, in the parish of Whitby, is situated on both sides of the river Esk, where it falls into the German Ocean, in 54° 29' N. lat., 0° 35' W. long., distant 45 miles N.E. from York, 236 miles N.N.W. from London by road, and 246½ miles by the Great Northern and York and North Midland railways. The population of the parliamentary borough in 1851 was 10,989. The borough returns one member to the Imperial Parliament. The living is a perpetual curacy in the archdeaconry of Cleveland and diocese of York. Whitby Poor-Law Union contains 22 parishes and townships, with an area of 90,371 acres, and a population in 1851 of 21,592.

The larger and better part of the town of Whitby stands on the left bank of the Esk. The two parts of the town are connected by a stone bridge of 8 arches, 172 feet long, with a swivel bridge to admit the passage of vessels to the inner harbour. The inner harbour is formed in the river, and is capacious and secure, with dry docks for building and repairing vessels. The harbour has 10 feet of water in ordinary neap-tides, and 15 feet and upwards in spring-tides. The piers which protect the harbour run out into the German Ocean, the western pier for about 1000 feet, forming a fine promenade; and two inner piers break the force of the waves in stormy weather. At the end of the west pier is a lighthouse. The ground on each side of the river rises rapidly, especially on the right or east side, where the town is continued southward in a narrow column of houses along the bank of the river. On the west side the streets have been carried over the crown of the hill. The streets are well paved, and are lighted with gas.

Whitby possesses a town-hall and a custom-house. The bath-house, a spacious and elegant structure on the quay, contains baths, a subscription library, and the museum of the Whitby Literary and Philosophical Society. The parish church stands on the summit of a cliff about 350 feet high, and a flight of 194 steps leads to it from the town below. The original structure, which is of Norman date, has been much altered and repaired at various periods. The other episcopal places of worship are—a chapel of ease, erected in 1788; and the churches of St. Michael and St. John the Evangelist, both of modern erection, and in the early English style. There are chapels for Wesleyan, Primitive, and Association Methodists, Independents, United Presbyterians, Quakers, Roman Catholics, and Unitarians. There are in the town National, British, and Infant schools; a subscription library; a literary and philosophical society, with a museum; the Whitby Institute, with a reading-room; a mechanics institute;

a news-room; a temperance-hall; a savings bank; a dispensary; and a seamen's hospital. The market is held on Saturday. Fairs are held on August 25th and on Martinmas day. A cheese fair is held in October, and a cattle show in August. A county court is held in the town.

Whitby seems to have arisen originally from the foundation of an abbey by Oswy, king of Northumberland, in A.D. 658; but both abbey and town were utterly destroyed by the Danes about 867, and lay in ruins after the Norman conquest, when the abbey was rebuilt, and the town became a considerable fishing town. The ruins of the abbey are near the church, overlooking the sea at the height of 800 feet. The beautiful central tower fell in 1880; the existing remains consist of the choir, the north transept (nearly entire), and part of the west front. The town rose into commercial importance towards the end of the reign of Queen Elizabeth, when the working of the alum-mines in the neighbourhood was greatly extended, the harbour was improved, and ship-building was carried on. The alum formerly exported to the continent is now sent chiefly to London and other British ports. The foreign exports are inconsiderable: the chief imports are timber, and hemp and flax from the Baltic. The manufacture of ornaments from jet found in the cliffs in the neighbourhood of the town affords some employment.

Whitby is still a very considerable sea-port. The number and tonnage of vessels registered as belonging to the port on December 31st, 1854, were:—Sailing-vessels under 50 tons 51, tonnage 1720; above 50 tons 339, tonnage 60,386; steam-vessels under 50 tons 4, tonnage 879. The number and tonnage of sailing-vessels which entered and cleared at the port during 1854 were:—inwards, 725, tonnage 85,375; outwards, 131, tonnage 7862.

Numerous interesting fossil remains have been found in the neighbourhood of Whitby, many of which are in the Whitby Museum. In 1841 an entire specimen of the *Plesiosaurus Grandipinnis*, 15 feet 6 inches long, was found in the lias near Whitby.

WHITCHURCH, Hampshire, a decayed market-town, municipal borough, and the seat of a Poor-Law Union, in the parish of Whitechurch, is situated about 5 miles from the head of the river Anton or Test, in 51° 13' N. lat., 1° 19' W. long., distant 12 miles S. by W. from Winchester, and 87 miles W.S.W. from London. The population of the parish in 1851 was 1911. The living is a vicarage in the archdeaconry and diocese of Winchester. Whitechurch Poor-Law Union contains 8 parishes and townships, with an area of 29,518 acres, and a population in 1851 of 5619. Friday is the market-day; fairs are held on the third Thursday in June and October 19th. Paper- and silk-mills are worked by water-power. The church was enlarged in 1846. Wesleyan and Primitive Methodists, Independents, and Baptists have places of worship. There are National and Infant schools, and a school on the Glasgow system.

WHITCHURCH, Shropshire, a market-town and the seat of a Poor-Law Union, in the parish of Whitechurch, is situated in 52° 58' N. lat., 2° 40' W. long., distant 20 miles N. by E. from Shrewsbury, and 163 miles N.W. by W. from London. The population of the town in 1851 was 3619. The living is a rectory in the archdeaconry of Salop and diocese of Lichfield. Whitechurch Poor-Law Union contains 25 parishes and townships, with an area of 41,003 acres, and a population in 1851 of 11,870.

The town of Whitechurch is situated on an acclivity, on the summit of which is the parish church, a handsome Grecian edifice, erected in 1722. There are also a district church of the Grecian order, erected in 1840; chapels for Wesleyan Methodists, Independents, and Baptists; a Free Grammar school; National, British, and Infant schools; a savings bank; and a reading-room. Friday is the market-day; four fairs are held in the course of the year.

WHITCHURCH. [OXFORDSHIRE.]

WHITE SEA, a large gulf of the Arctic Ocean, which enters deeply into the northern parts of European Russia, between 64° 30' and 68° 30' N. lat. It has nearly the shape of a semicircle, opening towards the north-west, and separated from the open sea by a large peninsula, which takes its ordinary name from the town of Kola, built not far from its northern shore. The entrance to the White Sea is between Kanin Noss, on the peninsula, or rather island, of Kaninskaja Zemlia, which lies to the east, and Swatol Noss, a projecting cape of the peninsula of Kola. These two places are about 100 miles distant from each other. The gulf gradually grows narrower, and where it turns to the south-west it is hardly more than 40 miles wide. That portion of it which lies east and west is nearly twice as wide, and expands towards the south into two large gulfs—the Dwinskaja Guba, or Gulf of the Dwina, on the east; and the Oneskaja Guba, or Gulf of the Onega: both bays have received their names from the rivers which fall into their most south-eastern recesses. West of the Oneskaja Guba the White Sea terminates with an inlet, which is about 100 miles long, but has only a mean width of 25 miles, and runs to the north-west. It is called Kandalaskaja Guba, or the Gulf of Kandalask, from a small place of that name which lies near its innermost recess. The area of this sea is said to be about 44,000 square miles.

The White Sea is so far favourable to navigation that it has a considerable depth of water, with the exception of a sandbank which lies before the mouth of the Dwina, and occupies the greater part of the Dwinskaja Guba. This sandbank approaches the eastern shore

within about a mile, and remains about three miles distant from the southern shore. Large vessels therefore must keep near the shore, which is generally rocky and of moderate height, but may be safely approached, as the depth is seldom less than 20 fathoms. A bar lies across the entrance of the river Dwina, which at low-water has a depth of only 12½ feet, and at high-water from 14½ to 15 feet; at spring-tides it rises to 17 feet. But the sea is frequently covered with fogs, which are thick at a distance from the shore, but much less so as the coast is approached, which circumstance renders them less dangerous to shipping. The navigation is open for five or six months in the year.

Fish is more abundant in the White Sea than in any of the closed seas of Europe. Seals are very frequently met with on the shores. The white fish, as it is called by the whalers of Spitzbergen, or the beluga, or white whale, of authors and navigators, yields a valuable oil, and is met with in large shoals. Cod is taken in great quantities along the coast of the peninsula of Kola. Herrings are as numerous as along the coast of Norway. The *Salmo autumnalis* of Pallas enters, towards the end of the summer, the small lakes along the coast, and is much esteemed for its flavour. But the fishery carried on by the population on the shores of the White Sea is not limited to that sea. From Archangel, Mezen, and Onega many vessels are annually sent to the coasts of the Polar Sea, and especially to Spitzbergen and Nova Zembla, where they take whales of different kinds, seals, and the walrus.

In 1553 Richard Chancellor, with his ship belonging to the squadron of Sir Hugh Willoughby, who had been sent to discover a north-east passage to Cataia or China, arrived at St. Nikolaus, not far from the present town of Archangel, and by this voyage, and the negotiations which followed it, the empire of Russia was first opened to English enterprise, and the White Sea made known to Europeans. The principal trading-place in the White Sea is ARCHANGEL.

WHITEGATE. [CORK.]

WHITEHAVEN, Cumberland, a market-town, sea-port, parliamentary borough, and the seat of a Poor-Law Union, in the parish of St. Bees, is situated on the western coast, on a level inlet between rocky and precipitous cliffs, in 54° 33' N. lat., 3° 35' W. long., distant 38 miles S.W. from Carlisle, 294 miles N.N.W. from London by road, and 340 miles by the North-Western and connected railways *via* Carlisle. The population of the parliamentary borough in 1851 was 18,916. The town is governed by 21 trustees, elected triennially, who have also the management of the harbour. The borough returns one member to the Imperial Parliament. The living is a perpetual curacy in the archdeaconry of Richmond and diocese of Chester. Whitehaven Poor-Law Union contains 23 parishes and townships, with an area of 98,713 acres, and a population in 1851 of 35,579.

In the reign of Elizabeth, Whitehaven was a small fishing village, containing six houses. It is now a well-built town, with considerable commerce, and its shipping business is important. The town is lighted with gas, and is supplied with water from Ennerdale Lake. In the vicinity are extensive collieries, some of which are wrought to the extent of two miles under the sea. Some of the coal-seams are eight feet and others are eleven feet thick. The harbour is commodious; it is tidal, but by means of a pier, constructed by Sir John Rennie, there is a depth of nine feet of water at low tide. There is a patent slip for the repair of large vessels. The port possesses two forts for its protection, and also two batteries of 42-pounders, all of which were repaired after the piratical attack of Paul Jones in 1771. At the entrance of the harbour are two lighthouses. The manufactures are of sail-cloth, linen, check, earthenware, candles, soap, &c. There are large rope-works and extensive ship-building yards. Coal is exported, chiefly to Dublin and other Irish ports. Communication by steam-vessels is maintained with Liverpool, Belfast, Dublin, and the Isle of Man.

There are in Whitehaven three churches of the Establishment; chapels for Wesleyan, Primitive, and Association Methodists, Independents, English Presbyterians, United Presbyterians, Baptists, Quakers, and Roman Catholics; a Marine school; National, British, and Infant schools; a mechanics institute; a news-room and library; and a savings bank. The market-house is a neat building; there are a custom-house, a house of correction, an infirmary and dispensary, salt-water baths, and a theatre. Petty sessions and a county court are held. The market days are Tuesday, Thursday, and Saturday. A fair or great market is held on August 12th. The northern approach to the town is through a gateway of red freestone, above which is a railway for coal-waggons; and at the south-east end of the town is a castellated mansion of the Earl of Lonsdale, called the Castle.

The number and tonnage of vessels registered as belonging to the port of Whitehaven on December 31st 1854 were—Under 50 tons, 13 sailing-vessels, tonnage 335, and one steam-vessel of 37 tons; above 50 tons, 173 sailing-vessels, tonnage 29,540, and 4 steam-vessels, tonnage 879. During 1854 there entered and cleared at the port, inwards, 621 sailing-vessels of 27,969 tons, and 817 steam-vessels of 75,113 tons; outwards, 3223 sailing-vessels of 238,404 tons, and 381 steam-vessels of 73,047 tons.

WHITEHOUSE. [ANTRIM.]

WHITEHORN. [WIGTONSHIRE.]

WHITSTABLE. [KENT.]

WHITTINGTON. [DERBYSHIRE; SHROPSHIRE; STAFFORDSHIRE.]

WHITTLESEA, Cambridgeshire, a decayed market-town and the seat of a Poor-Law Union, is situated in 52° 33' N. lat., 0° 8' W. long., distant 80 miles N.W. by N. from Cambridge, and 78 miles N. by E. from London. The population of the town in 1851 was 5472. The livings are vicarages in the archdeaconry and diocese of Ely. Whittlesea Poor-Law Union comprises the parishes of St. Mary and St. Andrew, with an area of 25,131 acres, and a population in 1851 of 7687.

There are two parish churches in the town, but the respective bounds of the parishes are not known, and there is only one parochial register. St. Andrew's church is the larger of the two; St. Mary's church has a very fine tower surmounted with a spire. The Independents and Baptists have places of worship; and there are National schools, a public library and reading-room, and a literary institution. The market has been discontinued for upwards of 60 years; there are fairs on January 25th, June 13th, and October 26th. Whittlesea Mere, which is about 5 miles S.W. from the town, is noticed under HUNTINGDONSHIRE.

WHITWELL. [DERBYSHIRE.]

WHITWICK. [LEICESTERSHIRE.]

WIASMA. [SMOLENSK.]

WIBORG. [FINLAND; JUTLAND.]

WICK, Caithness-shire, Scotland, a royal and parliamentary burgh, sea-port and market-town, and the chief town of the county, is situated on the Bay of Wick, 140 miles N.N.E. from Inverness by road, in 58° 24' N. lat., 3° 5' W. long. The population of the royal burgh in 1851 was 1514; of the parliamentary burgh, 6722. The town is governed by a provost and 14 councillors, two of whom are bailies; and unites with Cromarty, Dingwall, Dornoch, Kirkwall, and Tain in returning one member to the Imperial Parliament.

The town of Wick has increased considerably of late years. Pulteneytown, which is situated on the opposite side of the harbour, and is connected with Wick by a bridge, has been entirely built within the present century. Wick is the chief seat of the herring-fishery in the north of Scotland. In the harbour there are, during the season, usually from 1500 to 2000 boats. The town is lighted with gas and well drained. It possesses the parish church, two Free churches, and chapels for United Presbyterians, Independents, Baptists, Original Seceders, and Roman Catholics. There is an academy in Pulteneytown; the parochial school is in Wick. There are a Free Church school, a savings bank, and a library. Rope- and sail-making and the dressing of flagstone for pavements are carried on. There are extensive docks at Pulteneytown. The vessels registered as belonging to Wick on December 31st 1854 were:—Under 50 tons 24, of 693 tons; and above 50 tons 21, of 1876 tons. During the year 1854 there entered and cleared at the port as follows:—Inwards, 766 sailing-vessels, tonnage 39,780, and 176 steam-vessels, tonnage 33,622; outwards, 910 sailing-vessels, tonnage 48,763; and 168 steam-vessels, tonnage 32,945.

WICKHAM-MARKET. [SUFFOLK.]

WICKLOW, a maritime county in the province of Leinster, Ireland, is bounded N. by the county of Dublin, N.W. and W. by Kildare, S.W. by the county of Carlow, S. by the county of Wexford, and E. by the Irish Channel. It lies between 52° 40' and 53° 14' N. lat., 6° and 6° 47' W. long.; its greatest length is 38 miles from north to south, and its greatest breadth nearly 33 miles. The area comprises 781 square miles, or 500,178 acres. In 1841 the population was 126,143; in 1851 it was 98,978.

Surface, Hydrography, and Communications.—The county of Wicklow is covered by the mountains which skirt on the south-east the great limestone plain of Central Ireland. The central part of the range consists of a mass of granite, protruding through the slate rocks. The slate rocks occupy the rest of the county on each side of the granite, and form mountains of somewhat less elevation on its flank, extending from the central part of the range on the one hand towards the sea; and on the other, towards the great central limestone plain, no part of which is in the county. Wicklow is altogether occupied by crystalline or schistose rocks.

The eastern flank of the Wicklow Mountains presents a varied aspect, being worn into deep glens and dells, which are lined with abrupt precipices or occupied by lakes, from which begin those narrow transverse valleys whose general course to the south-east is distinguished by the most beautiful and romantic scenery. The western flank, on the other hand, presents less variety, the glens and valleys, which exhibit fewer features of attraction, being more rounded and expanded. The rivers which arise in these have a general tendency towards a north-west direction; but on both sides of the central range the transverse valleys either merge into or cut across more expanded longitudinal vales by which the central range is flanked, and beyond which arise offsets or detached groups and parallel ranges of lower hills.

This mountain range cannot be considered as having a clearly-defined crest or ridge extending longitudinally, but it is intersected by its transverse valleys, so that the mountains which compose it are separated into groups. Their principal summits are as follows:—Kippure, 2478 feet; Seefingan, 2364 feet; Tonduff North, 2043 feet; Tonduff South, 2107 feet; Moan Bane, 2313 feet; Gravale, 2352 feet; Duff Hill, 2364 feet; Mullaghcleevaun, 2783 feet; Tonlagree, 2307 feet; Carrigeenduff, 2105 feet; Little Sugar-Loaf, 1120 feet, and Great

Sugar-Loaf, 1651 feet; Douce, 2384 feet; Table Mountain, 2302 feet; hill south-east of Table Mountain, 2495 feet; Lugnaquilla, the highest mountain in the county, 3039 feet; Croaghan Moira Mountain, 2175 feet, near Lugnaquilla; Keadeen, 2143 feet; and Croghan Kinahela, 1399 feet.

The outline of the coast is tolerably even. Just at the mouth of the Dargle, which separates the county of Wicklow from that of Dublin, is a shelving shore, on which, near Bray, are two Martello towers. About a mile south of the Dargle the coast rises into low cliffs, forming the little promontory of Bray Head. Along the remainder of the coast occur low cliffs, headlands, and sand-hills. The whole length of the coast may be estimated at about 36 miles. The only harbours are formed by the mouths of the rivers Dargle, Vartry, and Ovoca, and they are all unimportant.

The scenery of the county of Wicklow is pre-eminent for picturesque beauty. The Glen of the Dargle, a deep dark cleft or hollow, between two mountains, the sides of which are richly wooded, is a much admired spot, and, owing to its easy distance from Dublin, is much frequented. The Glencoreane, a feeder of the Dargle, forms a beautiful waterfall as it passes through the demesne of Powerscourt. The stream falls over a perpendicular rock at an elevation of 300 feet; it is more striking from its elevation and the rich verdure of the surrounding scenery than from the volume of water. The Glen of the Downs, about 4 miles from Bray, is a romantic opening between two mountains, the sides of which are covered with rich hanging woods, interspersed with rugged cliffs. The view up the glen northward is closed by the picturesque form of the Great Sugar-Loaf Mountain, the summit of which commands a noble view in every direction. The Devil's Glen, near Ashford Bridge, is a narrow pass between two mountains rising precipitously on each side of it, and has little more width than suffices for the passage of the river Vartry, which here flows in an eastward direction. The northern side of the glen is occupied by rich woods, with masses of rocks occasionally breaking through the foliage. The two sides of the glen present in their geological structure and appearance a marked correspondence. The glen, from its depth and narrowness, is dark and sombre in its character. At its upper or western extremity is a noble waterfall; the Vartry throws itself over a ledge of rock 100 feet high in one unbroken sheet into the hollow beneath, and presents, particularly when the stream is swollen by rains, a spectacle of great magnificence. Glenmacanass is a valley amid the mountains, of which Tonelagee is the highest. A curved precipice partly incloses a vast hollow into which the river Avon-More (which waters the valley) falls over the brow of the precipice. Above the waterfall at some distance Tonelagee is broken into many bold granitic precipices. Under one of these precipices, from 400 to 500 feet high, is the small circular lake or tarn Ouler, at an elevation of 1828 or 1830 feet above the level of the sea. The military road made after the insurrection of 1798 runs through this valley. The valley of Glendalough is watered by the Glencole, which joins the river Glendassan, and falls with it into the Avon-More. The valley extends east and west, and is inclosed on the north and south sides by lofty, barren, and inaccessible mountains, which unite and close the western or upper end of the valley, presenting granitic or mica-slate precipices 500 feet high. The river tumbles over the rocks at the west end so as to form a cascade, and then expands into two lakes: the upper lake is about a mile long and nearly a quarter of a mile wide, and about 440 feet above the level of the sea; the lower lake is about 435 feet above the level of the sea, only about a quarter of a mile long, and about half that distance wide. Adjacent to this lake, at its lower end, are the ruins of the seven churches of Glendalough and various other antiquities. Glendassan opens into the valley of Glendalough, or rather the three valleys, Glenmacanass, Glendassan, and Glendalough, all open near the same point into the wider valley of the Avon-More, which may be regarded, with reference to its direction, as a prolongation of Glenmacanass. Glendassan is inclosed on both sides by steep and lofty hills; near its upper end is the lake or tarn Nahanagan, half a mile long, and nearly as wide, about 1380 feet above the level of the sea. Glenmalure is to the south-west of the three glens just noticed. It extends 8 or 10 miles in a south-eastern direction, having the Table Mountain at its upper or north-west end, and on the west the mountains of Croghan Moira. The mountains rise with considerable steepness 600 or 800 feet above the valley, and more than 2000 feet above the level of the sea. Lugnaquilla rises on the south-west of the valley, but not immediately adjacent to it, 2500 feet above the bottom of the valley at the lead-works, or more than 3000 feet above the level of the sea, having at its top a cromlech called 'Pierce's Table.' Near the upper end of the glen is a waterfall formed by the Avon-Beg (or, as it is called in the upper part of its course, the Eas), which waters the valley. The fall is broken by projecting crags, and loses itself in a succession of rapids in the hollow beneath. Glenmalure is characterised by the absence of trees, which imparts to it an air of peculiar sterility and desolation. There are lead-mines in Glenmalure. A bridle road over a gap in Table Mountain leads from Glenmalure to the Glen of Imale, a circular valley, surrounded by lofty heights, Lugnaquilla being the highest, and Baltinglass Hill (1256 feet) the lowest. This valley is about 3 miles in diameter, and is a scene of calm and rich beauty, nearly all the surface being made available, the upper parts of the mountains

for pasturage, the bottom for arable. From a tarn high up the northern side of Lugnaquilla, the Slaney issues and flows through the glen.

The picturesque beauties of the Vale of Ovoca, or Avoca, have been celebrated in Moore's 'Irish Melodies.' In his song 'The Meeting of the Waters' he has commemorated the junction of the Avon-More and Avon-Beg, which unite to form the Ovoca. In a note to the song, Mr. Moore speaks of the junction of 'the rivers Avon and Avoca.' This however is not correct. The name Avoca, or Ovoca, is not given except to the united stream; the constituent waters are both called Avon, one the Avon-More (or Great Avon), and the other the Avon-Beg (or Little Avon). The Avon-Beg is a rapid stream rolling over a rocky bed. The Avon-More has a gentle current. About 3 miles below Newbridge is a second 'meeting of the waters,' equal in beauty to that celebrated by Moore. Indeed there has been some dispute which of the two formed the poet's subject; and in his published 'Diary' he owns that he "wrote the song at neither place, though he believes the scene under Castle Howard [the upper meeting] suggested it." The lower meeting is constituted by the brawling mountain stream the Daragh, Derry, or Aughrim, and the stiller stream of the Ovoca.

The central mountain range divides the county into two slopes, the eastern and the western. The first is drained by the Dargle, the Vartry or Fartrey, the Three Mile Water, the Potter's River, and the Ovoca: the western by the Liffey and the Slaney, with their respective affluents. These two last-mentioned rivers, although draining the western slope, afterwards turn eastward, and passing through openings in the mountain range, fall into the Irish Channel, as well as the rivers which drain the eastern slope. The Dargle rises to the north-west of Douce or Djouce Mountain, and flows first east, then north, then north-east into the Irish Channel below Bray. In its upper part above the junction of the Glencree, it is called the Glencoreane. The Vartry rises on the eastern slope of Douce Mountain, and flows first east, then south, then south-east into the Irish Channel, below the town of Wicklow. It waters the Devil's Glen. It approaches very near to the sea, about two miles north of its present mouth, but being prevented from flowing into it by the ridge of sand or beach which here lines the shore, expands into a narrow lagoon above two miles long, called 'Broad Lough,' at the southern or lower end of which it flows into the sea. The long tongue of land intercepted between this lagoon and the sea is called the Murrrough, or Murragh, and is partly occupied by the Wicklow racecourse. The Three Mile Water has a course of 6 miles, and Potter's River of 7 miles. The Ovoca is formed by the junction of the Avon-More and the Avon-Beg. The Avon-More rises on the south-east slope of Duff Hill, and passes through Lough Dan; it receives on the left bank the Annamoe, which rises in Croghan Pond, a little lake 1770 feet above the level of the sea, passing through Lough Tay, an oval lake, the longer diameter of which is about half a mile, elevated 807 feet above the level of the sea, and surrounded by steep, abrupt, and wooded heights. Lough Dan, through which the Avon-More flows, is nearly two miles long from north-west to south-east, and about three furlongs across at the broad-east part; it is about 630 feet above the level of the sea. From the junction of the Avon-More and the Avon-Beg, the river now called Ovoca flows nine miles into the sea below Arklow, receiving on its right bank the Aughrim, which passes through a pretty glen of the same name, into which the Gold-Mine River and the Ow both fall. The Ow rises on the eastern slope of Lugnaquilla. The Liffey rises in a bog near Croghan Pond, and runs first west-north-west, then south-west (partly within and partly upon the border of the county), to the place where it quits the county altogether to enter that of Dublin, to which it chiefly belongs. It receives the King's River, between Blessington and Ballymore Eustace. The Slaney rises on the northern slope of Lugnaquilla, and flows in a winding channel westward to a little below the junction of the Carrigower: it then turns south, and flows by Baltinglass into the county of Carlow, to which county, and to the county of Wexford, the lower part of its course belongs. It receives on the left bank, above the bend, the Little Slaney, from the western slope of Lugnaquilla, and the Carrigower from the north-west slope of Slieve Gadoe, on the right bank. The Derry River has its source, and a considerable part of its course, within or upon the boundary of this county. It joins the Slaney soon after quitting this county, near Clonegall on the border of the counties of Wexford and Carlow.

Most of the lakes have been noticed in connection either with the scenery or the rivers. Upper Lough Bray and Lower Lough Bray are mountain lakes in which two feeders of the Glencree have their respective sources; the first is 1453 feet above the level of the sea, and has an area of more than 28 acres; the second is 1225 feet above the level of the sea, and has an area of nearly 65 acres.

The chief roads of Wicklow county are, the Dublin and Wexford mail-road, which enters the county at Bray, and runs southward by Delgany, Newtown-Mount-Kennedy, Ashford Bridge, Rathdrum, and Arklow into the county of Wexford; a branch road from this in the neighbourhood of Ashford Bridge to Wicklow; a road from Wicklow to Arklow; a road branching off at Rathdrum, by Talbotstown to Carlow; a road from Dublin to Carlow on the western side, by Blessington, Hollywood, Stratford-on-Slaney, and Baltinglass; a road

from Dublin to Glendalough, by Enniskerry and Annamoe; a road from Blessington to Naas; and the military road from Rathfarnham to Ashavanagh, by Glencree, Glendalough, Laragh, and Drumgoff. The other roads have been considerably improved of late years.

Geology, Mineralogy, &c.—The mass of granite which forms the surface-rock of the central district, occupies a tract of varying breadth, from 7 to 14 miles, and is the fundamental rock on which the other formations rest; it protrudes in isolated portions in the districts occupied by the slates. The granite is in general remarkably pure, and free from minerals not essential to its composition. It varies much in the size of the grain; some of the largest grained and most beautiful occurs in Glencree, in the northern part of the county, amid the mountains north of the Dargle; some of the finest grained, remarkably firm and compact, is found in the Glen of Imale, at the northern side of Keadeen Mountain. The granite is not unfrequently porphyritic, as in Glencree and Glenmacanass. Schorl, tourmaline, garnet, beryl, rock-crystal, epidote, heavy spar, magnetic iron-ore, galena, copper and iron pyrites, and other minerals are found in small portions. Contemporaneous veins of granite, and less frequently of quartz, are found in the granitic mass. Granite of later formation is occasionally found alternating with the rocks which rest on the fundamental granite.

The mica-slate district on the eastern flank of the granite is in general narrow, never exceeding 3 or 4 miles in breadth: it generally passes into clay-slate, by which it is bounded on the east side throughout its course in this county. Hornblende and hornblende-slate, grenatite, emery, andalusite, hollow-spar, talc-slate, which is quarried for chimney-pieces, hearthstones, gravestones, &c., and veins of quartz, occasionally occur in the mica-slate district. The mica-slate on the cap of Kealeen dips 65° to the south-east, and is remarkably full of andalusite. Brissetown Hill consists of mica-slate and trap-rocks, namely, fine granular greenstone, greenstone-slate, and greenstone-porphry. Mica-slate and granite are found alternating near Kilranelagh.

The clay-slate on the eastern flank of the granite occupies nearly the whole of that part of the county which lies east of a line drawn from the junction of the Dargle and Glencree rivers, south-south-west to Tinahely, Shillelagh, and Clonegall in Carlow county. This clay-slate is in different parts associated with granite, mica-slate, quartz-rock, flinty slate, grauwacke-trap, and porphyry. The strata in the northern part of the clay-slate district, near Bray, are much inflected, but in the middle part, and southern part, so far as concerns this county, they are tolerably regular, dipping to the south-east. In some places the granite acquires a sienitic character; in others it passes into a true felspar-porphry; and in others the felspar and mica are so intimately blended as to constitute an apparently homogeneous mineral, in some cases resembling some varieties of the trap-rocks, and in others verging in aspect and texture towards clay-slate. Near Danganstown, south-west of Wicklow, masses of greenstone and quartz rock are found, gradually passing into hornstone and compact felspar. A mass of greenstone, inclosing a bed of roofing-slate, which is quarried, is found near the Avon-More; and quartz-rock in combination with clay-slate, and abounding in contemporaneous veins of pure white quartz; granite, greenstone, and greenstone-slate, alternating with clay-slate, occur in several places. Arklow rock (411 feet high) on the coast, just south of Arklow, consists of trap rocks, as greenstone, felspar, felspar-porphry, and a variety of trap well entitled to the name of basalt, very similar to the basalt of the Giant's Causeway. Quartz-rock forms the masses of the Great and Little Sugar-Loaf, and of the hill above Bray Head. The clay-slate of the western flank of the granite occupies the most of that part of the county which lies west of the Liffey, the King's River, and the Slaney; grauwacke is found in combination with it.

The rocks on the eastern flank of the granite abound in metals, while on the western flank there is a total absence of them. In the granite and mica-slate districts the metallic substances are found in veins; the clay-slate district has metalliferous beds, and contemporaneous veins or alluvial deposits. In the granite and mica-slate, galena, green and white lead-ore, and copper pyrites are found. The ore is smelted in small blast-furnaces, with the aid of turf, lime, and a small portion of the purest blind-coal; the lead is obtained by a single operation, and is fit for all the purposes of the plumber. The principal lead-mines are in Glenmalure.

The metals obtained from the clay-slate tract are gold, silver, copper, iron, lead, zinc, tin, tungsten, manganese, arsenic, and antimony. The metalliferous portion of the clay-slate district is small, extending in length only from the border of the county at Croghan Kinshela, 10 or 11 miles in a north-north-east direction, and having but a small breadth. The discovery of native gold near Croghan Kinshela Mountain took place about 1796, but the quantity found was very small. Some gold has been found in streams near the mountain Croghan Moira. Copper pyrites, iron pyrites, and black copper-ore are found and wrought at Cronbane and Ballymurtagh, near the Avon-More. The mines employ about 1000 men. Native silver, minutely disseminated, sometimes in particles, sometimes in filaments, was found in the middle of the last century in a brown indurated oxide of iron at Cronbane. Lead is found and worked at Ripplagh, or Laganure, near Glenmalure.

Climate, Soil, and Produce.—The climate of Wicklow is nearly similar to that of Wexford; it is said to be somewhat drier than the county of Dublin. The nature of the soil varies considerably; in the mountainous parts it is thin and poor, but dry, and there is a large proportion of bog. In a great part of the lowlands, a rich light black mould rests on a subsoil of gravel or sand, or, sometimes, of yellow clay: this is generally tolerably dry; but a considerable quantity of the valley lands, and the low-lying bog, much require draining. In the north-eastern parts of the county the soil is peculiarly intermixed with small nodules of limestone, imbedded in marl or gravel. Dairy-farming, grazing, and the growing of corn, chiefly oats, are the principal objects of the farmer, and raise potatoes that of the farm-labourer or cottier. The land on the coast is moderately fertile. The county has no peculiar breed of cattle, sheep, or pigs, but all these kinds of stock have been greatly improved of late years. In 1853 there were under crop 118,002 acres, of which 4738 acres grew wheat; 37,947 acres oats; 5465 acres barley, let rye, peas, and beans; 9842 acres potatoes; 5246 acres turnips; 111 acres other green crops; 4 acres flax; and 53,268 acres were meadow and clover. In 1841 the plantations covered 23,945 acres yielding chiefly oak, ash, and fir. On 8015 holdings, in 1852, the aggregate stock was 11,564 horses, 3413 mules and asses, 67,428 head of cattle, 139,235 sheep, 19,972 pigs, 5825 goats, and 141,140 head of poultry.

The fishery along the coast is prosecuted to some extent. Oysters are taken off Arklow Bank, and herrings, cod, mackerel, and other fish, are found within a distance of from 5 to 8 miles from the coast. Arklow and Wicklow are the chief fishing-ports, but neither is good or convenient as a harbour, and the fishery is not very actively prosecuted.

The villas and mansions in Wicklow county are numerous and many of them handsome; and the demesnes are highly cultivated.

Divisions, Towns, &c.—The county is in the dioceses of Dublin and Glendalagh, with small parts in those of Leighlin and Ferns, and contains 59 parishes. It is divided into eight baronies:—ARKLOW, Ballinacor north and south, Newcastle, Rathdown, Shillelagh, and Lower and Upper Talbotstown. The principal towns are WICKLOW and ARKLOW, which with BALTINGLASS, RATHDRUM, and SHILLELAGH are noticed under their respective names. The following are some of the towns and villages, with the population of each in 1851.

Blessington is a neat market- and post-town, on rising ground, near the banks of the Liffey, 14 miles S.S.W. from Dublin: population, 514. In the middle of the town the street expands into a market-place. The church is a handsome small modern building, with a steeple. There are in the town a police barrack, a dispensary, and a loan-fund office. The market is on Thursday, and there are three yearly fairs. Petty sessions are held monthly. Blessington returned two members to the Irish Parliament, but it was disfranchised at the Union. *Bray* is a market- and post-town, standing on both sides of the river Liffey, near its mouth, 12 miles S.E. from Dublin: population, 1554. It is partly in the county of DUBLIN, under which head a notice of the town appears, vol. ii., col. 813. *Carnes* is a neat little market- and post-town on the borders of Wexford county, about 8 miles S. from Tinahely: population, 982. There is a castle which tradition states to have been battered by Cromwell in his march from Dublin to Wexford, but which has since been roofed and repaired. The church is a handsome building, with an embattled tower and spire, and there are chapels for Wesleyan Methodists and Roman Catholics, a dispensary, a loan-fund office, a police station, and a school. Petty sessions are held monthly, and there are eight yearly fairs, four of them considerable horse and cattle fairs. *Dalgany* is a small village and post-town about 2 miles S.E. from Bray: population, 214. It is situated near the elegant mansion and grounds of Bellevue, which form one side of the Glen of the Downs, the seat of the Latouches. The church, a gothic edifice with a steeple 90 feet high, and the school-house, were built by the Latouche family. In the village is a fever hospital. *Donard* is a small post-town on the Slaney, near its source in Slieve Gadoe, about 4 miles N.E. from Stratford-on-Slauey: population, 323. There are a church, a Roman Catholic chapel, many good houses, and the ruins of an old church, burned during the rebellion of 1793. *Dunlavin*, or *Dunlavan*, is a market- and post-town, about 5 miles N.W. from Donard: population, 757. Several of the houses are well built, and there are a neat church of modern erection, a market-house, a Roman Catholic chapel, a school-house, a police station, and a dispensary. Petty sessions are held monthly, and there are six annual fairs. *Enniskerry* is a beautifully-situated village and post-town, on a rapid mountain stream falling into the Dargle River, 12 miles S. from Dublin, on the road to Glendalough: population, 380. There are a school-house, a fever hospital, and a dispensary; also a number of cottages in the old English style erected by Lord Powerscourt. The romantic scenery of the neighbourhood draws many persons from Dublin. Powerscourt demesne, with its spacious and splendid mansion of hewn granite, adjoins the town. Near Enniskerry are the demesne and house of Tinnehinch, which were purchased by the Irish parliament and presented to the late Henry Grattan. *Kilcoole* is a small village on the road from Bray to Wicklow, near the sea, about 2 miles N. from Newtown-Mount-Kennedy: population, 383. There are a church in ruins, a Roman Catholic chapel, and three or four schools. Two fairs

are held yearly on the village green, where is a detached rock, from the summit of which a good view of the surrounding country is obtained. *Newbridge* is a hamlet and post-town on the *Ovoca*, about 5 miles N. from *Arklow*. There are a Roman Catholic chapel and a tourists' hotel; and in its neighbourhood *Castle M'Adam* church, the lead-mines of *Ballymurtagh* and *Cronbane*, a number of mansions and villas, and some of the loveliest scenery of the county. *Newtown-Mount-Kennedy* is a small market- and post-town on the mail-road to *Wexford*, about 10 miles S.W. from *Bray*: population, 717. There are a church, a market-house, a dispensary, a loan-fund office, and a school-house. There are six yearly fairs. Petty sessions are held monthly. The town is chiefly noticeable as being a central station for tourists. *Redcross*, a village and post-town on the road from *Rathdrum* to *Arklow*, about 6 miles N. from the latter town: population, 267. There are a church and the ruins of another church, two schools, a dispensary, and a police station. Petty sessions are held monthly, and there are seven yearly fairs. *Stratford-upon-Slaney* is a small manufacturing, market- and post-town, about 4 miles S.W. from *Donard*: population, 237. This town is of modern origin, having been founded in 1790 by the then Earl of *Aldborough*, after whose family name it was called. The town chiefly consists of one principal street, having in the course of it two large open spaces, one an oval, the other a square, which latter the main street crosses diagonally; there are two or three smaller streets branching from the main street at right angles at the open spaces. It contains a neat church, and chapels for Roman Catholics and Presbyterians. Near the town is a fever hospital. *Tinahely*, about 52 miles S. from *Dublin*, is a market- and post-town on the road from *Rathdrum* to *Carnew*, about 8 miles S.W. from *Aughrim*: population, 562. The town was destroyed in the insurrection of 1798, and has since been neatly rebuilt, partly at the expense of Earl *Fitzwilliam*, the lord of the manor. It consists of three streets meeting in the market-place. There are a market and court-house, a police barrack, a bridewell, and a dispensary. There are also a large flour-mill, a tannery, and a soap manufactory; and 13 yearly fairs are held, chiefly for cattle and pigs. The quarter sessions for the district are held here, and petty sessions are held monthly.

The county returns two members to the Imperial Parliament. It is in the *Leinster* circuit. The assizes are held in the town of *Wicklow*, where are the county jail and an infirmary. Quarter sessions are held there, and at *Arklow*, *Bray*, *Balinglass*, and *Tinahely*, which last two towns have each a bridewell and infirmary. Petty sessions are held in 14 places. The district lunatic asylum, which admits 27 patients from the county, is in *Dublin*. The fever hospitals are at *Arklow*, *Bray*, *Delgany*, *Enniskerry*, *Newtown-Mount-Kennedy*, *Stratford-on-Slaney*, and *Wicklow*. There are 20 dispensaries in the county. *Arklow*, *Balinglass*, and *Bray* have savings banks, and there are loan-funds at *Balinglass*, *Imail*, *Kiltegan*, *Moyno*, and *Wicklow*. The union workhouses are at *Balinglass*, *Rathdrum*, and *Shillelagh*. The county is in the military districts of *Dublin* and *Kilkenny*. The staff of the county militia is stationed at *Arklow*. The police force, numbering 232 men and officers, has its head-quarters at *Wicklow*, and is distributed over six districts, comprising 34 stations. In September, 1852, there were 71 National schools in operation in the county, attended by 3468 male and 3304 female children.

History and Antiquities.—This county appears to have been included in the dominions of the *Cauci* of *Ptolemaeus*. The *Slaney* was perhaps the *Modonus* of *Ptolemaeus*, and the *Ovoca* may be safely identified with the *Ovoca* of the same writer. In the Anglo-Norman invasion (1169) the city of *Glendalough* was taken without resistance, and plundered and burned. In the division of lands among the invaders *Wicklow* was assigned to *Maurice Fitzgerald*. In the division of *Leinster* and *Munster* into shires by *King John*, what is now the county of *Wicklow* was included in that of *Dublin*, and was not formed into a separate county until the government of the lord-deputy *Sir Arthur Chichester*, in the reign of *James I.*, 1605. The native sept appear to have preserved a precarious independence in the mountains; of which the separate continuance of the bishopric of *Glendalough* for nearly 300 years after the attempt of the Anglo-Norman government, with the aid of the Pope's legate, to suppress it, is an indication. Castles were built to restrain them, but with little effect. In the time of *Elizabeth*, *Pheagh*, or *Feagh M'Hugh*, chief of the *O'Byrnes*, was in rebellion against the government, but in 1596 he was defeated, and in 1597 slain. The natives joined in the great insurrection of 1641, and were in the sequel subdued by *Cromwell* in his march toward the south.

In the insurrection of 1798 the *Wexford* insurgents entered the county from the south, but were beaten at *Arklow* by *General Needham* and *Colonel Skerrett*: this was one of the most important actions of the war, as it prevented the insurgents from advancing upon *Dublin*.

The principal antiquities that have not been noticed in the localities where they occur, are those of *Glendalough*, or more properly the *Seven Churches*, as the former name is now applied to the glen, which we have already described.

In this valley *St. Coemgene*, *Kevin*, or *Kevin*, a young man of noble birth, born A.D. 498, took up his abode, and afterwards founded an abbey, under the invocation of *St. Peter* and *St. Paul*, over which he presided as abbot and bishop. *St. Kevin* died in 618, aged 120, and his festival is kept on *June 3rd*. The abbey suffered much in subse-

quent years. It was burned once or twice by accident, and repeatedly soaked or burned by the Danes or others. Notwithstanding these disasters the religious establishments in the glen went on increasing, and the jurisdiction of its bishops extended even to the walls of *Dublin*. About the middle of the 12th century the ecclesiastics began to desert the place, and the see was united in 1214 to that of *Dublin*. The see however continued to exist either by usurpation or papal appointment, and the bishops were supported by the natives. *Denis White*, the last titular bishop, resigned his claims in 1491, and the see has been ever since united to that of *Dublin*. The ruins of many of the ecclesiastical buildings remain. The easternmost are the ruins of the priory of *St. Peter* and *St. Paul*, otherwise the priory of *St. Saviour*, on the south side of the united stream of the *Glencalo* and *Glendassan*: the priory has been a building of more elegant design and richer embellishment than any other building in the valley, but the remains are very imperfect. On the opposite or north side of the stream, a little more to the west, are the ruins of *Trinity* church, sometimes called *Ivy* church, from its being overgrown with *ivy*. A short distance west of *Trinity* church is a small paved area, said to have been the market-place of the city, with a base of masonry on which the market-cross is said to have stood. From this area a paved causeway, the remains of which may be traced in several places, formerly led up the valley of *Glendassan*: traces of a road leading up the valley of *Glendalough* may also be seen in one or two places. To both these roads the name of *St. Kevin's Road* is given. Close to the market-place the river *Glendassan* is crossed by a ford and by stepping-stones; there was anciently a bridge; and opposite to the market-place, on the south side of the *Glendassan*, on the tongue of land between that and the *Glencalo*, are the ruins of the cathedral and of several other churches. The ruins of the cathedral, of what is called the *Priest's Church*, of a 'cloigtheach,' or round tower, and of several crosses, are in an inclosed burial-ground, entered, immediately on crossing the *Glendassan*, by a gateway with a semicircular arch. The remains of the cathedral consist of parts of the nave and choir; the nave was 48 feet long by 30 feet wide, and was united to the choir by a semicircular arch, now fallen down. The semicircular east window of the choir, adorned with a chevron moulding, and having on its impost sculptures of some of the traditional adventures of *St. Kevin*, and three windows on the south side of the nave, remain. The crosses in the graveyard are mutilated; one of them, formed of a single block of granite and neatly sculptured, is supposed to be the market-cross, removed from its base in the market-place. The round tower is in the north-west corner of the graveyard; it is 15 feet in diameter at the base, and tapers very gradually to the summit: it is 110 feet high. Originally it was crowned by a conical roof, but that is gone. Since the publication of *Mr. Petrie's 'Essay on the Round Towers of Ireland,'* there is a growing belief that these remarkable buildings were erected by the Christian ecclesiastics who were settled in Ireland at a very early period. *Mr. Petrie* thinks they were intended to serve at once for keeps, or places of security from marauders, and for belfries. In the inclosures which immediately adjoin the graveyard of the cathedral is a church with a stoue roof, commonly called *St. Kevin's House*, or *St. Kevin's Kitchen*, by far the most perfect of all the ancient buildings in the valley. It is nearly 23 feet long and 15 feet wide inside, and has a semicircular vaulted roof, with an opening into a small round tower or belfry, covered in with a conical cap rising 45 feet from the ground, similar to those of the ancient round towers. The roof of the church is a high-ridged roof externally, rising 30 feet from the ground; at the west end of the church is a small chapel of somewhat later date, with a roof of lower pitch. The sites of two other churches may be traced in this and the adjoining inclosure. A short distance westward from the cathedral are the ruins of *Our Lady's Church*, a small building of more ornamental character than most of the others, and covered with *ivy*, from which circumstance it is sometimes called *Ivy Church*. Scattered in the valley are the remains of stone crosses and two or three small earthen forts. On the bank of the *Lugduff Brook*, which flows into the upper lake, in the midst of a plantation, are the ruins of *Refcart* or *Rhefart Church*. On the south side of the lake are the ruins of another church called *Templenaskellig*, or *Teampall-na-Skellig*, otherwise *Dysart-Kevin*. A small chapel or crypt near the abbey church, discovered in the latter part of the last century, is supposed to have been the tomb of *St. Kevin*. *St. Kevin's Keep* and *St. Kevin's Well*, in the neighbourhood, are connected by tradition with the saint.

WICKLOW, the capital of the county of *Wicklow*, a market- and post-town and seaport, in the parishes of *Kilpoolo*, *Drumkay*, and *Rathnew*, is situated on the right bank of the estuary of the *Vartrey*, which here forms a small port, in 52° 58' N. lat., 6° 3' W. long., about 20 miles S. from *Bray*, 32 miles S.S.E. from *Dublin*. The population in 1851 was 3141.

Wicklow is supposed to have been occupied as a naval station by the *Ostmen* or *Danes* before the Anglo-Norman invasion. *Maurice Fitzgerald*, one of the Anglo-Norman invaders, began to build a castle here. In 1310 the town was burned by the Irish. In 1375 the town was put into a state of defence by one of the *Fitzwilliams*, in whose family the constablership of the castle long continued. In the early part of the 16th century the castle and town were occupied by the native sept of the *Byrnes*, but were soon afterwards surrendered by them to the English government.

The estuary of the Vartrey, which is called Brom Lough, is separated from the sea by a long and narrow slip of land, called the Murrough, which at its southern end bends to the west, and approaches so close to the shore, that a bridge crosses it, and leads to a suburb. At the northern end of this slip is the race-course. The town extends along the estuary for above half a mile. At the eastern end of the town, on a steep rock or cliff projecting into the sea on the south side of the mouth of the river, are some trifling remains of the castle, called Black Castle. In the centre of the town are the ruins of a Franciscan friary, founded in the reign of Henry III. The church of the Wicklow union (which comprehends the three parishes in which the town is situated, and those of Glenealy, Killiskey, and Kilcommon) is on the north-west side of the town, near the river. The south door has a fine Norman arch, the remains of the ancient structure; but nearly all the rest of the building is of modern date: it has a tower and a copper cupola added in 1777. Near the church is a school-house. There are meeting-houses for Wesleyan Methodists and for Quakers, also a Roman Catholic chapel, two school-houses, a fever hospital, an infirmary, a loan-fund office, a county jail and court-house, a post-office, and a police station. Vessels drawing from seven to eight feet water can enter the harbour at ordinary tides. There are two lighthouses on Wicklow Head, a mile and a half south-east of the town. There is a coast-guard station at Wicklow. Corn and some copper- and lead-ore are exported; and coal, culm, limestone, timber, and iron are imported. A few small vessels of from 35 to 100 tons and some small craft belong to the port. Wicklow was incorporated by charter of 11 James I., and sent two members to the Irish parliament before the Union; at which time it was disfranchised. The assizes for the county, and quarter and petty sessions, are held in Wicklow.

WICKWAR. [GLOUCESTERSHIRE.]

WIDIN, a fortified town in Turkey, capital of Upper Bulgaria, is situated on the right bank of the Danube, opposite the straggling village of Calafat on the left bank, about 130 miles E.S.E. from Belgrade, and has a population of about 25,000. The fortifications, which were previously decayed and weak, were repaired and greatly strengthened by the Turks in 1853-54. The town contains pretty wide streets for a Turkish town; many mosques surmounted with graceful minarets; small bazaars, &c. It is the residence of a Greek bishop, and of the pasha of the province of Widin. The trade of the town is in rock-salt, corn, wine, and agricultural produce. The Austrian Danube steamers put into Widin. The inhabitants of Widin consist of Turks, Greeks, and Armenians: the Christians inhabit suburbs outside the line of the fortifications.

WIELICKZKA. [GALICIA, Austrian.]

WIELUN. [POLAND.]

WIERINGEN. [HOLLAND.]

WIESBADEN. [NASSAU.]

WIGAN, Lancashire, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parish of Wigan, is situated in 53° 33' N. lat., 2° 38' W. long., distant 40 miles S. by E. from Lancaster, 200 miles N.W. by N. from London by road, and 194½ miles by the London and North-Western railway. The population of the municipal and parliamentary borough, which are coextensive, was 31,941 in 1851. The borough is governed by 10 aldermen and 30 councillors, of whom one is mayor; and returns two members to the Imperial Parliament. The living is a rectory, in the archdeaconry of Liverpool and diocese of Chester. Wigan Poor-Law Union contains 20 parishes and townships, with an area of 47,018 acres, and a population in 1851 of 77,539.

Wigan is a place of considerable antiquity. The old part of the town is chiefly on the right bank of the river Douglas; the suburb of Scholes, which is modern, is on the left bank of the river. The town is supplied with water, and is lighted with gas. Besides the parish church, a handsome structure of ancient date, seated on the brow of the hill, there are St. George's church, erected in 1781, and St. Catherine's, built in 1841. There are chapels for Wesleyan Methodists, Independents, Baptists, English Presbyterians, and Roman Catholics; a Free Grammar school; a Blue Coat school; National schools; Infant schools; a mechanics institute, library, and museum; news-rooms; a savings bank; and a dispensary. The town-hall, built in 1720, and the moot-hall, are in the market-place. A large brick edifice, called the Commercial Hall, 102 feet by 66 feet, erected in 1816, is for the use of the manufacturers on market-days. The market-days are Monday and Friday, and there are annual fairs on Holy Thursday, June 27th, and October 28th.

The manufactures of the place comprise linens, calicoes, checks, fustians, the spinning of cotton-yarn, and other branches of the cotton manufacture. Iron- and brass-foundries, chemical works, manufactories of spades and edge tools, and corn- and paper-mills, give considerable employment. There are extensive collieries in the neighbourhood. The Leeds and Liverpool Canal, which passes through the town, gives it the advantage of water communication with Yorkshire and many parts of Lancashire, and, by the Lancaster branch of this canal, with Westmorland. Several lines of railway meet at Wigan, by which communication is afforded with all parts of the country.

Wigan has received nine royal charters, the first of which was granted by Henry III., in 1246. Quarter and petty sessions and a

county court are held. There are several sulphureous springs in the parish.

WIGBOROUGH, GREAT. [Essex.]

WIGHT, ISLE OF, on the south coast of England, is separated from the mainland of Hampshire by a channel called the Solent. The average breadth of this channel is less than four miles. It is narrowest to the west of Yarmouth, where it is contracted to about a mile by a narrow tongue of gravelly beach which runs out nearly three miles from the Hampshire coast, and on the extremity of which is situated Hurst Castle. This narrow part of the channel is extremely deep. From Yarmouth to near West Cowes the width is from three to three miles; it is here contracted to a mile and a half, but opens out opposite to Southampton Water to about five miles; it then becomes narrower as it approaches Spithead, where the entrance to the channel from the east is from two to three miles. The current through the channel, both with the rising and ebbing tide, is extremely strong.

The form of the island is that of an irregular rhomboid or lozenge. The Needles Cliff, at the western extremity of the island, is in 50° 41' N. lat., 1° 34' W. long.; the Foreland, at the eastern extremity, is in 50° 41' N. lat., 1° 5' W. long. West Cowes Castle, north, is in 50° 41' N. lat., 1° 17' W. long.; St. Catherine's Point, south, is in 50° 41' N. lat., 1° 18' W. long. The longer diameter, from the Foreland to the Needles Cliff, is not quite 23 miles; the shorter diameter, from West Cowes on the north to St. Catherine's Point on the south is scarcely 18 miles; the circumference is about 56 miles, and the area is about 1,500 acres, or about 155 square miles. The population in 1851 was 42,000.

Coast and Surface.—The coast of the Isle of Wight consists for the most part of precipitous cliffs or steep slopes. The north coast is more than the south.

The surface of the Isle of Wight is for the most part at a great elevation above the sea. A range of high chalk downs extends with some interruptions and irregularities, from the Culver Cliff east to the Needles west. In this chalk range there are three principal depressions: between Yaverland and Brading, three-quarters of a mile wide through which the eastern Yar flows; between St. George's Down and Carisbrooke, half a mile wide, through which the Medina flows; and at Freshwater Gate, hardly 100 yards wide, through which the Western Yar flows. Besides these principal depressions, several others, from 100 to 200 feet deep, divide the range into a series of long eminences. The highest point of the chalk range is Mottiston Down, 698 feet above the sea. The south side of the island consists of a high range of downs, the upper part of which, on the west, is part of the chalk ridge; on the south, is chalk in horizontal strata; on the east, is green sandstone and iron sand. A broad valley separates the lofty range of south downs from the central chalk ridge. The north side of the island, which is in general less elevated than the south side, consists of a great variety of wooded hills and valleys.

The most extensive of the valleys is that of the Eastern Yar alluded to above, which comprises a large portion of the most fertile land in the island. The basin of the Medina, which is in general very narrow, forms a central valley. The south-western valley is bounded on the east by St. Catherine's Hill, on the west by the sea, on the north by the chalk ridge. On the north-east are a number of small valleys which open separately into the sea; that of the Wootton River is the most extensive. Another series of separate valleys, but more flat and marshy than the north-eastern, forms a north-western valley which is bounded on the west by the high land of Colwell Bay and Totwell Bay. Last and least is the singular valley of Freshwater, in which the Western Yar rises within a few yards of the south coast, and running into the sea at Yarmouth on the north coast, almost makes a distinct peninsula of the western end of the island.

The highest part of the island is St. Catherine's Hill, the summit of which is 830 feet above the sea; the height of Dunnoose is 792 feet.

Rivers.—The Medina rises near the north-eastern foot of St. Catherine's Hill, and runs in a narrow valley till near Gatoombe, where the valley becomes wider; it then passes through the chalk ridge near the centre of the island, and flowing on the east side of Newport, forms immediately below the town a wide estuary, and enters the sea five miles to the north, between East and West Cowes. The Eastern Yar, or Brading River, has its source in the same range of hills as the Medina, not far to the east; it runs in a direction generally north, north-east, and east, and passing through a narrow chasm in the chalk range between Brading and Yaverland, then forms Brading Haven, which at high-water is a beautiful lake of 800 acres, but at low-water is a surface of muddy sand traversed by the Yar. The Western Yar rises near Freshwater Gate, and falls into the sea at Yarmouth; it is an estuary in nearly its whole length, which is less than three miles.

Geology.—The whole of the strata which compose the Isle of Wight are exhibited in its precipitous cliffs in the most distinct and complete manner. Some of the phenomena which these strata present are extremely curious. The north side of the island consists of the strata above the chalk; the centre and the upper part of the south side consist of the chalk; and the lower part of the south and south-east sides consist of the strata below the chalk. The series above the chalk belongs to what has been called the chalk basin of the Isle of Wight, the boundaries of which are—near Winchester to the north, near Carisbrooke to the south, Brighton to the east, and Dorchester to the

west. This basin is circumscribed by chalk-hills, except where it is broken into by the Solent Sea.

The most extraordinary circumstance in the geological structure of the Isle of Wight is the vertical or highly-inclined position of the central chalk ridge, and of the plastic clay and London clay to the north of it. The strata farther to the north and to the south are horizontal, or nearly so, those to the south being the chalk and underlying strata, which remain undisturbed, while those to the north are more recent formations deposited horizontally and unconformably on the broken edges of the vertical strata. Two great sections of these vertical strata are exhibited by the Culver Cliff and the cliffs of Whitecliff Bay on the east, and by the Needles Cliff and the cliffs of Alum Bay on the west. In Whitecliff Bay the plastic clay and sands form two low cliffs perfectly vertical; rounding the cape to the south, the chalk of the Culver Cliff rises to a great height at an angle of about 70°, dipping north-north-east, and gradually diminishing to about 50°. In Alum Bay a section, quite conformable, but more extensive and distinct, is exhibited. On the south are the lower strata of chalk and chalk-marl at an angle of about 50° north-north-east, the upper strata of chalk at an angle of about 70°; farther to the north, the plastic clay and its sands, perfectly vertical; still farther to the north, the London clay, also vertical; and, farthest, a bed of yellow sand inclined at an angle of 60° or 70° north-north-east. The face of the chalk ridge is about one-fourth of a mile wide. The upper strata of chalk have alternating strata of flints in a very extraordinary state, the pieces of flint, though closely invested with the chalk and perfectly retaining their forms, being found, when taken hold of, to be shivered into fragments of every size from three inches to an impalpable powder, and the fractured edges of every particle being quite sharp, as if the effect had been occasioned by a blow of inconceivable force. The plastic clay in Alum Bay consists of clays, marls, and sands in a countless number of layers, some extremely thin, of every variety of colour, and most of them, especially when recently cut, singularly bright, like the stripes of a ribbon or the streaks of a tulip. It contains also eight beds of wood-coal, or rather bituminised wood, each about one foot thick, and vertical, like the other layers. The cross fracture of the coal is earthy; it burns with difficulty, with little flame, and a sulphurous smell. The line along which the disturbing force acted that occasioned the vertical position of the strata may be traced as far as Abbotbury in Dorsetshire.

Another very curious circumstance in the stratification of the Isle of Wight is that of a marine deposit between two fresh-water deposits. This is distinctly shown in a natural section of Headon Hill, on the north side of Alum Bay. Hence it has been concluded that this hill must have been twice the bottom of a fresh-water lake, and at an intermediate period have been covered by the sea. This marine deposit does not seem to be a part of any extensive formation; it only forms a bed of which the actual boundaries are unknown; but the fresh-water formations have been found to correspond very closely with the *calcaire grossier* of the Paris basin. Beneath these formations in Headon Hill, and extending into Alum Bay, Totland's Bay, and Collwell Bay, is a stratum of pure siliceous sand without shells, from 30 to 50 feet thick, which is extensively used for making the best kinds of glass. The whole of the north side of the island is considered to belong to these formations.

The south side of the Isle of Wight, from Dunnose to St. Catherine's, consists in the upper part of chalk and chalk-marl in nearly horizontal strata; the centre is green sandstone, beneath which is dark marl, and then ferruginous sand. Whenever the land-springs act on this marl it is formed into mud, runs out, and leaves the green-sandstone and chalk without support, which then tumble down. In this manner have been formed those picturesque terraces called the Undercliff. The green-sandstone, so called from its being mixed with a considerable quantity of green earth, is here about 70 feet thick, divided in layers by other substances. The green-sandstone and dark-red ferruginous sand extend from Dunnose to Yaverland. The ironsand is very thick, and some of it consolidated into rock, as may be seen in the lofty perpendicular Redcliff, near Yaverland. Cliffs of the ironsand may be traced from Sandown Bay on the east to Freshwater on the west, except where it is concealed by the ruins of the Undercliff. It forms the substratum of all the south side of the island.

Between the central chalk ridge and the south range of downs, the chalk and greensand are entirely wanting; and in this space, which constitutes the valleys of Newchurch and Kingston, the ironsand only is found.

Climate, Soil, and Agriculture.—The climate is very mild, especially in the valleys and sheltered parts of the south side of the island. Laurels, myrtles, geraniums, and various kinds of delicate evergreens, flourish throughout the winter. The Undercliff has been particularly recommended by the most eminent physicians as peculiarly suitable for invalids, especially for persons having a tendency to or afflicted with pulmonary complaints.

North of the chalk ridge the predominating soil is a stiff clay, extremely well suited for the growth of wood, especially oak, which in the neighbourhood of East Cowes and St. Helen's grows down to the water's edge. Elm does not bear the sea air so well as oak, but in sheltered situations it grows to a large size. Ash is not common, and the beech is rare. This north side of the island was formerly covered

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with forest, and though the demand for ship-building has thinned it greatly, it is still well wooded. All the northern half of the island is much inferior to the southern half as arable land. The soil, whether clay or loam, is generally very full of flints. Much chalk is used for manure, and sea-weed is mixed with the dung in the farmyard. The soil of the whole of the south part of the island is generally a rich red loam, in some parts inclining to sand, in others more stiff and clayey, but everywhere extremely fertile. Timber does not grow so well on the south side of the island as on the north side. A long fleecy gray moss invests many of the trees. Almost all the lower tracts are employed in tillage, and the produce of wheat especially is greater than in almost any other part of the kingdom. Wheat, barley, and oats are exported to a considerable amount annually, and all kinds of pulse and green crops are cultivated. The pastures and meadows are rich, but few oxen are reared. Dairies are attached to most of the larger farms. The Alderney and Devonshire cows are preferred. Large flocks of sheep are fed on the downs, and are in repute for the fineness of their wool; and a considerable number of lambs are sent to the London markets.

Game is abundant, especially pheasants. Fish is not taken in great abundance, except shell-fish. Lobsters and crabs are very large and fine on the south side of the island. Sea-fowl, choughs, puffins, razor-bills, &c., resort to the cliffs in summer in vast numbers: the Main Bench is their chief place of resort.

The Isle of Wight is much visited, as well for the grandeur and extraordinary geological structure of its cliffs, as for the beautiful scenery of the interior, in which, considering the smallness of the space, it is not surpassed by any other part of the kingdom.

Divisions, Towns, &c.—The Isle of Wight is included in, and forms a division of, the county of Southampton. [HAMPSHIRE.] The two nearly equal divisions of the island formed by the Medina constitute the Liberties of East Medina, which contains 14 parishes, and West Medina, which contains 16 parishes. By the Reform Act of 1832 the Isle of Wight was separated from Hampshire for parliamentary purposes, and returns one member to the House of Commons.

The chief towns are NEWPORT, COWES (East and West), and RYDE, which are noticed under their respective titles; and Yarmouth, Brading, and Newtown, which we notice here.

Yarmouth is a small town; the population of the town and parish in 1851 was only 572. It is situated at the mouth of the estuary of the western Yar, 10½ miles W. from Newport. It has an excellent roadstead. There is a pier for steam-boats, a town-hall and market-house, an old but plain church, a Wesleyan Methodist and a Baptist chapel, and National and British schools. The castle is a small fort. The market is held on Friday, and a yearly fair on July 25th. Yarmouth is a corporate town, which was not affected by the Municipal Corporation Act. It was formerly a parliamentary borough, and returned two members.

Brading is a small town picturesquely situated near the head of Brading Haven, on the slopes of two opposite hills on the south-east side of the island, 7 miles E. by S. from Newport: population of the parish 3046 in 1851. The market-house and town-hall is a small structure. The church is large, and has some portions of Norman date. The Independents have a chapel, and there are National and British schools. A sample market for corn is held on Monday. Fairs are held on May 12th and November 2nd.

Newtown, situated on the north-west side of the island, at the top of the estuary of the Newtown River, 5 miles W. by N. from Newport, is a decayed municipal borough, and, until the Reform Act, was a parliamentary borough, which returned two members to the House of Commons. It is now a very small place; it is a chapelry in Calbourne parish, containing in 1851 only 21 houses and 86 inhabitants. At high-water vessels of 500 tons can come up the estuary of the Newtown River, in the creeks of which are several salterns, now little used. The place was burnt by the French in the reign of Richard II. The ruins of a church, and a town-hall now used as a school-room, are the chief relics of the town.

The following are the only villages which require notice; the population, when not otherwise stated, is that of the parish in 1851:—

Arreton, population 1912, is a long straggling agricultural village, situated on the southern slope of Arreton Down, 3 miles S.E. from Newport, and contains an old church, and an endowed parochial school. *Binstead*, population 317, is prettily situated one mile W. from Ryde. It is chiefly occupied by genteel villa-residences, several of which are of quite recent erection, and some of a superior class. The church is a very elegant new building in the early English style. *Bonchurch*, population 523, is on the south side of the island, adjoining Ventnor on the east. The old church, of Norman date, is now disused, a very elegant new gothic church having been lately built. A handsome school-house was erected at the same time. Bonchurch is a favourite residence and resort of bathing visitors, on account of its mild and healthy climate and picturesque situation. *Calbourne*, population 695, is an old-fashioned and secluded agricultural village, 5 miles W. by S. from Newport. The church, of the early English date, has a curious square tower. *Carisbrooke*—population, including Parkhurst Prison, the House of Industry, and the Albany Barracks, 7530—is pleasantly situated on the Medina, one mile S.W. from Newport.

Carisbrooke is said to have been at one time the capital of the island, but to have decayed as Newport rose into consequence. The chief object of interest is Carisbrooke Castle, formerly the residence of the lords of Wight, and subsequently of the governor of the island, but now a mere ruin. It is noticed more particularly at the end of this article. There are also some slight remains of a Cistercian priory. The parish church is a portion of the original priory church. There are a Primitive Methodist meeting-house and an infant school in the village. There are large corn-mills on the river. Parkhurst Prison, or Reformatory for Juvenile Offenders, is in Carisbrooke parish; it is an extensive and well-arranged edifice. Near the Reformatory is the House of Industry, or workhouse for the whole of the Isle of Wight. Near these, and also in Carisbrooke parish, are the Albany infantry barracks. The scenery around Carisbrooke is very beautiful. *Chale*, population 629, is on the south side of the island, at the western extremity of the Undercliff, about 9 miles S. by W. from Newport. It is an agricultural village, but is much resorted to by tourists on account of Black-Gang Chine, one of the most remarkable of the chines, or narrow gorges, through which the streams of the island find their way to the sea, and which form a peculiar natural feature of the Isle of Wight. The cliff over which the stream falls is only about 40 feet high, but the rocks behind it rise to a great altitude, and the cliff scenery generally is here of a very bold and picturesque character. The church is of the reign of Henry I.; there is an Endowed parochial school. *Freshwater*, population 1393, is on the left bank of the Yar, 3 miles S. by W. from Yarmouth. The old village consists of a few houses, situated by the church, near the head of the estuary of the Yar. The church is an ancient cruciform structure, with a rather singular tower. The Wesleyan Methodists have a chapel, and there is a Free school. *Freshwater Gate* is a collection of new villas, lodging-houses, baths, &c., and is much resorted to in summer for sea-bathing. The chalk-cliffs between Freshwater Gate and the Needles are the loftiest in England. The Needles light-house, erected on the summit of the cliff overlooking the Needles rocks, is in Freshwater parish. *Godshill*, population 1316, is an agricultural village built on the sides of an irregular hill, the summit of which is crowned by the church, which is a handsome building, partly of the decorated and partly of the perpendicular period. There is a Free school. In the parish is Appuldurcombe, for a long period the most celebrated mansion in the Isle of Wight. It is a large and stately edifice, standing in the midst of an extensive, well-wooded, and picturesque park. It was the family seat of the Worsleys, and contained the splendid collection of pictures, books, and antiquities collected during many years at a vast expense, and illustrated in a well-known costly work, the 'Museum Worsleyanum.' *Helen's St.*, population 1948, is situated opposite the well-known roadstead, St. Helen's Road, near the mouth of Brading Harbour, 4 miles E.S.E. from Ryde. The old church of St. Helen's stood close by the shore; but having become endangered by the incroachments of the sea, it was pulled down, except the tower, which has been strengthened, and now serves as a sea-mark. A new church was in 1719 erected on a more elevated site; it was almost entirely rebuilt in 1831. A district church is at Oakfield. There are National schools. Many of the inhabitants of St. Helen's are pilots, who mostly reside at Sea View, which place is resorted to for sea-bathing. *Niton*, population 684, is near the south shore of the island, 3 miles S. from Newport. The church is ancient; there are a Baptist chapel and a Free school. A chalybeate spring of some reputation is at Sandrock. At St. Catherine's Point is a handsome lighthouse, erected in 1840; it is 125 feet high to the top of the lantern. *Sandown* is a hamlet in Brading parish; the population is not returned separately. It stands facing Sandown Bay, about a mile and a half S. by W. from Brading. Within the last few years Sandown has been much resorted to by summer visitors. The situation is eminently picturesque, and commands a noble sea view. A new gothic church, a street of good shops, and several excellent villa-residences have been erected. *Shanklin*, population 355, is at the eastern extremity of the Undercliff, 4 miles S. by W. from Brading. The village is chiefly dependent on the numerous visitors who resort here during the summer. The church is very ancient. The Independents have a place of worship. The scenery around Shanklin is very beautiful; but the chief attraction of the place is Shanklin Chine, the most visited and most picturesque of the chines. It is a winding chasm or cleft in the rocks, which terminates in a narrow fissure about half a mile from the shore; at the further end a waterfall being formed by the stream, which has in course of ages worn away the chasm. The sides of the chine are to a great extent overgrown with trees and shrubs. *Ventnor*, population 2569 in 1861, is beautifully situated on the Undercliff, about 9 miles S.S.E. from Newport. Ventnor has within the last 25 years increased from a mere hamlet of a few rude cottages into a well-built watering-place. It was indebted for its rise to having been recommended by some eminent physicians as the most suitable part of the Undercliff for invalids and others requiring a mild climate. It now contains a handsome gothic church with a spire; places of worship for Wesleyan Methodists, Independents, Bible Christians, and Plymouth Brethren; National and British schools; a literary and scientific institution, and a mutual improvement society; handsome baths on the beach; several excellent hotels; numerous villa-residences, some of them of a superior

class; a kind of park called Madeira Vale; some superior shops; a branch bank of the National Provincial Bank of England; and a savings bank. An Improvement Act for Ventnor was obtained in 1844. *Whippingham*, population of the parish, which includes *East Cowes* [noticed under *Cowes*], 3100, is situated on the right bank of the Medina, 3 miles N. by E. from Newport. The church is a neo-crociform building of some antiquity. There is no village property so called; the only reason for noticing it here is that *Osborne*, the seat of her Majesty, is at Whippingham, about three-quarters of a mile from the church. Osborne, since it has become the possession of her Majesty, has been enlarged, and now presents an extended facade in the Italian palazzo style, with a lofty campanile. Standing on a considerable elevation, it commands a magnificent prospect.

History and Antiquities.—The Isle of Wight was conquered by Claudius, A.D. 43. In 495 it was conquered by Cerdic the Saxon, who settled here many of his own countrymen. In 661 Wulfhere, king of Mercia, subdued it. Not long afterwards it was subjected and compelled to embrace Christianity by Ceadwalla. From the 8th until early in the 11th century it was several times plundered by the Danes; and in 1052 Earl Godwin, who had been banished by Edward the Confessor, made a descent on it, and plundered it. William the Conqueror bestowed it on his kinsman William Fitz Osborne, and created him Lord of the Isle of Wight. A succession of Norman lords held it till 1445, when Henry VI. created Beauchamp, earl of Warwick, King of Wight, and crowned him with his own hands. The kingly title however was not continued, and the last of the lords was the Earl Rivers, who was beheaded by Richard III. in 1483. During the period that it was held by these lords it was frequently threatened by the French, and sometimes plundered by them. One of the last of their actual descents was in the reign of Richard II., when they conquered all the island except Carisbrooke Castle, but retired on receiving 1000 marks from the inhabitants. On the succession of Henry VII., Sir Edward Widville, or Woodville, brother to the late Earl Rivers, was made captain of the Isle of Wight, and the title was held by his successors for a considerable period. The last captain was the Earl of Portland, who was displaced by the Parliament, and the Earl of Pembroke was appointed governor in his place. He was succeeded by Colonel Hammond, and during his governorship Charles I. fled to the Isle of Wight after his escape from Hampton Court. He arrived there November 1st, 1647. He was not strictly confined at first, but was so afterwards, when he made several unsuccessful attempts to escape. A conference between Charles and the Parliament was held in the school-room of the Free school of Newport, which lasted some weeks. On the 29th of November, 1649, he was seized and conveyed to Hurst Castle. The title and office of governor of the Isle of Wight is still continued.

The Isle of Wight does not abound in antiquities. Barrows are found on the downs, but there are no traces of Roman forts or camps, or of Saxon warfare. Carisbrooke Castle is the only ancient fortress. During the rule of the lords of Wight, whose power and privileges were almost regal, the present village of Carisbrooke was the capital of the island, and Carisbrooke Castle was the residence of the lords. The castle stands on a lofty eminence, and the keep still higher on an artificial mound. Fitz Osborne the Norman built the castle, and included the keep within the ditch with which he surrounded the whole. The castle was successively enlarged by subsequent lords. Lord Widville, or Woodville, built the main gateway, which is very handsome, in the reign of Edward IV.; the arms of Woodville appear on its front. There were several conventual establishments in the island, but none of large size except Quarr Abbey, which was founded in 1182. It was dissolved by Henry VIII. It was bought by a merchant of Southampton, who swept away everything except some masses of the long walls, which inclosed an area of 30 acres, a building which has been called the Refectory, but on no good authority, and a few fragments of gables, arches, and doorways, which still remain. Carisbrooke Priory is entirely demolished, except the church, which is now parochial. Some of the parochial churches are as old as the Norman conquest. Yaverland church is one of the most ancient. The entrance-door is arched, and has some curious Norman mouldings.

WIGMORE. [HEREFORDSHIRE.]

WIGSTON-MAGNA. [LEICESTERSHIRE.]

WIGTON, Cumberland, a market-town and the seat of a Poor-Law Union, in the parish of Wigton, is situated near the right bank of the river Wisa, in 54° 49' N. lat., 3° 9' W. long., distant 11 miles S.W. from Carlisle, 303 miles N.N.W. from London by road, and 312 miles by the North-Western and Lancaster and Carlisle railways. The population of the town in 1851 was 4244. The living is a vicarage, in the archdeaconry and diocese of Carlisle. Wigton Poor-Law Union contains 31 parishes and townships, with an area of 176,529 acres, and a population in 1851 of 23,661.

Wigton consists chiefly of one long and tolerably wide street, which is lighted with gas and contains many well-built houses. The principal manufactures are checks, gingham, and calicoes. Some linen is made. Tanning, nail-making, brewing, and malting are carried on. The parish church is a handsome edifice, erected in 1738. The Wesleyan Methodists, Independents, Quakers, and Roman Catholics, have places of worship. There are a Grammar school, a British school, and a Roman Catholic school; news-rooms; and parochial, diocesan, and

subscription libraries. The Quakers have an academy at Brookfield House, about a mile west from Wigton. The weekly market on Tuesday is well supplied with grain and provisions; a great market for butchers' meat, apples, and honey is held on St. Thomas's Day. There are several fairs in the course of the year. Petty sessions and a county court are held in Wigton.

WIGTON, Wigtonshire, Scotland, a royal and parliamentary burgh, sea-port, and market-town, and the chief town of the county, is situated at the mouth of the river Bladenoch, where it falls into Wigton Bay, distant 129 miles S.W. from Edinburgh, in 54° 51' N. lat., 4° 24' W. long. The population of the borough in 1851 was 2121. The town is governed by a provost and 17 councillors, two of whom are bailies; and unites with New Galloway, Stranraer, and Whithorn in returning one member to the Imperial Parliament.

The town consists principally of a broad main street, in the centre of which is an inclosed square, containing a bowling-green. Immediately outside the inclosure stands a handsome granite cross. The town-house has a low spire at one end. There is a commodious prison. The old church is a mean-looking fabric. There are a new Church of the Establishment, chapels for Free and United Presbyterians, a Grammar school, a library founded in 1794, and two branch banks. There are several farina mills. Once a fortnight, and sometimes oftener, a steamer calls at Wigton, on the passage between Liverpool and Garieston. The number and tonnage of vessels belonging to the port on December 31st, 1854, was, under 50 tons 36, tonnage 1218; above 50 tons 17, tonnage 1523; with one steam-vessel of 316 tons. During the year 1854 there entered and cleared at the port, inwards, 444 sailing-vessels, tonnage 18,233, and 74 steam-vessels, tonnage 18,018; outwards, 265 sailing-vessels, tonnage 9185, and 78 steam-vessels, tonnage 19,929.

WIGTONSHIRE, a maritime county in the south-west of Scotland, bounded E by Kirkcudbrightshire, N. by Ayrshire, W. by the Irish Channel, and S. by the Irish Sea, lies between 54° 36' and 55° 4' N. lat., 4° 16' and 5° 12' W. long. The county is about 30 miles long and 80 miles broad from the extreme points; its area is 326,736 acres. The population of the county was 89,195 in 1841, and 43,389 in 1851.

Coast-Line.—The sea-coast of Wigtonshire is indented by several spacious bays. Wigton Bay, on the east, diminishes from a width of 8 miles until it terminates in the river Cree. Luce Bay forms an indentation in the southern part of the county, and stretches inwards about 15 miles: the distance between the two headlands of Burrow Head and the Mull of Galloway is about 15 miles, the Mull being about a mile and a half farther south, and the most southern point of Scotland. The point of the Mull, on which there is a lighthouse, is a peninsula of about a mile and a quarter long by a quarter of a mile wide. The small island of Whithorn, about 3 miles N.E. from Burrow Head, affords safe and commodious shelter for shipping. Lochryan Bay, which is also a safe and commodious harbour, on the north-west, extends into the country about 8 miles, to Stranraer, its breadth varying from 2 to 4 miles. No part of the county is above 18 miles from the sea.

Surface, Hydrography, and Communications.—The surface of Wigtonshire, though consisting of eminences and hills of considerable height, is said to be less elevated above the level of the sea than any other county in Scotland. The principal eminences are Mull Hill, Mont-lokown, Bunman, Cairnhill, Cairn of Dolt, and Grennan Hill, which vary from 400 to 900 feet in height. It may be divided into three districts:—the Rhynns (peninsula), lying west of a line drawn between Luce Bay and Lochryan; the Machers (flat country), lying between Wigton and Luce bays; and the Moors, which include the remainder, being more than one-third of the whole county. The freshwater lochs are numerous, but small, and occupy an area of about 7½ square miles. Dowalton, in the Machers, the largest, is about two miles long by a mile and a half broad. The only navigable rivers are the Cree and the Bladenoch. The Cree rises in Ayrshire and separates this county from Kirkcudbright before it falls into Wigton Bay. It is navigable for about 4 miles. The Bladenoch has a circuitous course of about 24 miles in the county before it falls into Wigton Bay. It is navigable for a few miles only. The river Luce, which falls into Luce Bay after a course of 21 miles from the borders of Ayrshire, is easily crossed on foot, except when floods occur. The other streams of the county are comparatively insignificant. Salmon abound in these streams, and on the coast there are several valuable stake-net fisheries.

Geology.—The most prevalent rocks are primary transition and secondary schists. Grauwacke, grauwacke slate, and argillaceous schist are particularly abundant. Beds of grauwacke occur of all thicknesses from a few inches to as many feet, of hard compact grain, and of a blue or grayish brown colour, for the most part breaking irregularly, but often splitting into parallel slices.

Climate, Soil, Agriculture, &c.—The climate of the county is exceedingly mild and salubrious: Wigtonshire is indeed sometimes called the Devonshire of Scotland. Of late years drainage has been scientifically carried out; the most improved implements are in use, and the application of the new manures is general. Towards the coast much of the land is excellent, such as the Baldoon estate, the reclaimed Moss of Cree, and the holms or lowlands around Garieston and Whithorn.

The general soil on the coast-land is either alluvial or sandy loam, and under careful culture is capable of yielding any kind of crop. The soil of the Machers and the Rhynns consists for the most part of a hazelly loam, dry, and adapted for the turnip husbandry. There is a tract of rich alluvial land in the eastern part of the county, which extends from the parish of Kirkcubright to Newton-Stewart. The Moors are bleak and barren, and in many places consist of peat-land partially covered with water. Grazing is much attended to in the county. The land is mostly under entail, and let in farms of moderate size, generally for leases of 19 years.

Divisions, Towns, &c.—Wigtonshire is divided into 17 parishes. The county returns one member to the Imperial Parliament; and one member is returned by the Wigton district of burghs, consisting of Stranraer, Wigton, and Whithorn in Wigton county, and New Galloway in Kirkcudbrightshire. There are three royal burghs in the county, Whithorn, Wigton, and Stranraer. WIGTON we have already described. The others, with the more important villages in the county, we notice here:—

Stranraer, population 5738 in 1851, about 30 miles W. by N. from Wigton, is a considerable sea-port town and royal and parliamentary burgh, situated at the head of Lochryan Bay. Stranraer was made a royal burgh in 1617. The town consists chiefly of three streets, which run parallel to the shore; many of the houses are well built. The town-house is a neat structure. Besides the parish church there are three chapels for United Presbyterians, and one each for the Free Church, Reformed Presbyterians, Original Seceders, and Roman Catholics; a parochial school, two subscription libraries, and a public reading-room. Lochryan Bay forms a spacious and well-sheltered harbour. Tanning is carried on, and hand-loom weaving for Glasgow manufacturers employs some of the inhabitants. The number and tonnage of vessels registered at the port on December 31st, 1854, were as follows:—Under 50 tons 28, tonnage 848; above 50 tons 6, tonnage 638. During 1854 there entered the port 172 sailing-vessels, tonnage 8588, and 251 steam-vessels, tonnage 29,740; and there cleared 134 sailing-vessels of 3996 tons, and 255 steam-vessels of 30,507 tons.

Whithorn, population 1652 in 1851, is a royal and parliamentary burgh and small sea-port, in the parish of Whithorn, 11 miles S. from Wigton. The town consists principally of one long street, intersected by a rivulet. In the main street stands the town-house and jail. In the churchyard are remains of the priory of Whithorn. A Norman arch is nearly entire, and is regarded as a good specimen of its class of architecture. The parish church is a plain building. The Free Church, United, and Reformed Presbyterians have places of worship. The port of Whithorn is subordinate to Wigton. Whithorn is mentioned at an early date in the ecclesiastical annals of Scotland. About the 12th century a priory for monks of the Premonstratensian order was erected by Fergus, lord of Galloway. The relics of St. Ninian collected in the original building attracted for a long period pilgrims from all parts of Scotland and from countries beyond sea. The bishopric of Galloway, or Whithorn, was one of the oldest in Scotland.

Drumore, population about 300 in 1851, in the parish of Kirkmaiden, the most southerly parish of Scotland, is about 5 miles N.W. from the Mull of Galloway. In the bay of Drumore there is good anchorage. In the harbour is a small quay. Drumore Castle is an ancient edifice, belonging to the Earl of Stair. *Garieston*, population about 700, about 8 miles S. by E. from Wigton, has a good harbour, which was improved some years since. At high tide it contains about 20 feet depth of water. Some ship-building is carried on. Garieston is a member of the port of Wigton. There is here a chapel for Independents. *Glenuce*, population about 1000, near the mouth of the river Luce, has a parish church, rebuilt in 1815, a Free and a United Presbyterian church, a Parochial and a Free Church school, a Parochial and a Free Church library, and a savings bank. The oyster fishery employs about 40 boats. At Stairhaven, or the Crow's Nest, there is a harbour for small vessels. Of the Abbey of Luce, founded in 1190, there are some remains. *Kirkcolm*, population about 420, is a small village on the west shore of Lochryan. Many of the females are engaged in embroidering muslin for Glasgow and Ayr manufacturers. There is here a Free church. *Kirkcowan*, population about 660, on the left bank of the Tarf Water, about 10 miles N.W. from Wigton, has some woollen manufactures, and in the vicinity are stone quarries. *Newton-Stewart*, population 2599, is a burgh of barony, on the right bank of the river Cree, about 10 miles N. by W. from Wigton. The town is lighted with gas. The curing of bacon is carried on to a considerable extent. There are a parish church and a Free church, and chapels for United Presbyterians, Reformed Presbyterians, and Roman Catholics. There are a Parochial school, the Douglas academy, an endowed institution, Lady Galloway's Industrial and Infant schools, and the Newton-Stewart and Minigaff young men's mutual improvement society. Lead-mines afford some employment. There is a neat town-hall. *Portpatrick*, population 1038, a sea-port town on the Irish Channel, possesses a convenient and sheltered harbour. Many of the inhabitants are engaged in fishing, or in other maritime pursuits. There are a parish church and a Free church. Since the government mail-packets ceased to have their station here, Portpatrick has declined.

History, Antiquities, &c.—Wigtonshire formed a part of the ancient province of GALLOWAY. Some Saxon remains exist, and relics of the

earlier Celtic inhabitants are occasionally discovered. The remains of an ancient wall or rampart, called the Dail's Dike, which commences at Lochryan, and is believed to have terminated near Bowness in Cumberland, where the great Wall of Hadrian commenced, is supposed by Chalmers to have been the work of the Britons after the departure of the Roman armies. There were monasteries at Whit-horn, WIGTON, Glenluce, and Soulesat. Several ancient castles are scattered over the county, among which may be mentioned Dunakey Castle, singularly placed on the verge of a precipice, above the sea, about a mile S. from Portpatrick; and Castle Kennedy, the ancient seat of the family of Cassilis, in the parish of Inch. The abbey of Glenluce is at the present day a mere remnant of what it once was. Of objects of antiquarian interest the most curious is the stone circle called the Standing Stones of Torrhouse, in the parish of Wigton: the stones are 19 erect blocks of granite, which form a circle, with several stones standing at a little distance to the south and east. Two cairns occur in the same neighbourhood. There are a few other unimportant prehistoric and Roman remains.

Statistics: Religious Worship and Education.—According to the Returns of the Census for 1851 it appears that there were then in the county 52 places of worship, of which 18 belonged to the Established Church, 14 to the Free Church, 10 to the United Presbyterian Church, 4 to the Reformed Presbyterian Church, 4 to Roman Catholics, and 1 each to Episcopalians and Independents. For 50 of the places of worship the number of sittings was estimated at 22,293. The number of Sabbath schools in the county was 51, of which 14 belonged to the Established Church, 14 to the United Presbyterian Church, and 12 to the Free Church. The total number of Sabbath scholars was 3402. Of Day schools there were 101, of which 59 were public schools with 4076 scholars, and 42 were private schools with 1452 scholars.

WILHELMSTADT, or WILLEMSTAD. [BRABANT, North.]

WILKOWYSZKI. [POLAND.]

WILLENHALL. [STAFFORDSHIRE.]

WILLIAM, FORT. [INVERNESS-SHIRE.]

WILLIAM HENRY. [CANADA.]

WILLIAMSBURG. [NEW YORK.]

WILLINGHAM. [CAMBRIDGESHIRE.]

WILLITON, Somersetshire, a village and the seat of a Poor-Law Union, in the parish of St. Decumans, is situated in a valley near the Bristol Channel, in 51° 9' N. lat., 3° 19' W. long., distant 13 miles N.W. from Taunton, 155 miles W. by S. from London. The population of the chapelry of Williton in 1851 was 2783. The living is a perpetual curacy, in the archdeaconry of Taunton and diocese of Bath and Wells. Williton Poor-Law Union contains 36 parishes and townships, with an area of 109,202 acres, and a population in 1851 of 19,895. Besides the district chapel there are places of worship for Wesleyan Methodists and Baptists, and a Diocesan school.

WILMINGTON. [CAROLINA, NORTH; DELAWARE; KENT.]

WILMSLOW. [CHESHIRE.]

WILNA, an extensive government of West Russia, formed out of Samogitia and Lithuania, situated between 53° 35' and 56° 24' N. lat., 21° 5' and 26° 40' E. long., is bounded N. by Courland, N.E. by Vitepsk, E. by Minak, S. by Grodno, S.W. by Poland, W. by Prussia, and N.W. by the Baltic. Its area is 16,251 square miles, and the population in 1846 numbered 868,700.

The country is an extensive and rather elevated plain, diversified by forests and hills, the highest of which however do not rise more than 300 feet above the surface of the sea, and the hollows are filled with marshes and bogs. Some districts are too sandy for vegetation, but on the whole the soil is not unfavourable to cultivation. All kinds of grain and useful plants flourish. Here and there are found blocks of granite, and fossil bones of elephants and other animals. The country appears to have been covered with one vast forest for thousands of years. The progress of cultivation has of course thinned the forests, but there are still woods of great extent. There are many lakes and numerous rivers; most of the rivers are tributaries of the Niemen, which forms the south-western boundary of the province towards the kingdom of Poland. The Duna bounds the province for a short distance on the extreme north-east. The Wilia is the principal river; it rises in Minak, is joined by the Narocs and the Swienta, and falls into the Niemen at Kauen. The Dange and the Beresina both rise in the province; the former passes into Prussia, and the latter into Minak. The course of most of these rivers is slow, and the water is bad in consequence of the many small streams which flow into them from the marshes, which are chiefly in the east and south-east of the province, where likewise the lakes are the most numerous, the principal of which are the Narocs, to the east of Wilna, the Drisirety, and the Lake of Braslau. The winters, though short, are very cold; the spring is long and humid; the autumn and summer are wet and foggy.

Agriculture is the chief occupation of the inhabitants. Rye is the grain most generally cultivated, and considerable quantities are exported. Next to rye are barley and wheat, then oats, buckwheat, peas and beans, and a little millet. Flax, hemp, and hops are grown, and a considerable quantity exported.

Cattle, though numerous, are in general of inferior breed. There is a good breed of small but hardy horses, called the Lithuanian,

which are in great request for the Russian light cavalry. Bees are kept in great numbers. The abundance and remarkably fine quality of the honey are attributed to the great forests of lime-trees, of the flowers of which the bees are very fond.

There are vast forests of oak, fir, ash, beech, lime, willow, maple, and alder, and great abundance and variety of wild-berries are found. Great quantities of charcoal are burned, and pitch, tar, potashes, and lamp-black are made. Large numbers of river-craft are built for the down-navigation of the rivers. There is abundance of game and wild beasts, among which are wolves, bears, gluttons, &c. The urus is said to exist in the woods near Letewik.

The minerals are bog-iron, saltpetre, marble, granite, sandstone, jasper, agates, and chalcidony.

The manufactures are unimportant. The women in the country spin hemp, flax, and wool, weave linen and coarse cloth for their families, and knit stockings. The men work in the forests, and gain their livelihood partly as carriers, and by preparing potashes, pitch, tar, and lamp-black, and partly by assisting in the conveyance of goods on the Niemen, the Duna, and the Wilia. The articles exported are rye, flour, linseed, hops, timber, staves, bark, tar, potashes, hides, wool, hair, horns, feathers, honey and wax, tallow, butter, oxen, Lithuanian horses, and strong coarse linen. There are no great brandy-distilleries, but all the principal farmers have each his own still for himself and his family, and the Jews distil brandy for sale. The inland trade is almost exclusively in the hands of the Jews.

Towns.—Wilna, the capital formerly of Lithuania, now of the government of Wilna, is situated in 54° 43' N. lat., 25° 10' E. long., at the conflux of the navigable river Wilia and the Wileyka, and has about 58,000 inhabitants, of whom more than one-third are Jews. The streets are crooked and narrow. On an eminence called the Castle Hill are ruins of a large palace of the Jagellons. The town-hall, the arsenal, the palace of the government, and some palaces of the nobility, are handsome buildings. Among the churches, which number about 40, the cathedral, dedicated to St. Stanislaus, is the most worthy of notice. It was built in 1367. Besides Catholic convents there are several Jewish synagogues, two Protestant and two Greek churches. The University of Wilna, founded as a college of Jesuits in 1578, was suppressed by a ukase of 1st May 1832, and its library of 200,000 volumes was transferred to St. Petersburg. The town has still a medical academy, a botanic garden, an observatory, and a theological seminary. It has a few manufactures and a considerable trade.

Zvolé, situated on a lake 17 miles to the west of Wilna, has 4000 inhabitants. Kowno, a town of 7000 inhabitants, is situated at the conflux of the Wilia and the Niemen; it was here that the main body of Napoleon's army entered Russia in 1812. Krcidany, with 6000 inhabitants, is a very considerable town; all the houses are of wood.

WILTON. [NORFOLK.]

WILTON, Wiltshire, a market-town, a municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parish of Wilton, is situated near the river Wily, in 51° 4' N. lat., 1° 51' W. long., distant 3 miles W. by N. from Salisbury, and 84 miles W.S.W. from London. The population of the parliamentary borough in 1851 was 8607. The borough is governed by a mayor, aldermen, and burgesses, and returns one member to the Imperial Parliament. The living is a rectory in the archdeaconry and diocese of Salisbury. Wilton Poor-Law Union comprises 23 parishes and townships, with an area of 55,304 acres, and a population in 1851 of 10,742.

Wilton is a place of great antiquity, and its former importance is indicated by the circumstance of its having given name to the county, which is called in the Saxon Chronicle Wiltunscire. It was the scene of one of Alfred's earlier battles with the Danes in 871. Wilton was the occasional residence of the West Saxon kings; and an abbey for nuns existed here at an early period. The town was plundered and burnt by the Danish king Sweyn, in the reign of Ethelred II., 1003, but it appears to have so far recovered as to be a place of importance at the time of the Conquest. It was for a time (909-1045, or later) the seat of a bishopric formed by the dismemberment of the diocese of Sherbourne, and afterwards reunited with it, just before the removal of the see to Sarum.

Wilton stands on the tongue of land formed by the junction of the Nadder and the Wily. The town consists chiefly of one long street, on the road from Salisbury to Hindon and Mera. The old church, formerly the abbey church, is now only used as a place of sepulture. The new church, erected in 1842, at a cost of nearly 30,000*l.* by the Right Hon. Sidney Herbert, M.P., is a very elegant and highly-finished edifice in the Lombardic style, with a detached campanile. There are places of worship for Independents and Methodists; an endowed and a parochial school. Opposite the old church is 'the county cross.' The town-hall is an ancient plain brick building. Wilton was formerly famed for its carpet manufacture: this branch of industry has declined, but is still carried on to some extent, and some beautiful fabrics are produced. The market is not held regularly. There are two yearly fairs; one of them, one of the greatest sheep fairs in England, is held on September 12th, the other on May 4th.

Near the town is Wilton House, the seat of the Earl of Pembroke, a mansion of incongruous architecture but imposing appearance,

standing in a noble park, in which are also extensive gardens. The house contains a fine collection of paintings and antiquities, and a valuable library.

WILTSHIRE, an inland county of England bounded N.W. and N. by Gloucestershire, N.E. by Berkshire, S.E. by Hampshire, S.W. by Dorsetshire, and W. by Somersetshire. The county is of very compact form, approximating to a quadrangle. Wiltshire is situated between 50° 55' and 51° 43' N. lat., 1° 29' and 2° 21' W. long. The greatest length of the county, north and south, is about 54 miles; the greatest breadth, east and west, is 37 miles. The area is estimated at 1352 square miles, or 865,092 statute acres. The population in 1841 was 256,280; in 1851 it was 254,221.

Surface and Geology.—The geological formations of Wiltshire consist chiefly of the cretaceous and oolitic series, with the intermediate beds; in the south-eastern corner the chalk is covered with the tertiary formations of the chalk-basin of the Isle of Wight.

The chalk formation may be considered, from its extent, as the most striking geological feature of the county, forming as it does the extensive downs which overspread the eastern, central, and southern parts. The chalk district of Hampshire and Wiltshire constitutes the centre of the chalk formation in England, from which proceed four great branches. The first great branch is the chalk range of the Chiltern Hills, Dunstable and Royston Downs, &c., extending through Berkshire, Buckinghamshire, Bedfordshire, Hertfordshire, Cambridgeshire, Essex (just the north-western corner), Suffolk, and Norfolk, across the Wash, reappearing in Lincolnshire and Yorkshire, and terminating in Flamborough Head; the second branch is the North Downs of Hampshire, Surrey, and Kent; the third the South Downs of Hampshire and Sussex; and the fourth the North and South Downs of Dorsetshire, inclosing between them the trough of Poole.

The Wiltshire portion of the great central chalk district is divided into two parts by the Vale of Pewsey, where the greensand occupies the bottom of the valley, and is skirted on each side by the chalk hills. This valley extends east and west, and it may be convenient to describe the two portions into which it divides the chalk district as the northern and southern districts: Marlborough Downs belong to the northern district; Salisbury Plain belongs to the southern.

The northern chalk district is bounded by a line entering the county from Berkshire at the village of Bishopston, and passes Avebury, Eddington, or Heddington, its westernmost point, Bishop's-Cannings, Wootton-Rivers, and Great Bedwyn, to the border of Berkshire at Great Shalbourne. The boundary may be traced throughout by a tolerably steep escarpment overlooking the surrounding country. The included chalk district is divided into two parts by the depression or valley, running east and west, through which the Kennet passes from Avebury to Hungerford; and the northernmost of the two parts is again divided by a valley running north and south, and drained by a small feeder of the Kennet. This valley is occupied by the chalk, as well as the higher ground on each side. The principal eminences are on the boundary-line of the district, and are in several instances crowned by ancient intrenchments, or rather earthworks. The following may be enumerated:—Charlbury Hill, above Little Hinton; Beacon Hill, crowned by an ancient intrenchment called Liddington Castle, above Liddington; Barbury Hill, also crowned with an intrenchment; Hackpen Hill, above the Winterbournes; Oldbury Castle, an intrenchment on the summit of the hill above Cherhill, having a white horse carved on the slope beneath; Beacon Down, above Eddington; Roundaway Hill, above Devizes, the scene of a severe action in the civil war of Charles I.; with Easton Hill, St. Ann's Hill, and several other hills, which are parts of the southern escarpment overlooking the Vale of Pewsey. The northern chalk district forms an elevated platform, and is to a considerable extent uncultivated and uninclosed. In the part north of the valley of the Kennet, are Marlborough Downs, Aldbourn Chase, Wanborough Plain, and Bishopston Down. South of the valley of the Kennet are the King's Play Down, Pound Down, Severnake Forest, and Bedwyn and Wilton Commons.

The southern chalk district is bounded by an extremely irregular line, commencing on the north side of Inkpen Beacon, and making a circuit by Westbury, Maiden-Bradley, and Wilton to Shaftesbury in Dorsetshire, its continuity being broken by three deep indentations in the upper part of the valleys of the Avon, Wily, and Nadder, where the subjacent formations have been denuded.

The south-eastern part of the county, inclosed by this boundary, is occupied by the chalk which extends eastward into Hampshire and southward into Dorsetshire, and forms an extensive hilly tract furrowed by the valleys of the Nadder, the Wily, the Avon, and the Bourn, and a valley watered by a stream which passes Broad-Chalk, Bishopston, and Humington, which valleys unite near Salisbury to form the Valley of the Lower Avon. South and east of Salisbury the chalk is covered with the plastic clay formation belonging to the chalk basin of the Isle of Wight, which is also observed in one or two other places in the district.

The principal hills in this southern chalk district, as in the northern, are on the boundary, which is for the most part indicated by a steep escarpment. The principal eminences are Inkpen Beacon, the highest point in the chalk formation in England, 1011 feet high, near the junction of Wiltshire, Hampshire, and Berkshire; Easton Hill and Pewsey Hill, both commanding the Vale of Pewsey, and crowned

with ancient earthworks; Little Cheverill and Great Cheverill Hills; Eddington Hill, Battlesbury Camp, Titherington Hill, Chiselbury Camp, with a circular intrenchment, and White Sheet Hill, between Wilton and Shaftesbury. In the central part of the district are Mizmaze, Ashley, and Harnham hills, Tower Hill, Amesbury Down, Newton Hill, and numerous others.

This chalk district, known as Salisbury Plain, forms an elevated platform, uncultivated and uninclosed, except in the valleys. Wide downs, covered by a scanty herbage, spread in every direction. The population is collected in the valleys, where, along the streams which water them, the villages stand very close to each other. The chalk is generally bare of wood, except in three or four spots, such as Severnake Forest, Grovely Wood, Vernditch Chase, and Cranbourn Chase.

The greensand formation, comprehending the chalk-marl with the greensand, crops out from beneath the escarpment of the two chalk districts occupying the Vale of Pewsey, which separates them, as well as the indentations in the boundary of the southern chalk district. Consequently the outer edge of the greensand is rather more regular than that of the chalk. The greensand rises gradually from the foot of the chalk escarpment towards its outer edge, which is in many parts traceable by a well-defined and steep escarpment.

From Eddington the outer edge of the greensand may be traced in an irregular line by Devizes and Pottern to Market Lavington; then westward by Westbury to the border of Somersetshire. It occupies nearly all the county west of the chalk between Warminster and Mere. About Warminster and Stourhead Park, in the south-western part of the county, the greensand hills nearly equal those of the chalk in height. Alfred's Tower, near Stourhead, is on a greensand hill 800 feet high.

From beneath the outer edge of the greensand formation the Weald clay, or Tetsworth clay, which usually separates the greensand from the ironsand, crops out. It occupies only a narrow tract, surrounding on every side the country occupied by the superior formations, and may be traced through the county with little interruption. In the Vale of Wardour the clay occupies a very narrow strip skirting the greensand. The ironsand does not appear in this county, except in a few places, and is described as being a pudding-stone composed of rounded quartz united by a siliceous cement with a red calx of iron, containing ore formerly in much request for the furnace and the forge.

In the absence of the ironsand, the Weald clay is found to rest along the northern and north-western borders of the county on the Kimmeridge clay, which belongs to the uppermost division of the oolitic group. This Kimmeridge clay occupies a tract rarely exceeding two miles in breadth, but extending in length from the Berkshire border to Seend, west of Devizes, beyond which it is covered by the westward extension of the overlying formations. At Swindon, in the Kimmeridge clay district, beds of oolitic freestone, similar to the Portland beds, intervene between the Weald clay and Kimmeridge clay, and are extensively quarried. In the northern part of the county the upper oolites are confined to low ground: in the Vale of Pewsey they acquire some elevation, as in Lady Down near Tisbury.

The formations already noticed occupy the whole of the county south and east of a line drawn westward from the Berkshire border, three miles south of Highworth, parallel to and a little to the north of the Wilts and Berks Canal, by Stratton to Wootton-Basset and Seend, to the Somersetshire border at Corsley near Frome; the whole line making a circuit convex to the north-west. Beyond this boundary the strata of the middle oolites, comprehending the coral rag and calcareous grit, and the Oxford clay, crop out, occupying all the northern border of the county, and extending westward to a line drawn south by west from Cirencester to Gloucestershire, by Malmesbury, Chippenham, Melkham, Trowbridge, and North Bradley, to Frome in Somersetshire; beyond which line the upper beds of the lowermost division of the oolites appear.

The tract occupied by the middle oolites has a breadth of eight miles along the northern part of the county, where it extends into Gloucestershire: between Wootton-Basset and Cirencester, it is 11 or 12 miles broad; thence diminishing towards the south and south-west, so that near Westbury and Frome it is probably not more than one or two miles broad. The lower or outer edge of the coral-rag and calcareous grit may be traced by a range of low hills of this formation, extending to the north of Highworth, Swindon, and Wootton-Basset, and then westward by Lyneham, Bremhall, Bowood, and Bromham. Near Seend, west of Devizes, there is a depression in these hills, through which the Kennet and Avon Canal passes; but the hills re-appear at Steeple-Ashton, beyond which the coral-rag is covered by the westward extension of the chalk and greensand. The average height of the coral-rag hills seems to be about 400 feet above the level of the sea. The Oxford or clunch clay occupies the lower ground at their foot, including the valley of the Thames, and that of the Avon above Malmesbury. There are some gentle eminences of Oxford clay between Criklade and Malmesbury, and again about Melkham, Semington, and Trowbridge. Mineral waters occur in this formation; those of Melkham, and of Holt, three miles south-west of Melkham, are impregnated with purgative salts; those of Seend near Devizes contain iron and carbonic acid. The formations belonging to the lower oolites in this county are the cornbrash, the forest-marble, then a bed of clay, in some places 80 feet thick, and then the great oolite.

Hydrography and Communications.—The county is comprehended in the three basins of the Thames, the Severn, and the Christchurch or Salisbury Avon; that part of the south-western border about Stourhead and Mere which is drained by the Dorsetshire Stour being included in the basin of the Avon, with which the Stour unites in Christchurch haven. The northern chalk district and the northern part of the county, as far as a line drawn from the neighbourhood of Swindon to near Tetbury in Gloucestershire, are included in the basin of the Thames; the southern chalk district, with the greensand district which begirds it, the Vale of Pewsey east of Devizes and Market Lavington, and the Vale of Wardour, belong to the basin of the Salisbury or Christchurch Avon; and the western side of the county, nearly as far south as Warminster, belongs to the basin of the Severn.

Some of the streams which join the Thames in the upper part of its course rise in this county. One, which has been considered by some persons, but with very little reason, as the true Thames, rises just on the border of the county where the Roman road Akeman or Acman Street crosses the Thames and Severn Canal by 'Thames-head' bridge; it joins the Churn or true Thames [THAMES] from Cirencester, about a mile above Cricklade bridge. This pseudo-Thames has a course of about nine miles before joining the true Thames. From Cricklade bridge, where the true Thames first touches the county, it flows four miles by Castle Eaton to the border of the county; then between three and four miles farther along the border, separating Wiltshire from Gloucestershire; and quits the county altogether a little above Lechlade. The *Key* (otherwise the Ray) rises in the greensand hills near Wroughton; it runs northward, passing to the west of Swindon, and joins the Thames between Cricklade and the border of the county. The *Cole* rises near Chisledon, and flows northward, chiefly on the border of the county, which it separates from Berkshire, and flows into the Thames just beyond the border of the county.

The most important feeder of the Thames in this county is the *Kennet*, which rises in the greensand district near its outer edge, in Cleavancy-fields between Cliffe-Pypard and Yatesbury. It flows south and south-east by Yatesbury and Avebury, to Silbury Hill on the Bath road, near which it turns eastward by East Kennet, Manton, Marlborough, Mildenhall, and Chilton-Foliat, just below which it touches the border of the county, which it separates from Berkshire for about a mile or a mile and a half, and then, at Hungerford, quits it altogether. That part of the course of the Kennet which belongs to Wiltshire is about 20 miles long.

The *Salisbury Avon* rises in the southern slope of the northern chalk district, in the neighbourhood of Devizes, and flows east-south-east along the Vale of Pewsey. At Salisbury it is joined on the right by the *Wily* (united with the *Nadder*): it is joined a little lower down, on the left bank, by the *Bourne*, and afterwards flows southward by Standfinch House to Downton, a little below which it quits the county: its length from the neighbourhood of Devizes to the border of the county is 42 miles. [AVON.]

The *Wily* or *Willely* rises in the downs north of Mere, in the south-west part of the county, and flows first east, then north by the Deverills to Warminster, near which it bends to the east-south-east, and flows past Heytesbury, Wily, Steeple-Langford, Stapleford, Ditchampton, and West Harnham, to Fisherton-Anger, a suburb of Salisbury, where it joins the Avon. Its whole course is about 27 miles. Near Quiddampton it is joined on the right by the *Nadder*, which rises close to the Dorsetshire border near Shaftesbury. The *Bourne* rises just within the northern boundary of the southern chalk district, and flows southward by Collingbourn-Kingston to Shipton, where it crosses a corner of Hampshire, Cholderton, Allington, Idmiston, the Winterbournes, and Laverstook, near Salisbury, below which it joins the Avon: its whole length is about 23 miles.

A very small part of the county about Mere, in the south-western corner, is drained by the upper waters of the Dorsetshire Stour, which rises at Stourhead in this county. The Stour and the Salisbury Avon unite just above their outfall into the English Channel at Christchurch.

That part of the county which belongs to the basin of the Severn is drained by the *Bristol* or *Lower Avon*, the sources of which are in the Cotswold Hills, at Horton near Chipping-Sodbury in Gloucestershire, and in the hilly district in the northern part of Wiltshire. The united stream is joined at Malmesbury by a stream, eight miles long, from Tetbury and Brokenborough. From Malmesbury the Avon flows in a winding channel 15 miles southward to Chippenham, and thence 20 miles in a winding channel south-west by Laycock, Melksham, Bradford, and Limpley-Stoke, to the border of this county and Somersetshire, between Bradford and Bath. The *Marden* rises in the greensand hills (Compton Hill) above Compton-Basset, flows by Calne, and after a course in all of about 9 miles, flows into the Avon. The *Were* and the *Frome* are also feeders of the Avon. The *Were* is formed by the junction of several streams which rise on the escarpment of the chalk downs about Westbury. The *Frome* belongs to Somersetshire, but some part of its course is on the borders of this county.

Of these numerous rivers but few are navigable, and then only for a short distance in this county. This is the consequence of its central position and comparative elevation, from which it results that the principal streams have only their sources or the upper part of their courses in it. The navigation of the Thames, the Kennet, and the

Bristol Avon does not commence until after those rivers have quitted the county.

The want of river navigation in Wiltshire is partially supplied by canals, of which three lines are connected with this county. The northernmost line is that of the Thames and Severn Canal, which in its course from the Thames at Lechlade in Gloucestershire to the Stroudwater Canal at Stroud in the same county, connecting the rivers Thames and Severn, crosses the northern part of this county near Castle Eaton and Cricklade. The second line is that of the Kennet and Avon Canal, which also connects the Thames with the Severn by means of their respective tributaries the Kennet and the Bristol Avon. This canal is 57 miles long: it commences at the head of the navigation of the river Kennet at Newbury in Berkshire, and terminates in the river Avon at Bath. About 41 miles of its course is in Wiltshire, which county it enters near Hungerford. It passes Great Bedwyn, Devizes, and Trowbridge, and quits the county 4 miles from Bradford, at the Dundas aqueduct, by which it is carried over the Avon. The third line of canal navigation is that of the Wilts and Berks Canal: it lies between the two lines already noticed, and connects the Thames near Abingdon with the Kennet and Avon Canal at Semington, between Devizes and Bradford. At Lower Eastcott, near Swindon, is a branch nearly all in Wiltshire 8½ miles long, passing the town of Cricklade to the Thames and Severn Canal at Latton in Gloucestershire, near Cricklade.

The principal coach-roads are the former mail-roads from London to Salisbury and Exeter, and to Bath and Bristol. There are several roads from London to Exeter besides the mail-road. One of these branching from the mail-road at Salisbury passes through Combe-Bisset, and enters Dorsetshire near Woodyates Inn. Another branching from the mail-road at Andover enters the county at Park House, and runs across Salisbury Plain through Amesbury and Winterbourne-Stoke to Mere, beyond which it enters Somersetshire. The road from London to the Old Passage on the Severn, opposite the mouth of the Wye, branches from the Bath road at Chippenham, and runs by Yatton-Keynell, Castle-Combe, and Nettleton into Gloucestershire. There are several roads from Salisbury, the county town: one runs south by west to Cranbourne, Wimbourne-Minster, and Poole in Dorsetshire, branching from the road to Exeter (through Blandford, Dorchester, and Honiton) a little beyond Combe-Bisset; one southward by Downton to Fordingbridge, Lyndhurst, and Christchurch in the New Forest in Hampshire; two south-east to Southampton—one through Bramshaw, the other through Romsey; two eastward to Winchester—one by Romsey, and one (branching from the London and Exeter main-road) through Stockbridge; and two north-east to Bath and Bristol—one through Heytesbury, Warminster, Westbury, and Bradford; the other branching from this at Warminster, and rejoining it at Bath.

The main line of the Great Western railway crosses this county in a direction nearly parallel to that of the Wilts and Berks Canal. It enters Wiltshire between the Shrivenham and Swindon stations, the latter of which is 77 miles from the London terminus, and runs in a south-western direction by Swindon, Chippenham, Corsham, and Box. The Cheltenham branch quits the main line at Swindon station, and runs in a generally north-western direction towards Stroud, a few miles short of which it quits Wiltshire. Just before it leaves Wiltshire the Cirencester branch runs off from it, but only two miles of this branch is in this county. The Wilts and Somerset branch quits the main line near the Chippenham station, south-by-west by Melksham, Trowbridge, and Westbury to Warminster. At the Westbury station a short branch diverges south-west to Frome, of which about three miles are in this county. The Salisbury branch of the South-Western railway enters the county at West Dean, and runs thence west-by-north for seven miles to Salisbury, where it terminates.

Climate, Soil, Agriculture.—In an agricultural point of view the county of Wilts may be divided into two districts—the first or southern district comprehending all the Wiltshire Downs, with their intersecting valleys, and separated from the northern district by an irregular line running round the foot of the chalk-hills from their entrance into the north-east part of Berkshire to their south-west termination at Maiden Bradley.

South, or more properly, South-East Wiltshire, contains in round numbers about 500,000 acres of land. The Downs are an elevated table-land intersected by valleys, which give the surface a broken appearance. These valleys contain rivers and small streams. The soil being generally more fertile there, and the climate milder, cultivation was originally confined to them, and there most of the villages are situated: the higher and more exposed situations remain as natural pastures for sheep and cattle. The air on the Downs is keen, and healthy to robust constitutions. The valleys, although more sheltered from the sweeping winds from the Atlantic, partake of this keen air, which is drawn along their course in currents. The soil on the Downs varies little, being thin, and uniformly resting on the chalk. It produces excellent short herbage very well suited for sheep-pasture. It is comparatively a small proportion which has been converted into arable land, and chiefly on the borders of the valleys. As we descend from the Downs into the valleys the soil generally becomes less mixed with flints and of a more loamy nature, in consequence of the waters washing down portions of the upper soil, of which the finer particles are deposited on the sides of the hills, and form what is called white

land. The level part of the valleys nearest the rivulets consists of flints washed down lower and mixed with fine earth.

Some remarkable veins of sand intersect this district: one of these, of a fertile nature, enters the county at Mere on the borders of Dorsetshire, and takes a north and north-east direction round the outer edge of the Downs, keeping nearly close to their foot, by way of Maiden Bradley, Warminster, Westbury, and Lavington, towards Devizes, where it meets with a much wider and still more fertile vein coming down the Pewsey vale from Barbage. Another vein also enters the county from Dorsetshire, being a continuation of the sand-hills on which Shaftesbury stands, and passes through Donhead, Ansty, Swallowclift, Fovant, &c., under the foot of the Downs, till it is stopped by the high ground in Barcombfield. This vein is also met at or near Fovant by another branch, or rather a ridge of sand-hills, coming from West Knoyle by Stop-Beacon and Ridge.

The system of cultivation was originally such as the situation of the more fertile soils and their connection with the extensive pastures on the Downs naturally suggested. Wool was no doubt the principal produce, and no more corn was grown than the necessity of the inhabitants required. In no part of England was the system of water-meadows introduced so early or carried to such perfection. A farm consisted of certain buildings and homesteads, with meadows, irrigated if possible, or kept in heart by flogging; with some fields to raise corn for the family, and a run on the Downs for a certain number of sheep, which were the chief source of rent and profit. Since the common fields have mostly been inclosed and divided among the proprietors, more land has been cultivated and better systems have been adopted; but this has been done slowly. A great and gradual improvement however has taken place, and new methods of cropping, new manures, and improved instruments, as well as more compact and better-arranged farm-buildings, are continually being introduced. Sheep are still a principal object of the Wiltshire farmer, but his attention is not confined to them, and he makes them subservient to a greater production of corn. All the usual crops are raised.

The water-meadows are extremely well managed. There are two kinds of water-meadows, those irrigated by catch-work and those which are flooded. The flooded meadows are those which lie along the course of the rivers or rivulets, and are flat and level naturally or rendered so by art. The water is let on by sluices and channels from the upper part of the stream, and kept in by banks, if necessary, and let off again into the lower part of the stream, or on lower meadows, by similar sluices and channels. It is computed that there are above 20,000 acres of excellent water-meadows in this district.

As the cows in this district are not such objects of attention as the sheep the breeds are very various, and few of them of superior quality. The chief dairies are on the borders of Dorsetshire, whence comes the butter used in the towns, North Wiltshire producing little butter, except whey-butter—its chief produce being cheese. The Wiltshire sheep are a variety of the Southdown, but not in general so pure. The original breed was horned, but this has been almost entirely superseded by the polled breed, which produces a finer wool, if not so large a carcass. The Southdown breed has almost entirely superseded the old Wiltshire breed. The pigs are much the same as in other counties, the Chinese and the Neapolitan breeds having by their crosses improved the original breeds and altered all their qualities.

The north-western district of Wiltshire differs greatly from the southern district. The sub-soil in this part of the county, instead of being chalk, consists chiefly of flat broken stone, called provincially corn-grate. It is the same as that of the Cotswold Hills in Gloucestershire. These stones serve for building when they are of sufficient thickness, and the thinner layers to cover houses, instead of slate. The top-soil is a reddish calcareous loam mixed with irregular flat stone, and commonly called stone-brash. In some places a stratum of clay is interposed between the rock and the top-soil, which may easily be known by the oaks which thrive there, whilst on other parts the elm thrives best.

There is a very fertile vein of gravel, or rather of small shelly sand with pebbles, covered with a good depth of rich mould, which runs in a broken line from Melksham through Chippenham to Cricklade, but extends wider from Tytherton through Christian Malford and Dauntsey to Somersford. All this vein is very rich land, especially near Dauntsey. A less fertile vein of sand runs from Redburn by Seagry and Sutton Benger to Langley Burnell by Chippenham, and another begins at the opposite corresponding hill at Charlott, and runs through Bremhill to Branham. The greatest part of the residue of the soil of this district lies on a hard close rock of a rough irregular kind of spurious limestone, fit only for mending the roads with: the soil above this rock is mostly retentive of moisture, and consequently cold.

This district is essentially a dairy country, and probably has been so from time immemorial. The buildings are well suited to this purpose, and placed conveniently with respect to the surrounding fields. The cheese-lofts are often on a very extensive scale; and all the buildings are kept in a neat and substantial order. Leases are common for 14 or 21 years, and the tenant is prevented from selling hay or straw, which secures his keeping sufficient stock for manure. The implements are similar to those used in the south-eastern district. The common fields have been mostly inclosed, to the great advantage

of the husbandry. Some of the best land has been laid down in grass, and a better system of cropping has been generally introduced, as well as a cleaner tillage. The grass-land forms the greater portion of North Wiltshire, and the cheese made there is justly celebrated.

The breed of milk-cows is an object of greater attention in this district than in the southern. A great many cows are fattened in the dairies. The sheep in this district are much the same as in the southern portion of the county, and although there are not such extensive sheep-pastures, there is usually a flock attached to every arable farm, and folding is one of the chief modes of manuring the fields. Many porkers are fattened in the dairies on the whey, after it has been skimmed and whey-butter made. The breed of pigs has been much improved. There is nothing peculiar in the breed of horses; those used on the farms are mostly imported young from other counties.

There are very few market-gardens or orchards in this district, and no cider is made. Vegetables are only raised for sale near the towns; every farm having generally as much garden as the family requires, and no more. The woods have diminished greatly all over the county, which was once very well-wooded.

There are many excellent markets in Wiltshire; the principal corn-markets are Warminster, Devizes, and Salisbury. Swindon and Salisbury are excellent cattle-markets. Marlborough is a great market for cheese, although most of it is contracted for by factors, who take the whole produce to London, Bath, and Bristol.

Divisions, Towns, &c.—The county is divided into 28 hundreds, which are situated as follows:—

Alderbury, south-east; Amesbury, east; Bradford, west; Branch and Dole, central; Calne, central; Cawden and Cadworth, south; Chalk, south; Chippenham, north-west; Damerham North, north-west, with Damerham South, south-west; Downton, south and south-west; Dunworth, south-west; Elatub and Everley, east and central; Frustfield, south-east; Heytesbury, south-west and central; Highworth, Cricklade, and Staple, north; Kingsbridge, north-east and central; Kinwardstone, east; Malmesbury, north; Melksham, west and central; Mere, south-west; Potterne and Cannings, central; Ramsbury, north-east; Selkley, east and central; Swanborough, central; Underditch, south-east and central; Warminster, west; Westbury, west; Whorwelsdown, west.

The city of Salisbury is included in Underditch hundred, the borough of Devizes in Potterne and Cannings hundred, and the borough of Marlborough in Selkley hundred.

Wiltshire contains the county town and city of New Sarum, or SALISBURY; the parliamentary boroughs of CALNE, CHIPPENHAM, CRICKLADE, DEVIZES, MALMESBURY, MARLBOROUGH, WESTBURY, and WILTON; the disfranchised boroughs of GREAT BEDWYN, DOWNTON, Heytesbury, Hindon, Ludgershall, Old Sarum, and Wootton-Bassett; and the market-towns of AMESBURY, BRADFORD, CORSHAM, HIGHWORTH, East or Market Lavington, MELKSHAM, MERE, SWINDON, TROWBRIDGE, and WARMINSTER. The places printed in small capitals are described in separate articles. Of the rest we subjoin an account, the population given being that of 1851:—

Heytesbury, population 1210, on the left bank of the Wily, about 17 miles N.W. by W. from Salisbury, had for its Saxon name Hegtredesbiryg, softened in Domesday into Haseberie. The church is a large cruciform edifice, with a square tower at the intersection of the nave and transept. It was anciently collegiate. The Independents have a chapel, and there is a National school. The manufacture of woollen-cloth employs a few of the inhabitants.

Hindon, population 710, about 15 miles W. by N. from Salisbury, is a small market-town and decayed borough. The church or chapel (for East Knoyle is the mother church) is a plain building; it was founded in the 16th century; in 1836 it was repaired and enlarged. The Primitive Methodists and Independents have places of worship, and there are National schools. The market is on Thursday; fairs are held on May 27th and October 29th for horses, cattle, sheep, and poultry.

Ludgershall, colloquially termed Lurhall, population 580, about 17 miles N.N.E. from Salisbury, close to the Hampshire border, is called Litlegarsele in Domesday. There are some remains of a castle erected soon after the Norman Conquest. The church is of irregular form, with nave, chancel, and two transepts of very unequal dimensions. The Primitive Methodists and Baptists have places of worship, and there is a Free school. A mutilated stone cross distinguishes what was formerly the market-place. There is a considerable yearly fair.

Old Sarum, situated about a mile and a half N. from Salisbury, is generally regarded as the Sorbiodanum of the Romans. Its name, derived from the Celtic words sorbio, 'dry,' and 'dun,' 'a city or fortress,' leads to the conclusion that it was a British post. The number of Roman roads which met at Old Sarum, which are noticed at the end of this article, and the mention of the place in the Itinerary of Antoninus, show that it was occupied by the Romans, but the remains present little resemblance to the usual form of their posts. In the Saxon times, Sarum, under the somewhat altered name of Searobyrg, Serabyria, and Sarisberia, is frequently noticed by historians. Kenric, son of Oerdic, defeated the Britons in this neighbourhood, A.D. 552; and in 1008 the place was taken and burned by Sweyn, king of Denmark. Under the Anglo-Saxon and Anglo-Norman princes,

councils ecclesiastical and civil were held here, and the town became the seat of a bishopric. There was a castle or fortress, which is mentioned as early as the time of Alfred, and which may be regarded as the citadel; and the city was defended by a wall, within the inclosure of which the cathedral stood. Early in the 13th century the oppression of the castellans, or captains of the castle, and their disputes with the bishops and clergy, led to the removal of the cathedral to its present site. Many of the citizens also removed, and the rise of New Sarum [SALISBURY] led to the decay of the older place, so that in the time of Leland there was not one inhabited house in it. It returned members to Parliament in 23 Edward I., and again in 34 Edward III., from which period it continued to return them until it was disfranchised by the Reform Act. It was commonly referred to as the most striking instance of a rotten borough, continuing to return members when it had neither house nor inhabitant. It contained one house with four inhabitants in 1851.

Wootton-Basset, population 2123, about 15 miles N. by E. from Devizes, is called in Domesday, *Wodetone*; it passed to the Bassets of W.combe, from whom it obtained its distinguishing epithet. The market-house and the town-hall, as well as the church, which is ancient, are in the centre of the town. The Independents and Primitive Methodists have chapels, and there are National, British, and Infant schools, and an Endowed Free school. The market is on Tuesday, and there are four yearly fairs, with a large market for cattle on the second Tuesday in each month.

East or Market Lavington, population 1189, about 6 miles S. by E. from Devizes, is in the valley between the greensand and chalk hills on the north-west side of Salisbury Plain. The church, which occupies an elevated site a short distance west from the town, is in the perpendicular style. The Independents and Baptists have places of worship, and there are National and British schools. The market is on Wednesday, and there is one yearly fair. An iron-foundry and agricultural implement manufactory gives some employment. Malting, gardening, and basket-making are carried on.

The following are some of the more important villages, with the parish populations in 1851, and a few other particulars:—

Aldbourn, or *Auburn*, population 1622, about 9 miles S.E. from Swindon, is beautifully situated in a fertile valley, and was once a place of importance, possessing a market and fairs, which have however been long disused. The church is of Norman date. The Wesleyan and Primitive Methodists and Independents have places of worship, and there are National schools. *Ashton-Keynes*, population 1365, about 4 miles W. by N. from Cricklade, is on the left bank of the river Thames, near the Gloucestershire border. The church, which is ancient, has some traces of Norman architecture. The Independents and Primitive Methodists have places of worship. There is a Free school. *Steeple-Ashton*, population of the tithing 802, about 4 miles E. from Trowbridge, was formerly a market-town and the seat of a considerable clothing manufacture. The parish church is a lofty and elegant structure, with nave, chancel, side aisles, north and south porches, and a large square tower at the west end. The church was erected about the end of the 15th century. The tower was originally surmounted with a stone spire, which gave the village its specific designation of Steeple-Ashton. The spire was destroyed in two thunder-storms in July and October, 1760. There are here a chapel for Baptists, and a National school. A tessellated pavement, somewhat different in style and material from the usual Roman pavements, was dug up at Steeple-Ashton. *Box*, population 1987, about 4 miles W. by S. from Corham, is situated in a beautiful valley watered by a small feeder of the Avon, sometimes called the Box Brook. The parish church is an ancient edifice with a spire. The Wesleyan Methodists have a chapel, and there are National schools. There are considerable quarries near Box of the freestone usually called Bath stone, and there are two mineral springs. A station of the Great Western railway is at Box, and the longest tunnel on the line is near this place. *Maiden Bradley*, population 704, is on the Somersetshire border, 7 miles S.W. from Warminster. The parish church is a stone edifice with a western tower. It was originally built in the reign of Richard II., but has undergone repairs and alterations at various periods. In the village are a chapel for Independents and National schools. *North Bradley*, population of the tithing 987, is about 2 miles S. from Trowbridge. The parish church is a commodious structure with a fine Norman tower. There are here an Endowed National school and an asylum for six poor parishioners. Broadcloth and kerseymeres are made here. *Bratton*, population of the chapelry 721, is about 2 miles N.E. from Westbury. The parish church is of Norman architecture, and has a tower at one corner surmounted with a spire. Bratton camp is an ancient intrenchment of irregular form, nearly a mile in circuit, and inclosing an area of 23 acres. *Bromham*, or *Brenham*, population 1619, is 4 miles N.W. from Devizes. The village is near the site of the Roman station *Verulcio*, and some Roman antiquities, consisting of a bath and portions of a tessellated pavement, were found here about 90 years since. The church, which is large and ancient, has been restored and repewed. It has a chapel richly carved, which contains some ancient banners and armour, and several monuments of the Baynton family; the tower, with the spire which surmounts it, is 180 feet high. The Wesleyan Methodists and Baptists have places of worship, and there

are National schools. In the vicinity is *Sloperton Cottage*, long the residence of the poet Thomas Moore, and the house in which he died. *Bishop's-Cannings*, population 3925, is about 3 miles N.E. from Devizes. Bishop's-Cannings has a fine cruciform church, with nave and side aisles, transept, south porch, a chantry on the east end of the south transept, another chantry chapel, and a lady chapel, now used as the chancel. The church was repewed in 1829. There are National schools. *Castle Combe*, population 557, about 6 miles N.W. from Chippenham, has an ancient gothic church with a tower, chapel for Independents and Baptists, and National schools. Paper-making and making are carried on, and in the neighbourhood there are saw-mills. *Corsley*, population 1473, is about 5 miles W. by N. from Warminster, on the Somersetshire border. The church is a neat early English edifice, recently rebuilt, with a square tower. The Baptists and Independents have places of worship, and there is a National school. *Crudwell*, population 781, is about 4 miles N. by E. from Malmesbury, near the Gloucestershire border. The church is a very ancient edifice, but has been altered and repaired at different periods; it is chiefly in the early English style. The Baptists have a chapel, and there is a National school. *Longbridge Deverhill* or *Deverhill*, population 1878, about 3 miles S. from Warminster, is so called to distinguish it from four other villages to which the name of Dew hill is common. The church is ancient, and contains the burial-place of the Bath family. There are a chapel for Primitive Methodists, National schools, and some almshouses. *Longleat House*, the splendid mansion of the Marquis of Bath, standing in a well-wooded park about 12 miles in circumference, is on the border of the county, about 5 miles W. from Longbridge Deverhill. The clothing manufacture gives employment to some persons in the parish. *Fonthill Gifford*, population 442, is about 2 miles S.E. from Hindon. The church, built by Adam Beckford, is constructed after the model of a Grecian temple, with a pediment and a tower surmounted with a dome. There are National schools. The extensive park in which is the site of Fonthill Abbey, lies between Hindon and the village of Fonthill Gifford. The magnificent structure raised here by the celebrated William Beckford, author of 'Vathek,' was entirely removed after the fall of the lady central tower in 1825. *Praxfield*, population 571, is chiefly noticed on account of the Duchess of Somerset's Hospital, or almshouse, for 30 widows of laymen and 20 widows of clergymen. The building forms an oblong quadrangle of considerable extent, and the institution is under the charge of a steward, a chaplain, and other officers. The parish church, which is seated on high ground a short distance from the village, is a brick building with a low tiled roof. *Hilperton*, population 996, about a mile N.E. from Trowbridge, shares in the cloth and kerseymeres manufacture of that town. There are here a small parish church, chapels for Wesleyan Methodists and Baptists, and National schools. *East Knoyle*, population 1110, is about 2 miles S. from Hindon. The church, a cruciform stone building with a western embattled and turreted tower, stands on elevated ground. There are National schools, a lending library, and a branch of the Wiltshire Friendly Society. East Knoyle was the birthplace of Sir Christopher Wren, whose father was rector of the parish. *Lacock* or *Laycock*, population 1653, about 3 miles S. from Chippenham, near the right bank of the Avon, was formerly a market-town. The church is an ancient gothic edifice with a spire. The Independents have a chapel, and there are National schools. *Lacock Abbey*, now the seat of the lord of the manor, was formerly a nunnery, founded about 1231. *Potterne*, population 1778, about 2 miles S. from Devizes, is pleasantly situated in a sheltered and picturesque valley. The church, a Norman edifice, has been repaired and internally restored. A large square tower, embattled, with turrets and pinnacles, rises from the intersection of the nave and transepts. There are here a chapel for Wesleyan Methodists, National schools, and some parochial charities. *Parva*, population 2087, about 4 miles S. from Cricklade, is pleasantly situated on elevated ground. The church is a commodious and handsome cruciform gothic structure with two towers; the one which rises from the intersection of the nave and chancel is surmounted with a lofty spire. The Primitive Methodists and Independents have places of worship, and there are National schools. *Ramsbury*, population 2696, on the left bank of the Kennet, about 12 miles S.E. from Swindon. Ramsbury was made the seat of the bishopric erected in the 9th or 10th century by the dismemberment of Wiltshire from the diocese of Sherbourne; the see was removed after an interval to Wilton, and was afterwards reunited to Sherbourne, the cathedral being fixed at Old Sarum, from which it was removed to Salisbury. The church is spacious, and consists of a nave and two aisles, a chancel, and a massive western tower. The Wesleyan and Primitive Methodists and Independents have places of worship, and there are National schools. Ramsbury formerly had a market. *Rosde*, population 1123, is about 2 miles W.N.W. from Devizes. The church, partly rebuilt in 1833, is a gothic edifice with a square embattled tower at the west end. The Wesleyan Methodists have a chapel, and there are National schools. *Sherston Magna*, or *Great Sherston*, population 1589, is situated near the head of the river Avon, about 6 miles W. by S. from Malmesbury. Sherston is supposed to be the Sceorstane of the Saxon Chronicle, the scene of an indecisive battle in 1016 between Edmund II. (Ironside) and Canute, who engaged during the battle in personal conflict. The village is partly within the site of an ancient encampment, part of

which is obliterated. The church at Sherston is a very large cruciform building, comprising a nave, two aisles, transept, and large south porch. It is partly Norman, partly of later date. The Independents and Baptists have chapels, and there are National and British schools.

Divisions for Ecclesiastical and Legal Purposes.—About three-fourths of the county are included in the diocese of Salisbury and archdeaconries of Sarum and Wilts. The other fourth is in the diocese of Gloucester and Bristol, and archdeaconry of Bristol. By the Poor-Law Commissioners the county is divided into 18 Poor-Law Unions:—Aldbury, Amesbury, Bradford, Calne, Chippenham, Cricklade and Wootton-Basset, Devizes, Highworth and Swindon, Malmesbury, Marlborough, Melksham, Mere, Pewsey, Salisbury, Tisbury, Warminster, Westbury and Whorwelsdown, and Wilton. These Unions contain 307 parishes and townships, with an area of 773,713 acres, and a population in 1851 of 240,460. Wiltshire is in the western circuit: the spring assizes are held at Salisbury, the summer assizes at Devizes. The Epiphany quarter sessions for the county are held at Devizes; the Easter sessions at Salisbury; the Midsummer sessions at Warminster; and the Michaelmas sessions at Devizes. County courts are held at Bradford, Calne, Chippenham, Devizes, Malmesbury, Marlborough, Melksham, Swindon, Trowbridge, Warminster, and Westbury. Before the Reform Act 34 members of Parliament were returned from Wiltshire—namely, two for the county, two for the city of Salisbury, and two each for the boroughs of Great Bedwyn, Calne, Chippenham, Cricklade, Devizes, Downton, Heytesbury, Hindon, Ludgershall, Malmesbury, Marlborough, Old Sarum, Westbury, Wilton, and Wootton-Basset. By the Reform Act Great Bedwyn, Downton, Heytesbury, Hindon, Ludgershall, Old Sarum, and Wootton-Basset were altogether disfranchised; and Calne, Malmesbury, Westbury, and Wilton reduced to one member each. The county was formed into two divisions, each returning two members; so that the number of members is now 18.

History and Antiquities.—Wiltshire is probably the richest of all the English counties in memorials of the earliest historic period, and also of the ante-historic period of our country. This pre-eminence it owes to the wide extent of its chalk downs, unbroken by inclosures, and untouched by the plough, on which the earthen or rude stone memorials of the remotest ages have remained uninjured, except by the mouldering touch of time, or by rare and occasional interventions of the caprice and violence of man; exempt in a great degree from the more systematic and complete destruction which the extension of building or cultivation has caused.

It is difficult to determine exactly to which of the ancient British nations the various parts of the county belonged. A large portion, there can be no doubt, belonged to the nation or nations mentioned by Ptolemaeus under the generic name of Belgæ. Ptolemaeus assigns to them the cities of Ischalis and Aquæ Calidæ, now Ilochester and Bath in Somersetshire, on the one hand, and Venta, now Winchester in Hampshire, on the other. We may therefore assign to the Belgæ that part of the county which lies between these places. Other parts of the county may probably have been occupied by the Durotriges, the Atrebatii, the Dobuni, and the Hedui. It is likely that the county was included in the scene of Vespasian's operations in the reign of Claudius. In the Roman division of Britain, Wiltshire was included in the province of Britannia Prima.

After the departure of the Romans Wiltshire was the scene of contest between the Britons and the Saxons. The site of the asserted massacre of the British nobles by Hengist is placed on Salisbury Plain, but the event itself and its locality are alike doubtful. The great victory which Cerdic, founder of the kingdom of Wessex, obtained in 508 over the British king Natan-leod, or Nazaleod, brought the conquerors to the south-eastern border. Chardford, the Cerdic's-ford of the 'Saxon Chronicle,' on the Salisbury Avon, above Fording-bridge, in Hampshire, but close on the Wiltshire border, was the limit of the territory 'Natanleaga,' to which Natan-leod gave name. In 552 we find Cynric, son of Cerdic, in successful conflict with the Britons at Searobyrg, or Old Sarum. The West Saxons, of whose kingdom Hampshire formed the nucleus, appear to have sought to extend their power northward, to and even beyond the Thames, rather than westward. However, before or in 577, they must have overrun Wiltshire, as we find them in that year, under their king Ceawlin, fighting with the Britons in the north of Somersetshire and in Gloucestershire, to reach which they must have crossed Wiltshire. In 591, according to the 'Saxon Chronicle,' "there was a great slaughter of the Britons" at Wodnesbeorge, or Wanborough, near Swindon. In 652 Cenwalh, king of the West Saxons, "fought at Bradan-forda by Afene," obviously Bradford-on-the-Avon. In 715 Ine, or Ina, king of Wessex, and Ceolred, king of Mercia, fought at Wodnesbeorhe, or Wanborough, near Swindon. In 828 the battle which gave to Wessex the permanent superiority among the Anglo-Saxon states was fought at or on Ellendune, probably Allington-on-the-Bourne, near Amesbury, or Ellington Wroughton, now called simply Wroughton, near Swindon.

The first notice of Wiltshire by that name in the 'Saxon Chronicle' occurs under 870, just before the accession of Alfred, when it is recorded that the Bishop of Wiltshire, Ethered, was translated to the metropolitan see of Canterbury. It is obvious that the name, which is written Wiltun-soire, was taken from the town of Wiltun, or Wilton. Alfred's first battle with the Danes, after his accession, was fought at Wilton early in 871, before he had been on the throne a month. His ardour

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led him to engage the enemy with too small a force, and he was defeated. Just at the beginning of 878, Cyppanhamme, or Chippenham, was surprised by the Danes, and Alfred was driven from his kingdom. When he emerged from his retirement amid the marshes of Athelney, he met the men of Somersetshire and Wiltshire at Egbyrhtes-stane, or Egbert's-stone (probably Brixton Deverhill, near Warminster), on the east side of Seal-wuda, or Sel-wood; whence he marched to Iglea (Iley, or Highley, near Melksham), and from thence to Æthandune, generally supposed to be Eddington, near Westbury, under the escarpment of the southern (or Salisbury Plain) chalk district, where he gave the Danes so complete a defeat as to compel them to surrender their camp and submit to him. He thus recovered his kingdom with little difficulty. The Danish army, which appears to have retired by agreement to Chippenham, marched after some months (879) to Ciren-ceastre, or Cirencester, and next year (880) into East Anglia, where they settled.

When the East-Anglian Danes revolted against Edward the Elder (905), they forced the Thames at Cricklade, and overran and plundered the country as far as Bradon, between Cricklade and Malmesbury, but retired before the king could gather his army to attack them. In the year 978 a council of the chief nobles on ecclesiastical affairs was convened by Dunstan at Calne, which became mournfully celebrated from a fearful disaster which distinguished it. The floor of the room where the council was assembled gave way; some were killed, others dreadfully bruised, but Dunstan was unhurt. In 1003 Wiltshire was ravaged by the Danes, who plundered and burnt Wilton, and occupied Old Sarum; the men of Wiltshire and Hampshire assembled to meet them, but the treachery or cowardice of their commander, Ealderman Elfric, enabled the enemy to withdraw without loss. For several years the Danes continued to harass the district. In 1016, soon after midsummer, a severe but indecisive battle was fought between Edmund Ironside, who had become king of the Anglo-Saxons, and Canute, the Danish king, at Scesorstane, now Great Sherston, about six miles west from Malmesbury.

The Roman road from Calleva (Silchester) to Isca Silurum (Caerleon) probably entered the county at or near Hungerford, but there do not appear to be any traces of it east of Marlborough. It is still to be traced from Fyfield, two miles west of Marlborough, with little interruption, for 22 miles across the downs by West Kennet, Silbury Hill, and Heddington Wick, through Spy Park, almost to the border of the county near Bathford. The remains of baths, tessellated pavements, medals, pottery, glass, &c., have been dug up in Spy Park and in Bowood Park, near the supposed site of the station Verlucio. This road is included in the twelfth Iter of Richard of Cirencester.

A Roman road from Calleva (Silchester) and Venta Belgarum (Winchester) to Isca Dumniorum (Exeter), coincident with the fifteenth Iter of Antoninus, and included in the sixteenth Iter of Richard, enters the county across the Hampshire border, about two miles east of the village of West Winterslow, passes by the hamlet of Middle Winterslow (near which its remains are called the Devil's Causeway), across Winterbourne-Down, and thence to Old Sarum; from which place the road runs south-west by Stratford-Dean, Bemerton, and Vernditch Lodge, and across Vernditch Chase, into Dorsetshire, where it is in one part known as Achling Ditch, or Atchling Street.

The Roman Foss Road touches the boundary of the county on the north side, about two miles from Cirencester; it runs south-west about 23 miles upon or within the boundary of the county, coinciding throughout with existing roads, and showing its Roman origin by the directness of its course. There are traces of a Roman settlement at Easton-Grey on the Foss, where a profusion of medals has been found.

Another Roman road enters the county on the north side, and runs south-east, coinciding with the modern road from Cirencester to Cricklade, near which it crosses the Thames, just however avoiding the town. From near Cricklade, it runs still south-east by or near Water-Katon, Wanborough, and Baydon, into Berkshire, uniting at Spine or Speen with the Roman road from Londinium to Aquæ Sulis, or Bath. It is comprehended in the thirteenth Iter of Antoninus, and is coincident throughout its Wiltshire course with modern roads or lanes. Numerous minor roads evidently of Roman construction have been traced in the county.

Of the station Cunetio traces are found both at Mildenhall on the north side of the Kennet, and Folly Farm on the south side. The hill on which Folly Farm stands is covered with a variety of banks and earthworks, probably belonging to the period before the Roman dominion, and within these more ancient works are traces of the Roman settlement. A portion of the rampart, which was quadrangular with rounded angles, may be seen; and funeral remains, coarse tessellated pavements, medals, and other relics have been dug up.

The earthworks of Sorbiodunum, now Old Sarum, are very conspicuous. They are on the right of the Marlborough road, about a mile and a half from Salisbury, and consist of a circular or rather oval intrenchment; a smaller intrenchment of similar form within the first; and some earthen banks extending from the inner to the outer intrenchment, and subdividing the area between them. Numerous roads met here, of which traces are still distinguishable.

At Stockton Wood Corner, 10½ miles from Sorbiodunum (Old Sarum), on the road which leads into Somersetshire by Kingston Deverhill, are some indications of a Roman settlement, pottery and

medals having been dug up. At Bishopstrow, between Warminster and Heytesbury, on the line of the supposed road from Sorbiodunum (Old Sarum) to Aquæ Sulis (Bath), the remains of a Roman settlement have been found; an earthen vallum incloses an irregular quadrangular area of 50 acres, still called the Bury: large fragments of Roman pottery have been dug up in every part of the inclosure. At Pitmead, close to Bishopstrow; at Rudge, near Froxfield; at Bromham, near the site of the station Verucio; and at Littlecote, near Ramsbury, tessellated pavements have been discovered, but the principal of them were destroyed soon after they were found. At Rudge a brass cup and some medals were found in a well: the cup was inscribed with the names of several of the stations on the Roman wall in Northumberland. An engraving of it is given in Horley's 'Britannia Romana,' and in Hoare's 'Ancient Wiltshire.' Many other Roman remains, but not of great importance, have been found; some of them, such as stuccoed and painted walls, and hypocausts, were found within the inclosures of what were supposed to be British settlements.

Of the antiquities not Roman, the most striking are those of Stonehenge and Avebury. There are some traces of a British road, or tract-way, known as the Ridgway, running across Salisbury Plain, from Heytesbury, by John a'Gore's Cross, Redhorn turnpike (on the road from Salisbury to Devizes), by the village of Charlton-on-the-Avon, across Walker's Hill, by the village of East Kennet, over Hackpen Hill and Shelbarrow Hill into Berkshire; throughout which county it may still be traced.

Wansdyke, or Wansditch, is a vast earthen rampart, with a ditch on the north side, which extends, though not uninterruptedly, through the county. Its length in Wiltshire, from its divergence from the Roman road to the Berkshire border, is about 19 miles, including gaps. The origin of Wansdyke is unknown, but it was probably a boundary between different kingdoms. Aubrey supposed it to have been the ancient boundary of the kingdoms of Wessex and Mercia. Stukeley supposes it to have been made by the Belgæ, to secure their territories from the Celts. Sir R. C. Hoare seems to have regarded it as a Belgic work, repaired or reconstructed by the Saxons. Mr. Guest, in a paper read before the Archaeological Institute, and since published in the *Journal of the Institute* (viii. 143, &c.), has carefully traced the work and ascertained its present condition: he considers it to have been the boundary between the Belgæ and the Dobuni.

There are numerous other banks and ditches to be traced on the downs; some perhaps for boundaries or for defence, like Wansdyke, have one rampart and a ditch; whilst others were no doubt roads, and consist of a broad level way between two banks. Old-ditch may be traced on the downs, north of Warminster and Heytesbury, running eastward by Chittern, or Chiltern-All-Saints, and Tilahead, till it terminates in another ditch running at right angles to it; its length is about 11 miles, including gaps or intervals; the transverse ditch, in which it terminates, can be traced for above two miles.

The most remarkable feature of the topography of Wiltshire is that extraordinary group of stones which has received the name of Stonehenge. It is an assemblage of upright, horizontal, and prostrate stones situated on Salisbury Plain, about 2 miles W. from Amesbury, and 9 miles N. from Salisbury. From its singular character Stonehenge has attracted more attention than any other relic of primeval antiquity in Great Britain. Many of the stones have been squared, or hewn by art, and the horizontal stones of the outer circle are carefully attached by mortices to the uprights, which have tenons; whereas nearly all other examples of pre-historic, or, as they are generally called, Druidical circles, are composed of rough unhewn upright stones, without impost.

The stones are surrounded by a circular vallum, or bank of earth, within a shallow ditch or fosse. Within this bank are three stones, two of which are in an upright position, and the other is prostrate. It has been conjectured, with some probability, that these originally formed part of a circle. In the centre of the inclosed space is what is usually called the temple itself, which comprised originally an outer circle of 30 upright stones, at nearly equal distances apart, sustaining as many stones in a horizontal position, forming a continuous impost. Each of the upright stones had two tenons or projections on the top, which were adapted to fit into and fill up two mortices or hollows in each superincumbent slab. Within this was another, or second circle, consisting of about the same number of perpendicular stones, of much smaller size, and without impost. This circle inclosed an elliptical arrangement of large and small stones; the former, which were divided into groups of three stones each, are called trilithons. There were five trilithons, each of which consisted of two upright stones, and an impost, covering or extending to the extreme edges of the standing stones. Before each trilithon stood three small upright stones; and in the central space, or adytum, of the temple (in front of the principal trilithon) was a large flat stone, known as the altar. The dimensions of the stones, and the space occupied by the structure, as nearly as they have been ascertained, are—diameter of the space inclosed within the vallum or bank, 800 feet; height of the vallum, 15 feet; diameter of the outer circle, 100 feet; diameter of the second circle, 83 feet; height of the stones of outer circle, 14 feet (sides 7 feet by 3 feet); height of trilithons, 16 feet 3 inches, 17 feet 2 inches, 21 feet 6 inches; height of one of the small stones before the same, 7 feet 6 inches.

Viewed at a distance, Stonehenge seems an unimportant object; for

its real magnitude is hardly conceived in the extensive plain or open country on which it stands, and even when seen close at hand it often fails to satisfy expectation. At first sight it appears to be little more than a confused heap of upright and fallen stones; but a steady examination soon renders the nature of the original arrangement of the principal stones pretty clear, and the greatness of the work irresistibly impresses itself on the mind. The stones are mostly much weathered, and covered with moss and lichens. Some of the upright stones have large portions entirely eaten away, and some of the fallen ones are much broken; but many are still square and sharp at the angles, and the tenons and mortices remain in perfect preservation. Six of the impost stones of the outer circle remain in their original position, and two of those of the trilithons of the inner circle. The remaining are fallen.

The surrounding plain is covered with a profusion of tumuli: barrows and earthworks, unparalleled in any spot of similar extent in England. Many of the barrows were opened by Sir Richard C. Hoare and his indefatigable coadjutor Mr. Cunnington, and were found to contain, in some instances, cists or chests, filled with burnt bones, and in others entire skeletons, with various relics of British and in a few cases of Roman art. The avenue by which the work is approached from the north-east, is a narrow strip of raised ground, bounded on each side by a slight bank of earth, and extending in a straight line from the entrance, through the vallum to the distance of 594 yards, which spot it divides into two branches, one of which continues southward, and is seen between two rows of barrows, while the other proceeds northward, and approaches within a few yards of the curus. The curus is a curious and interesting appendage to Stonehenge, if it can be properly so considered. It is a flat tract of land, bounded by two parallel banks and ditches, and is situated about half a mile N.E. from Stonehenge: it measures 1 mile, 5 furlongs, 176 yards in length, and 110 yards in breadth. Its direction is from east to west, and at the eastern extremity is a mound of earth resembling a long barrow, which stretches entirely across it. Hoare, who supposes the curus to be a British circus, thinks this bank was where the principal spectators of the race were seated. The western extremity is destitute of any such mound, but there are two barrows irregularly placed near this end within the area of the curus, a part of which appears also to be cut off by a slight bank. From the near resemblance of the curus to the genuine circus of the Romans, it is reasonable to suppose that, if not formed by the Romans, it was made in imitation of their chariot-course, and by a people familiar with their manners and customs. In Hoare's 'Ancient Wiltshire' is a map showing the surface of the plain around Stonehenge to the extent of about five miles from east to west by three miles from north to south. In this area there are at least 300 barrows or tumuli of various sizes and shapes.

The object for which Stonehenge was constructed, and the date of its erection, have engaged both the research and the imagination of antiquaries, but no definite conclusion has been arrived at. In 1844, the Rev. E. Duke, in his 'Druidical Temples of the County of Wilt,' extending the suggestions of some previous writers, made an elaborate attempt to show that Stonehenge was a temple of Saturn, and a member of a vast planetarium, representing, in conjunction with Avebury and the barrows and other primeval remains on Salisbury Plain, the solar system, and extending over a wide extent of country, "on a meridian 82 miles in length." The stones of the inner circle of Stonehenge, he thinks, were brought from Egypt for the purpose of being erected here! Rickman, the celebrated writer on gothic architecture, published a paper in the 'Archæologia' (vol. xxviii.), in which he argues that Stonehenge was formed in the 4th century of the Christian era, or before the final departure of the Romans from Britain. Mr. A. Herbert has, in a work entitled 'Cyclops Christianus,' developed at great length and supported with much curious learning, a novel theory—that Stonehenge was erected early in the 5th century of the Christian era by a neo-Druidic sect, who sought to preserve or restore the old Druidic faith under Christian forms, and raised Stonehenge as in some measure a substitute for the ancient Druidic groves.

It is perhaps scarcely to be expected that anything better than a very vague conjecture can now be formed as to the time when this work was constructed, or the purpose for which it was raised. That it was erected by a Celtic tribe, and not by Romans or Saxons, is supported by all analogy, and appears to be admitted by most antiquaries. It is evident from the vast number of tumuli which cover the plain, and the traces of primitive villages which Hoare found within a few miles of Stonehenge, that here was the residence and the cemetery of an extensive tribe. The tumuli which have been opened in the neighbourhood are all of an ante-Roman date; but it is remarkable that in the only recorded excavations made within the area of Stonehenge Roman pottery was each time found. Sir R. C. Hoare found, on excavating within the inner circle, "several fragments of Roman as well as of coarse British pottery, parts of the heads and horns of deer and other animals, and a large barbed arrow-head of iron. Dr. Stukeley says that he dug close to the altar, and that at the depth of one foot he came to the solid chalk. Mr. Cunnington also dug about the same place to the depth of nearly six feet, and found the chalk had been moved to that depth; and at about the depth of three feet he found some Roman pottery, and at the depth of six feet some pieces of sarsen stones, three fragments of half-baked pottery, and some

charred wood. Some small pieces of bone, a little charred wood, and some coarse pottery were intermixed with the soil." These excavations seem to prove that this was not a place of sepulture, but rather of sacrifice. The cursus shows that the immediate vicinity of Stonehenge was a place of assemblage for public sports, and public sports were generally in early times associated with religious ceremonies. The great labour, skill, and cost necessary to the erection of such a structure as Stonehenge, lead us to the conclusion that it must have been intended for some great public purpose. On the whole we incline to the opinion, as in the instance of Avebury, that this extraordinary structure was a British temple, or a place of meeting for important deliberations, and probably was appropriated to both purposes, as well as to solemn judicial investigations. But the mechanical skill and art displayed in its construction, lead us to infer that Stonehenge was raised at a time when the tribe had made a considerable advance beyond the state of cultivation existing when Avebury was erected. In a word, we believe that it was erected probably not very long before the Roman conquest of Britain; while the discovery of Roman pottery within its area shows that it continued to be used for some time after that event.

Tumuli are more numerous in Wiltshire than in any other English county; the camps and other earth-works are also very numerous; they are fully described in Sir R. C. Hoare's 'Ancient Wiltshire,' which has been our chief authority for the antiquities of the county.

In the reign of Henry II., 1164, a national council was held at Clarendon, 2 miles S.E. from Salisbury, where the kings had a residence and a forest. At this council the Constitutions of Clarendon were passed, restricting the power of the clergy. In the reign of Henry III., 1267, the statutes for the suppression of tumuli, known as 'The Statutes of Malbridge,' were enacted in an assembly or council held at Marlborough. In the War of the Roses the men of Wiltshire generally embraced the Lancastrian side; but no great event in that war occurred in the county. In the civil war of Charles I., Marlborough was garrisoned by the Parliamentarians, but was taken by the Royalists under Wilmot in 1642. During the Commonwealth, Wiltshire was the scene of the unsuccessful attempt of the Royalists under Sir Joseph Wadstaffe. [SALISBURY.]

Religious Worship and Education.—According to the Returns of the Census in 1851, it appears that there were then in the county 754 places of worship, of which 352 belonged to the Church of England, 196 to four sections of Methodists, 101 to Baptists, and 76 to Independents. The total number of sittings provided was 159,484. Of Sunday schools there were 478, of which 281 were connected with the Church of England. The total number of Sunday scholars was 27,624. Of day schools there were 774, of which 367 were public schools with 27,068 scholars, and 407 private with 7776 scholars. There were 16 evening schools for adults, with 342 scholars; and 12 literary and scientific institutions, with 1956 members, and libraries containing 6424 volumes.

Savings Banks.—In 1853 the county possessed 11 savings banks—at Bradford, Calne, Chippenham, Devizes, Malmesbury, Marlborough, Melkham, Salisbury, Swindon, Trowbridge, and Warminster. The total amount owing to depositors on November 20th 1853 was 461,541*l.* 13*s.* 4*d.*

WIMBLEDON. [SURREY.]

WIMBORNE MINSTER, Dorsetshire, a very ancient market-town, and, conjointly with Cranborne, the seat of a Poor-Law Union, in the parish of Wimborne Minster, is situated in 50° 48' N. lat., 1° 57' W. long., distant 21 miles E.N.E. from Dorchester, and 100 miles S.W. by W. from London by road. The population of the town in 1851 was 2295. Wimborne and Cranborne Poor-Law Union contains 24 parishes and townships, with an area of 79,878 acres, and a population in 1851 of 17,271.

Wimborne is supposed to have been a Roman station called *Vindogladia*; by the Saxons it was called *Vinburnan*. A nunnery was established here in the beginning of the 8th century, upon the site of which the present minster or collegiate church was built; and the word 'Minster' has been added to the name of the town to distinguish it from Wimborne St. Giles, in another part of the county. Wimborne Minster is pleasantly situated on the right bank of the Stour, near its confluence with the Wim or Allen. Parts of the minster were built soon after the Conquest. It is a cruciform structure, 108 feet in length, and consists of a chancel, nave, choir, and side aisles, a transept, and three porches. There are two quadrangular towers, one at the west end, and the other, once surmounted by a very lofty spire, at the intersection of the cross. The minster is a royal free chapel, and a peculiar in the diocese of Salisbury. Several royal and noble persons have been interred here. The Wesleyan Methodists, Baptists, and Independents have places of worship. There are a Free Grammar school, for the support of which some of the lands of the nunnery were set apart by Queen Elizabeth, National schools, two ancient hospitals for poor aged persons, and a savings bank. Friday is the market-day; fairs are held on the Friday before Good Friday and on September 14th. Coach-making is carried on. A county court is held in the town.

WIMPOLE. [CAMBRIDGESHIRE.]

WINCANTON, or WINCHAUNTON, Somersetshire, a market-town and the seat of a Poor-Law Union, in the parish of Wincanton, is

situated on the left bank of the river Cale, in 51° 3' N. lat., 2° 25' W. long., distant 26 miles S. by W. from Bath, and 109 miles W.S.W. from London. The population of the parish of Wincanton in 1851 was 2483. The living is a perpetual curacy in the archdeaconry of Wells and diocese of Bath and Wells. Wincanton Poor-Law Union contains 39 parishes and townships, with an area of 65,960 acres, and a population in 1851 of 21,272.

Wincanton consists chiefly of four principal streets, one of which forms part of the main road from London to Exeter by Ilchester and Honiton. In the Domesday Survey the town is called *Wincalton*, a name which embodies that of the river on which the town stands. Wincanton parish church is a commodious structure, with a tower at the west end. The Independents and Baptists have places of worship, and there are National schools, and a reading-room with a library. Wednesday is the market-day: fairs are held on Easter Tuesday and September 29th. Some dowels and bed-tick are manufactured.

WINCHCOMBE, Gloucestershire, a market-town and the seat of a Poor-Law Union, in the parish of Winchcombe, is situated on the banks of the river Isbourne, a feeder of the Upper Avon, in 51° 57' N. lat., 1° 58' W. long., distant about 19 miles N.E. from Gloucester, and 95 miles W.N.W. from London. The population of the town in 1851 was 2052. The living is a vicarage in the archdeaconry of Gloucester and diocese of Gloucester and Bristol.

Winchcombe is a place of great antiquity, and was once of considerable importance. It was anciently the site of a castle and of a Benedictine abbey, the abbot of which was mitred. No trace of the buildings remain. The parish church is a fine gothic edifice, with an embattled tower at the west end. The Wesleyan Methodists and Baptists have chapels, and there is a Grammar school. Saturday is the market-day: fairs are held on the last Saturday in March, May 6th, and July 28th.

WINCHELSEA. [SUSSEX.]

WINCHESTER, the county town of Hampshire, an ancient episcopal city, a municipal and parliamentary borough, and the seat of a Poor-Law Union, is situated in 51° 4' N. lat., 1° 19' W. long., distant 62 miles S.W. from London by road, and 67 miles by the London and South-Western railway. The population of the city of Winchester in 1851 was 13,704. The livings are in the archdeaconry and diocese of Winchester. The city is governed by 6 aldermen and 18 councillors, of whom one is mayor; and returns 2 members to the Imperial Parliament. Winchester Poor-Law Union contains 34 parishes and townships, with an area of 60,544 acres, and a population in 1851 of 21,164.

Winchester is one of the most ancient towns in England; its origin is lost in the fables of tradition. The Britons are said to have called it 'Caer Gwent,' or the White City; the Romans, by whom it was first subdued, named it *Venta Belgarum*; the Saxons, who were the next possessors, named it *Witancaster*, which has become Winchester: in Latin deeds and by the Latin writers it is called *Wintonia*.

Winchester appears to have flourished under the Romans as long as they remained in the island. The massive walls, composed of flints and mortar, which inclosed the city, are considered to have been originally built by them. In A.D. 519 it was conquered by Cordic the Saxon, who afterwards made it the seat of his government; and it continued to be the capital of the West Saxon kings till Egbert, the first king of the whole heptarchy, was crowned there, and then it may be said to have become the metropolis of England. Though sometimes plundered and in the possession of the Danes, it continued to be the capital of successive Saxon kings till 1013, when Sweyn, the Danish king, obtained possession of England, and Winchester became the seat of his government. After his death a fierce struggle ensued, and England is said to have been ultimately divided into two kingdoms: London became the capital of Canute, and Winchester of Edmund Ironside, till Edmund's death in 1016, when Canute became sole king and Winchester the sole capital.

After the Norman conquest Winchester continued to be the capital, and during the reign of Henry I. attained the summit of its greatness. It was surrounded by strong walls; was defended by a castle built by William the Conqueror on the west, and by another, subsequently erected for the residence of the bishop, on the east; it contained an extensive palace and numerous mansions of the nobility; a cathedral, three monasteries of royal foundation, and a very large number of churches: the suburbs extended a mile from the walls in every direction. In the reign of Stephen, Winchester began to decline. While Stephen was a prisoner in Gloucester Castle a contest commenced between his queen and the Empress Matilda, aided by their respective partisans, which was carried on for several weeks in the streets of Winchester, at the termination of which nearly the whole of the town north of the High-street, the royal palace, the abbey of St. Mary, Hyde Abbey, and about 40 churches, were burnt down or laid in ruins. The death of Stephen in 1154 put a stop to the calamities of civil warfare. Henry II. resided much at Winchester; he rebuilt the palace, and to a considerable extent renewed the city; but London seems to have found more favour in the eyes of subsequent kings, and Winchester lost its dignity as capital of the kingdom.

In the contests between Henry III. and his barons Winchester suffered severely, both parties alternately gaining possession of its castles, and carrying on the work of destruction in the city. From this time Winchester, though partly upheld by the splendour of its

cathedral and other ecclesiastical and scholastic establishments, seems to have declined rapidly. When Henry VIII. suppressed the monasteries, the minor establishments were the first to suffer in Winchester. Subsequently the priory of St. Swithin was suppressed, and the greater part of its revenues were transferred to the dean and chapter of the cathedral; also Hyde Abbey, which had been rebuilt; St. Mary's Abbey; and several hospitals.

The last of the great sufferings of Winchester occurred during the civil war between Charles I. and the Parliament. The city adhered to the king. On the 29th of March, 1644, a battle was fought on Cheriton Down, in which Sir William Waller, the parliamentary general, was victorious; and his soldiers destroyed or defaced the stained-glass windows, the monuments, and relics of the cathedral. After the battle of Naseby, Cromwell was sent to reduce Winchester under the authority of the Parliament. Having taken the city after a week's siege, he undermined and blew up Winchester Castle, and laid Wolvesey Castle and the other fortified places in ruins. St. Mary's College escaped from injury it is said through the firmness of one of the parliamentary officers, who was a Wykehamist. In 1666 very many of the inhabitants of Winchester were destroyed by the plague. An obelisk, with an inscription, commemorates the event. Charles II. took a liking to the place, and employed Sir Christopher Wren to design and erect a palace, which he intended for a summer residence, on the site of Winchester Castle. The king laid the foundation-stone, March 3rd, 1683, and the work was carried on with vigour till the death of Charles in 1685, when a stop was put to it, and it was never completed. The building is now used as a barrack for infantry.

The city is built on the slope of an eminence which rises gently from the right bank of the Itchin. The river is made navigable as a canal from Winchester to the sea. The city is well supplied with water, and the streets are well paved, and are lighted with gas.

The liberty of the Soke encompasses the city on almost every side, and a small part is within the city. The Soke is divided into the East Soke and the West Soke. The ancient city had four principal gates—north, south, east, and west; of these only the West Gate, at the end of the High-street, now remains: it is a massy square tower over a wide gateway. The tower is built in the Norman style: it is now employed as a room in which to preserve the corporation records.

Winchester being the centre of an agricultural district, it has a good corn-market, which is well attended. Wednesday and Saturday are the market-days. Four fairs are held in the course of the year, one of which is a large sheep fair.

Of the public buildings of the city, the first place is due to Winchester Cathedral, which is one of the largest cathedrals in England, and in many respects one of the most interesting. From the west entrance to the choir is 356 feet; the length of the choir is 135 feet; and the Lady Chapel at the east end is 54 feet, which makes the total length 545 feet. As a distinct part, the nave is 250 feet long, 86 feet wide including the aisles, and 78 feet high. The choir is 40 feet wide. The length of the transepts is 186 feet. The square of the tower is 48 feet by 50 feet, and the height is 138½ feet, which is only about 26 feet above the roof; of course it has a low and squat appearance, and was perhaps not intended to contain bells, but only to throw additional light into the choir, and increase the interior effect by additional height. The present bells were suspended in the reign of Charles I.

Viewed from the exterior, the west front is by far the most imposing part of the structure. On entering the building, the view from the west end to the east is magnificent: the vast length of vista formed by the nave and choir, with the splendid ceiling, the columns and arches on each hand and overhead, and the eastern window 'casting its dim religious light' from behind the choir, produce a combined result of solemnity and beauty equalled by few cathedrals in Europe.

The original structure of Winchester Cathedral was destroyed by the pagan Cerdic, and rebuilt by one of his successors, the Christian Kinegils. Some of the most substantial walls and pillars of the present structure were erected by St. Ethelwold, bishop of Winchester, who lived to finish it, and to dedicate it to St. Swithin in 980. In 1079, having been much damaged by the Danes, it was repaired by Bishop Walkelyn, who built the present tower, with part of the nave and transepts, and in 1098 re-dedicated the church to St. Peter, St. Paul, and St. Swithin. The bishops De Lucy, Edyngton, and Wykeham repaired and rebuilt other portions. Bishop Fox in the early part of the 16th century rebuilt some portions. The grandeur of the west front is due to Wykeham. Many restorations and repairs of the cathedral have been recently executed at an expense of upwards of 50,000*l.* Among the monuments in the cathedral may be mentioned the tomb of William Rufus, of plain gray stone, without inscription, in the choir; the six mortuary chests of wood, carved, painted, and gilt, in which Bishop Fox deposited the remains of Saxon kings and other distinguished persons, which he transferred from the decayed lead coffins in which they had been buried; and especially the beautiful chantries or oratories of the bishops Edyngton, Wykeham, Beaufort, Waynflete, and Fox.

Winchester College (St. Mary's College), which is outside the city boundary on the south-east, was founded by William of Wykeham in 1387, on the site of 'the great grammar school of Winchester,' at which he had been educated. The college was founded and endowed

by Wykeham as a preparatory college to New College, Oxford, which he had founded a short time before. The college was opened March 28th, 1393. In 1354 there were in the college 70 scholars on the foundation, and 16 choristers. The number of commoners, boys not on the foundation, was about 80, who are lodged in a spacious quadrangular building contiguous to the college. The buildings of Winchester College are spacious, and comprise a chapel, a hall of gothic architecture, and a library; a school-room, erected by subscription of the Wykehamists in 1687; and a hall in which the commoners dine. Over the entrance to the school-room is a bronze statue of Wykeham.

The ruins of Wolvesey Castle are at a short distance south-east from the college. This castle, once the residence of the bishops of Winchester, was built in 1138 by Henry de Blois, brother of King Stephen and bishop of Winchester, on the site of a former palace of the Saxon kings. It was a place of great strength till it was dismantled in the reign of Henry II. It continued to be the residence of the bishops till it was demolished by Cromwell in 1646. The episcopal palace begun in 1684 was suffered to go to decay, and the greater part of it was taken down about 40 years ago. The present plain but neat episcopal residence was formed out of the west wing of the former building: it is now occupied during pleasure by the Diocesan Training school for masters. The Cross, in the High-street, is a square structure on an octagonal base of five steps. The circumference of the lowest step is 49 feet, and the height is 44 feet. The cross consists of three tiers of gothic archwork, with ornamented niches and canopies. Winchester Castle stood on an eminence outside the city wall on the south-west. It was built by William the Conqueror in 1068, and blown up by Cromwell in 1645. The ruins were entirely removed when Charles II. began his palace. The chapel of Winchester Castle, which was a building detached from the castle, has since been converted into a court for holding the assizes. A curious piece of antiquity, called King Arthur's Round Table, is suspended over the judges' seat. Symonds' College (properly Christ's Hospital) was founded in 1607, by Peter Symonds, a native of Winchester, and afterwards a mercer of the city of London. The endowments are applied to the maintenance of six old men, one matron, and four boys, and also to the assistance of one scholar in each of the two English universities. The Matrons' College, built by Bishop Morley in 1672, and endowed for the support of 10 clergymen's widows, stands on the site of the monastery of St. Grimbald, founded in A.D. 898, by King Alfred.

Most of the churches in Winchester are ancient. One of the most curious for its situation is the parish church of St. Swithin, built by King John over the old postern of St. Michael, or King's Gate. St. Thomas's parish church has been rebuilt. There is a new church in the parish of St. Maurice. The Wesleyan Methodists, Independents, Baptists, and Roman Catholics have places of worship. There is also a convent of Benedictines at Winchester. There are several National schools, a mechanics institute, a Church of England library and reading-room, a Church of England Young Men's Society, a museum, and a savings bank. A county court is held in the town. The guild-hall, or town-hall, in High-street, was built in 1711. Some articles curious for their antiquity are kept in it, especially the ancient standards of measure. The market-house was built in 1772. A new county jail, bridewell, police station, and offices have been erected outside the West Gate. The county hospital was established in 1736, but the present building was not erected till 1759. St. John's House, which is the public banqueting-room and assembly-room, is on the site of the hospital of St. John the Baptist. There are a small theatre, and a public library and reading-rooms.

The hospital of St. Cross, about one mile S. from Winchester, was founded and endowed in 1136, by Henry de Blois, bishop of Winchester, as a permanent retreat for 13 poor men past their strength, and for 100 other poor men, who were to be provided with a dinner. Other charities were added. A glass of ale and a small loaf are still offered to persons who call at the hospital before the day's supply is exhausted. The endowments of this institution have been grossly misappropriated for many years past; but inquiry has recently been made by authority of the government into the manner in which the intentions of the founder have been carried out, with a view to a more appropriate employment of the funds of the charity. The church is a very beautiful cruciform pile; it is chiefly of Norman, but partly of early English date. The other buildings which remain are fine specimens of gothic architecture.

The see of Winchester is in the province of Canterbury. The diocese includes Hampshire, with the islands of Wight, Guernsey, Jersey, Alderney, Sark, and the county of Surrey; and comprises 524 benefices. It is divided into the archdeaconries of Surrey and Winchester. The chapter consists of the dean, the archdeacons, eight canons, four minor canons, and a chancellor. The income of the bishop is fixed at 10,500*l.* a year.

WINDAU. [COURLAND.]

WINDERMERE. [LANCASHIRE; WESTMORLAND.]

WINDSOR, or NEW WINDSOR, Berkshire, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, is situated on the right bank of the river Thames, in 51° 29' N. lat., 0° 37' W. long., distant 18 miles E. by N. from Reading, 22 miles W. by S. from London by road, 21 miles by the Great Western railway, and 26 miles by the South-Western railway. The population of the

borough in 1851 was 9598. The borough is governed by six aldermen and 18 councillors, one of whom is mayor; and returns two members to the Imperial Parliament. The living is a vicarage, in the archdeaconry of Berks and diocese of Oxford. Windsor Poor-Law Union contains six parishes, with an area of 22,407 acres, and a population in 1851 of 18,449.

Windsor derives its importance, and perhaps its origin, from having been a favourite residence of many of the kings of England since the Conquest. The Saxon kings had a palace at Old Windsor, called Windles-ofra, or Windleshora, from the winding course of the Thames in this part, and Edward the Confessor occasionally kept his court there; but it is a distinct parish, about 2 mile S.E. from New Windsor. In the reigns of William the Conqueror and William Rufus, the castle at Windsor was a military fortress. Henry I. enlarged and improved the castle and held his court there, and from this time it was the frequent residence of the king, in consequence of which New Windsor received many marks of royal favour. From having been a chapelry in the parish of Clewer, it was constituted a separate parish. Edward I. made it a free borough, and in his reign it first returned two members to Parliament; from the 25th Henry VI. (1447) it has regularly returned two members. Though situated on opposite banks of the Thames, Windsor and Eton form in appearance but one town, the line of houses being interrupted only by the bridge, erected in 1824, a neat structure of iron, 200 feet long and 29 feet wide, and consisting of three arches. The town is well lighted with gas, and paved. Among other recent improvements Datchet Bridge has been removed, and two new bridges, both of iron, with stone piers, have been erected: Victoria Bridge, some distance above the old Datchet Bridge, in connection with the new road from the South-Western railway station; and Albert Bridge, below old Datchet Bridge, and about midway between it and Old Windsor, in connection with the new road to Staines.

The public buildings of Windsor (exclusive of those pertaining to the castle) are not in any way remarkable. The church is a spacious and convenient structure, in the perpendicular style, erected in 1822. A neat district church of gothic character was erected in 1842. The Wesleyan Methodists, Independents, and Baptists have places of worship. There are Free, National, British, and Infant schools; a royal dispensary; Brotherton's hospital, founded in 1508, for eight poor persons; Reeves' almshouses, founded in 1676; and a savings bank. The guildhall, or town-hall, erected in 1686, is rather a handsome building. In the hall, or court-room, are a number of portraits of the sovereigns of England and personages of rank. The town-hall was repaired and to a considerable extent remodelled in 1852, under the direction of Mr. Hardwick. The theatre is internally neat and convenient. The Great Western railway station, near the centre of the town, is a plain but convenient building. The South-Western railway station, in Datchet-lane, is a more ambitious edifice of red brick, with stone dressings; it is a somewhat quaint imitation of the Tudor style.

Windsor possesses no manufacture, but there are considerable ale breweries. The inhabitants are chiefly dependent upon the trade created by the residence of the court at Windsor Castle, and by the abode of many persons of rank and wealth in the vicinity, and the numerous visitors who resort to the town. The market is held on Saturday. Fairs are held on Easter Tuesday, July 5th, and October 24th. On the west side of the town is a piece of meadow-land, surrounded with a gravelled walk, which is known as the 'Bachelor's Acre,' and is reserved, under the Inclosure Act, as a place in which to play at 'all sports and pastimes.' 'The Bachelor's Revel' is held here on August 17th, and attracts numerous visitors. On the Acre is an obelisk, erected by the Bachelors to commemorate the visit of Queen Charlotte and the princesses to their festival in honour of the jubilee of George III. There are barracks for infantry and cavalry, the latter in Clewer parish.

Among the royal and palatial edifices of Europe, that of Windsor holds a very high rank, and is in a manner to England what Versailles is to France, and the Escorial to Spain; and while it is infinitely superior to both in point of situation—standing on an elevation which commands a rich extent of country—it far exceeds them, and indeed every other pile of building of its class, in antiquity. From having been the residence of so many of our kings, its history is to a certain extent identified with that of the kingdom itself from the time of the Conquest. In its present state however the antiquity of the castle is little more than nominal, the whole of the habitable part having been remodelled and rebuilt; but if it has thus lost the reality, it has at least recovered the appearance of antiquity, after nearly every trace of it had been obliterated, and the greater part of the whole pile had been rendered a motley assemblage of mongrel architecture.

Relative to the early history of the castle, only a few of the more prominent dates and epochs of the building can here be noticed. The Conqueror's structure on this site was probably a mere hunting-lodge, or a military post; and we have little positive information in regard to what it became when rebuilt by Henry I., who there took up his residence; or as to the extensive additions, including a chapel, afterwards made by Henry III. In fact, it was not until the 14th century that the plan of the whole began to assume its present extent and arrangement, when Edward III. first erected the buildings form-

ing the third or upper ward, to the east of the keep, whose inclosure then became the middle one; and the same king founded the 'College or Free Chapel of St. George,' in the lower ward. These works were carried on from about 1350 to 1374, and were chiefly conducted by William of Wykeham, who was appointed surveyor in 1356, with a salary of one shilling a day. From this period comparatively little was done until a century afterwards, when Edward IV. began to re-erect St. George's Chapel nearly as we now behold it, thereby adding, if not immediately to the castle itself, to the buildings within its precincts, one of extraordinary beauty and interest. Henry VII. added to the castle that singularly fine specimen of palatial architecture in its particular style, which is still called after him, and which is situated near the public entrance to the state apartments, at the western extremity of the range forming the north side of the great quadrangle.

During the three following reigns no additions were made. The reign of Elizabeth, on the contrary, forms almost an epoch in the architectural history of the castle, because, though she did not do much to it in the way of building, except annexing to the portion added by Henry VII. that which is distinguished by the name of Queen Elizabeth's gallery, she first caused the terraces to be formed, thereby giving to the royal abode of Windsor what is not the least striking or least attractive of its characteristics. Under the Stuarts nothing material was done until the Restoration, when the castle began to be modernised, and in such a tasteless and insipid manner as to have no quality of style of any kind, and nothing of grandeur but what was derived from mere size. The principal addition made by Charles II. was the Star-Building (containing the state apartments shown to the public). The first two Georges did nothing for Windsor; George III. restored the interior of St. George's chapel (1787-90), which, little as the execution of gothic was then understood, was done in a judicious manner, by scrupulously following the original details.

Except beauty of situation the castle had nothing whatever to recommend it as a residence. The whole of the east and south sides, the portions actually inhabited, were singularly inconvenient in every respect. Hence it was found indispensably necessary to erect (1778-1782) a separate building for the actual occupation of the royal family. This, which was called the Queen's Lodge, was merely a large plain house on the south side of the castle, near the site occupied by the present stables, and was taken down in 1823. About the same time George IV. announced his intention of taking up his abode within the castle, and converting it into a suitable residence for himself and his successors. Accordingly a grant of 300,000*l.* was readily voted by parliament in April 1824 for the projected improvements. The designs for the intended works, furnished by Jeffrey Wyatt, were adopted, and no time was lost in carrying them into execution. The first stone of 'King George IV.'s Gateway' (forming the principal entrance into the quadrangle on the south side, in a direct line with the Long Walk) was laid by the king himself, August 12th, 1824; on which occasion the architect received the royal authority for altering his name to that of Wyattville; and on the king's taking possession of the private apartments, which were completed by the end of 1828, he received the further distinction of knighthood.

Until renovated and remodelled by Sir Jeffrey, the exterior had very little of either architectural character or dignity, or even of picturesque-ness, except that arising from situation; whereas now it is marked by many bold features and well-defined masses, and presents a series of parts, all varied, yet more or less interesting; but even where the principal masses remain the same, the general outline, before feeble and insipid, has been greatly improved: somewhat greater height than formerly has been given to most of the buildings by deep embattled parapets, and in some of them by machicolations also. Some of the towers have been carried up higher and others added; among these last are the Lancaster and York, flanking George IV.'s Gateway, and distinctly marking that as the principal portal of the castle; also the Brunswick Tower, which, owing to its difference of form and greater mass, adds very much to the architectural effect of the north-east angle. But the most striking improvement of the kind was that of carrying up the Round Tower 30 feet higher, exclusive of the Watch Tower on its summit, which makes the height in that part 25 feet more. Previously to this being done that keep hardly deserved the name of tower, it being of diminutively low proportions; whereas now it renders the castle very much more conspicuous than formerly as a distant object.

After the first grant of 300,000*l.*, others were successively made and the total expenditure down to the end of the reign of William IV. amounted to 771,000*l.* There has since been a grant of 70,000*l.* for new stables, which form an extensive range of buildings, only 400 feet from the castle, on its south side, and to the west of the Long Walk; they extend upwards of 600 feet, and include a riding-house, nearly 200 feet in length by 60 feet in breadth. Some additional expenditure has since been incurred by the removal of the houses along the west side of the castle by Thames-street, and the opening of the approaches, and in other improvements. The state apartments, which contain many fine portraits by Vandyke and Lawrence, as well as many other paintings and works of art and taste, are open to the public every Monday, Tuesday, Thursday, and Friday, by tickets obtainable gratuitously of the leading print-sellers in London.

The beautiful chapel of St. George stands within the castle precincts. A chapel dedicated to St. George, for the service of the Order of the Garter, was erected at Windsor by Edward III. (1327-77); but the present edifice was begun by Edward IV. (1461-83), and was not completed until after the commencement of the 16th century. It is one of the most beautiful specimens of the perpendicular style of architecture in this country. The great east window is painted after the designs of West. During the last few years this chapel has been entirely and very judiciously restored at a great expense. St. George's Chapel is a collegiate establishment. The chapter consists of a dean, eight canons, and six minor canons.

The castle is surrounded on two sides by the Little Park, a very ancient and beautiful domain, which at one time formed part of Windsor Forest. Within its precincts is Frogmore Lodge, now occupied by the Duchess of Kent: the grounds comprise about 18 acres, laid out with great taste. In the reign of Queen Anne that part of Windsor Forest which remained the property of the crown, under the name of the Great Park, was cut off from the castle by the intervening private property; and it was therefore determined to buy as much land as might be required to complete an avenue from the castle to the forest. This is the present Long Walk, generally considered the finest avenue of the kind in Europe. It is a perfectly straight line, above three miles in length, running from the principal entrance to the castle to the top of a commanding hill in the Great Park called Snow Hill. On each side of the road, which is slightly raised, there is a double row of stately elms. The view from Snow Hill is very fine. In 1832 a colossal equestrian statue of George III. was erected on the highest part of this hill. The total elevation of the statue and pedestal exceeds 60 feet, and the statue (man and horse) is 26 feet in height. The walks and drives in the Great Park present scenes of much beauty and variety. At the southern extremity of the park is Virginia Water, the largest artificial lake in the kingdom. The eastern side of the Great Park is chiefly in Surrey.

WINDSOR. [NOVA SCOTIA.]

WINDWARD ISLANDS, THE, are opposed to the Leeward Islands, both of which terms are applied to some islands belonging to the Columbian Archipelago, or to the West Indies. The English however differ from other seafaring nations in the application of the name. They limit both terms to that group of the Archipelago which is commonly called the Lesser Antilles, and call those south of 15° N. lat. Windward, and those north of that parallel Leeward Islands [WEST INDIES.]

WINFARTHING. [NORFOLK.]

WINGFIELD. [DERBYSHIRE.]

WINGHAM. [KENT.]

WINGROW. [POLAND.]

WINKFIELD. [BERKSHIRE.]

WINLATON. [DURHAM.]

WINSLOW, Buckinghamshire, a market-town and the seat of a Poor-Law Union, in the parish of Winslow, is situated in 51° 56' N. lat., 0° 51' W. long., distant 10 miles N. by W. from Aylesbury, 49 miles N.W. by W. from London by road, and 54 miles by the London and North-Western railway and its Oxford branch. The population of the parish in 1851 was 1889. The living is a vicarage in the diocese of Oxford. Winslow Poor-Law Union contains 17 parishes and townships, with an area of 85,895 acres, and a population in 1851 of 9876.

Winslow is a neat town, seated on the brow of a hill commanding fine prospects of the surrounding country. The parish church, a commodious plain building of the perpendicular style, has at the west end a square embattled tower. The Independents and Baptists have places of worship. There are National and Infant schools; and a Girls school, in which lace-working is taught. The market is held on Thursday: a monthly market has been lately established for the sale of cattle, wood, &c. Fairs are held eight times in the year. Statute fairs are held on the first Thursday before, and the second and third Thursday after, Old Michaelmas Day.

WINSTER. [DERBYSHIRE.]

WINSTREE. [LEICESTER.]

WINTERBOURNE. [DORSETSHIRE.]

WINTERINGHAM. [LINCOLNSHIRE.]

WINTERTHUR. [ZURICH.]

WINTERTON. [LINCOLNSHIRE; NORFOLK.]

WINTZENHEIM. [RHIN, HAUT.]

WIRKSWORTH, Derbyshire, an ancient market-town, in the parish of Wirksworth, is situated in 53° 4' N. lat., 1° 33' W. long., distant 18 miles N.N.W. from Derby, and 140 miles N.N.W. from London. The population of the town of Wirksworth in 1851 was 2632. The living is a vicarage in the archdeaconry of Derby and diocese of Lichfield.

Wirksworth is the ancient seat of the lead trade, and is situated near the southern edge of the mining district, in a valley nearly shut in by limestone hills. Roman coins and relics have been found at Wirksworth. The town is lighted with gas. Barmote courts are held in the moot-hall, a handsome stone-building, erected in 1814, at the cost of the duchy of Lancaster. Here is kept the miners' standard dish for lead-ore, made in the reign of Henry VIII. The church is a handsome gothic structure of the 14th century. The Wesleyan Methodists, Baptists, and Independents have places of worship. There

are a Grammar school, National schools, and a savings bank. Poor sessions and a county court are held in the town. Gingham, and small-wares are manufactured. The lead-mines of the vicinity, though not so productive as formerly, are still the chief sources of the prosperity of the town. The market is held on Tuesday; there are six annual fairs. Races are held annually.

WIRRAL, a hundred in the county of Chester, which gives name to a Poor-Law Union. The hundred of Wirral occupies the peninsula lying between the estuaries of the Mersey and the Dee. Wirral Poor-Law Union contains 56 parishes and townships, with an area of 112,110 acres, and a population in 1851 of 87,147.

WIRTEMBERG. [WÜRTTEMBERG.]

WISBEACH, Cambridgeshire, a municipal borough and seat of a Poor-Law Union, is situated in the Fen district, chiefly on the right bank of the river Nene, in 52° 40' N. lat., 0° 7' E. long., distant 49 miles N. from Cambridge, 98 miles N. by R. fr. London by road, and 96½ miles by the Eastern Counties and E. Anglian railways. The borough is governed by 6 aldermen and 10 councillors, of whom one is mayor. The living is a vicarage, in the archdeaconry and diocese of Ely. Wisbeach Poor-Law Union contains 22 parishes and townships, with an area of 131,585 acres, and a population in 1851 of 86,215.

The town of Wisbeach has a neat and uniform appearance; its streets are clean and lighted with gas. A handsome circus, constructed in 1816, occupies the space on which the castle of Wisbeach formerly stood. The corn exchange, built in 1811, was converted in 1831 into a room for lectures, concerts, and similar purposes. At the back of the corn exchange is a large plot of ground used as a cattle-market. The new town-hall was built in 1801 on the site of a building called 'The Firkin Cross,' which was the butter-market at a period when the town had a considerable trade in dairy produce. A public hall was erected in 1852 for the use of the mechanics institute, temperance society, &c. The house of correction was built in 1807. The market-place occupies a large piece of ground in the centre of the town. There are public baths. St. Peter's church is an ancient and very fine building, with a tower detached from the body of the church. St. Mary's church is a short distance from the town, and there is a chapel of ease. The Wesleyan Methodists, Independents, Baptists, Quakers, Roman Catholics, and Unitarians have places of worship. There is a Bethel or Seamen's chapel, a Free Grammar school, National, British and Infant schools, a literary society, a scientific institution, reading-rooms, a public library, and a savings bank. Quarter and petty sessions and a county court are held in the town.

The two parts of the town of Wisbeach are connected by a bridge of stone, consisting of one arch of 72 feet span. A canal between Wisbeach and Outwell, which was completed in 1792, connects the Nene with the Ouse. The navigation of the Nene to Wisbeach had gradually become very difficult and dangerous, from the accumulation of mud and sand; but by cuts and other works it has been much improved. The number and tonnage of vessels registered as belonging to the port of Wisbeach on December 31st, 1854, were—50 tons and under, 22 sailing-vessels, tonnage 816; and 1 steam-vessel, tonnage 18: above 50 tons, 78 sailing-vessels, tonnage 11,932; and 2 steam-vessels of 675 tons. The number and tonnage of vessels entered and cleared at the port during 1854, were:—Inwards, 727 sailing-vessels, tonnage 62,694, and 41 steam-vessels, tonnage 16,996; outwards, 308 sailing-vessels, tonnage 19,658, and 2 steam-vessels, tonnage 104.

The market for fat cattle is held weekly on Thursday; that for corn, which is of considerable importance, is held on Saturday. Three fairs are held yearly. The exports include corn, potatoes, wool, and seeds; coals and timber are the chief imports. Ship- and boat-building, rope-making, iron-founding, brick-making, brewing, malting, and tanning are carried on. Whiting is made to some extent. In the vicinity are extensive market-gardens.

A castle was built at Wisbeach in 1086 by William I. After its destruction by an inundation in 1236 it was rebuilt. It existed in Cromwell's time, but has since been demolished. The Guild of the Holy Trinity of Wysbech was established in 1379, and remained, with eight minor guilds, till the dissolution of the monasteries.

WISBY. [GOTHLAND.]

WISCASSET. [MAINE, U.S.]

WISCHEGRAD. [BOSNIA.]

WISCONSIN, one of the most northern of the United States of North America, extends between 42° 30' and 47° N. lat., 86° and 93° W. long. It is bounded E. by Lake Michigan and the large inlet at its south-western extremity known as Green Bay, which divides it from the state of Michigan; N.E. by the state of Michigan; N. by Lake Superior, which divides it from Upper Canada; N.W. and W. by the territory of Minnesota; S.W. by the state of Iowa; and S. by that of Illinois. The extreme length from north to south is 285 miles, the greatest width 255 miles. The area is 53,924 square miles. The population in 1850 was 805,391, of whom 635 were free-coloured persons: the density of population was 5.66 to the square mile. The inhabitants being all free, the federal representative population is the same as the entire population in 1850. This, according to the present ratio of representation, entitles the state to send three representatives to Congress. To the Senate, like each of the other states, Wisconsin sends two members.

Surface, Hydrography, and Communications.—The surface of this state is for the most part gently undulating. No portion of it is mountainous, but the northern and north-western parts are very much broken, and some of the hills known as the Wisconsin Mountains attain a considerable elevation. The most northern part is a wild rocky country containing immense forests of white pine and other evergreen trees, from which vast quantities of lumber are annually sent down the St. Croix River to the Mississippi. This region is wholly one of primitive rocks, and affords scenes of striking grandeur. It is in this district that the extensive copper deposits of Wisconsin are found. Along Lake Superior the cliffs are very steep and mostly bare, or only covered with low bushes. In the immediate vicinity of the lake forest trees rarely occur, except in the recesses of some of the bays, or along the river bottoms. All the rivers in this northern portion of the state are very rapid, and afford abundant water-power; those which flow into Lake Superior generally have rapids or falls a few miles above their mouths.

That portion of the state which borders on the Mississippi is described under *MISSISSIPPI RIVER*. From the junction of the St. Croix the Mississippi runs along a 'bottom,' which below Lake Pepin widens from 8 to 10 or 12 miles. This bottom is uniformly bounded by limestone cliffs, or 'bluffs,' which are generally abrupt and often precipitous, rising to a height of from 300 to 500 or 600 feet, and occasionally still higher; south of the Wisconsin River they sink much lower. Within the bottom, especially in the vicinity of Lake Pepin, isolated hills and knobs of considerable magnitude, based upon horizontal strata of rock and towering to various heights, are frequently met with. The valley consists of alternate prairie and woodlands. The prairies are usually elevated above the reach of floods, and richly covered with herbage and flowers; while the woodlands sustain a heavy growth of trees, but are inundated in flood-time. The high lands bounding the river are intersected by deep and numerous rivers and watercourses, which give to that part of the country a hilly and broken aspect. At the back of them the country is diversified by hills and valleys: the hills are high and rugged, and partly covered with timber; the valleys often present extensive flats, abounding in lakes, swamps, and ponds. The soil is sandy, and the vegetation not vigorous; the trees do not attain their full growth. This country is bounded on the east, about 90° W. long, by a lofty range of hills called the Ocooch and Smokey Mountains. In this hilly region originate the head-waters of a great number of rivers and numerous lakes. The country east of this ridge, extending by Fox River to Green Bay, is less broken and rugged; the soil is less sandy, the vegetation more luxuriant, and the forest-trees attain a more stately growth. A large part of it consists of wide rolling prairies, and there are several lakes and extensive swamps having an abundant growth of cranberries and wild rice. The forests in these parts consist chiefly of yellow-pine, pitch-pine, and white-pine of excellent quality; but white-birch, white-cedar, spruce, and juniper are also common.

The country between the southern boundary of the state and the Wisconsin, where that river runs from east to west, is an irregular plain, elevated from 250 to 300 feet above the surface of the Mississippi, and consists of limestone which is often rent by deep and nearly perpendicular chasms of considerable depth, but little width. On the upper surface of the plain are numerous single hills rising from 200 to 500 feet above their bases, and from 600 to 1000 feet above the watercourses which run in the chasms. The highest of these hills, called Blue Mound, not far from the left bank of the Wisconsin, is stated to be 1414 feet above the surface of the Mississippi at the mouth of Wisconsin River. The greater part of this region is a prairie destitute of wood, and generally covered with a good turf. There are also many tracts overgrown with stunted oak and some other trees; but these woods have no underwood, and the single trees are generally from 10 to 20 feet from one another. In a few places the forests are more dense. The bottoms of the rivers run at a considerable depth below the general level of the country, especially that of the Wisconsin, which resembles the bottom of the Mississippi, but is only from one mile to two miles wide.

The country along the shores of Lake Michigan has a different aspect. The southern part, as far north as the small bay into which the river Milwaukee falls, is a portion of the great level and low plain which surrounds the southern extremity of the lake, and extends from St. Joseph's River to the Milwaukee. It is an extensive flat embracing woodlands and prairies alternating with each other. Farther north the shores of the lake are skirted by high sand-hills, which sometimes extend inland, and are barren, but protect the more level and fertile country which is traversed by the Milwaukee and Manawakee rivers against the winds blowing from the lake. North of 44° N. lat., and up to Green Bay, the shores of the lake are somewhat rocky, uneven, and partly wooded. The country farther inland along the Fox River, and towards Winnebago Lake, has a considerable degree of fertility.

In the southern part of the state are numerous very remarkable remains of an unknown antiquity, the only records of the ancient inhabitants of the country. They consist of a series of tumuli, and are locally known as the Mounds. They are scattered over a wide area, but are most numerous along Rock, Wisconsin, Fox, and Pishtaka rivers, and in the vicinity of Lake Winnebago and the Four Lakes.

The most numerous of the mounds are of a circular and oblong form, similar to the sepulchral mounds which have been met with all over the globe; but besides these, and often placed without regard to regularity among them, are numerous others wholly unlike what are met with elsewhere. These are described as being of various sizes, and constructed of various materials, but commonly of burnt clay. They all assume definite shapes, and, though rudely fashioned, are evidently intended to represent various quadrupeds, birds, reptiles, and occasionally man. One, near Blue Mound, represents a man lying down, with his head towards the west, his feet to the east, and his legs and arms extended. It is 120 feet long, and about 6 feet high. A figure of a turtle is 56 feet long, and about 5 feet high. Some are said to represent buffaloes, eagles, lizards, &c.; and in a few instances they occur arranged in an irregular line as though the animals were following each other. At one spot, near the Four Lakes, about 100 of these mounds occur; those representing animals being placed among the plain ones without any apparent order. Fragments of ancient pottery are frequently found in the same neighbourhood. ('Silliman's Journal,' vols. xxxiv. and xlv.)

The Mississippi, which forms the western boundary of the state from the junction of the St. Croix, is noticed in a separate article. [*MISSISSIPPI RIVER*.] All the more important rivers of the state fall into the Mississippi. The *Wisconsin*, from which the name of the state is derived, flows from some lakes north of 45° N. lat., and runs above 200 miles in a generally southern direction to Portage, when it turns to the south-west and west, and, after a further course of 114 miles, falls into the Mississippi near Prairie du Chien. When swollen by a freshet it affords an easy navigation for steam-boats of considerable burden up to Portage, and boats of light draft usually find sufficient water. Above Portage are numerous rapids, which afford water-power to a great number of saw-mills. At Portage is a depression, or portage, of one mile and a half, across a flat meadow, which is occasionally subject to inundation, to the Fox River of Green Bay, thus affording a communication between Lake Michigan and the Mississippi, through which boats have been known to pass. The current in the lower part of the river is rapid, and like the Mississippi it contains numerous islands: when the water is low, the navigation is obstructed by shoals and sand-banks. Works have been for some time in progress for the purpose of improving the navigation of the Wisconsin, and of rendering available its communication with Lake Michigan.

The river next to the Wisconsin in importance is the *Fox*, or *Neenah* River, whose head-waters lie to the east of the great bend of the Wisconsin. From the portage above-noticed between the two rivers it runs northward to the Buffalo and Puckawa lakes, which extend from west to east. Issuing from these lakes the Fox River runs north-west, until it is joined from the north by the largest of its affluents, the Wolf River. The united river passes through a small lake, called, from the tumuli which occur in its vicinity, the Grande Buttes des Morts Lake, into Winnebago Lake, which is 32 miles long and nearly 10 miles across in the widest part. It leaves this lake at its north-western extremity and soon afterwards forms a series of rapids, which obstruct navigation. The remainder of its course lies to the north-east, and it falls into the most southern recess of Green Bay. The rendering the rapids below Lake Winnebago passable by steam-boats, is a part of the scheme for connecting the Mississippi with Lake Michigan, noticed above.

Of the other rivers we shall only mention three, which fall into the Mississippi,—the Black River, the Chippeway and St. Croix rivers. *Black River* rises in the Ocooch Mountains near 44° 20' N. lat., and flows first south, and then south-west to its junction with the Mississippi, about 91° 30' W. long. It drains a valley, in which the surrounding hills are covered with fine forest trees; and above 15,000,000 feet of pine lumber are annually sent down the river to the Mississippi. The *Chippeway*, the Ojibway of the Indians, rises near some of the tributary streams of Lake Superior. The main stream is formed by the union of several small streams, which issue from numerous lakes near the Michigan boundary. It flows in a generally south-western direction to the Mississippi, which it enters near the foot of Lake Pepin. It forms in its course numerous rapids, one series of which extends for about 24 miles. Above 28,000,000 feet of pine lumber are sent down this river annually. The *St. Croix* River is noticed under *MISSISSIPPI RIVER*, vol. iii. col. 821. About 20,000,000 feet of pine lumber are annually sent down the St. Croix. The other rivers of the state are very numerous, and though not of much value for navigation, are of the greatest importance for mechanical purposes.

The number of lakes which are dispersed over the state between the Mississippi River and Lake Superior is very great. In some parts north of 45° N. lat., they cover more than half the surface, most of them varying from 2 to 10 miles in circumference; but there are also several larger lakes. The larger are the Flambeau Lake and the Tomahawk Lake, each of which sends its waters to the Chippeway River; in the same district are lakes Courtoreille, Chetac, Red Cedar, &c. The country south of 45° N. lat., contains comparatively few lakes, with the exception of the low tract of country which lies between the great bend of the Wisconsin River and Green Bay, and is drained by Fox River. This tract contains numerous lakes, among

which is the Winnebago Lake, through which Fox River flows, and which is navigable for steam-boats, several of which ply regularly upon it. The lakes Buffalo, Puckawa, and Buttes des Morts, formed by expansions of Fox River, have been already noticed; Fond du Lac is another expansion of Fox River, which opens into Great Buttes des Morts Lake, and is remarkable for its picturesque scenery. South of the Wisconsin are the Four Lakes, through which the Goosekahn River flows; on the isthmus between Third and Fourth lakes, Madison, the capital of the state, is situated. Lake Michigan, which bounds the state on the east, is noticed under CANADA.

Numerous railways have been projected for this state, and several have been wholly or partly constructed. Madison is the centre of the state railway system. One of the chief lines in operation is the Milwaukee and Mississippi railway, which connects Milwaukee with Madison, and will eventually be continued to the Mississippi. Another great line connects Chicago, on Lake Michigan, in Illinois, with Fond du Lac. In all there were, on the 1st of January, 1855, in Wisconsin 11 lines of railway, having 283 miles of road in operation, and 746 miles additional were in course of construction or projected. Plank roads have been laid down from all the chief lake ports to the interior.

Geology, Mineralogy, &c.—The rocks of the north and north-western portions of the state belong entirely to the eruptive and metamorphic series; except in the immediate vicinity of Lake Superior, where are strata of what Mr. Owen describes as Potsdam sandstone, but which Mr. Marcou thinks clearly identical with the New Red-sandstone of European geologists. In this north-western section are valuable dykes of copper-trap. But the prevalent formation of Wisconsin is the Silurian, which is described as extending along the entire course of the Mississippi in this state, from the St. Croix to considerably east of the Chippeway, along Lake Michigan, and to occupy almost the whole of the southern moiety of the state. Of this extensive tract Lower Silurian strata occupy by far the largest portion. The lowest of these strata is the hard crystalline sandstone, known as Potsdam sandstone; in the western part of the state it is of considerable thickness, and is characterised by containing a larger number of *Lingula* and *Orbicula* than is found in any other part of America. Above this occur strata, chiefly of blue-limestone and blue clays, with, in some places, layers of sandstone. The limestones are mostly magnesian, in which are included the Galena limestones, which supply the lead veins that constitute so important a part of the wealth of southern Wisconsin. To this division of the Lower Silurian strata chiefly belong the rocks which border Green Bay. The St. Peter's shell-limestone, or the upper division of the Lower Silurian strata of America, is also said to have been recognised in some parts of Wisconsin. Upper Silurian strata form a comparatively narrow band, extending along Lake Michigan from Green Bay into Illinois: these strata consist entirely of limestone rocks. In the extreme south-eastern angle of the state, south of Milwaukee, they consist chiefly of light gray limestones, and are designated by Mr. Owen the Red Cedar River Formation.

Wisconsin is very rich in minerals, and though so new a state, mining operations are carried on upon an extensive scale. In the north-western portion of the state, or the region of igneous rocks, veins of copper-ore occur of remarkable richness, and which are said to be apparently inexhaustible. The copper-mines are chiefly in the neighbourhood of Lake Superior. The lead-mines of Wisconsin supply however by far the larger proportion of its mineral wealth. The lead occurs in the porous limestone of the southern part of the state, and the mines are worked to great profit. In 1852 about 40,000,000 lbs. of lead were exported from Galena, of which nine-tenths are said to have been raised in Wisconsin, and the quantities shipped at other ports on the Mississippi and Wisconsin are said to be more than equal to the remaining tenth part. Iron-ore occurs along the upper course of the Mississippi and elsewhere, but it has not yet been turned to much account. In the copper-veins zinc and calamine are found. The Silurian sandstone forms an excellent building-stone, for which purpose it is largely quarried. White-marble abounds in the southern and eastern portions of the state. Gypsum, chalcedony, jasper, &c., are met with in various places.

Soil, Climate, Productions, &c.—In the prairie districts the soil generally consists of a dark vegetable mould of considerable depth, resting on a clayey loam. It contains a large proportion of carbonate of lime, is quite free from stones or gravel, and is very fertile. The soil of the timbered land is neither so deep nor so rich as that of the prairies; that of the evergreen district is sandy and far from fertile. There is also a great deal of poor sandy land along the eastern side of the state. In the mining districts there are many very fertile tracts.

The winters are long and very cold, and the summers are very hot. The difference between the two seasons is much greater than in the northern countries of Europe, which are under the same degree of latitude and nearly as elevated as Wisconsin. During the winter months the thermometer frequently descends below zero, which very seldom takes place in southern Sweden. But the temperature rises rapidly in March, and the spring is much warmer than in Europe, in places which have the same mean annual temperature. On the other hand, the decrease of heat in the months of October and November is also greater. The mean annual temperature is about 45°, but it

differs of course somewhat in different parts of the state. Notwithstanding the numerous lakes and swamps, the climate of Wisconsin is said to be very healthy.

The prevailing winds in the countries situated near the shores of Lake Michigan are from the south-west for at least ten months in the year. But on the banks of the Mississippi the north-west is the prevailing wind, except in May and June, when the south-east is the frequent. Thunderstorms are frequent, especially at the beginning of the spring and towards the end of the summer.

Wisconsin is mainly an agricultural country, and its agricultural operations are yearly extending rapidly. The oak openings, the result of the annual fires which have for an indefinite period swept over a large portion of the state, offer great facilities for the operation of immigrant farmers; and Wisconsin has continued to attract for many years past a steadily increasing influx from the south and east, and the returns show a corresponding increase of improved lands. The cereals wheat is the principal crop, and the quantity raised increased from 212,116 bushels in 1840 to 4,286,131 bushels in 1850, an increase of 1920 per cent. in 10 years. Oats is the next largest crop, and then maize; the quantity grown of both of these has increased very largely (though a good deal less than that of wheat between the above dates. Barley, rye, and buckwheat are also grown to a considerable extent. Potatoes are raised in large quantities. Some hops are grown. The cultivation of hemp and flax is increasing. Home manufactures were only valued at 12,567 dollars.

The forests consist chiefly of white and other pines, but they contain various kinds of oak, hickory, walnut, sugar-maple, linden, cotton-wood, white, blue, and black ash, elm, red cedar, maple, willow, elm, white birch, white cedar, spruce, and juniper. About 200,000,000 feet of lumber are annually sawn and sent down the rivers of Wisconsin.

The prairies, especially in the southern districts, are covered with a fine turf, and afford good pastures for cattle and sheep. Horses, cattle, and sheep are becoming numerous. Swine have increased very greatly. The wool sheared in 1850 amounted to 253,963 lbs., butter 3,633,750 lbs., and of cheese 400,283 lbs. were made. There are wild animals of several kinds, though their number is rapidly decreasing. In the northern districts are buffaloes, elk, and deer; in these animals are rare in the southern districts. Bears, wolves, and foxes are not uncommon. The black and silver fox are greatly prized for their skins. The other animals are beavers, otters, minks, muskrats, musk-rats, which are now found only in the northern districts. The lakes, swamps, and rivers abound in water-fowl, such as swans, geese, ducks, and teal. There are also eagles, falcons, snipes, wild turkeys, and partridges. Fish abound in the lakes. The most important kind is the white-fish, which weighs from 4 to 6 lbs., and is very numerous in some of the northern lakes. The rivers abound in sturgeon.

Commerce, Manufactures, &c.—The direct foreign commerce of Wisconsin is chiefly with Canada, and is not of much importance. But the coasting-trade carried on from the lake ports of this state and by the Mississippi is very large. The imports at the ports on Lake Michigan in 1850-1 amounted to above 6,300,000 dollars, and the exports to about 3,000,000 dollars. The exports from the Mississippi ports are chiefly of minerals. The quantity of lumber annually sent down the rivers has been already stated.

The manufactures are chiefly of agricultural implements and the kinds of articles which are required in an agricultural country, the great bulk of what are entered in the state returns under the head of manufacturing establishments, being saw-mills, flour-mills, and tanneries. There are however also several iron-works, woolen factories, breweries, distilleries, &c. A large quantity of maple sugar is made by the farmers.

Divisions, Towns, &c.—Wisconsin is divided into 45 counties. The political capital is Madison, but the commercial centre and by far the largest town in the state is Milwaukee. The following comprise most of the more important towns, but new towns are constantly rising into comparative importance in this as in the other more flourishing of the new states.

Madison, the capital, is situated on the isthmus between the Third and Fourth Lakes, of the series known as the Four Lakes; 85 miles W. from Milwaukee: population 1525 in 1850, and 3500 in 1853. On Wisconsin being organised as a territory this spot was selected as the site of the future capital. The country was then only very partially cleared, and the contractor for laying out and building the future capital was, with his party, 11 days in cutting his way through the wilderness from Milwaukee. The foundation of the city was commenced in June 1837. The situation of the city is a very striking one. The capitol occupies the summit of an elevation 75 feet above the level of the lakes, and the main streets lead from it down to the lakes, with the exception of the western avenue, which is directed to the open country. The capitol, the chief public building, is a spacious and substantial structure. On an elevated spot west of the city stands the University of Wisconsin, founded in 1848: in 1854 it had 5 professors and 23 students. The city has greatly increased in buildings and population since the opening of railway communication; and the great amount of water-power which it possesses has led to the erection of several extensive mills. Three newspapers are published here.

Milwaukee stands on both sides of the Milwaukee River, at its entrance into Lake Michigan; 85 miles E. from Madison, in 43° 3' N. lat., 87° 57' W. long. The rise of this city has been very rapid. It was laid out in 1835 as a village. In 1840 it contained 1712 inhabitants; 20,061 in 1850, and about 25,000 in 1853. It is the chief commercial and manufacturing town in the state, and the largest on Lake Michigan after Chicago, which is about 100 miles S. from it. Milwaukee contains some good county and municipal buildings, churches, schools, stores, hotels, &c. A large portion of the trade is in the export of lumber, but there is an important and rapidly-extending export of wheat, flour, pork, beef, hides, lead, &c. The imports in 1850-51 amounted to 3,828,650 dollars, the exports to 2,098,469 dollars, but they have since greatly increased. In the city and its suburbs are extensive saw-mills, flour-mills, woollen factories, machine shops, iron foundries, cooperages, paper-mills, and tanneries; also manufactories of carriages, cabinet-ware, harness, soap and candles, sails and rigging, &c. Bricks of peculiar colour and quality are made here very largely for exportation. The city possesses several ships, and screw- and paddle-steamers. Milwaukee Bay, which is 6 miles across and 3 miles deep, is well sheltered, except from the east, and affords good anchorage. Six daily newspapers, 5 of them having also tri-weekly and weekly issues, are published here.

Beloit, on both sides of Rock River, at the junction of Turtle Creek, 46 miles S. by E. from Madison; population 2732 in 1850, and 3300 in 1853. The town possesses considerable water-power, which is applied to working several large mills; it also contains machine-shops, and other manufacturing establishments. Beloit College had 6 professors in 1854, and 30 students. A branch of the Galena and Chicago railway is carried to the town. Several of the ancient tumuli before noticed are in the vicinity. *Fond du Lac*, a village on the Fond du Lac River, at its entrance into the lake, 30 miles N.E. by N. from Madison; population 2014 in 1850, and about 4000 in 1840, is a place of considerable and growing trade. Regular steam-boat communication is maintained with the chief ports on Lake Michigan. *Green Bay*, on the right bank of Fox River, at its entrance into Green Bay, 140 miles N.N.E. from Madison; population 1923 in 1850, and 2500 in 1853. It is well situated for trade, the harbour permitting vessels of 200 tons to come up to the town, and the Fox River promising to afford, when the improvements in progress are completed, great facilities for communication with the interior. Some of the buildings are large and showy. *Janesville*, on both sides of Rock River, 35 miles S.S.E. from Madison; population 3419 in 1850, about 5000 in 1853. This is one of the rising business towns of the state. It contains a few good public buildings; has several large mills and stores; and is connected with Chicago and Milwaukee by railway. *Kenosha City*, formerly called Southport, is situated on Lake Michigan, about 100 miles S.E. from Madison; population 3455 in 1850, about 5000 in 1853. The harbour is a good one, and the town is the market and port of one of the finest farming districts in this part of the Union. *Manitowac*, at the entrance of the Manitowac River into Lake Michigan, 120 miles N.E. from Madison; is conveniently situated for trade, has good water-power for mechanical purposes, and is the natural outlet of a fertile district. It appears to be one of the most rising towns in the state; the population, which in 1850 was only 756, had increased in 1853 to 2300. *Mineral Point*, on one of the head streams of the Pecatonica, an affluent of Rock River, 50 miles W.S.W. from Madison; population about 3000 in 1853; is a mining town of considerable local importance. It contains some good public buildings, and large works for smelting lead- and copper-ore. *Prairie du Chien*, on the Mississippi, 3 miles above the confluence of the Wisconsin, about 105 miles W. from Madison; population 2498 in 1850. The town contains several churches and other buildings. It is a place of considerable trade; in its vicinity are very productive lead-mines; and the prairie from which the town derives its name is one of the most fertile regions south of the town. The military post, Fort Crawford, is a short distance south from the town. In the neighbourhood are numerous ancient sepulchral mounds. *Racine City*, at the mouth of Root River, on Lake Michigan, 90 miles E. by S. from Madison; population 5107 in 1850, and about 7500 in 1853, is, after Milwaukee, the most important commercial place in the state. It contains several good public buildings, and is the site of Rowsell Episcopal College. The exports, chiefly of wheat, amounted in 1851 to 650,950 dollars; the imports to 1,452,750 dollars. Five newspapers are published here. The Chicago and Milwaukee railway passes through the city. *Sheboygan*, on Lake Michigan, at the mouth of the Sheboygan River, 115 miles N.E. from Madison, is a place of some trade, and contained 2600 inhabitants in 1850. *Shullsburg*, on a branch of Fever River, 60 miles S.W. from Madison, is the centre of a busy lead-mining district, and contained 1678 inhabitants in 1850, and 2500 in 1853. *Waukesha*, on the Pishtaka River, 65 miles S.E. from Madison, stands on the edge of a rich prairie, and is a place of considerable trade. It had 2313 inhabitants in 1850, and 4000 in 1853.

History, Government, &c.—Wisconsin was first visited by the French about 1660; and it remained nominally a French possession till 1763, when it was ceded to Great Britain. After the declaration of American independence, Wisconsin formed a part of the United States North-West Territory. Wisconsin was erected into a distinct territorial government in 1836; but the territory included a much

larger area than the present state. In 1848 Wisconsin, with its present boundaries, was admitted into the Union as an independent state.

The constitution of the state of Wisconsin was confirmed by a popular convention in April 1848. By it the suffrage is vested in all free white males 21 years of age, who have resided in the state for one year, and in all civilised persons of Indian descent not being members of a tribe. The legislature, elected biennially, consists of an Assembly of not less than 54 nor more than 100 (at present 54) members; and a Senate of not less than one-fourth nor more than one-third of the number of members of the Assembly: at present there are 18 senators. The governor is also elected for two years. The judges are elected by popular vote. By the constitution, the legislature cannot pass a bill for a lottery or a divorce. The total revenue of the state for the year ending December 31, 1853, was 311,633 dollars; the total expenditure was 254,187 dollars. The state militia consisted in 1854 of 39,565 men, of whom 414 were commissioned officers. In 1853, in the counties which furnished returns (39 out of the 45 in the state), there were in all 138,279 "children between the ages of 4 and 20," of whom 95,293 attended school. The capital of the State School Fund amounted on December 31, 1853, to 1,141,804 dollars, of which 1,107,709 dollars were at interest at 7 per cent. There are a state university at Madison, and colleges at Beloit and Racine.

(*Hunt, Gazetteer of Wisconsin; Statistical Gazetteer of the United States; Owen, Report of a Geological Survey of Wisconsin; Marcou, Geological Map of the United States; Seventh Census of the United States; De Bow, Statistical View of the United States; American Almanac.*)

WISHAWTON. [LANARKSHIRE.]

WISMAR. [MECKLENBURG.]

WITCHAMPTON. [DORSETSHIRE.]

WITHAM, Essex, a market-town and the seat of a Poor-Law Union, in the parish of Witham, is situated on the left bank of the river Brain or Podsbrook, just above its junction with the Blackwater, in 51° 48' N. lat., 0° 39' E. long., distant 9 miles N.E. from Chelmsford, 87 miles N.E. from London by road, and 38½ miles by the Eastern Counties railway. The population of the parish of Witham in 1851 was 3803. The living is a vicarage in the archdeaconry of Colchester and diocese of Rochester. Witham Poor-Law Union contains 17 parishes and townships, with an area of 36,938 acres, and a population in 1851 of 16,099.

Witham is generally reputed to have been built by Edward the Elder, but probably that prince only restored the place, as there appears to have been a Roman station here. The town of Witham consists of two portions: the larger comprises one main street along the high road, and four small streets branching from it; while the smaller, about half a mile distant, is on Chipping Hill, and includes the parish church. The town is lighted with gas. The church is a commodious structure. A second church, All Saints, was erected in 1842, at a cost of 5000*l.* The Independents, Baptists, Quakers, and Roman Catholics have places of worship. There are National, British, and Infant schools, a literary institution, and a savings bank. The market is held on Saturday; three fairs are held in the course of the year.

WITNEY, Oxfordshire, a market-town and the seat of a Poor-Law Union, in the parish of Witney, is pleasantly situated on the banks of the river Windrush, in 51° 48' N. lat., 1° 29' W. long., distant 11 miles W.N.W. from Oxford, and 65 miles W.N.W. from London. The population of the town of Witney in 1851 was 3099. The living is a vicarage and rectory, in the archdeaconry and diocese of Oxford. Witney Poor-Law Union contains 42 parishes and townships, with an area of 70,169 acres, and a population in 1851 of 23,530.

The town of Witney is chiefly known by its blanket manufacture, which has been carried on from an early period. Although a manufacturing town, Witney retains a quiet and rural appearance. Situated in the High-street are a staple or blanket hall, a handsome structure, erected in 1721; a town-hall, built of stone, with a piazza underneath for a market-house; and a market-cross, erected in 1683, and repaired in 1811. The church is a commodious and handsome cruciform building, with a tower and a lofty spire at the intersection. The Independents, Wesleyan and Primitive Methodists, and Quakers have places of worship. There are a Grammar school, National, British, and Infant schools, and an Athenæum reading-room. The manufacture of rough coatings, of tilt for barges, of felt for paper-makers, and of gloves, employs some of the inhabitants. The Witney blankets are of superior texture and good colour. Thursday is the market-day; six fairs are held in the course of the year.

WITTENBERG. [MERSBURG.]

WITTERSHAM. [KENT.]

WITTON-LE-WEAR. [DURHAM.]

WITSTOCK. [BRANDENBURG.]

WIVELISCOMBE. [SOMERSETSHIRE.]

WIVENHOE. [ESSEX.]

WIX. [ESSEX.]

WLODAWA. [POLAND.]

WOOHOO. [SANDWICH ISLANDS.]

WOBURN, Bedfordshire, a market-town and the seat of a Poor-

Law Union, in the parish of Woburn, is situated in 51° 59' N. lat. 0° 37' W. long., distant 16 miles S.S.W. from Bedford, 41 miles N.W. by N. from London by road, and 50 miles by the London and North-Western railway. The population of the parish of Woburn in 1851 was 2049. The living is a perpetual curacy exempt from episcopal jurisdiction. Woburn Poor-Law Union contains 16 parishes and townships, with an area of 29,603 acres, and a population in 1851 of 12,075.

An abbey of Cistercian monks was founded at Woburn by Hugh de Bolebec in 1145. The last abbot, Robert Hobs, was executed for denying the king's supremacy; and the site of the abbey was granted to John, lord Russell, afterwards earl of Bedford. The town of Woburn was destroyed by fire in 1724, after which it was rebuilt in a regular manner. The market-house has been much improved by the present Duke of Bedford, who has also enlarged the parish church and school-house, and added to the church tower an elegant lantern and pinnacles. The Wesleyan Methodists and Independents have chapels, and there are a British school and some almshouses. Lace-making and straw-hat making employ some of the females. Friday is the market-day; fairs are held on January 1st, March 23rd, July 13th, and October 6th.

The park, in which is situated Woburn Abbey, the magnificent seat of the Duke of Bedford, is about three miles long by about a mile and a half wide. Part of the old abbey remains, but has been incorporated with the buildings constituting the present mansion. Woburn Abbey, as it now stands, was erected about the middle and towards the end of the last century; it occupies four sides of a quadrangle, presenting four fronts of above 200 feet each. The principal front, on the west side, is of the Ionic order, with a rustic basement. The offices are at a short distance from the mansion, and the park is finely diversified with wood and water. The tree on which Abbot Hobs was hung is still standing, and is carefully preserved. The abbey is adorned with several interesting historical portraits. In the dining-room is a fine collection of portraits by Vandyke; and in the breakfast-room a numerous series of views in Venice, by Canaletti, painted originally for Bedford House. In the sculpture gallery are the antique vase known as the Lanti vase, brought over to England by Lord Cawdor, and a very large ancient marble sarcophagus (brought from Ephesus) having bassi-relievi on the four sides. In the park is a farm-yard on a very extensive scale, and furnished with every convenience. It originated with Francis, fifth duke of Bedford. The grounds and gardens have obtained great horticultural celebrity. The arboretum is a very fine one; the collection of willows is the finest in England.

WOKING. [SURREY.]

WOKINGHAM, or OAKINGHAM, Berkshire, a market-town and the seat of a Poor-Law Union, in the parish of Wokingham, is situated near the right bank of a feeder of the river Loddon, in 51° 25' N. lat., 0° 50' W. long., distant 7 miles S.E. from Reading, and 32 miles W. by S. from London. By the Great Western railway, and the Reading branch of the South-Eastern railway, the distance from London is 42½ miles. The population of the town of Wokingham in 1851 was 2272. The town is governed by eight capital burghesses, one of whom is alderman. The living is a perpetual curacy, in the archdeaconry of Berks and diocese of Oxford. Wokingham Poor-Law Union contains 16 parishes and townships, with an area of 42,226 acres, and a population in 1851 of 13,663.

Wokingham is within the precincts of Windsor Forest, and on one of the roads from London to Reading. The town consists of several streets, which meet in a spacious area, containing the market-house. The church, which is ancient, is a large and handsome edifice. The Wesleyan Methodists and Baptists have places of worship. There are National and Infant schools, a savings bank, almshouses, and a hospital at Luckley Green for a chaplain and 16 poor men. The malting and meal trades and the shoe manufacture furnish the chief occupations of the inhabitants. The market is held on Tuesday, and is well supplied with poultry, which is purchased largely for the London market. Four fairs are held during the year.

WOLFENBÜTTEL, a town in the duchy of Brunswick, capital of the circle of Wolfenbüttel, is situated in 52° 9' N. lat., 10° 32' E. long., on the Ocker, 13 miles by railway from Brunswick, and has about 10,000 inhabitants. It is divided into three parts, namely the citadel, or formerly fortified part, and two suburbs. The town is well built, and has broad, and for the most part, straight streets, all well paved. Till 1764 it was the residence of the dukes, in whose palace there was a manufactory of tapestry and a theatre. Opposite the palace stands a fine building, erected in 1723, on the model of the Pantheon at Rome, containing on the ground-floor the ducal riding-school, and above it the public library, which contains 10,000 manuscripts and 200,000 printed volumes. The town has four churches, of which that of St. Mary is remarkable for its size; an ancient arsenal, now used as barracks; a large poor-house; an orphan asylum; a gymnasium; and several schools. The inhabitants have a considerable trade in yarn, and they also manufacture linen, leather gloves, japanned-ware, paper-hangings, silk, diaper, tobacco, liqueurs, and vitriol; there are likewise some tanneries and distilleries. Wolfenbüttel is the seat of several public offices, for the whole duchy, of the consistory and of the supreme court of appeal for Waldeck, Lippe, and Brunswick.

WOLGA. [VOLGA.]

WOLLIN. [STETTIN.]

WOLSINGHAM. [DURHAM.]

WOLSTANTON, Staffordshire, a village, and the seat of Wolstanton and Burslem Poor-Law Union, is situated in the pottery district, in 53° 1' N. lat., 2° 11' W. long., distant 2 miles N. by E. from Newcastle-under-Lyme, 150 miles N.W. from London by road, and 147½ miles by the North-Western and North-Staffordshire railways. The population of the township of Wolstanton in 1851 was 1317; that of the entire parish, which includes Tunstall, noticed among the towns in STAFFORDSHIRE, was 22,191. The living of Wolstanton parish is a vicarage, in the archdeaconry of Stafford and diocese of Lichfield. Wolstanton and Burslem Poor-Law Union contains the two parishes so named, with an area of 13,679 acres, and a population in 1851 of 41,916. Wolstanton church is a neat edifice; there are no other buildings of any consequence. The inhabitants are chiefly dependent on the potteries of the district.

WOLVERHAMPTON, Staffordshire, a market and manufacturing town, municipal and parliamentary borough, and the seat of a Poor-Law Union, is situated in 52° 35' N. lat., 2° 7' W. long., distant 16 miles S. from Stafford, 123 miles N.W. from London by road, and 127 miles by the London and North-Western railway. The population of the municipal borough of Wolverhampton in 1851 was 49,985; of the parliamentary borough, 119,748. The borough is governed by 12 aldermen and 36 councillors, one of whom is mayor; and returns two members to the Imperial Parliament. The livings are in the archdeaconry of Stafford and diocese of Lichfield. Wolverhampton Poor-Law Union contains 4 townships, with an area of 23,998 acres, and a population in 1851 of 132,603.

A monastery was founded at Wolverhampton in 996 by Wulfrana, sister of King Edgar; and the town appears to have been named Wulfrana Hamton, after the foundress of the monastery, which by contraction and corruption has become Wolverhampton. The parish includes a circumference of about 30 miles. The town is situated on rising ground, and consists in general of substantial and well-built houses; the streets are well lighted with gas. The public buildings are—a new exchange, opened in January 1852, containing a hall 100 feet long, 50 feet wide, and 50 feet high; a town-hall; a public subscription library-hall, over which is a suite of rooms used for concerts and assemblies; an hospital; a dispensary; a theatre; and a new market-hall. There are eight churches, four of which are of recent erection; the oldest is that of St. Peter, a spacious structure, erected in the 14th century, and just restored. The pulpit is formed of a single stone elaborately sculptured, and there is a font of great antiquity, with curious bas-relief figures of saints. In the churchyard is a column 20 feet high, with rude antique sculptures. The Wesleyan Methodists, Independents, Baptists, English Presbyterians, and Roman Catholics have places of worship. There are a Free Grammar school; National and Infant schools; an Endowed Blue-Coat school; and a school erected and endowed by Mr. Barker, one of the iron-masters, for the children of his workmen. There is a general cemetery a short distance south-west of the town.

The district in which Wolverhampton is situated abounds in mines of coal, iron, limestone, and other minerals; and the manufactures consist chiefly of fire-irons, tinned and japanned iron-ware, locks and keys, guns, files, screws, edge-tools, and a variety of other articles of hardware. Numerous extensive iron-foundries are situated in the vicinity of the town. There are several large manufactories of japan, papier-mâché, and tin goods; also several brass-foundries, chemical-works, and coach and railway-carriage works. Brick-making, rope-making, malting, and tanning are carried on. The town is regarded as the capital of the Staffordshire iron district. The market is on Wednesday; a fair is held on July 10th. Races are held annually.

WOLVERTON. [BUCKINGHAMSHIRE.]

WOLVISTON. [DURHAM.]

WOMBRIDGE. [SHROPSHIRE.]

WOODBRIDGE, Suffolk, a market-town and port, and the seat of a Poor-Law Union, in the parish of Woodbridge, is situated on the right bank of the river Deben, where it expands into an estuary, in 52° 6' N. lat., 1° 19' E. long., distant 8 miles E.N.E. from Ipswich, and 77 miles N.E. by E. from London. The population of the town of Woodbridge in 1851 was 5161. The living is a vicarage in the archdeaconry of Suffolk and diocese of Norwich. Woodbridge Poor-Law Union contains 46 parishes and townships, with an area of 80,761 acres, and a population in 1851 of 23,660.

The town is lighted with gas and well paved. The market-place is spacious; in the centre of it is an ancient shire or sessions hall, in which quarter-sessions for the division are held. The church is a handsome edifice of early perpendicular character, built chiefly of black flint, and has a large square tower built of flint and stone, 180 feet high. A new church was opened in 1846. There are places of worship for Wesleyan Methodists, Independents, Baptists, and Quakers. There are Free, National, British, and Infant schools, a mechanics institute, and a savings bank. There are extensive almshouses of the Sekford charity, built about 10 years since at the cost of nearly 20,000*l.* Wednesday is the market-day for corn, cattle, and provisions. Fairs are held on April 5th and October 23rd; that held in April is a large horse-fair. There are a custom-house, a lecture and temperance

hall, a small theatre, and barracks; and near the town is a bridewell. The estuary of the Deben is here navigable for small coasting-vessels; the tide flows above the town. Corn, malt, and flour are exported; and coal, timber, and general merchandise imported. The number and tonnage of vessels registered as belonging to the port on December 31st 1854, were:—Of and under 50 tons 30, tonnage 1007; above 50 tons 34, tonnage 2398. The entries at the port during 1854 were:—Inwards, 543 vessels, tonnage 28,298; outwards, 380 vessels, tonnage 19,399.

WOODFORD. [Essex.]

WOODHAM FERRERS. [Essex.]

WOODNESBOROUGH. [Kent.]

WOODSTOCK, NEW, Oxfordshire, a parliamentary and municipal borough, and the seat of a Poor-Law Union, in the parish of Woodstock, is situated on rising ground on the left bank of the Glyme, a stream which is expanded into a lake in Blenheim Park, in 51° 51' N. lat., 1° 21' W. long., distant 8 miles N.N.W. from Oxford, and 62 miles W.N.W. from London by road. The population of the parliamentary borough of Woodstock in 1851 was 7933. The borough returns one member to the Imperial Parliament. The living is a curacy in the archdeaconry and diocese of Oxford. Woodstock Poor-Law Union contains 31 parishes and townships, with an area of 44,973 acres, and a population in 1851 of 14,360.

The hamlet of Old Woodstock, though not included in the municipal borough, may be considered as forming a part of the town of New Woodstock. The town-hall, erected about 1766, is a neat stone building, with a piazza in the lower part, which is used as a market-place. The greater part of the church was rebuilt in 1785 on the site of a chantry founded by King John. A round-arched Norman doorway remains in the south wall, and three massive ancient columns in the interior, with grotesque heads on the capitals, support pointed arches. There are chapels for Wesleyan Methodists and Baptists, a Free Grammar school, two endowed Free schools, and a savings bank. A county court is held in the town. The only manufacture of importance is that of gloves, which is carried on partly in the town of Woodstock, but chiefly in the surrounding villages. Tuesday is the market-day; seven fairs are held in the course of the year. Previous to the Reform Act, Woodstock returned two members to Parliament.

WOODSTOCK. [CANADA; NEW BRUNSWICK.]

WOODVILLE. [MISSISSIPPI, State of.]

WOOLER. [NORTHUMBERLAND.]

WOOLWICH, Kent, a market-town and the seat of the chief government arsenal, in the parish of Woolwich, is situated on the right bank of the river Thames, in 51° 29' N. lat., 0° 4' E. long., distant 8 miles E. from London by road, about 9½ miles by the river, and 9 miles by the North Kent railway. The population of the town and parish of Woolwich in 1851 was 32,867. The parish forms part of the parliamentary borough of GREENWICH. The town is governed by a board of 30 commissioners. The living is a rectory in the archdeaconry of Middlesex and diocese of London.

Woolwich consists chiefly of a street about a mile long, on the bank of the river, with other streets diverging from it chiefly to the south. In the higher and more modern part of the town there are several streets of handsome houses. The streets are lighted with gas. At Woolwich the Thames is three-quarters of a mile wide. A tract of land in Essex, on the left bank of the river, called North Woolwich, is included in the parish of Woolwich. The parish church is a plain brick building with a square tower. Two new churches have been erected within the last few years with the aid of the Church Building Society. There is also a proprietary Episcopal chapel. The Ordnance chapel, on the road to Plumstead, and another chapel in the Royal Artillery Barracks, are both in the appointment of the Board of Ordnance. The Wesleyan and Association Methodists, Independents, English Presbyterians, Baptists, and Roman Catholics have places of worship. There are National, British, Infant, and Roman Catholic schools, a Marine school, reading-rooms, a mechanics institute, a savings bank, baths, and several parochial charities. There is a town-hall. A county court is held in the town. The government establishments are—the Royal Artillery Barracks, the Royal Marine Barracks, the Royal Sappers and Miners' Barracks, the Royal Arsenal, Her Majesty's Dockyard, and the Royal Ordnance Hospital.

The importance of Woolwich has arisen from its dockyard, from the government foundry for cannon having been established there, and from its having been made a great dépôt for naval and military stores. Of the government establishments at Woolwich, the first was—

The Royal Dockyard, which was formed in the reign of Henry VIII. The 'Harry Grace à Dieu,' named after the king, and built at Woolwich in 1515, was the largest vessel which had then been constructed. The dockyard now commences at the village of New Charlton on the west, and extends along the south bank of the river almost a mile to the east, very near to the Royal Arsenal. It contains two large dry docks, a basin 400 feet long by 300 feet wide, capable of receiving the largest vessels; extensive ranges of timber-sheds, store-houses, mast-houses, with steam saw-mills, &c.; and a large building provided with powerful steam-engines, Nasmyth's steam-hammer, and every other needful implement for manufacturing the various articles of iron used in ship-building.

The government foundry for casting cannon was formerly in

Moorfields, and was removed to Woolwich about the year 1716. The foundry for cannon forms one of the principal departments of the Royal Arsenal. It has 4 air-furnaces, the largest of which can melt at once 19 tons of metal. Another department of the Royal Arsenal is the Model Room, which is near the foundry. It contains a pattern or model of every article used in the artillery service; of the machinery for granulating gunpowder, and for trying the strength of powder; of Congreve and other rockets; chain, bar, and other shot; fire-ships, fire-works, &c. Connected with the Model Room is the Laboratory, in which cartridges, rockets, fire-works, and other articles of chemical manufactures are prepared. In other parts of the arsenal are large numbers of cannon-balls and bomb-shells arranged in pyramidal groups. At the east end of the grounds is the 'butt,' a large mound, which is made use of in proving the large guns cast here. There are extensive magazines for gunpowder and rockets, also saw-mills and workshops for the manufacture of gun-carriages, rocket-staffs, lance-poles, and similar articles. The Storehouses of the Royal Artillery are to the north of the Royal Arsenal. The Royal Artillery Barracks are on the north side of Woolwich Common. The principal front, which consists of 6 ranges, is 1200 feet long, with an elegant entrance-tower in the centre. A spacious chapel in the east wing has accommodation for 1000 persons. The other parts of the building consist of the library and reading-rooms, and a splendid suite of apartments, in which balls and other entertainments are given. The interior is divided into two quadrangles, with stabling and barracks for the horse-artillery and a large riding-school.

The Royal Military Academy is at the south-east edge of Woolwich Common, towards which it presents a handsome front: the central tower, with its four domed turrets, is a picturesque object in the distance. The academy was established as early as 1719, but the present building was not erected till 1805. The Master-General of the Ordnance for the time being is the governor. The resident officers are—a lieutenant-governor and inspector, second captains and lieutenants, a professor of mathematics, a professor and instructors of fortification, instructors in practical artillery, masters of geography, surveying, drawing, languages, &c., with lecturers on mechanics, astronomy, geology, and chemistry.

The Repository, south of the town, on the west side of Woolwich Common, is a depository for models of fortified towns, dockyards, &c.; other models of military and naval architecture, with specimens of fire-arms, military machines, and a variety of other things connected with military and naval affairs. The building, called the Rotunda, is of tent-like form, with 24 sides, the diameter being 120 feet. The centre of the cone which forms the top of the building is supported by a pillar, round which are arranged specimens of old English weapons, such as matchlocks, wheel-locks, bills, partizans, old swords, &c.

Besides the buildings above described, there are the Royal Marine Barracks; the barracks of the Royal Sappers and Miners, in which a library and museum have been instituted by the non-commissioned officers and privates of the corps; and the Royal Ordnance Hospital. In the Thames, opposite the dockyards, are the hulks for the reception of convicts sentenced to transportation and to hard labour: the convicts are employed on government works.

At North Woolwich, on the opposite side of the river, a village of neat residences, with an hotel and pleasure-grounds, has sprung up since the construction of the Woolwich branch of the Eastern Counties railway, which has its terminus here. Communication by steam-boat is constantly maintained between Woolwich and North Woolwich. Extensive commercial docks are in course of construction at North Woolwich.

WOOTTON BASSETT. [WILTSHIRE.]

WOOTTON ST. LAWRENCE. [HAMPSHIRE.]

WORBIT. [ERFURT.]

WORCESTER, the capital of Worcestershire, an episcopal city, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, is situated chiefly on the left bank of the river Severn, in 52° 12' N. lat., 2° 12' W. long., distant 111 miles W.S.W. from London by road, and 139 miles by the London and North-Western and Bristol and Birmingham railways. The population of the city of Worcester in 1851 was 27,523. The borough is governed by 12 aldermen and 36 councillors, of whom one is mayor; and returns two members to the Imperial Parliament. The livings are in the archdeaconry and diocese of Worcester. Worcester Poor-Law Union contains 12 parishes, with an area of 6967 acres, and a population in 1851 of 26,237.

The ancient boundary-wall of the city of Worcester may still be traced in some places. There were six gates (besides the tower on the bridge); the last was taken down in 1787. The present extent of the city is about three miles from north to south, and nearly two miles from east to west.

Worcester is built almost entirely of red brick, with the exception of some public buildings, the churches, and the cathedral, which are of a soft and commonly a reddish kind of sandstone. The city is lighted with gas, and well supplied with water. The principal streets are broad, airy, and cheerful; the appearance of the houses and shops is clean and neat. The chief thoroughfares are High-street, Bridge-street, Broad-street, Sidbury, College-street, the Cross, Foregate-street, and the Tything. Besides the cathedral there are 13 churches. St.

John's is the parish church of what may properly be termed a suburb of Worcester, and is on the right bank of the Severn. There are places of worship for Wesleyan and Primitive Methodists, Quakers, Baptists, Independents, Countess of Huntingdon's Connexion, Roman Catholics, and Mormons. A floating chapel is maintained for boatmen and others employed on the river. Besides Queen Elizabeth's Grammar school, there are a Cathedral school, a Diocesan school, a Blue-Coat school, a Roman Catholic Charity school, and the Countess of Huntingdon's Charity school; National, British, and Infant schools; a literary and scientific institution; a natural history society and museum; public news-rooms; a law society and reading-rooms; a savings bank; a dispensary; an infirmary; a female asylum; and several other benevolent institutions.

A cathedral existed here in the time of the Saxons; but it was deemed insufficient for its purpose, and was superseded by a new cathedral, built by Oswald, the bishop, in 983. This building being destroyed by fire, another edifice arose under the auspices of Bishop Wulfstan in 1084. This cathedral likewise twice suffered from fire. After the second conflagration it remained for 16 years in a dilapidated state. Repairs, so great as to render a fresh consecration necessary, were then made, and in January, 1281, the church was re-opened in the presence of the king. Various alterations and additions were made in 1224, and again in 1830. The crypt of Wulfstan's cathedral remains in a tolerably perfect state.

Worcester cathedral is built in the form of a double cross, with double transepts. The tower, which is 193 feet high, rises from the intersection of the western transept with the nave and choir. The nave, which appears to be the oldest part of the present building, except of course the crypt, is divided from the aisles by 10 clustered columns on each side, surmounted with pointed arches. The roof is groined, and ornamented with flowers, heads, and other forms of decoration; some of the windows are admirable examples of the early and decorated English styles. The height of the nave is 67 feet, the length 174 feet, and the width 30 feet. The choir has also a handsome groined roof; the altar-screen and the pulpit are of stone, and both are richly sculptured. The tomb of King John is in the centre of the choir. There is a lady-chapel, which corresponds in date and style with the choir. The total length of the cathedral is 425 feet; the greatest width is 145 feet. The west transept is 128 feet; the east transept is 120 feet. The cloisters form a quadrangle on the south side; on the east side is the chapter-house, which is polygonal outside, and circular in the interior, with a central column supporting the roof: it contains the cathedral library.

The other principal buildings of Worcester are—the guildhall, an elegant structure of brick, with stone quoins and ornaments; the skinkhall, a handsome stone Ionic building; the county courts; the county jail; the city jail; the county infirmary; a new corn-hall; another building, erected for a corn-exchange, but now converted into a music-hall; a new market-house; and Edgar's Tower. In the guildhall is a large room which is used for public entertainments. The present bridge over the Severn was built in 1780; it has of late years been repaired, and the pathway widened. Musical festivals, conducted by the choirs of the dioceses of Worcester, Hereford, and Gloucester, are held in Worcester cathedral triennially. Races take place in July and November near the bank of the river; on the race-ground is a commodious grand stand.

A considerable manufacture of cloth was once carried on here. The glove trade now employs a large number of the female inhabitants. Porcelain of a fine quality is extensively made; in the town are several celebrated porcelain factories. Hops are cultivated in the neighbourhood. A distillery and a rectifying-house are in the city. Trade is carried on in coal, corn, malt, slate, and timber; iron-founding, tanning, and rope-making employ some of the population. On the bank of the canal are large warehouses. Markets are held on Wednesday and Saturday: there are eleven fairs in the course of the year. A county court is held in the town.

A city occupying the site of the present city of Worcester was destroyed by the Danes, and rebuilt about 894 by Ethelred. In 1041 the town was plundered and partly burnt by the troops of Hardicanute. In 1074 a body of troops under Walter de Lacy and the Barons of Hereford was assembled here, to quell a conspiracy against William the Conqueror, and to guard the passes of the Severn against the rebels. In 1088 Bernard Neumarck unsuccessfully besieged the city. On several occasions during the 12th century the city suffered from casual fires, and also from the ravages of civil war. In 1216 the king's troops, commanded by the Earl of Chester, plundered the city, which had revolted. King John was buried here in this year. In 1225 a great tournament was held here. Bishop Blois excommunicated all persons concerned in it. From the year 1263, in the revolt of the barons, till 1651, when Charles II. was besieged in the city by the parliamentary troops under Cromwell, the town experienced on many occasions the disasters accompanying a state of civil warfare.

The site of the castle, which from time to time sustained so many sieges and so frequently changed governors, is on the south side of the cathedral. A small part of an old ecclesiastical house, the nunnery of Whitetane, now called 'The White Ladies,' is still standing; Friar-street takes its name from a house of Franciscans which formerly existed here; the remains of the monastery were demolished in 1823.

The Dominicans, Penitents, Black Friars, and Friars of the Holy Trinity had likewise their establishments.

The see of Worcester is in the province of Canterbury. The diocese includes the counties of Worcester and Warwick, one parish in Gloucestershire, and three in Staffordshire, and comprises 393 benefices. It is divided into the archdeaconries of Worcester and Coventry. The chapter consists of the dean, the archdeacons, 6 canons, 14 honorary canons, 5 minor canons, and a chancellor. The income of the bishop is fixed at 5000*l.* a year.

WORCESTER, U.S. [MASSACHUSETTS.]

WORCESTERSHIRE, an inland county of England, is bounded N. by Staffordshire and Shropshire, E. by Warwickshire, S. by Gloucestershire, and W. by Herefordshire. The county lies between 51° 56' and 52° 31' N. lat., and 1° 46' and 2° 38' W. long. The greatest length of the county is about 29 miles, in a direction from north-east to south-west; its greatest breadth is about 22 miles, in a line running from east to west. The area of Worcestershire is 788 square miles, or 472,165 acres. The population in 1841 was 248,460; in 1851 it was 276,926.

Surface, Geology, &c.—Worcestershire is generally a flat county; on the eastern and western sides are two nearly parallel ranges of hills, which partly bound and partly intersect it: the intermediate space is, for the most part, a fertile plain. The eastern range of hills commences in the north in the Clent Hills, extends to the north-west of Bromsgrove, and forming near Redditch the boundary between this county and Warwickshire, terminates to the north of Evesham. The western chain commences in the neighbourhood of Bewdley, and runs southward by Abberley and Martley to the great chain of Malvern Hills, in which it terminates. The principal hills not comprised in or bordering on these chains are Bredon Hill, situated about three miles south of Pershore, Broadway Hill, near the town of that name, in the south-eastern extremity of the county, and a small line of hills extending from Croome northwards towards Worcester.

Geology, &c.—Worcestershire is composed, for the most part, of new red-sandstone, lias, and oolite; other formations are visible in the chain of the Malvern Hills, in the districts bordering on Tenbury, Bewdley, and Dudley, and in the Lickey and neighbouring hills in the northern part of the county. The new red-sandstone comprehends that district which is watered by the Severn, together with the north-eastern portion of the county: its lower beds being found round Witley, Stourport, Kidderminster, Bromsgrove, and Alvechurch; and the higher, called the Keuper beds, round Droitwich, Worcester, and Upton. The lias formation is found at Pershore and Evesham, and in the vales watered by the Avon; it extends from Foster's Green to the limits of the county near Tewkesbury. The portion of the Malvern Hills within the boundary of Worcestershire consists of trap; while the Silurian rocks, the Caradoc sandstone, Ludlow rock, and Wenlock limestone appear in the northern portion of the chain. The lower coal and ironstone beds are found at its termination, to the north of Abberley Hill, in the forest of Wyre. Here also is found the old red-sandstone formation upon which Tenbury stands, and which is the prevailing stratum throughout the adjoining county of Hereford. Bewdley is situated near the junction of the lower red-sandstone with the coal-field of the Forest of Wyre. The town of Dudley stands on the thicker coal-measures, Wenlock limestone appearing on its north-west, and trap at Rowley Hill on the south-south-east. In the neighbourhood of Droitwich and Stoke Prior are saliferous beds, from which a large quantity of salt is manufactured. A full and interesting account of them is given in a pamphlet by Dr. Hastings. They are likewise described by Sir R. I. Murchison in his 'Silurian System,' to which work we refer our readers for very accurate accounts of the coal-fields and more remarkable geological phenomena of the county. In a paper by Mr. Leonard Horner, in the 'Geological Transactions,' is a full and interesting account of the geology of the Malvern Hills.

Hydrography and Communications.—The principal rivers are the SEVERN, the AVON, the Teme, and the Salwarp.

The Teme, which is a very rapid stream, first comes into contact with Worcestershire at its western extremity; it passes the town of Tenbury, and forms here, as during other parts of its course, the boundary of Worcestershire with Herefordshire. It falls into the Severn near Powick, about three miles south of Worcester: it is not navigable. The stream is good for fishing, and trout and grayling are abundant. The Salwarp, a small river, rises to the north of Bromsgrove, flows through Droitwich, and falls into the Severn near Claines.

The northern part of the county is intersected by several canals, which are of great commercial importance. The chief of these, the Birmingham and Worcester Canal, reaches from the junction of the Birmingham and Fazeley canals at Birmingham, to the Severn, a little below Worcester, passing through the salt-district of Droitwich, and having two branches, one to Dudley by way of Hales Owen, and the other from King's Norton to Stratford-upon-Avon. From Dudley there is a canal, which, under different names, runs to Stourbridge, Kidderminster, and Stourport, at which last place it opens into the Severn.

The principal roads are from Birmingham through Bromsgrove, Droitwich, Worcester, Severnstoke, and Upton to Tewkesbury, Cheltenham, and Gloucester; from Dudley to Stourbridge, Kidderminster

to Stourport; or, leaving Stourport on the left, through Hartlebury and Omberley to Worcester; and from Worcester to Malvern. There are good turnpike-roads which connect the county town with Tenbury and Bromyard, and other towns.

The main line of the Bristol and Birmingham railway intersects this county diagonally from north-east to south-west. The line runs nearly parallel with the turnpike-road leading from Tewkesbury to Worcester and Birmingham on the south-east. The Oxford, Worcester, and Wolverhampton railway enters the county a short distance east of Evesham, and runs west-north-west to Worcester; it then turns northward, and passes by way of Droitwich, Kidderminster, and Stourbridge to Dudley, where it quits the county. A short branch from Droitwich to the Stoke Works station connects it with the Bristol and Birmingham line. A portion of the London and North-Western railway likewise traverses the north-eastern extremity of the county. There are some tram-roads, on which horses are worked, in the coal districts.

Climate, Soil, Agriculture.—The climate of Worcestershire, especially in the middle, south, and west of the county, is remarkably mild and healthy, and the fruits of the earth are brought to early maturity. The vales of Severn and Avon are but little raised above the level of the sea; and it has been observed, that an elevation of 60 yards makes a difference in climate equal to a degree of latitude towards the north, soil and other circumstances remaining the same. The higher parts of the county, between Bromsgrove and Birmingham, have consequently a later harvest. The higher hills, such as the Malvern Hills, are proportionally colder and later. They tend to shelter the vales between them from the cold winds, and add to the mildness of the climate there.

The Vale of Severn, which extends about 30 miles in length from north to south, contains some extremely rich alluvial soils, which from their situation are admirably adapted for rich pastures. The banks of the Avon also, which falls into the Severn near Tewkesbury, are rich, and consist mostly of meadows and pastures.

The *Teme* winds through the county for about 30 miles. Along its banks are many hop-gardens and orchards, a sure proof of a good deep soil, and the lower parts form rich meadows. Several lesser streams run in their own valleys, the soil along their banks being generally good, except in a few instances in which bogs, with their accompanying peat, have been formed by the stagnation of the waters. Except where the higher hills rise in peaks, the surface is in general gently undulating. One-half of the county consists of rich loams and clay soils. Upon the whole, few counties in England contain so much good land, and, as a consequence, fewer wastes.

Many of the farms are small, but the average size is gradually enlarging, by the union of several farms under one tenant. The system of agriculture is steadily approximating to the most improved methods, with only the differences rendered necessary by local peculiarities.

The average produce of wheat in Worcestershire is higher than in many other counties. Potatoes are raised in great abundance in this county, and supply the markets of Birmingham and Staffordshire. Wolverley sands have long been famous for the growth of carrots and for raising carrot-seed. Hop-yards occupy a considerable extent. The cultivation of this plant is a perfect garden culture, chiefly by the spade. Apple orchards are extensive, and a great deal of cider is made. Pear orchards are common in Worcestershire. There is much fine timber growing in the hedgerows: elms predominate, and grow to a large size where they have room. There are also some woods and plantations of oaks and ash, the underwood of which forms valuable coppices.

There is no peculiar breed of cattle in Worcestershire. The cattle are chiefly obtained from Herefordshire and South Wales. The best and most profitable breeds to stock the rich pasture are found to be the Herefords and Devons, which get into excellent condition by a summer's run, and are then finished in the stalls with hay, turnips, and oil-cake in winter: very fat beasts are sent up to Smithfield and to Birmingham every year from this county.

The sheep are mostly of the Leicester breed, which suit the rich pastures. On the Malvern Hills are some small hardy sheep, without horns, with gray faces and legs, which, when fattened at a proper age, make excellent mutton. The horses for farm-work are mostly of the strong black breed.

Divisions, Towns, &c.—Worcestershire is divided into five hundreds:—Blackenhurst, Doddingtree, Halfshire, Oswaldalow, and Pershore, Upper and Lower. It contains the city of WORCESTER, the parliamentary boroughs of BEWLEY, DROITWICH, DUDLEY, EVESHAM, and KIDDERMINSTER, and the market-towns of HALES OWEN (erroneously included in the towns referred to under SHROPSHIRE, to which county it belonged till 1844), PERSHORE, SHILTON-ON-STOUR, STOURBRIDGE, STOURPORT, TENBURY, and UPTON-ON-SEVERN. All these are described in separate articles, except Stourport, which we notice here.

Stourport, a market-town in the hamlet of Lower Mitton and parish of Kidderminster, population of the hamlet 2993 in 1851, is situated on the left bank of the river Stour, at its junction with the Severn, about 10 miles N. by W. from Worcester. The streets are lighted with gas, and paved. The Worcestershire and Staffordshire Canal enters the Severn at Stourport. Across the Severn is thrown a handsome iron bridge of a single arch, of 150 feet span, and 50 feet above the surface of the river. There is a spacious basin, with extensive

wharfs and warehouses. Hops, corn, and apples are largely sold at Stourport market; great quantities of coal, from the Staffordshire and Worcestershire collieries, are conveyed on the canal; and timber is dealt in to a considerable extent. Markets are held on Wednesday and Saturday. There are fairs on March 31st, September 15th, and December 18th for horned cattle, hops, &c. Petty sessions are held in the town. There are in Stourport a chapel of ease, a chapel for Wesleyan Methodists, National schools, and a savings bank.

The following are some of the more important villages, with the parish populations in 1851, and a few other particulars:—

Alvechurch, population 1600, about 23 miles N.E. by N. from Worcester, was at one time a borough, but is now a mere village. Besides the church, there are National schools and some almshouses. *Belbroughton*, population 1839, is about 6 miles N.N.W. from Bromsgrove. The parish church is a commodious and handsome edifice, with a lofty spire. There are National schools. Malting is largely carried on. A manufactory of scythes and hay-knives employs a considerable number of persons. Three fairs are held in the year. *Bengworth*, [EVESHAM.] *Blockley*, population 2587, is about 12 miles S.E. from Evesham. In the village are the parish church, partly of Norman and partly of early English date; a chapel for Baptists; an Endowed Free school; and a mechanics institute. Silk-throwing employs a considerable number of hands. A fair is held on the first Tuesday after Easter for cattle, and a hiring fair on October 10th. Numerous coins and other Roman remains have been found at Blockley. *Bredon*, population 1661, is on the left bank of the river Avon, 8 miles S. by W. from Pershore. The principal manufacture is that of stockings, which are worked on frames here for the Tewkesbury manufacturers. The church is a very ancient and interesting edifice, partly of Norman date. There is an Endowed Blue-Coat school. In the neighbourhood are the remains of an ancient encampment of large size. *Broadway*, population 1629, is about 6 miles S.E. from Evesham. The houses, which are built of stone, extend in a straggling manner for about a mile along both sides of the main road. There are day schools, partly supported by subscription. *Chaddesley-Corbett*, population 1420, about 5 miles S.E. from Kidderminster, possesses a neat church, built of red freestone, of various styles, including Norman; and an endowed Free school. Malting is carried on. There are flour-mills and a worsted-mill. *Feckenham*, population 3254, about 8 miles E. by S. from Droitwich, was formerly surrounded by Feckenham Forest, the wood of which was cut down to supply fuel for the Droitwich salt-works: it was disafforested in the reign of Charles I. There are here a neat parish church, in which are several ancient monuments; a chapel for Independents; and an Endowed school. The manufacture of needles and fish-hooks employs a considerable number of persons. Cattle fairs are held on March 26th and September 30th. *Hagley*, population 935, is about 6 miles N.E. from Kidderminster. The parish church has been recently enlarged. There are National schools. Roman remains have been found at various times in the vicinity. *Hanbury*, population 1009, is about 4 miles E. by N. from Droitwich. The parish church occupies an elevated site. The Worcester and Birmingham Canal and the Bristol and Birmingham railway pass on the west side of the village. *Hanley-Castle*, population 1686, about 9 miles S. from Worcester, is pleasantly situated near the right bank of the Severn. In the village are a parish church, a chapel for Roman Catholics, and National schools. *Hartlebury*, population 2047, is about 11 miles N. by W. from Worcester, and 2 miles S.E. from Stourport. There are here a Free Grammar school and a Free school for 15 girls. Malting is carried on. There are some corn-mills. *Kempsey*, population 1375, about 4 miles S. from Worcester, on the left bank of the Severn, contains the parish church and National schools. Henry II. held his court here. The ruins of an ancient camp are near the church. *KING'S NORTON*. *MARTLEY*. *Old Swinford*, population of the township of Upper Swinford 2728, about a mile S.S.E. from Stourbridge. Brick-making, nail-making, chain- and trace-making, brewing, and malting, are carried on. There are some collieries in the vicinity. The church is a very handsome gothic edifice, with a lofty spire. There is a Blue-Coat hospital for 100 boys, connected with which is an Infant school. The school-house is a neat collegiate building. *Omberley*, population 2364, about 6 miles N. from Worcester, near the left bank of the Severn, has a handsome church, which was lately rebuilt. There are here Endowed National schools, and an Infant school. In the churchyard are the remains of an ancient cross. *Powick*, population 1834, about 3 miles S.S.W. from Worcester, of which city it may be reckoned a suburb, is on the right bank of the river Teme, over which there is here an ancient bridge. The church, which is a handsome gothic edifice, is situated on a lofty hill, from which there is a fine view of the valley of the Severn. In the village are National and Infant schools. *Radditch*, population of the township 4802, is pleasantly situated on an eminence near the Warwickshire border, about 6 miles E.S.E. from Worcester. It is the chief seat of the needle manufacture; fish-hooks are also made in large quantities. There are here a chapel of ease, chapels for Wesleyan and Primitive Methodists, Independents, and Roman Catholics; National schools; and a savings bank. Brickmaking, brewing, and malting are carried on. *Stoke Prior*, population 1613, about 2 miles S. by W. from Bromsgrove, has extensive salt, soap, and chemical works, and a manufactory of railway carriages. There are

a parish church, a chapel of ease, and National and Infant schools. *Strensham*, population 339, is pleasantly situated on the right bank of the Avon, 5 miles S.S.W. from Pershore. The village is chiefly known as the birth-place of the author of *Hudibras*. The house in which Butler was born is still standing, about a quarter of a mile from the church. It is a low rude timber-frame and thatch cottage, and is known as *Butler's Cot*. *Strensham* church is a handsome edifice, containing some fine monuments and brasses. *Strensham* possesses a Free school and some almshouses. *Wolverley*, population 2441, about 2 miles N. from Kidderminster, on the right bank of the river Stour, has a neat parish church, erected in 1722; a well-endowed Free school; and a National school.

Divisions for Ecclesiastical, Legal, and Parliamentary Purposes.—Worcestershire is in the province of Canterbury, and for the most part in the diocese of Worcester; a few parishes are in the diocese of Hereford. The county is in the Oxford circuit: the assizes and quarter sessions for the county and city are held at Worcester. County courts are held at Bromsgrove, Droitwich, Dudley, Evesham, Kidderminster, Pershore, Redditch, Stourbridge, Tenbury, Upton-on-Severn, and Worcester. By the Poor-Law Commissioners the county is divided into 13 Unions:—Bromsgrove, Droitwich, Dudley, Evesham, Kidderminster, King's Norton, Martley, Pershore, Shipston, Stourbridge, Tenbury, Upton-on-Severn, and Worcester. These Unions contain 267 parishes and townships, with an area of 527,797 acres, and a population in 1851 of 384,325. Before the Reform Act Worcestershire sent nine members to the House of Commons; namely, two for the county, two each for the city of Worcester and the boroughs of Droitwich and Evesham, and one for the borough of Bewdley. By the Reform Act the number was increased to 12; namely, two each for the East and West divisions of the county, two for the city of Worcester, two for the borough of Evesham, and one each for Bewdley, Droitwich, Dudley, and Kidderminster.

History and Antiquities, &c.—The etymology of 'Worcester' is with some plausibility adduced from 'Wyre-Cestre,' the Camp or Castle of Wyre, under which name a considerable forest still exists in the neighbourhood of Bewdley. Of the early history of the county little is accurately known: there are however many evidences of its occupation by the Romans. During the Heptarchy, Worcester was the principal Mercian see, and the inhabitants of the district were under ecclesiastical government. After the Conquest the form of government was changed. Earls of Worcester were created, and had the civil power confided to them. During the war between Stephen and the Empress Matilda, and subsequently during the resistance of the barons to King John, the possessions of the Earls of Worcester frequently changed masters. Some of the conspirators in the Gunpowder Plot retreated to and were apprehended at Hendlip, an old house, of a curious construction, well fitted for concealment, situated between Droitwich and Worcester. During the contest between the king and the parliament, Worcestershire was on several occasions overrun by the contending parties. [WORCESTER.]

The antiquities of this county are not remarkable. Three Roman roads have been traced—Icknield-street, which ran from Alocster northward to Staffordshire; a second road, which passed from Tewkesbury to Upton, Worcestershire, and so to Shropshire; and the Ridgeway, which is the boundary of the county for some distance on its eastern frontier. Ancient encampments may be traced at Malvern, at Breton, and on the hills at Woodbury and Witlebury. There are many remains of ecclesiastical houses; the chief are St. Wulstan's at Worcester, and the abbeys of Malvern, Bordesley, and Evesham. The most remarkable churches are the cathedral at Worcester, the churches at Evesham, Malvern, Droitwich, Eastham, Naunton, Beauchamp, Stockton, and Church Leach.

The principal gentlemen's seats are—Croome, belonging to Lord Coventry; Hagley Park, the residence of Lord Lyttleton; Witley, the property of Lord Ward; Hewell Grange, belonging to the Hon. Robert Olive; Hartlebury Castle, the episcopal residence of the bishop of the diocese; Ombersley, belonging to Lord Sandys; Westwood Park, Madresfield, Bordesley Park, Standford Court, Pull Court, Overbury Park, Hanley Court, Kyre, and Hanbury Hall.

Manufactures and Commerce.—Iron is largely manufactured at Dudley, in the neighbourhood of which there are likewise extensive coal-mines. In the northern part of the county a very large quantity of nails is made, and there are likewise factories for fish-hooks and needles; carpets of many descriptions and qualities are made at Kidderminster; glass is manufactured at Stourbridge; a declining glove-trade is carried on at Worcester; and porcelain is manufactured to a considerable extent. The population of the southern and eastern part of the county is wholly occupied with agriculture.

Religious Worship and Education.—According to the Returns of the Census of 1851, it appears that there were then in the county 489 places of worship, of which 244 belonged to the Established Church, 127 to five sections of Methodists, 46 to Baptists, 24 to Independents, and 12 to Roman Catholics. The total number of sittings provided was 141,512. The number of Sunday schools was 341, of which 193 were connected with the Church of England, 82 with Methodists, 27 with Baptists, and 20 with Independents. The total number of Sunday scholars was 35,221. Of day schools there were 701, of which 288 were public schools with 21,279 scholars, and 468 were private

schools with 9278 scholars. There were 19 evening schools for adults, with 379 scholars; and 21 literary and scientific institutes, with 1541 members, and libraries containing 15,776 volumes.

Savings Banks.—In 1853 the county possessed ten savings banks, at Bewdley, Bromsgrove, Droitwich, Evesham, Kidderminster, Shipston-on-Stour, Stourport, Tenbury, Upton-upon-Severn, and Worcester. The total amount owing to depositors on November 20th 1853 was 463,204l. 3s. 5d.

WORKINGTON, Cumberland, a market-town and sea-port, in the parish of Workington, is situated on the left bank of the river Derwent, about a mile from its entrance into the sea in St. George's Channel, in 54° 39' N. lat., 3° 33' W. long., distant 32 miles S.W. from Carlisle, 306 miles N.N.W. from London by road, and 330 miles by the London and North-Western and connected railways via Carlisle. The population of the town of Workington in 1851 was 5837. The living is a rectory in the archdeaconry of Richmond and diocese of Chester.

Workington is indebted for its prosperity chiefly to the collieries in its neighbourhood, which furnish the principal article of export. Timber and flax are imported to a considerable amount. Ship-building, rope and sail-making, and block-making employ some of the inhabitants. The manufacture of straw-plait in imitation of Leghorn is carried on. There are extensive iron-foundries, hat-works, breweries, malt-kilns, dye-works, chemical-works, timber-yards, nail-works, and flour-mills. The river Derwent is here crossed by a stone bridge of three arches, built in 1763. Workington possesses a safe and capacious harbour, with a breakwater and extensive quays. The custom-house and commodious warehouses are situated on the quays. The number of vessels registered as belonging to the port on December 31st 1854, was, under 50 tons 3, tonnage 88; above 50 tons 92, tonnage 18,466; with one steam-vessel of 18 tons. The number and tonnage of vessels entered and cleared at the port during 1854 were:—Inwards, 126, tonnage 8625; outwards, 1210, tonnage 103,116.

St. Michael's, the parish church, was rebuilt about 1780 in a semi-gothic style; St. John's chapel, erected in 1825, is in the Tuscan order of architecture. There are chapels for Wesleyan Methodists, Independents, English Presbyterians, and Roman Catholics; National, British, Infant, and Roman Catholic schools; a School of Industry for girls; a savings bank; a mechanics institute, a subscription library and news-room; a theatre; assembly-rooms; and a dispensary. A lock-up and justice-room has been recently built. The principal market, for corn and provisions, is held on Wednesday, and a less important market on Saturday. Fairs, held in May and October, have lately been revived. Races are held annually. From Workington there is a branch railway to Cockermouth, of which the terminus is situated near the new quay.

WORKSOP, Nottinghamshire, a market-town and the seat of a Poor-Law Union, in the parish of Worksop, is pleasantly situated on the banks of the river Ryton, in 53° 17' N. lat., 1° 7' W. long., distant 26 miles N. by E. from Nottingham, and 146 miles N.N.W. from London by road, and by the Great Northern and Sheffield and Lincolnshire railways. The population of the town in 1851 was 6058. The living is a vicarage in the archdeaconry of Nottingham and diocese of Lincoln. Worksop Poor-Law Union contains 26 parishes and townships, with an area of 78,050 acres, and a population in 1851 of 18,990.

Worksop contains numerous well-built houses, and the streets are well paved and lighted with gas. An ancient building, called the Moot-Hall, is used for public business. A corn-exchange, erected in 1851, contains a large hall fitted up with an orchestra, &c., for assemblies and concerts; the building contains also corn, butchers' meat, fruit, vegetable, and fish markets. The parish church is a large building, originally cruciform, and of Norman architecture; but the exterior shows considerable admixtures of later styles. The Wesleyan and Primitive Methodists, Independents, and Roman Catholics have places of worship. There are National schools, a savings bank, and some parochial charities. Wednesday is the market day. Three cattle-fairs and a statute fair are held in the course of the year. The Chesterfield Canal, which passes the town, is carried over the river Ryton by an aqueduct. Of an Augustinian priory, which formerly existed here, the principal gateway is still standing, and part of the priory church now forms the parish church. Several noblemen's seats are in the vicinity. Many Roman coins and other antiquities have at different times been found near Worksop.

WORMHOUDT. [NORD.]

WORMS, an ancient city, in the province of Rheinessen, in the grand-duchy of Heese-Darmstadt, is situated in 49° 37' N. lat., 8° 22' E. long., near the left bank of the Rhine, in a beautiful country, 23 miles S. from Mayence by railway, and has a population of about 9000 exclusive of the garrison. The city occupies the site of the Roman *Borbetomagus*, which subsequently took the name of *Augusta Vangionum*, from the Vangiones, in whose territory it was. The name *Wormatia* (from which the modern name is taken) was in use in the middle ages, corrupted according to D'Anville from *Borbetomagus*. After its destruction by the Vandals and Huns, it was rebuilt by the Franks about 475, and became the seat of a count, and subsequently of the dukes of Franconia, who styled themselves Counts of Worms. It was for a time the residence of Charlemagne, who held in its vicinity those primitive legislative assemblies which, meeting in May, were

called Mai Lager, or Champs de Mai. Some of the Frankish and Carolingian kings also resided here. Several diets of the German empire were held at Worms, among which was that of 1521, at which Luther appeared before the emperor Charles V. Its industry, its commerce, and its great population (which in the time of the Hohenstaufen amounted to 60,000, and even after the Thirty Years' War was still 80,000) made it rich and powerful; but in the two next centuries its prosperity rapidly declined. In 1689 it was burnt by order of Louis XIV., and only the fine old cathedral resisted the efforts made to destroy it. Since that time it has never recovered; some portions have been indeed rebuilt, but within the ample circuit of its decayed walls are large inclosures, some waste, some converted into vineyards and gardens, which were once covered with populous streets and fine buildings. Since the beginning of the 19th century improvement has set in, and the population is nearly double what it was in 1800. The most remarkable edifice is the venerable cathedral, which was founded in the 8th century, but not completed till 1110. It is a plain gothic building, with two towers at each end. The Leibfrauenkirche, or Church of Our Lady, is also a fine building in the gothic style. Near it formerly stood a Capuchin convent, the garden of which is now a vineyard, famous for its wine called from it Liebfrauenmisch. Worms is the seat of the provincial tribunals and of the consistory: it has a gymnasium and several schools; and manufactories of sugar-of-lead and tobacco, several tanneries, and a good trade in corn, cattle, and wine.

WORONESCH. [VORONETZ.]

WORSLEY. [LANCASHIRE.]

WORSTEAD. [NORFOLK.]

WORTHING, Sussex, a market-town and watering-place, in the parish of Broadwater, is situated on the shore of the English Channel, in 50° 48' N. lat., 0° 22' W. long., distant 12 miles W. from Brighton, and 61 miles S.S.W. from London by road and by the London, Brighton, and South-Coast railways. The population of the town of Worthing in 1851 was 5370. The living is a perpetual curacy, in the archdeaconry and diocese of Chichester.

The situation of Worthing is low and flat, no part of the town being more than 20 feet above the level of the sea, and it is foggy in winter. It was originally an obscure fishing-station, but at the close of the last century, when fashion caused the best points of the southern coast to be resorted to for health and pleasure, this town sprang up, and in consequence of its proximity to the Downs, and the richness of the surrounding country, it has continued to increase. The esplanade extends for three-quarters of a mile along the shore, and the bathing-machines and the baths are of superior character. There are in the town a church, erected in 1843; a chapel of ease; a Wesleyan Methodist and an independent chapel; National and Infant schools; a town-hall; a market-house; a theatre; a dispensary; and a literary institution. The Steyne is an open space, of three acres in area. The market is on Saturday, and a corn-market is held on every alternate Wednesday. There is an annual fair on July 20th, and races are run in September. A county court and petty sessions are held here. In the neighbourhood Roman remains have been found, and at Cissbury is a fortification or earthwork of an irregular oval form, inclosing an area of nearly 60 acres. The parish church of Broadwater, about a mile from the town, is a fine specimen of Norman architecture, though some parts are of a somewhat later date.

WORTLEY, West Riding of Yorkshire, a village and the seat of a Poor-Law Union, in the parish of Leeds, is situated in 53° 48' N. lat., 1° 36' W. long., distant about 3 miles W. by S. from Leeds, and 192 miles N.N.W. from London. The population of the chapelry of Wortley, which forms part of the borough of LEEDS, was 7896 in 1851. The living is a perpetual curacy, in the archdeaconry of Craven and diocese of Ripon. Wortley Poor-Law Union contains four townships, with an area of 51,944 acres, and a population in 1851 of 18,798. Wortley possesses manufactures of woollen-cloth, fire-bricks, pipes, and alum. There are flax-spinning, worsted-spinning, and fulling-mills; iron-foundries, machine-factories, malt-kilns, corn-mills, and dye-works. In the village are a neat modern chapel of ease; chapels for Wesleyan and Primitive Methodists, and Independents; National and Endowed Free schools, and a reading-room.

WOTTON-UNDER-EDGE, Gloucestershire, a market-town, in the parish of Wotton-under-Edge, is situated in 51° 38' N. lat., 2° 21' W. long., distant 18 miles S. by W. from Gloucester, and 107 miles W. by N. from London. The population of the borough in 1851 was 1212. The town has a corporation with merely nominal functions. The living is a vicarage, in the archdeaconry of Gloucester and diocese of Gloucester and Bristol.

The former town of Wotton-under-Edge was burnt down in the reign of John; a place called the Brands is supposed to mark the original site. The present town is well built and lighted with gas. The church, dedicated to St. Mary, is a handsome building of early English style and date. The Wesleyan Methodists, Independents, and Baptists have places of worship. The Tabernacle meeting-house, originally erected by Rowland Hill, has been rebuilt in the early English style, with pinnacles, and a tower at the south-east angle. There are a Free Grammar school, National, British, Infant, and Blue-Coat schools; a literary institution, with a small library and a news-room; a general hospital, a hospital for twelve poor persons, and almshouses for six poor persons. Wotton is one of the clothing

towns, and has many cloth-mills; woollen cloth of a fine quality is manufactured. Dyeing is carried on. Friday is the market-day. Fairs are held on the Tuesday before March 25th and on Sept. 25th.

WRAGBY. [LINCOLNSHIRE.]

WREXHAM, Denbighshire, North Wales, a market-town, parliamentary borough, and the seat of a Poor-Law Union, in the parish of Wrexham, is situated on the Gwenfry Brook, a feeder of the Clywedog, which is itself an affluent of the river Dee, in 53° 2' N. lat., 2° 59' W. long., distant 23 miles S.E. from Denbigh, 179 miles N.W. by W. from London, and 185 miles by the North-Western and Birmingham, Shrewsbury, and Chester railways. The population of the parliamentary borough in 1851 was 6714. The living is a vicarage, in the archdeaconry and diocese of St. Asaph. Wrexham Poor-Law Union contains 44 parishes and townships, with an area of 78,592 acres, and a population in 1851 of 40,078.

Wrexham is advantageously situated in the mining district of Denbighshire, and is one of the most important towns in North Wales. The church is a handsome and spacious building, in the perpendicular style. The tower, which has a very striking appearance, has an elevation of 135 feet, and has on three sides rows of saints in richly-sculptured niches. The church was formerly collegiate. The English and Welsh Independents, Welsh Calvinistic Methodists, Baptists, and Roman Catholics have places of worship. There are a Grammar school, National schools, and a Roman Catholic school. The town-hall is a plain brick building: there are a county house of correction, an infirmary, a new market, a literary institute, and a savings bank.

Wrexham has a considerable flannel manufacture; and in the parish there are quarries, lead-mines, collieries, and iron-works. Brewing, malting, and tanning are carried on, and there is a factory for making patent flat and round rope. Markets are held on Thursday and Saturday. Fairs are held eight times in the year. The fair held on March 23rd is kept up for many days, and is one of the most important in North Wales: cattle and horses, Welsh flannels and other woollens, Irish linens, Manchester cotton goods, Yorkshire woollens, and especially hardwares from Birmingham and Sheffield, are sold at this fair. By the Reform Act Wrexham was made a contributory borough to Denbigh. A county court and petty sessions for the hundreds of Bromfield and Yale, are held at Wrexham.

WRIETZEN. [BRANDENBURG.]

WRINGTON. [SOMERSETSHIRE.]

WRITTLE. [ESSEX.]

WROCKWARDINE. [SHROPSHIRE.]

WROTHAM. [KENT.]

WU-CHANG-FU. [CHINA.]

WÜRTEMBERG, a kingdom in the south-west of Germany, lies between 47° 35' and 49° 35' N. lat., 8° 15' and 10° 30' E. long. It is bounded N.E. and E. by Bavaria, N.W. and W. by Baden, and S. by Switzerland and the Lake of Constance. Its greatest length from south to north is about 140 miles; and its greatest breadth from east to west nearly 100 miles. The area is 7494 square miles. The population in December 1852 numbered 1,733,263—namely 838,276 males and 894,988 females. The principalities of Hohenzollern, almost wholly surrounded by the kingdom of Würtemberg, now belong to Prussia. [HOHENZOLLERN.]

The area and population of Würtemberg are distributed among the four circles, or provinces, of the kingdom as follows:—

Circles.	Area in Square Miles.	Population in 1852.
Neckar-Kreis . . .	1,279	501,034
Schwarzwald-Kreis . . .	1,835	448,872
Donau-Kreis . . .	2,406	413,444
Jagt-Kreis . . .	1,974	374,913
Total . . .	7,494	1,733,263

The surface is for the most part mountainous; on the east the Swabian Alp enters the country, and the western border is covered by the Schwarzwald (the Black Forest), both of which send out branches in all directions. The Schwarzwald runs from south to north, parallel to the Rhine, and to the Vosges Mountains on the other side of that river. It begins between Eglisau and Basle, and extends to Durlach and Pforzheim; its length is about 83 miles, and its mean breadth 14 miles. On the west side its declivity is steep; on the east it slopes gradually towards the central part of Würtemberg. It consists chiefly of granite and sandstone, and is intersected by many well-watered valleys. The highest points of the Schwarzwald in Würtemberg are the Hornigrunde, 3640 feet high, and the Rossbühl, 2940 feet high: but the most elevated part of the range is in Baden. The Alb, or Alp, is entirely in the kingdom of Würtemberg (excepting a small part of it which is in Hohenzollern), and runs from south-west to north-east. Its length is between 80 and 90 miles, and its breadth varies from 9 to 13 miles, between the Neckar and the Danube. On the north-west side it is steep, but on the south-east side gradually declines into undulating hills. Though not so elevated as the Schwarzwald, it is more bleak and inclement. There are several large caverns in the limestone of the Alp.

There are wide and fertile valleys, the principal of which are those of the Neckar and of the Danube. The diversity of mountain and valley, the fertility of the soil, and the luxuriance of the vegetation combine to produce a great variety of beautiful scenery, and render Würtemberg one of the finest parts of Central Europe.

The chief rivers are the Neckar [NECKAR-KREIS] and the DANUBE, into which almost all the other rivers discharge themselves. The principal affluents of the Neckar are on the right—the Kocher, a considerable river, which has a course of 160 miles; the Rems; the Eyach; and the Jagst; on the left the Enz, which has a course of 98 miles, and at its junction with the Neckar at Berigheim has a volume of water nearly equal to that river. The Danube enters Würtemberg at Tuttlingen, and crosses the kingdom in a generally north-east direction to Ulm, where it enters Bavaria. The chief affluent is the Iller, which joins it on the right bank near Ulm. The Lake of Constanz is the only considerable lake in the kingdom, which however only touches a small portion of Würtemberg on the southern frontier. The small lakes are numerous. The Fidersee is about five miles long and as many broad.

The soil is extremely fertile, except in the higher regions of the Alp and the Schwarzwald, where the substratum is unfavourable to vegetation.

The climate is healthy, temperate, and mild, with differences however arising from elevation. The summits of the Alp and the Schwarzwald are too cold to produce corn, and are covered with forests and pastures. Goitrous affections are very common in the Kocherthal and the Roththal.

Of domestic animals in 1852 there were horned cattle, 811,159; sheep, 458,488; swine, 148,524; horses, 95,038; being in every class a large diminution from the numbers of each in 1850. There are still a few stags and deer in the forests, as well as foxes, badgers, some wild cats, squirrels, martens, and weasels. Poultry of all kinds is abundant, and also game and wild-fowl. There are several species of owls, which are very numerous. The many small lakes and all the rivers yield a great variety of fish. In many parts of the kingdom bees are kept, and silk-worms have been introduced. Leeches are bred in ponds, and edible snails in separate reservoirs.

Agriculture.—The distribution of the soil in 1852 was as follows:—Corn land, 2,050,102 acres; gardens, 94,778 acres; vineyards, 64,678 acres; meadows, 687,653 acres; pastures, 208,206 acres; forests, 1,497,082 acres; roads, 103,648 acres; railways, 2429 acres; buildings, 21,777 acres; heaths and barren lands, 65,844 acres; lakes, rivers, &c., 31,384 acres: total, 4,827,656 acres. The quantity of wine produced in 1852 was 5,822,180 gallons.

Würtemberg is one of the most fruitful countries of Germany, and agriculture is on the whole carried on upon a good system. On the 26th of September there is an annual agricultural fête at Cannstadt, at which prizes are given. A manifest improvement in the breed of cattle and horses is remarked at every new cattle-show.

The kinds of grain cultivated are chiefly spelt, maize, oats, barley, rye, and wheat. There is usually a surplus for exportation. The other agricultural productions are peas, beans, vetches, potatoes, flax, hemp, rape-seed, poppies, hops, and tobacco. Fodder of many kinds is abundant. Of the vineyards more than three-fifths are in the circle of the Neckar. There are the Tauber and Lake (that is, of Constanz) wines, which resemble Rhenish.

The minerals are copper, lead, zinc, and iron, marble, alabaster, millstones, freestone, gypsum, quartz, garnets, tourmaline, amethysts, chrysolites, rock-crystal, agate, chalcedony, carnelian, opal, jasper, porcelain earth, potters'-clay, basalt, fullers'-earth, chalk, marl, coal, and salt. The salt-works are the property of government, which has the monopoly of the salt-trade; the annual produce is 24,000 tons. Most of the Swiss receive their supply of salt from Würtemberg, according to specific conventions.

Manufactures.—There are manufactures of almost every description, and though not on so extensive a scale as in some other parts of Germany, they are of considerable importance. The principal are linen, woollen-cloth, calicoes, silks, lace, hosiery, muslin, carpets, leather, porcelain, earthenware, ironmongery and stealware, gold and silver plate, tobacco, tobacco-pipes, and gunpowder; there are numerous distilleries, breweries, and chemical factories.

Commerce.—Würtemberg has a very considerable trade. The exports consist both of the natural productions and manufactures, horned cattle, horses, sheep, salt, corn, timber, raw hides, wool, garden-seeds, millstones, and saltpetre; gold and silver articles, leather, hats, paper, white-lead, tobacco, oil, chemicals, vinegar, and printed books. The imports consist of raw cotton and cotton manufactures, silks, glass wares, wine, fruit, cheese, china, earthenware, and all kinds of colonial produce. There is likewise a very great transit trade. The inland navigation is important, especially on the Neckar, which becomes navigable at Cannstadt. Steamers ply below Heilbronn. A railroad runs from Stuttgart to the Lake of Constanz through Ulm, where it is joined by the Bavarian line to Augsburg and Munich. Another line runs north from Stuttgart to Heilbronn, with a branch westward from Bretigheim to the Bruchsal station, on the trunk railway along the right bank of the Rhine. Würtemberg is a member of the German Zoll-verein, or commercial union.

Population.—With the exception of about 22,000 Jews and some

foreigners, the population is entirely German. With respect to religion the Protestants are to the Catholics in the ratio of 2 to 1 very nearly. In 1850 the population, including that of Hohenzollern, amounted to 1,802,252; namely, 885,756 males, and 916,496 females. The births were 74,294, of which 9804 were illegitimate. The deaths amounted to 53,233. The average revenue of Würtemberg for the years comprising the interval 1852-55 was 1,218,977*l*. The expenditure in 1854 was 1,216,403*l*. The total amount of the public debt was 4,841,291*l*. Emigration has for several years tended to keep down the population of Würtemberg.

Education.—In regard to education, Würtemberg ranks very high. There is not a parish in the kingdom without its school. The establishments for higher and special instruction are—a university at Tübingen, with about 800 students; 7 gymnasia, 4 lycœums, 78 Grammar schools, a Protestant seminary at Tübingen, a large number of Protestant theological seminaries, 4 seminaries for Roman Catholic priests, Protestant and Catholic training-schools, schools of philology and sciences, schools for the deaf and dumb, for the blind, for drawing, &c. According to law, every child is to attend school from the age of six to that of fourteen. The private literary societies are numerous.

The Army.—Every subject of Würtemberg is liable to serve as soon as he has completed his twentieth year, and he has to serve six years. The army numbers in all 19,017 men in time of war, and 8107 in time of peace; it consists of eight regiments of infantry, four regiments of cavalry, two battalions of artillery, two garrison companies, and a squadron of jägers.

Constitution.—Würtemberg is an hereditary monarchy. According to the constitution, which was completed in 1819, Würtemberg is a constitutional representative kingdom, with a diet or parliament consisting of two chambers. The crown is hereditary in the direct male line, according to the order of primogeniture; and if the male line becomes extinct, in the female line. The constitution secures to the subject every reasonable degree of civil and religious liberty, Christians of the Lutheran, Calvinistic, and Roman Catholic faiths being placed on a footing of perfect equality. The liberty of the press, which had been shackled by a decree of the German diet in 1819, was established by a decree abolishing the censorship, March 1, 1848. In the troubled period that followed the French revolution of 1848, attempts were made to alter the constitution of Würtemberg; national assemblies were convoked for this purpose in 1849 and 1860, but in consequence of their wild democratic tendencies they were both dissolved. Würtemberg has the sixth place in the German diet, and has four votes in the full council. Its contingent to the army of the Confederation is 13,955, forming the first division of the 8th army corps of the Confederation.

History.—At the beginning of the 4th century the Alemanni appeared in the country, afterwards called Suabia, now partly included in Würtemberg. In A.D. 496 the Alemanni were overcome by the Franks under Clovis. This country, as a part of Austrasia, subsequently belonged to the kingdom of the Franks, and was governed by dukes, under whom Christianity was introduced. When Germany was governed by kings of its own nation, Suabia was under dukes, who were often changed; and, according to the policy of those times, the emperor's own sons were often put in their place. When the princes of the house of Hohenstaufen, who had become dukes of Suabia, had acquired the imperial crown, they caused Suabia to be governed by members of their family. Philip of Hohenstaufen sold and gave away a great part of the hereditary estates, and thus created a great number of petty principalities, which after the death of Conradin in 1268 asserted their independence. Ulrich, count of Würtemberg, who reigned from 1246 to 1265, is the acknowledged founder of the family now on the throne of Würtemberg. From his death Würtemberg was governed by counts of his family till the latter end of the 15th century, when Eberhard V. was created Duke of Würtemberg by the emperor Maximilian at the diet at Worms, on the 21st of July, 1494. The reformation was established in Würtemberg by Duke Christopher about 1540. In the Thirty Years' War, which began in 1618, the duchy of Würtemberg was frequently ravaged. After the first French revolution, Würtemberg was repeatedly traversed by hostile armies, and a revolutionary spirit spread among the youth. The French crossed the Rhine on the 24th of June, 1796, and on the 18th of July entered Stuttgart; and the Austrians being obliged to retreat, the duke was compelled to purchase peace with eight millions of francs and the cession of Mömpelgard. The then reigning duke Frederick Eugene died in 1797, and was succeeded by his son Frederick William Charles.

The territories of Würtemberg had been greatly curtailed during the war with France, but the German diet in 1803 amply indemnified the duke for this loss, and at the same time made him elector of the empire. His adherence to Napoleon brought him a further extension of territory at the peace of Presburg. On new year's day, 1806, he assumed the title of King of Würtemberg, and proclaimed a uniform administration for all his dominions, and equal rights to all his Christian subjects. After the battle of Leipzig, Würtemberg joined the allies. King Frederick died in 1816, and was succeeded by the present king William I., to whom Würtemberg is indebted for its excellent constitution.

WURZBURG, a city in Bavaria, capital of the circle of Lower

Franconia, is situated in 49° 45' N. lat., 9° 56' E. long., in a beautiful valley on the Mayn (over which there is a bridge 200 yards long, adorned with twelve colossal statues of saints), and on the railway from Bamberg to Frankfurt, from which towns respectively it is distant 63 and 70 miles, and has 25,000 inhabitants. As Würzburg has been the see of a bishop since A.D. 741, and for many centuries the capital of an ecclesiastical principality, governed by a succession of above 80 bishops, who were princes of the empire, it contains a great number of handsome churches and other handsome public buildings. Of the churches the principal are, the cathedral, originally founded in the 8th century, but rebuilt subsequently to 1042, which contains many fine paintings, and a long series of monuments of the bishops, each bearing the sword in one hand and the crozier in the other; the church of St. John im Haug, built on the model of St. Peter's at Rome; the New Minster, containing the relics of St. Kilian, an Irish missionary, and the apostle of Franconia; the Marienkirche, an elegant edifice, built in the years 1377 to 1479, in the German pointed style, with lofty lancet windows; and the University church, with an observatory on its lofty tower. The most remarkable of the secular buildings are, the royal, formerly the episcopal, palace; it was built by two bishops of the name of Schönborn, 1720-1744, in imitation of the palace of Versailles, is 270 feet long, 60 feet high, and forms a parallelogram with two projecting wings: the Julian hospital, a very large, wealthy, and admirably arranged institution: the town-hall: the university, which has a clinical establishment, an anatomical museum, a library of 100,000 volumes and 1000 manuscripts, &c.: and the citadel, situated on the Frauenberg, or Marienberg, a hill 400 feet high above the left bank of the Mayn. Besides the university, Würzburg has a gymnasium, a seminary for priests and schoolmasters, a veterinary school, a polytechnic institution, a school of industry, a school of music, schools for the blind, for midwifery, &c.: it has also four hospitals, besides the Julian hospital already mentioned; and a synagogue. The manufactures comprise woollen-cloth, tobacco, pipes, leather, paper, surgical and mathematical instruments, &c. Boats are built, and there is an active river trade in wine and other agricultural produce. Steamers ply daily on the Mayn to Frankfurt. Würzburg is the residence of a bishop and chapter, and the seat of the law courts and public offices connected with the administration of the province. The territory of the prince-bishops was secularised in 1803 and given to the archduke of Tuscany. In 1815 it was united to Bavaria.

WURZEN. [LEIPZIG.]

WYCOMBE, CHIPPING, or HIGH WYCOMBE, Buckinghamshire, a market-town, municipal and parliamentary borough, and the seat of a Poor-Law Union, in the parish of Chipping Wycombe, is situated in 51° 37' N. lat., 0° 45' W. long., distant 18 miles S. by E. from Aylesbury, and 29 miles W. by N. from London. The population of the municipal borough in 1851 was 3588, of the parliamentary borough 7179. The borough is governed by four aldermen and 12 councillors, of whom one is mayor; and returns two members to the

Imperial Parliament. The living is a vicarage, in the archdeaconry of Buckingham and diocese of Oxford. Wycombe Poor-Law Union contains 80 parishes and townships, with an area of 81,308 acres, and a population in 1851 of 33,562.

High Wycombe, as the town is commonly designated, probably occupies the site of a Roman settlement: a Roman tessellated pavement and Roman coins and other antiquities have been discovered here. The town had a market in the time of the Saxons. It was incorporated in the reign of Henry VI. (1422-1461). The borough has returned two members to Parliament since the reign of Edward I. The river Wick passes through the town, and falls into the Thames at Great Marlow, about 6 miles south from Wycombe. There are numerous paper-mills and corn-mills on the Wick and on the Rye, a feeder of the Wick. The church is a fine old building of the 13th century, with a highly-ornamental tower, 108 feet high, of later date. The length of the church, including the chancel, is 180 feet; the height of the nave is 48 feet. In the course of extensive repairs in the church in 1827, a fine gothic window over the great south door was discovered and opened. The Wesleyan Methodists, Independents, and Baptists, have each two places of worship; the Quakers and Primitive Methodists have one each. There are a Free Grammar, a Diocesan, National, and British schools, a literary institution, and a savings bank. The town-hall and market-house, erected in 1757, is supported on 34 stone pillars. The making of chairs from beech-wood is carried on to a considerable extent in Wycombe. Rope-making, basket-making, coach-building, the parchment manufacture, brewing, and malting, furnish employment. Lace-making and straw-plaiting employ many of the female inhabitants. A county court is held in the town. Friday is the market-day. Fairs for cattle are held on the third Monday of April and on October 28th; a statute fair is held on the Monday before Michaelmas day. Wycombe market is important for corn and agricultural produce generally. Adjoining the town is Wycombe Abbey, a very large and handsome modern mansion, the seat of Lord Carrington. *West Wycombe*, 2 miles W.N.W. from High Wycombe, is noteworthy on account of the church, a somewhat singular structure, erected in 1763 by the notorious Francis Dashwood, Lord le Despencer. The tower is surmounted by a globe, in which is a room capable of containing several persons. *West Wycombe House*, a spacious modern mansion, the Dashwood family seat, stands in an extensive park adjoining the village. The park is picturesque, well-wooded, and contains some fine sheets of water.

WYE. [KENT.]

WYE, RIVER. [SEVERN; MONMOUTHSHIRE.]

WYKE REGIS. [DORSETSHIRE.]

WYLAM. [NORTHUMBERLAND.]

WYMESWOLD. [LEICESTERSHIRE.]

WYMONDHAM. [NORFOLK.]

WYRARDISBURY. [BUCKINGHAMSHIRE.]

WYRE, RIVER. [LANCASHIRE.]

WYSZOGROD. [POLAND.]

X

XALAPA. [MEXICO.]

XALISCA, or JALISCA. [MEXICO.]

XANTHUS, RIVER. [ANATOLIA.]

XENIA. [OHIO.]

XERES (JERES) DE LA FRONTERA. [SEVILLA.]

XERES (JERES) DE LOS CABALLEROS. [ESTREMADURA, Spanish.]

XINGU, RIVER. [BRAZIL.]

XORULLO, or JORULLO. [MEXICO.]

Y

YAKUTSK. [SIBERIA.]

YALDING. [KENT.]

YALOOTOROVSK. [SIBERIA.]

YANG-TSE-KIANG, one of the largest rivers in the world, drains the north-eastern districts of Tibet and the central provinces of China proper. Its source is in the interior of Asia, about 1850 miles from its mouth in a straight line; but the whole course of the river probably exceeds 3000 miles. The country watered by the Yang-tse-kiang and its numerous tributaries is estimated to have an area of 740,000 square miles.

Upper Course.—According to Chinese statements translated and published by Klaproth in his 'Mémoires relatives à l'Asie,' the Yang-tse-kiang rises between 34° and 35° N. lat., 89° and 90° E. long., in the Bayan Khara Mountains, in three branches, all of which bear the Mongol name of Oolan muren; but to the most northern the name of *Nam-tai-tu* is prefixed; that in the middle is distinguished as *Toktonas*, and the southern river is called *Kat-si*. These three rivers run from west to east. The *Kat-si*-oolan-muren is joined from the south by a small river called *Murus-ussu*, which comes from the south-east. The united stream preserves the name of the last-mentioned river, which indeed seems to be the denomination by which the Yang-tse-kiang, in its upper course, is known. The *Murus-ussu* runs northward, and

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is joined by the *Toktonai-oolan-muren* from the west; it then turns eastward and receives the waters of the *Nam-tai-tu-oolan-muren*, which enters it from the north. The *Murus-ussu*, after being joined by the *Nam-tai-tu-oolan-muren*, turns southward, being opposed in its eastern course by a branch of the Bayan Khara Mountains, but soon afterwards it enters by a south-eastern course that extensive mountain region which divides the table-lands of Central Asia from the lowlands of China. As the ranges composing this mountain region run mostly from north to south, the river soon takes a southern direction, and flows in a narrow valley inclosed by mountains, whose summits rise far above the snow-line. In these parts the river is called *Pho-lat-tshu*, which passes the town of Batang (29° N. lat.), and forms the boundary-line between Tibet on the west and China proper on the east. After passing 28° N. lat., the river begins to break through the several ranges of snow-covered mountains which oppose its eastern course. The valleys which its waters have scooped out across these chains is rather wide in the western ranges, so as to extend in some places into moderate plains; but in the eastern ranges it is a mere chasm, which is entirely filled up by the great volume of water brought down by the river. In these parts the river is called *Kin-cha-kiang*, or the river of the golden sand, because small particles of gold are found in it. In its course through the mountain region the *Kin-cha-*

kiang is joined by several tributaries, among which the largest is the *Ya-teng-kiang*, which rises in the Bayan Khara Mountains, south of the sources of the Hoang-ho, and runs parallel to the course of the principal river, preserving a distance of about 180 or 140 miles from its banks. The course of this tributary of the Kin-cha-kiang exceeds 600 miles, and the whole of it lies in a narrow longitudinal valley between snow-covered ranges. Near 102° E. long. the Kin-cha-kiang attains its most southern point (26° N. lat.), and near 108° E. long. it turns northward. In the vicinity of the town of Tung-tshuan-foo (26° 30' N. lat.) it enters a wider and more open valley, and here it begins its middle course. The upper course of the river is about 1280 miles long. It runs about 460 miles eastward as far as the Muru-usu, about the same distance southward as the Pho-lai-tshu, and about 860 miles eastward as the Kin-cha-kiang. It does not appear that the river is navigated in any part of its upper course, where in its passage through the mountains it forms many rapids and falls. But great quantities of timber are floated down. The large rafts of timber which are found in the middle parts of the course floating down to the provinces near the Pacific prove that this supply must be derived from a country covered with forests, and such a country is only found on the upper part of its course.

Middle Course.—The middle course of the river lies through a hilly country, and extends from Tung-tshuan-foo to King-tsheou-foo, at which place it enters the great Chinese plain. From Tung-tshuan-foo the Kin-cha-kiang flows northward about 180 miles, and then turns to the east, in which direction it runs about 100 miles, when it is joined from the north by the Min-kiang or Ta-kiang, and from this place it is called *Kiang* (the river), or *Ta-kiang* (the great river). The Kiang runs in a north-eastern direction about 860 miles, when it passes north of 31° N. lat., where its course is directed to the east by some offsets of the Tapa-ling range, and, flowing in that direction, it reaches King-tsheou-foo, after a course of about 240 miles. Thus the middle course of the river amounts to 860 miles. Though the Kin-cha-kiang below Tung-tshuan-foo runs in a wide valley, it is still within the mountain region, and its course is interrupted by cataracts. It is ascended by large barges to the mouth of the Yan-min-kiang, or Ta-kiang. This tributary rises in the mountains of Sifan, a branch of the Bayan Khara range, and traverses in its southern course a rugged mountain tract, until it enters the plain of Tching-too-foo (so named from the capital of Te-tchu-an), which is surrounded by high mountains, and which the river waters and fertilises by dividing into a great number of arms. These arms unite some distance south of the city, and flow through a depression of the mountains to Kia-ting-foo, where the river runs through a plain to its junction with the Kiang near Siu-tshou. The Ta-kiang is navigable to Tohing-too-foo, to which place it was ascended by the Portuguese missionary Magallans, in the middle of the 17th century. This author gives an account of the great number and extent of the rafts of timber which he daily met with on the Kiang. They were only 10 feet wide, and of different lengths, the longest about a mile and a half in length: but their number was so great, that if all of them had been put together, they would have covered a space of several days' journey. On the rafts were placed other articles, drugs, parrots, monkeys, rhubarb, musk, and chowry-tails. The hilly country, through which this part of the Great River lies, improves lower down. The country near the mouth of the Ta-kiang is mostly covered with high hills, which at some distances rise into mountains, which are covered with extensive forests of pine, fir, cedar, and juniper; a part is overgrown with bamboo. The remainder is well cultivated, and the fields are interspersed with large plantations of fruit-trees, among which orange, lemon, and citron are mentioned. The *Kia-ling-kiang*, which joins the river near the town of Tung-king-foo, drains a rich agricultural valley and joins its principal stream, near which the country yields rice, cotton, sugar, silk, and fruits of every kind in abundance. Cultivation increases lower down the river to the still more important town of Kuei-tsheou-foo, which stands on the northern banks of the Ta-kiang, in one of the richest parts of China, where hardly a spot is to be found which is not applied to some useful purpose, with the exception of the crest of the Tapa-ling range, which is about 35 or 40 miles distant from the town, and inhabited by some mountaineers. But this range supplies great quantities of salt, which is sent from Kuei-tsheou-foo to the lower country.

Lower Course.—From King-tsheou-foo the river runs about 100 miles south-east to the outlet of Lake Tung-ting, from that place north-east to the mouth of the Han-kiang about 160 miles, then again south-east about the same distance to Kieu-kiang, which is on the channel that unites Lake Poyang with the Ta-kiang. At this place the name of the Ta-kiang is changed into that of *Yang-tse-kiang*, which it preserves to its embouchure. From Kieu-kiang the river runs north-east about 220 miles to Nan-king, the ancient capital of the empire. From Nan-king it flows mostly eastward, and after about 50 miles it reaches the Great Canal, and flowing about 180 miles more, it falls into the Pacific. In all this extent the river does not offer any impediment to navigation: its current is as gentle as the large volume of water permits. The width varies from one to three miles. The number of islands is small, and most of them are rocky. The tides are perceptible as far as Kieu-kiang, 400 miles from its mouth; and so far upward several kinds of sea-fish ascend it in great numbers, as sturgeons, porpoises, dorades or gold-fish, &c.; and some, which seem peculiar

to this river, as that called hongyu, or yellow fish. The river barges used in this part of the river are as large as coasting-vessels; but the river is navigated also by the largest junks, and the largest men-of-war might ride in safety on its surface.

Between King-tsheou-foo and Poyang Lake the Ta-kiang passes through an extensive depression, which is filled with a deep alluvial soil, and distinguished by a great number of lakes. This depression lies nearly in the centre of China proper, and extends over the greater part of the province of Hupe and the northern districts of Ho-nan, and is considered the most fertile portion of the whole empire. This plain may be about 200 miles every way, and is called *Yumichiti*. Nearly all the productions of China are here raised in the greatest abundance; no spot is uncultivated, towns and villages cover the country on all sides, and several large towns are found on the banks of the Ta-kiang. Besides several smaller rivers, the Kiang receives from the south a great volume of water by the outlet of Lake Tung-ting, which falls into it east of 130° E. long. This lake is more than 200 miles long, and surrounded by an extremely fertile country, which even in the driest seasons yields abundant crops, the means of irrigation derived from the lake never failing. Two large rivers, originating on the northern declivity of the Nan-ling Mountains, and draining a country as extensive as the island of Great Britain, fall into this lake, the Tshing-shui-kiang and the Heng-kiang, each running more than 400 miles. The largest river which from the north joins the Ta-kiang is the *Han-kiang*, which rises on the southern declivities of the Pe-ling, drains the wide and fertile valley inclosed by the Pe-ling and Tapa-ling ranges, runs nearly parallel with the Ta-kiang, and falls into it after a course of about 500 miles at the town of Han-yang. There are several large towns on its banks, and the river seems navigable nearly to its source. By means of the easy water-communication afforded by these rivers and several large lakes, the country contiguous to the banks of this portion of the Ta-kiang has become the centre of an immense traffic, and the towns built on them are very populous and industrious. King-tsheou-foo, situated where the river enters the plain of Yumichiti, is large, rich, and well fortified. Where the Han-kiang joins the Ta-kiang there are two large towns, Han-yang on the northern, and Wan-tshang on the southern shores. Wan-tshang is compared by the Jesuits to Paris in extent, and Han-yang to the second town of France. The navigation in the neighbourhood of these two places is so active, that from 8000 to 10,000 large river-barges, equal in size to small coasting-vessels, may always be seen either at anchor or plying between the two towns. About 30 miles farther down is the large commercial town of Hoang-tsheou-foo, surrounded by a beautiful and fertile country.

The plain of Yumichiti is separated from Lake Poyang by a rocky mountain tract called Li-shan. The lake extends nearly 90 miles from north to south, with an average width of 20 miles. It contains many islands, most of which are cultivated and populous. Both on the west and east it is inclosed by high hills where it approaches the Yang-tse-kiang, but a large low plain surrounds its southern shores, and this plain is traversed by numerous arms of the river Kan-kiang, which is the largest of the rivers that fall into the lake. This river and the country surrounding it are crossed by the great road from Canton to Peking. The course of the river is about 300 miles in a straight line, but with its bends it probably exceeds 400 miles. It rises near the Meiling Pass, through which the great road leads to Canton, and becomes navigable at the foot of the pass, where the town of Nan-gan is built, though at this place its width does not exceed 15 yards. Small river-barges ply between this place and Kan-tsheou-foo, where the river receives a large supply of water by several tributaries which join it near this place. Hence it has sufficient water for large river-boats, but about 10 miles below the last-mentioned place are the Shepotan, or rocks with the 18 rapids, which however do not interrupt the navigation. South of the rapids begins a wide, fertile, and very populous valley, which extends to the town of Nan-shang-foo, the capital of the province Kiangsi, which is large, well-built, and contains many edifices as large as palaces. Below this town the country extends in a low and level plain, which is traversed by the different arms into which the Kan-kiang branches out before it enters the lake. In the hills contiguous to the low plain of Lake Poyang, on the east, the best porcelain clay is found, and the china-ware made in the vicinity of lao-tsheou-foo is considered the best in the empire. There is the village *King-te-shing*, which is said to have a million of inhabitants and 500 large manufactories of china-ware. It is called shing (village) because it is not inclosed by walls.

After uniting with the channel which issues from Lake Poyang, the Yang-tse-kiang is always from 2 to 4 miles wide, and contains a great number of islands, most of which are low and formed by alluvium, but a few are rocky and elevated. The country on both sides consists of low hills, composed of sandstone or clay, which terminate on the river in steep declivities. It is of indifferent fertility, but well cultivated. In a depression of this hilly country, forming a considerable basin, is the town of Ngan-king-foo, or Gan-king-foo, a place of great commerce and manufacturing industry. The hilly country ceases where the river Tshao-ho-kiang falls into the Yang-tse-kiang. This river brings down the waters of the large lake Tshao-ho, and a little lower down the Yang-tse-kiang is joined, near the large town of Tai-ping-foo, by several small rivers. These, as well as the Tshao-ho-kiang,

are navigable to a considerable extent. Farther down the Yang-tse-kiang flows through a rather level country and between high banks, so as not to have a bottom along its bed. This country is of considerable fertility, and extends below the town of Nan-king to the vicinity of Tshing-kiang-foo, or the Great Canal.

About 45 miles below Nan-king the Yang-tse-kiang is joined on the north by the western branch of the Great Canal, and about 10 miles farther down, at the town of Kua-tsheou, by the eastern branch. Both branches unite near the town of Yang-tsheou-foo, one of the largest and most commercial towns in China, whose population is stated to be two millions by the Jesuits. From Yang-tsheou-foo the canal runs directly northward along the borders of Lake Kao-yeou to the Hoang-ho. Opposite the island which is formed by the two above-mentioned branches of the Great Canal, north of the Yang-tse-kiang, is the entrance to the southern portion of the Great Canal, at the town of Tshing-kiang-foo. By these two canals the navigation of the Yang-tse-kiang is continued over the eastern and northern provinces of China proper.

At the junction of the canals the width of the river is about two miles, but farther down it increases considerably. Junks of the largest kind find no difficulty in sailing up the river to Tong-tsheou-foo, a large town on the northern shores of the estuary, and even to Tshing-kiang-foo. According to the maps the mouth of the river seems to form an opening more than sixty miles wide.

In this opening, but much nearer to the southern shores of the estuary, is the alluvial island of Tsung-ming, which is traversed by numerous canals and dikes for the purpose of irrigation. The island is 60 miles long, 15 to 18 miles wide, and has a population of half a million. It is very fertile, and produces abundance of rice, millet, cotton, and vegetables.

The depth of the Yang-tse-kiang, as far up as the tides ascend, that is, to Lake Poyang, is very great, and is expressed in the Chinese proverb, "The sea has no boundary, and the Ta-kiang no bottom." Such a depth is not found in any other river, except in the Amazonas, below the Strait of Obydoa. The tide of course affects only the surface-water of the river, and below it the natural current carries the river-water to the sea. This river-water however is pressed to the bottom by the superincumbent tide-stream, and thus confined it scoops out a much deeper bed than it does in other circumstances where such a pressure does not exist.

(Du Halde; Staunton's *British Embassy to China*; Barrow, *Travels in China*; Ellis, *Journal of Lord Amherst's Embassy to China*; Abel, *Narrative of a Journey in China*; Klapproth; Ritter.)

YANNINA. [JOANNINA.]

YAORI. [SOODAN.]

YARDLEY HASTINGS. [NORTHAMPTONSHIRE.]

YARE RIVER. [NORFOLK.]

YARKIAN, or YARKAND. [THIAN-SHAN-NANLU.]

YARM. [YORKSHIRE.]

YARMOUTH, or GREAT YARMOUTH, Norfolk, a market-town, sea-port, and the seat of a Poor-Law Union, in the parish of Great Yarmouth, is situated near the confluence of the rivers Yare, Waveney, and Bure, in 52° 36' N. lat., 1° 45' E. long., distant 23 miles E. by S. from Norwich, 124 miles N.E. from London by road, and 136 miles by the Eastern Counties and Norfolk railways. The population of the borough in 1851 was 30,879. The borough is governed by 12 aldermen and 36 councillors, one of whom is mayor; and returns two members to the Imperial Parliament. The living of St. Nicholas is a perpetual curacy in the archdeaconry and diocese of Norwich. Great Yarmouth Poor-Law Union comprises the parish of Great Yarmouth, with an area of 1510 acres, and a population in 1851 of 26,880.

Great Yarmouth is situated chiefly on the left bank of the Yare, but it extends also along the left bank of the Bure. Over the Bure is a suspension-bridge. The rivers Yare and Waveney unite their waters about four miles south-west from Yarmouth, forming an estuary called Braydon Water; and the stream issuing from the east end of this lake, being joined by the river Bure, retains in its passage to the sea the name of the Yare. The hamlet of South Town, sometimes called Little Yarmouth, on the right bank of the Yare, may be considered as a part of Yarmouth. The town extends beyond the limits of the old walls, to the north towards Caistor, and to the south towards Nelson's monument, and east of the walls, between the old town and the sea. The village of Gorleston, to the south, near the mouth of the river, is now connected with South Town.

The town of Yarmouth, within the boundary of the old walls, consists of four principal lines of streets, nearly parallel with the river, and of about 150 narrow lanes, called rows, which form the communications between the streets. The rows are extremely narrow, most of them being not more than from five to eight feet wide, and impassable for ordinary wheel-carriages; the greater part of the traffic of the town is therefore carried on in 'Yarmouth carts,' which are peculiarly constructed, with low wheels, and adapted to the width of the rows; they are drawn by one horse, and look like sledges, but are well suited for conveying heavy goods. Some of the rows have been enlarged, particularly one near the middle of the town, to which the name of Regent-street has been given. The principal streets are wide, and the houses are mostly well built, but the most substantial

and handsome houses are situated along the quays. The provision-market is spacious. Near it is the fish-market. The corn-exchange is in Regent-street. Many visitors resort to Yarmouth as a bathing-place, for which purpose it is the best on the coast of Norfolk. The town within the walls is well paved and lighted with gas. The harbour is in the river Yare. There are two quays, South Quay and North Quay. South Quay is the larger; it is about a mile and a quarter long, well constructed, and improved by Sir J. Rennie. There is a bar at the entrance of the river: but vessels drawing 12 feet water, or about 200 tons burden, can pass it at high water, and sail up to the town. The quay is in some parts 150 yards wide, and there is a beautiful promenade planted with trees along the centre. Opposite the southern part of Yarmouth a jetty, supported on piles, extends about 450 feet into the sea; it is 24 feet wide, and in fine weather affords a pleasant promenade.

The guildhall is a building of considerable extent, with a spacious assembly-room. The town-hall, a handsome building, with a portico supported by Tuscan columns, stands on the quay. There are a large custom-house, a jail, a house of correction, the Royal hospital, the Fisherman's hospital, a commercial club-house, a theatre, a ball- and concert-room, and two bath-houses. The oldest church is that of St. Nicholas; it is a handsome cruciform building, of pointed architecture, with turrets at the west end, and a tower and spire, 168 feet high, in the centre. It was founded in the beginning of the 12th century. St. George's church was built in 1716, and St. Peter's in 1833. At Gorleston is an ancient church, and there is a small church in South Town, called St. Mary's church. The Wesleyan, Primitive and New Connexion Methodists, Baptists, Independents, Unitarians, Jews, Roman Catholics, and Countess of Huntingdon's Connexion have places of worship. There is also a Mariners' church. There are in Yarmouth a Proprietary Grammar school, British schools, Endowed Hospital schools, Church Charity schools, a Factory evening school for girls, and Infant schools; a public library, a savings bank, and 70 almshouses. On the beach, about half a mile from the town towards the mouth of the river, is the Nelson column, which was erected in 1817: it is a fluted pillar 140 feet high, surmounted by a statue of Britannia. Not far from the column are barracks, which were built at an expense of 120,000*l.* The building was used as a hospital after the battle of Waterloo: it is now occupied as a government asylum for officers of the army and navy afflicted with lunacy.

The chief business of Yarmouth is in the fishing, curing, and exporting of herrings. The Yarmouth bloater is a well-known article of commerce. Railway communication with London is of considerable importance to the herring fishery, the produce of the deep-sea fishing being forwarded to the metropolis daily by railway. There are manufactures of crape and silk goods. Ship-building, rope- and sail-making, and other trades dependent on shipping, are carried on. Salt-works, corn-mills, soap-works, breweries, malt-houses, tanneries, and iron-foundries afford considerable employment. Yarmouth is the chief port for the exports and imports of Norfolk, Suffolk, and part of Essex. It has also an extensive inland trade by the rivers Yare, Waveney, and Bure. The Yare is navigable to Norwich, the Waveney to Bungay, and the Bure to Aylsham. Coals are largely imported, also timber, salt, wines, and colonial produce; barley is the principal article of export: other grains and peas are also shipped in large quantities. The market-days are Wednesday and Saturday; the chief sales of corn are on Saturday. Fairs are held on the Friday and Saturday in Easter week, and on Monday and Tuesday at Shrovetide. A county court is held in the town.

The number of vessels registered as belonging to the port of Yarmouth on December 31st 1854 was:—Sailing vessels under 50 tons 831, tonnage 9401; above 50 tons 264, tonnage 30,082; steam-vessels under 50 tons 4, tonnage 71; above 50 tons 2, tonnage 197. The number and tonnage of vessels entered and cleared at the port during 1854 were:—Inwards, sailing-vessels 1927, tonnage 158,915; steam-vessels 208, tonnage 27,343; outwards, sailing-vessels 774, tonnage 48,617; steam-vessels 208, tonnage 27,343.

From Domesday Book it appears that Yarmouth was a royal demesne, to which belonged 70 burgesses. Henry III. granted a charter, with permission to fortify the town with a wall and moat. The wall had 10 gates, and was strengthened with 16 towers. In Ket's, or the 'Norfolk,' rebellion, in the reign of Edward VI., Yarmouth was attacked by the insurgents, who were repulsed by the townsmen. In 1588, on the alarm of the Spanish Armada, a fortress with four towers, whence beacons might be displayed, was erected in the middle of the town. As the navigation off the coast is dangerous, floating lights are kept in Yarmouth Roads. A regatta is held annually at Yarmouth. The Dens are used by the inhabitants for cricket and other amusements; annual racing meetings are held on them. On the beach are the South Star, North Star, and Town batteries. There is a station of the coast-guard at Yarmouth.

YARMOUTH. [WIGHT, ISLE OF; NOVA SCOTIA.]

YAROSLAV, or JAROSLAW, an extensive government of European Russia, is situated between 56° 42' and 59° N. lat., 37° 45' and 41° 20' E. long. It is bounded N. by Novogorod and Vologda, E. by Kostroma, S. by Vladimir, and W. by Tver. The area is 18,965 square miles. The population in 1846 was 1,008,100.

The country is a pretty high table-land, the level surface of which

is diversified only by some ridges of low hills and the high banks of the rivers. The soil is a mixture of sand and gray clay, and there are extensive morasses, and some small tracts which are wholly incapable of cultivation. The hills and the banks of the rivers consist of strata of clay, marl, and limestone. Of the 19 rivers, the principal is the Volga, which enters the government from Twer, runs at first to the north to Mologa, where it is joined by the river of the same name, then turns to the south-east, to the city of Yaroslav, where it makes a small bend towards the north, and then flows eastward to Kostroma. At Rybinsk, between Mologa and Yaroslav, it is joined by the Scheksna. All the rivers of the government flow into the Volga. The Mologa and the Scheksna are by far the most considerable. The lakes are 38 in number: the largest is that of Nero, near Rostow, which covers an area of 23 square miles. The climate is rather severe; the winter, spring, and autumn are long; the summer is short. The purity of the air is very favourable to vegetation and to the health of the inhabitants.

Agriculture is the chief occupation of the inhabitants. The soil is only moderately fertile, and the corn produced is far from sufficient for the consumption of the inhabitants. The chief corn crops are rye, barley, wheat, buckwheat, and oats. Peas are grown in large quantities; flax and hemp only for domestic use. Horticulture is well understood. Apples and cherries thrive in the southern circles. The forests chiefly consist of birch, alder, aspen, and underwood; but timber for building is scarce, there being hardly any oaks, and very few pines and firs. The beasts of prey are bears, wolves, lynxes, and foxes; the fur-bearing animals are squirrels, martens, badgers, and weasels; hares are pretty numerous. The fisheries in the rivers are very productive. Very little attention is paid to the breeding of cattle.

Spinning and weaving, both of flax and wool, are universally practised; in the country, gloves, shoes, and cloaks for the peasantry, caps, stockings, harness, and agricultural implements, are manufactured for home use. The manufactures, properly so called, are confined to the towns, and consist of leather, linen, cotton, silk, tobacco, paper, soap, and candles. The principal articles of export are Russia leather, sail-cloth, duck, linen, cordage, some linseed and linseed-oil, salt meat in large quantities, and horsehair; the imports are corn, brandy, salt, iron, and all kinds of colonial produce, drugs, and manufactures.

The inhabitants are almost all Russians. They are of the Greek Church, under the Archbishop of Yaroslav and Rostow, whose diocese contains 833 parishes.

Yaroslav, the capital of the government, is situated near to the eastern frontier, at the junction of the Volga with the Kotorosla, the outlet of Lake Nero. The town is surrounded with palisades and defended by a citadel, which is in the angle formed by the two rivers, and is surrounded by a rampart. The city stands on an elevated plateau, and its many stone houses, its 44 churches and three monasteries, give it a striking appearance. It is however ill built, with generally narrow streets; the principal street by which the town is entered on coming from St. Petersburg is broad, and consists of handsome stone houses. Yaroslav has a theological seminary, a gymnasium, a district school, and a school for the higher branches of learning, called the Demidoff Lyceum, from its founder, Prince Paul Demidoff, who in 1803 endowed it with a capital of 300,000 silver rubles and 3600 peasants. The lyceum has a very good library. The linen and Russian leather of Yaroslav are highly esteemed. Its trade is very considerable, and the merchants have a very large bazaar. The population is 28,500.

Rostow, situated on Lake Nero, is one of the most ancient towns in Russia. It is six miles in circuit, has several times suffered by war and fire, and now consists of the city and an extensive suburb. The city is surrounded by a rampart and a moat. The site is low and surrounded by marshes. The Archbishop of Yaroslav resides here, where he has his principal cathedral, an ancient richly-adorned edifice, and a vast palace with a seminary. There are 24 churches and 3 convents in the city. Besides the bazaar, the city contains 200 shops and above 1000 houses, with 6500 inhabitants. The great fair of Rostow, which begins at the end of February and continues for a month, is attended by at least 40,000 Russians, Armenians, Greeks, and Tartars, who bring goods to the value of 14,000,000 rubles.

Uglitsch, on the right bank of the Volga, is likewise an ancient town. Before it was burnt by the Lithuanians in 1607, it contained, it is said, 150 churches, 12 convents, and 30,000 houses. At present it has two convents, 23 churches, and a fortress built of wood. The streets are narrow and crooked. There are 7000 inhabitants, who have a considerable trade and some manufactures.

Rybinsk, at the confluence of the Rybinska with the Volga, 50 miles N.W. from Yaroslav, is an important commercial town, though the population hardly amounts to 4000. Goods are here transferred from the large vessels that ply on the Volga to smaller craft, which convey them to St. Petersburg and other Baltic ports. As many as 20,000 barges arrive annually with goods to the amount of 250,000,000 rubles. Rybinsk has a fine exchange, several churches, an arsenal, a theatre, large bazaars and corn-stores, a house of correction, and several schools. Beer, spirits, salt, oil, soap, candles, and earthenware are among the manufactures. Corn is the chief article of commerce. Two large annual fairs are held.

YARRA YARRA, RIVER. [AUSTRALIA; VICTORIA.]

YARRIBA. [SOODAN.]

YARROW, RIVER. [SELKIRKSHIRE.]

YAXLEY. [HUNTINGDONSHIRE.]

YECLA. [MURCIA.]

YEDDO, or JEDDO. [JAPAN.]

YELDHAM. [ESSEX.]

YELL. [SHETLAND.]

YEMEN. [ARABIA.]

YENESEI, RIVER. [ALTAI MOUNTAINS; SIBERIA.]

YENIKALE. [AZOF, Sea of; CRIMEA.]

YENISEISK. [SIBERIA.]

YENOTAYEWSK. [ASTRAKHAN.]

YEO, RIVER. [SOMERSETSHIRE.]

YEOVIL, Somersetshire, a market-town and the seat of a Poor-Law Union, in the parish of Stone, is situated near the left bank of the river Yeo, in 50° 56' N. lat., 2° 37' W. long., distant 36 miles S.S.W. from Bath, and 123 miles S.W. by W. from London. The population of the town in 1851 was 5985. The town is governed by a portreeve. The management of the paving, lighting, watching, &c., is under a body of commissioners. The living is a vicarage in the archdeaconry of Wells, and diocese of Bath and Wells. Yeovil Poor-Law Union contains 35 parishes and townships, with an area of 51,271 acres, and a population in 1851 of 28,446.

Yeovil was probably a Roman station, as Roman coins and tessellated pavements have been found at the place; the town was called *Gevele* by the Saxons, and *Ivle* and *Givele* in Domesday Book, which names may be identified with that of the river Yeo or Ivel. The streets are lighted with gas and paved. The church is a handsome cruciform edifice, of perpendicular character, 146 feet long and 50 feet wide; the length of the transept is 80 feet. The church stands in a large churchyard surrounded with lime-trees. There are also a new church called Trinity church; places of worship for Wesleyan Methodists, Independents, Baptists, Quakers, and Unitarians; a Grammar school; National schools; a savings bank; Wobourne's almshouses, for 12 poor persons; Portreeve's almshouses; and several parochial charities. A new town-hall has been recently erected. Yeovil was formerly the seat of a woollen manufacture, but the manufacture of leather gloves is now the chief source of employment. The wages paid yearly by the manufacturers of Yeovil and its neighbourhood are estimated at about 100,000*l.*, of which about two-thirds are paid by the Yeovil manufacturers. A considerable number of women and girls are employed in sewing the gloves at their homes. The market is held on Friday, every alternate Friday being regarded as the great market. Large quantities of corn, butter, cheese, hemp, and flax are sold; and considerable trade is carried on in the sale of cattle. Fairs for horses are held on June 28th and November 17th. In the vicinity of Yeovil are many dairy farms, from which butter in considerable quantities is obtained for the London market. A county court is held in the town.

YESHIL-IRMAK. [ANATOLIA.]

YESO. [JAPAN.]

YETHOLM. [ROXBURGHSHIRE.]

YETMINSTER. [DORSETSHIRE.]

YONNE, a department of central France, is bounded N.E. by the department of Aube, E. by Côte-d'Or, S. by the department of Nièvre, W. by that of Loiret, and N.W. by Seine-et-Marne. It lies between 47° 20' and 48° 24' N. lat., 2° 55' and 4° 20' E. long. Its greatest length is 82 miles; the greatest breadth is 53 miles. The area is 2368 square miles; and the population in 1851 amounted to 381,133.

The surface is in many parts undulating; the highest ground is toward the south-western corner, where the low hills which separate the basin of the Loire from that of the Seine cross the department. The country about Avallon is comprehended in the granitic district of Morvan; the rest of the department is occupied by the oolitic formations, except the north-west of the department, which is occupied by the chalk formations. Iron-ore is obtained; freestone, sandstone, and stone suitable for lithography are quarried; and gun-flints, and red and yellow ochre, are procured. A mine of lead and silver was formerly worked near Avallon.

The department belongs almost entirely to the basin of the Seine. Some parts along the western border are drained by the Loing and its affluents; the central and eastern parts are drained by the Yonne and its tributaries the Cure, the Serein, the Armançon, the Tholon, the Vrin, and the Vanne. The Loing and its feeder the Ouanne rise in the south-west part of the department, and have a north-western course into the adjacent department of LOIRET, in which their junction takes place. The other feeders of the Loing have only their sources and the upper part of their course in this department. The Yonne rises in the department of Nièvre, near Château-Chinon; and flows north-west into the department of Yonne, where it passes Coulanges, Auxerre, Joigny (between these towns it receives the Serein and the Armançon, both on the right bank); and just below Joigny it receives the Tholon and Vrin, both on the left bank, St. Julien, Sens (near which it receives the Vanne on the right bank, and Villeneuve-la-Guiard. Below Villeneuve-la-Guiard it quits the department and enters Seine-et-Marne, through which it flows a short distance west-north-west to Montreault-Yonne, where it unites with the Seine. Its whole course is about 150 miles. The river is employed for floating timber from near its

source: at Clamécy the timber is formed into trains or rafts, and floated down to Auxerre. At Auxerre the navigation commences, and extends for about 64 miles, the greater part of it in this department. The *Cure* rises in the department of Nièvre, and flows north-north-west into the department of Yonne, and by Vermanton into the river Yonne on the right: its whole course is above 50 miles. The *Voisin*, which joins the *Cure*, and its feeder the *Cousin*, both rise in the department of Côte-d'Or, and flow north-west. The *Serein* rises in the department of Côte-d'Or, and flows north-north-west into the department of Yonne, where its course bends more towards the west. The *Armançon* rises in the department of Côte-d'Or, and flows north-north-west by Semur into the department of Yonne, through which it flows north-west by Nuits, Tonnerre, and Dannemoine; then westward by St-Florentin and Briénon into the Yonne. Its whole course is about 92 miles. Both the *Armançon* and its feeders, including the *Armance* (which flows into it from the department of Aube), are used for floating timber, and vast quantities of firewood down to Paris.

The Canal de Bourgogne, which connects the Seine with the Rhône, commences in the Yonne, and passes up the valley of the *Armançon*, then up the valley of the *Brenne*, a feeder of the *Armançon*, and, crossing the hills which separate the basin of the Seine from that of the Rhône, follows the valley of the *Ouche* till it terminates in the *Saône* at St-Jean-de-Losne. The summit-level is at Pouilly in the department of Côte-d'Or, so that all the part of the canal which is in this department (of Yonne), officially stated at 91,638 mètres (about 57 miles), is on the side of the descent from the summit-level to the Yonne: this descent is of 311 mètres (about 1020 feet), and is effected by 115 locks. This canal was projected by Henri IV., but was not commenced till 1775; and if finished (of which we have no certain information) has been completed only within a very few years. The department is traversed by the Canal de Bourgogne, which connects the navigation of the Seine with that of the Rhône, commencing in the Yonne at the mouth of the *Armançon*, and terminating in the *Saône* at St-Jean-de-Losne [Côte-d'Or]; and by the *Nivernais Canal*, which commences in the *Loire* at Decize, in the department of Nièvre, passes up the valley of the *Aron*, is carried by a tunnel under the mountain of *Coloncele*, and descends from the summit-level to the Yonne at Auxerre, thus connecting the navigation of the *Loire* with that of the *Seine*. The department is traversed by 6 imperial, 19 departmental, and a great number of communal or parish roads; and also by the Paris-Lyon railway, which passes Sens, Joigny, and Tonnerre, and sends off a branch from Joigny to Auxerre.

The area of the department comprehends in round numbers about 1,800,000 acres, of which about 1,150,000 acres are under the plough. More corn is produced than suffices for the consumption of the inhabitants. The produce in wheat is below the average of the French departments; but in other kinds of grain, oats, rye, maslin, and especially in barley, the department far exceeds the average. Other products are—hemp, chestnuts, truffles, pulse, and fruits. The grasslands amount to nearly 80,000 acres; the commons and other open pastures to 45,000 acres. Horned cattle, sheep, and horses are kept, but in no great numbers. Wine is the staple produce of the department. The vineyards comprehend above 90,000 acres, yielding about 19,000,000 gallons of wine annually, of which two-thirds are exported. The wines are known as 'Lower Burgundy wines.' Some of them are in high repute. The orchards and gardens occupy nearly 15,000 acres, and the woodlands above 360,000 acres. The exportation of timber and firewood, and the manufacture and exportation of charcoal, are important branches of industry. The department has some important iron-works and glass-houses. In the manufactures of the department are comprised also coarse woollens, blankets, serges, caeks, leather, conserve of grapes, tiles, pottery, &c.

The department is divided into five arrondissements, which, with their subdivisions and population, are as follows:—

Arrondissements.	Cantons.	Communes.	Population in 1851.
1. Auxerre . . .	12	181	121,539
2. Avallon . . .	5	71	47,524
3. Joigny . . .	9	108	99,446
4. Sens . . .	6	90	66,855
5. Tonnerre . . .	5	82	45,769
Total . . .	37	482	381,133

1. Of the first arrondissement, and of the whole department, the chief town is AUXERRE. *Vermanton*, on the right bank of the *Cure*, has a population of 2816, who carry on a considerable trade in wood and wine. The loose timber and firewood floated down from the *Morvan Hills* are collected at *Vermanton*, and formed into trains or rafts, which descend by the Yonne and the *Seine* to Paris. *Chablis*, 12 miles E. from Auxerre, on the left bank of the *Serein*, has a population of about 2800, who trade in the excellent white wine produced in the vineyards of the canton: there are seven fairs in the year. At *St-Florentin*, an ill-laid out but on the whole a handsome town, prettily situated on the Canal-de-Bourgogne, at the junction of the *Armance* and the *Armançon*, and on the Paris-Lyon railway, are several tan-yards; trade is carried on in corn, hemp, firewood, and charcoal:

there are seven yearly fairs. The town stands on a hill; the fine lofty gothic church, built in 1376, has some stained-glass windows of great beauty, and some handsome sculptures. From the four principal gates of the town the four leading streets run to a handsome central square, in the middle of which is a public fountain of gothic design. The Canal-de-Bourgogne is carried over the *Armance*, near the town, by a beautiful aqueduct bridge. The town is on an ancient site. A strong castle which stood on the site now partly occupied by the parish church, is connected with the history of Queen *Brunebaut*, who took refuge here in A.D. 597 from the pursuit of her grandson, *Theodebert II.*, king of *Austrasia*. *Pepin* demolished the fortress as soon as he mounted the throne in 752. The Normans were defeated near *St-Florentin* in 888 by *Richard*, duke of *Bourgogne*. The town capitulated to the Count of *Champagne* in 936. On the banks of the *Cure*, near the south-eastern border of this arrondissement, are the extensive grottoes of *ARCY*.

2. In the second arrondissement the chief town, *Avallon*, on the right bank of the *Cousin*, a feeder of the *Aire*, has a college and 5740 inhabitants in the commune. The town is regularly built, with clean wide streets, and has some handsome public buildings. Coarse woollen-stuffs, woollen-yarn, staves, paper, and casks are the chief industrial products. *Vézelay*, an old and ill-built town, anciently fortified, stands on a hill not far from the left bank of the *Cure*, and is surrounded by vineyards. The church of *Vézelay*, which is classed among the historical monuments of France, and has been recently restored, consists of two parts: the first part, into which the three outer doors open, is 80 feet long, and is called the *Catechumen's church*; the second part, with which the first part communicates by three other doors, is called the *Great church*, and is 213 feet long. The choir of the church is very fine; the lofty roof, 75 feet high, is supported by 10 beautiful columns. The nave and choir are surrounded by aisles. The three portals of the façade are adorned with sculptures; those over the central door represent the apostles. *Vézelay* is rich in historical recollections. At a council held here in 1145 the second crusade was preached by *St. Bernard*, and *Louis VII.* of France and many of his nobles took the cross. In the third crusade, *Philippe Auguste* of France, and *Richard Cœur-de-Lion* of England, united their forces at *Vézelay*, to the number of 100,000 warriors. It is now a small place with about 1200 inhabitants.

3. In the third arrondissement the chief town, *Joigny*, stands on the Paris-Lyon railway, and is built on the slope of a hill above the right bank of the Yonne, over which there is a handsome stone bridge. Along the river on each side of the bridge extends a broad and elevated quay, fronting which is a handsome cavalry barracks. The town is surrounded by an ancient wall, and is entered by six gates; the streets are very steep, narrow, and winding, and are lined for the most part with wretched houses, among which are mingled a few of better construction. In the upper part of the town is a fine château, the windows and terraces of which command a beautiful prospect. Near it is the church, the fine vaulted roof of which, although mutilated, is worthy of notice. The town has two hospitals, a college, a theatre, and 6056 inhabitants, who trade in oak-bark, wood, charcoal, caeks, hoops, wine, brandy, and vinegar; there are brandy-distilleries, tan-yards, and tile-yards; whiting is made. *St-Julien*, a small place on the left bank of the Yonne, 10 miles by railway from *Joigny*, gives name to a favourite French wine. *Villeneuve-le-Roy*, or *Villeneuve-sur-Yonne*, on the right bank of the Yonne (over which there is an old stone bridge), is the first railway station between Sens and *Joigny*: population about 4500. The principal street of the town is straight and handsome, with a gate and an avenue of trees at each end; the church is near the centre of the main street, and has an elegant front, with a handsome door on each side. Coarse woollen-cloth and leather, and conserve of grapes are the chief industrial products; trade is carried on in wine, wood, and charcoal. *Briénon*, or *Briénon-l'Archevêque*, is a well laid out, well-built, handsome town, situated on the Canal-de-Bourgogne, and the right bank of the *Armançon*: population, 2650. The manufactures are woollen-yarn, coarse woollen-cloths, and leather. There is also considerable trade in firewood (which is floated down to Paris), charcoal, corn, and linen. *St-Fargeau*, prettily situated on the *Loing*, is an ancient town with about 2400 inhabitants, who manufacture leather, iron, glass, and earthenware; they also trade in firewood to Paris. The territory and castle of *St-Fargeau* passed by purchase from the house of *Montferrat* to *Jacques Cœur*, on whose spoliation it was sold by *Charles VII.* to *Antoine de Chabannes*. They came by marriage into the house of *Anjou*, and afterwards into that of the *Bourbons*. *Mademoiselle de Montpensier*, who built the beautiful château still standing, left the estates to her husband, the Duke of *Lanzun*, who sold them soon after her death to an ancestor of the present possessor, the *Marquis de Boisgelin*.

4. In the fourth arrondissement the chief town is SENS. *Pont-sur-Yonne*, a station on the railway to Paris, 7 miles from Sens, is on the left bank of the Yonne, over which there is a handsome bridge. The population, which numbers about 2000, manufactures tiles, leather, and coarse woollen-cloth, and carries on trade in the wine of the district, corn, and cattle. *Villeneuve-la-Guyard*, in the north-west of the department on the left bank of the Yonne, 14 miles by railway from Sens, on the road to *Montereau* and Paris, has a population of about

2000. *Villeneuve-l'Archevêque*, situated in a fertile plain, 14 miles from Sens, on the Vanne, has four yearly fairs; a considerable trade in wool, hemp, and woollen-stuffs; manufactories of coarse woollen cloth, tan-yards, and tan- and fulling-mills.

5. In the fifth arrondissement the chief town is *Tonnerre*, which is a station on the Paris-Lyon railway, and is built on the slope of a hill on the left bank of the Armançon, over which there is a stone bridge: population, 4510. The Canal de Bourgogne passes near the town, which is well laid out and well built with houses of stone. The parish church of St. Pierre and the magnificent hospital, founded and endowed by Marguerite de Bourgogne, sister-in-law of St. Louis, are built on a rock above the town, and are remarkable structures. The church of the hospital is of large dimensions and remarkable for the bold architecture of its vaulted roof, which is not supported by pillars. The town has a college, a theatre, a fine public walk, saw-mills, tan-yards, curriers'-shops, and corn-mills; paper-hangings and agricultural implements are manufactured; and trade is carried on in corn, wine, wood, and earthenware. There are seven yearly fairs. At *Tanlay*, the first station on the railway S.E. from Tonnerre, some trade is carried on in iron goods and other articles, and there are three yearly fairs. *Ancy-le-Franc*, which is 9 miles farther along the same railway, has considerable iron-works, a glass-house, a pottery, and a saw-mill. *Noyers*, in the valley of the Serein, which is inclosed by hills covered with vineyards, has an hospital, and about 1800 inhabitants, who manufacture serge, coarse linen, striped linens, cottons, and woollens, horsecloths, hosiery, bleached wax, wax and tallow candles, leather, and combs; and trade in corn, wine, and wool. The town which was taken by Edward III. in 1359, and suffered much in the religious wars of the 15th century, is surrounded by walls flanked with well-built towers of cut-stone.

The department forms the archiepiscopal diocese of Sens-et-Auxerre. The department is in the jurisdiction of the Imperial Court and within the limits of the University-Academy of Dijon, and is included in the 1st Military Division, the head-quarters of which are at Paris. It returns 3 members to the Legislative Chamber of the French empire.

(Malte Brun; Vaysse de Villiers; *Dictionnaire de la France*; D'Anville. *Statistique de la France*; *Official Papers*.)

YOONASKA. [ALEUTIAN ISLANDS.]

YORK, the capital of Yorkshire, an archiepiscopal city, a municipal and parliamentary borough, and the seat of a Poor-Law Union, is situated on the banks of the river Ouse, or Ure, which flows through the midst of it, in 53° 37' N. lat., 1° 4' W. long., distant 199 miles N. by W. from London by road, and 191 miles by the Great Northern railway. The population of the municipal borough in 1851 was 86,303; that of the parliamentary borough was 40,359. The borough is governed by 12 aldermen and 86 councillors, of whom one is lord mayor; and returns two members to the Imperial Parliament. The livings are in the archdeaconry and diocese of York. York Poor-Law Union contains 82 parishes and townships, with an area of 80,519 acres, and a population in 1851 of 53,932.

York was originally a town of the Brigantes, a people of Celtic origin, described by Tacitus as the most numerous of the British tribes. It was converted into a Roman station during the second campaign of Agricola in Britain, about A.D. 78. By the Romans it was called Eboracum, or Eboracum. It appears to have very soon become the principal Roman station of the north, and even of the whole province of Britain. It was the head-quarters of the sixth legion from the time of its arrival in Britain in the reign of Hadrian, till the departure of the Romans from the island. The ninth legion, which came over with the emperor Claudius, had previously been stationed here, and of course continued here after its incorporation with the sixth. From the time of Septimius Severus, if not earlier, it was the residence of the emperors when they visited the province, and, in their absence, of the imperial legates.

One of the angle towers, and a portion of the wall of Eboracum attached to it, are to this day remaining in an extraordinary state of preservation. Excavations made at various times, and in different parts of the city, have discovered many remains of the fortifications of Eboracum, on three of its sides. It is inferred that this important station was of a rectangular form, occupying a space of about 650 yards by about 550 yards, inclosed by a wall and a rampart mound on the inner side of the wall, and a fosse without; with four angle towers, and a series of minor towers, or turrets, and having four gates or principal entrances, from which proceeded military roads to the neighbouring stations mentioned in the 'Itinerary' of Antoninus. Indications of extensive suburbs, especially on the south-west and north-west, exist in the numerous and interesting remains of funeral monuments, coffins, urns, tombs, baths, temples, and villas, which from time to time, and especially in late years, have been brought to light.

For more than a century after the departure of the Romans we have no authentic account of the state of York. Though it lost the pre-eminence it had so long maintained as the different Anglo-Saxon kingdoms rose and flourished, yet it was unquestionably the chief city of the north, and an important bulwark against the incursions of the Picts, from which there is reason to believe that it suffered greatly. When the kingdom of Northumbria was constituted, York became the capital.

The historical notices of York from the foundation of the kingdom of Northumbria to the Norman Conquest are sufficient to show that it continued to be a place of considerable importance. It was the principal royal residence. Here, 'under the lofty walls of York,' says Alouin, Edwin, king of Northumbria, and fifth Bretwalda, was baptised by Paulinus; and here he erected the first metropolitan church. The first Danish invader found it necessary to employ a considerable force in order to make himself master of this bulwark of the north. Edgar, the first sole monarch of England, held, in the year 966, the Witanagemot in this city. Siward the Dane, who was earl of Northumbria in the reign of Edward the Confessor, built a church at York, dedicated to the royal Danish saint Olaf, or Olave, preparatory to his intended foundation of a monastery, and, dying at York, was buried in that church.

Very few Saxon or Danish relics have been discovered at York. An interesting portion of the Saxon church erected by Paulinus, or by Albert, has been brought to light beneath the choir of the present cathedral; and fragments of crosses, or commemorative pillars, and some coffins, both of stone and wood, belonging to the Saxon period, have occasionally been found. The dean and chapter are in possession of a large and beautifully-carved ivory horn, a Danish relic, presented to the church by Ulphus, a Danish chief and friend of Canute, when he endowed it with all his lands.

Although William was crowned in London by Aldred, archbishop of York, the claims of the Conqueror were for a long while strenuously resisted in the north. As soon as the affairs in the south would permit, William took possession of York, built or repaired two castles in it, and strongly garrisoned them with Norman soldiers. Notwithstanding this, Edgar Atheling appeared at York, and was acknowledged king. The citizens, supported by a powerful body of English and Scotch, and a considerable number of Danish auxiliaries, besieged the castles, entered them, and put the garrisons to the sword. During the siege a great part of the city was destroyed by fire. York soon felt the destructive vengeance of the Conqueror, who reduced the whole country of Northumbria to a vast wilderness. In the reign of Stephen, David, king of Scotland, formed the design of seizing York, and for this purpose appeared before it with a powerful army. But this design was frustrated by the great battle of the Standard, in the year 1138. His grandson, Malcolm IV., was summoned to York by Henry II., where he did homage to the English king for Lothian; and according to Kuyghton, in 1171 William, the successor of Malcolm, did homage at York to Henry for 'broad Scotland'; and in token of submission, offered and deposited upon the altar of St. Peter, in the cathedral church, his breastplate, spear, and saddle. The reign of Richard was ushered in by a general massacre of the Jews. It began in London, apparently by accident, but was soon followed in other places, and especially in York, where, it has been computed, not less than 1000 or 1500 of this unhappy race perished. In the last year of King John the northern barons laid siege to York, but retired on receiving from the citizens 1000 marks. In the year 1230 Henry III. kept his Christmas magnificently at York, with Alexander II. of Scotland, the cardinal legate, and a large concourse of nobility. Henry III. with great magnificence observed the festival of Christmas in 1251, when he gave his daughter Margaret in marriage to Alexander III. in the presence of all the peers of the realm, and a great assembly of the nobility of Scotland and of France. In the year 1298 a parliament was summoned to meet at York, and in the following spring the whole English army was mustered there, preparatory to their march into Scotland. The Courts of King's Bench and Exchequer were on this occasion removed to York, where they appear to have remained seven years. Edward II. made York his head-quarters. In 1327 Edward III. kept his Christmas at York, and on the 24th of January was married in the cathedral church to Philippa of Hainault. Three months after he had defeated the French on the plains of Crécy, his queen took the field with forces she had collected together at York against the Scotch, who had invaded England under the conduct of David Bruce. At the battle of Nevill's Cross the Scotch king was taken prisoner, and was afterwards brought to York, whence he was conveyed to the Tower of London.

Richard II. held a parliament at York, and removed thither for a few months the courts of Chancery and King's Bench. The city, having received from him several immunities and privileges, gratefully adhered to him in his adversity, and consequently suffered severely from the vengeance of his successor, Henry IV. The neighbourhood of York was the scene of some of the sanguinary conflicts in the War of the Roses, and the lofty gates of the city exhibited the barbarous spectacle of the heads of Lancasterians and Yorkists alternately. Richard III., while duke of Gloucester, resided much at his favourite castle of Middleham, and soon after his coronation at Westminster visited the city with his queen. Henry VII. came twice to York for the purpose of suppressing insurrections in the north.

The dissolution of the monasteries by Henry VIII. occasioned many insurrections in the north; the most formidable of which was that styled 'the Pilgrimage of Grace.' The insurgents made themselves masters of York, and compelled the archbishop to take the oath and join their party. The first visit of Charles I. to York was on his peaceable progress to Scotland in 1633; his second, six years afterwards, on his hostile expedition against the Scotch. The year 1642

opened with the civil war, and in March the king fixed his headquarters at York, where he was joined by many of the Yorkshire gentry, and several of the peers from London. After a stay of five months he removed to Nottingham. In the beginning of the next year the queen, having landed at Bridlington, proceeded to York, and continued there some time 'with great advantage to the king's cause.' In the month of April, 1644, Sir Thomas Fairfax, commanding the parliamentary forces, joined by the Scotch, invested York, which had been strongly fortified and held out for the king. Several batteries were erected against the city; the suburbs, then very extensive, were set on fire; one of the gates was nearly demolished, and a tower of the abbey of St. Mary, in which the chartularies of many of the northern monasteries had been deposited, was blown up, and many important records were destroyed. After the battle of Marston Moor the city was compelled to open its gates to the Parliamentarians. Many who took part in the rebellion of 1745 were tried and executed at York; and the noble gates were again defiled by a spectacle worthy only of an age of the grossest barbarism.

Among the interesting relics of Eboracum, or of York, under the Romans, are remains or memorials of Roman temples. About the end of the 6th century, Ethelbert, the Saxon king of Kent, was converted to the Christian faith by the preaching of the monk Augustine. Edwin, the fifth Saxon king of Northumbria, and a native, it is said, of York, had married Ethelburga, the daughter of Ethelbert, and, through her influence and the seal of Paulinus, a companion of Augustine, became a convert, and with Coiffi, the heathen priest, and a considerable number of the nobles of his kingdom, was baptized by Paulinus on Easter-day, in the year 627, at York, in the church of St. Peter, which, says Bede, he had hastily constructed of wood while he was a catechumen, and preparing to receive baptism. Soon afterwards, by the advice and with the aid of Paulinus, to whom he had given York as his episcopal see, the king made preparations for building a larger and a nobler church, in the midst of which the oratory that he had previously constructed, and in which he had been baptized, might be included. He laid the foundation and began to raise the edifice; but before the walls were completed he was slain. The work was finished by his successor Oswald; but when he also had fallen, and Paulinus (who during the life of Edwin had received the pallium from Rome, and been elevated to the rank of archbishop of York) had been compelled to retire with Ethelburga into Kent, the church was wholly neglected, and fell into ruins. In the episcopate of the celebrated Albert, who was elected to the see of York in the year 767, a new church was begun, finished, and dedicated; this edifice appears to have been one of the most magnificent of the Anglo-Saxon churches. A small but very interesting portion of this church, comprising a part of the earlier church built by Edwin, was brought to light during the excavation of the present choir, after the calamitous fire in February, 1829.

Archbishop Thomas, who was appointed to the see by William the Conqueror in the year 1070, rebuilt the church, which had been in great part destroyed by fire. From remains of the crypt, discovered in the recent excavation and preserved beneath the floor of the present choir, a good idea may be formed of the grandeur and beauty by which the entire edifice must have been distinguished. Archbishops Roger, Grey, and Thoresby, with other dignitaries, at various periods repaired, altered, and added to the buildings of the cathedral.

York Minster, although wanting the uniformity of a building constructed from a well-arranged plan, is a magnificent structure. Its situation is low and confined; yet its mass, and the grand scale on which every part is constructed, render it an imposing object from whatever point it is viewed. The west front is very grand; the immensity of the structure here appears very striking. The window is an unrivalled specimen of the rich tracery that marks the style of the middle of the 14th century. The lofty towers arising from the western aisles are uniform and very graceful; they are terminated by pinnacles and supported by buttresses, in every part highly enriched. Almost the whole of this front is adorned with a profusion of tracery and sculpture. The south transept is a noble piece of workmanship. Attached to it is a fine porch. The central tower is very fine, but appears hardly high enough compared with the towers at the western end, which are a few feet loftier; it has been supposed that it was intended to be crowned with a lofty spire. The cathedral consists internally of a nave, choir, and Lady chapel, each with its two aisles; north and south transepts, with two aisles, and a lantern in the centre; and a chapter-room, with a vestibule on the north side. The elevation of the north transept presents five tall and very beautiful windows, commonly known as 'the five sisters;' above these are five other lancet windows of varied heights. The south transept is neither so regular nor so finished as the other, though rather richer in the details. The nave is remarkably beautiful, and the aisles are unequalled for grandeur in this kingdom; they are as lofty as those at Westminster, but not so narrow. The east window is about 78 feet high and 30 feet wide. It is divided into compartments, each containing the representation of an historical event: in all about 200 subjects are represented. The singularly elaborate and very interesting screen contains statues of the kings of England from William I. to Henry VI. That of Henry VI. is a modern statue, the original having been removed in the reign of Edward IV. Its place was supplied until

recently by a statue of James I., which was placed in the vacant niche when he visited the minster. Upon this screen now stands the organ, perhaps the finest in the kingdom.

This magnificent cathedral is cruciform, measuring in length from base to base of buttresses east and west about 519 feet, and from base to base of the transepts 249 feet. The internal length east and west is 483 feet, of the transepts 222 feet 6 inches. The internal height of the nave is 93 feet, of the choir 101 feet, of the central tower externally about 198 feet, internally 182 feet 6 inches. The height of the western towers is about 201 feet to the top of the pinnacles, 178 feet 3 inches to the top of the battlement.

The chapter-house is a noble room of an octagonal form, the angular diameter being 60 feet 6 inches, and the height of the central boss from the floor 62 feet 2 inches. The roof is unsupported by any pillar. It has an elegant window in each of seven of its sides, the eighth having corresponding tracery. Under the windows are fifty-four stalls for the canons, the stalls being surmounted with rich crocketed canopies. It has a handsome wooden roof, which was brilliantly painted and gilt by Willemont. The floor is laid with a tessellated pavement.

During the Commonwealth period the interior of the cathedral suffered much injury, and several of the ancient monuments were demolished or mutilated. There are however still many ancient monuments of great beauty and interest. The most important is that of Archbishop Walter Grey, who built the south transept, in which it is placed. This splendid relic of the 13th century consists of two tiers of trefoil arches, supported by eight slender columns, with capitals of luxuriant foliage, sustaining a canopy divided into eight niches, with angular pediments and elaborate finials. On a flat tomb under this canopy is a recumbent effigy of the archbishop in his pontificals.

The earlier cathedrals were successively destroyed by fire: the present Minster has twice within the last thirty years narrowly escaped a similar fate. The first time was on February 2nd, 1829. It was the work of a maniac, Jonathan Martin, who had concealed himself in the Minster the preceding day, Sunday, after prayers. He was soon apprehended and tried, but acquitted on the ground of insanity. He was of course sent to a lunatic asylum, where he died in October, 1838. By this fire the whole of the roof of the choir, 222 feet long, was destroyed, with the woodwork on each side; and the walls above the arches of the choir were so much damaged that it was found necessary to rebuild them; the organ was burnt, and the altar-screen so much injured as to render a new one necessary; the communion plate too was melted. No time was lost in repairing the parts injured; but the restorations were scarcely completed, when another fire occurred, hardly less destructive in its results. A workman who had been employed to repair the clock, with most culpable negligence left his candle burning when he quitted his work. This was on the evening of May 20th, 1840, and by nine o'clock the south-western tower, in which he had been employed, was discovered to be in flames. By twelve o'clock the south-western tower, with its fine peal of bells, was destroyed, and the whole of the roof of the nave had fallen in. The progress of the flames was on both occasions checked by the great central tower. The parts destroyed were reconstructed under the direction of Sir Robert Smirke, at a cost of above 100,000*l.*, and the opportunity was taken to remove many irregularities and incongruities which in the course of time had to a certain extent been allowed to deface the noble edifice. The whole is now undoubtedly in a far more perfect state than it has been for centuries.

In replacing the various fittings of the Minster a new peal of 12 bells of large size and fine tone, presented to the Minster by the late Dr. Beckwith, was substituted for the old peal of 10 bells. A new great bell was also cast for the cathedral by Mr. Mears, of London, at whose foundry the peal was cast, and paid for by subscription. This is the largest bell in the kingdom, weighing 11½ tons, and exceeding by four tons Great Tom of Oxford, previously the largest.

The palace of the archbishop was anciently on the north side of the cathedral. Archbishop Roger is said to have rebuilt it towards the end of the 12th century, and a small portion of his work is still remaining, as is the chapel of the palace, of a later date. This elegant building, having been long an unsightly ruin, was repaired in the time of Dean Markham, and is now used as the library of the dean and chapter. Near it is the new deanery.

No establishment of regular monks is known to have existed at York prior to the Norman conquest. Shortly before that event Siward, the Danish earl of Northumberland, laid the foundation of a monastery near the walls of York; but the building did not advance beyond the erection of the church; and the foundation was laid anew, and a great part of the monastery completed, by William Rufus. It was dedicated to 'The Blessed Virgin Mary.' About the end of the 13th century the church and a great part of the monastery were rebuilt; but several portions of the original structure still remain. During the government of the third abbot, Gaufridus, in 1131, thirteen of the monks, desirous of adopting the Cistercian rule, seceded, and founded the abbey of Fountains near Ripon. William Thornton, the last abbot, surrendered to the king, November 29th, 1540, when there were in the monastery fifty monks, including the abbot, prior, and sub-prior, and one novice. The clear annual value was reckoned to be 1650*l.* 0*s.* 7*d.* The abbot enjoyed the dignity of the mitre, and was

south-south-east, and forming the northern slope of the most extensive valley in England, that of the Ouse and Trent. The high land on the eastern boundary of this valley, extending from the Tees to the Humber, forms, as has been previously stated, a bold coast-line, from which, in the northern part of the county, the surface rises, in some parts very suddenly, to a great elevation. In the description of this valley and its boundaries in the 'Physical and Political Geography of Great Britain,' in the 'Library of Useful Knowledge,' it is observed that south of the estuary of the Tees we find the commencement of the high lands which in some places stretch inwards to a distance of from 20 to 30 miles from the coast—in Barnaby Moor, which has an elevation of 784 feet; in the trigonometrical station of Burleigh Moor; and, a little farther south, in the Guisborough Hills. These high lands run down to the sea-coast at Huntcliff, and also by the Easington Heights, about midway between the Tees and Whitby, where is a trigonometrical station at an elevation of 681 feet, to Rodcliff, or Rockliff, a little farther south. A small depression in the high moors, opening to the sea at Whitby, carries off the drainage of the small valley of the Esk, which runs between the Guisborough Hills and the elevated Egton Moors, which lie south of it. These form part of a series of barren elevations which extend from the bold and lofty coast south of Whitby to within about 5 miles of Northallerton, a distance of about 30 miles from the coast. The whole tract of the Eastern Moorlands, extending about 30 miles from east to west, and 15 miles from north to south, is a wild and mountainous district, intersected by numerous picturesque and fertile valleys. North of Northallerton, where the scarped extremity of the high lands turns eastward, it overlooks the vale of Cleveland, which slopes down to the Tees. On the various roads which intersect the district extensive and dreary wastes present themselves, with no boundary but the horizon; but towards the northern and western escarpments of the moorlands there are some very beautiful prospects. Among the most elevated points of this mountainous region are the trigonometrical stations of Botton Head (1435 feet), Loosehoe Hill (1404 feet), and Black Hambleton, on the western escarpment (1246 feet). Another remarkable summit, which is celebrated as a landmark, and as commanding a most extensive and beautiful view, is the mountain called Roseberry Topping, the height of which is given by Greenough as 1102 feet, near the road from Guisborough to Stokesley, on the northern escarpment of the high lands.

The valley of the Derwent, which descends from near the sea-coast in the neighbourhood of Scarborough, and, inclining towards the south-west, falls into the valley of the Ouse, separates the Eastern Moorlands from the Yorkshire Wolds, which form the continuation of the high lands on the east side of the valley of the Ouse. The ascent of the Wolds, except on their eastern side, is generally steep, but they seldom rise to an elevation exceeding 600 feet, and they are broken and divided by many deep winding valleys. Although their southern extremity presents the finest prospects, there are many points on the range from which beautiful views may be obtained of the Vale of York, the low grounds between the Wolds and Spurn Head, and the Valley of the Derwent, beyond which the Eastern Moorlands rise in the back ground. The peninsular district of Holderness is agreeably diversified in surface, especially towards the sea-coast, within a short distance of which, close to the town of Hornsea, is the largest lake of the county, called Hornsea Mere, about a mile and three quarters long, and three quarters of a mile broad at the widest part. The western side of Holderness is distinguished by a fenny district known by the provincial name of 'The Cars,' which extends nearly 20 miles from north to south, with an average breadth of about four miles. As noticed in a previous column, considerable portions of land have been reclaimed from the Humber, and among them may be named the Holderness drainage, comprising upwards of 11,000 acres, the Beverley and Barstow drainage, and the Keyingham drainage, comprising about 5500 acres. In addition to the great extent of fertile land added to the county by these and several other extensive drainages, the high prices of agricultural produce in this country have led to a great extension of cultivation on the Wolds, which, until about the close of the 18th century, were little better than a large rabbit-warren.

On the western side of the great valley of the Ouse lie the Western Moorlands of Yorkshire, the general elevation of which is much greater than that of the Eastern Moorlands. These form part of the irregular tract of high land called the Pennine Chain, which, extending southward to the Derbyshire and Staffordshire hills, forms the great moorland district of England. The highest point of the Pennine Chain is at Cross Fell, a few miles north-west of the north-western angle of the county, where it joins Westmorland and Durham, and approaches within 3 or 4 miles of Cumberland; and from a little south of this point, which has an elevation of 2901 feet, is a ridge nearly coincident with the county boundary, with a steep escarpment towards the eastern side of the valley of the Eden. South of this point the Cumbrian Mountains join the western side of the great Pennine range, the high lands of which, in its further progress towards the south, sometimes spread out into extensive moors, sometimes present rounded mountain-tops, and in other places consist of a confused heap of rocky mountains, interspersed with numerous narrow valleys, which afford scenery of the most romantic and

picturesque character. This portion of the range, which occupies the north-western extremity of the West Riding, forms the western portion of the wild district of Craven, and comprises, among its more elevated summits, those of Wharfedale, or Wharfedale, near the junction of the counties of York, Westmorland, and Lancashire, with an elevation of 2384 feet, according to the Ordnance Survey; Ingleborough, a little farther south, 2361 feet; Penyghent, or Pennigant, rather more to the east, about 2270 feet; a second mountain, distinguished as the Great Wharfedale, near Kettlewell, and still more to the east, 2263 feet; Bow Fell, near Sedburgh, a few miles north of the first-mentioned Wharfedale, 2911 feet high, an elevation considerably greater than that of any other mountain in this part of the county; and Cam Fell, between the two Wharfedales, 2245 feet high. The valleys of this district, the most extensive of which are Netherdale, or Netherdale, the valley of the river Nidd, Wharfedale, and Airedale, are so well wooded, cultivated, and studded with villages, as to present a beautiful appearance from the adjacent heights; and the picturesque character of the district, the roads of which afford some of the finest scenery in the country, is heightened by numerous small lakes, one of the principal of which is Malham Water, or Malham Tarn, 6 or 7 miles east by north of the town of Settle, which is about a mile in diameter, and is situated upon the summit of an elevated moor. Though the general direction of the great range of mountains which occupies the western side of the county, and which is sometimes styled 'the back-bone of England,' is from north to south, it does not consist of a single ridge, but rather of several ranges, which, though very irregular in their disposition, mostly form small angles with the main direction of the mountain-range, thereby forming numerous long and narrow valleys, with a general direction from north to south. This hilly district forms a kind of natural boundary between Yorkshire and Lancashire, and presents great difficulties in the construction of canals or railways, rendering necessary the execution of some extraordinary and costly works.

The Valley of the Ouse, or the Vale of York, commences very near the river Tees, on the northern boundary of the county, the basin of that river being separated from that of the Wiske, one of the affluents of the Ouse, by a narrow ridge of small elevation; and, occupying the centre of the county, it extends southward to its opposite boundary. With the tributary valley of the Aire, which stretches westward about as far as Halifax, the breadth of this valley is about 50 miles; while the Don, which joins the Aire near Snaith, drains a continuation of the valley towards the south-west to the very extremity of the county, between 30 and 40 miles from the confluence of the Ouse and Trent, and about 45 miles in a direct line from York. The northern part of this valley has a gentle slope towards the south, with the level surface broken by several bold swells; but south of the city of York the surface sinks into a perfect flat, and is in several parts marshy, especially along the course of the Ouse. The monotony of the level is only broken by low sandy hills, seldom rising to an elevation of more than 50 feet above the level of the sea, and which are found principally near the course of the Don, in the vicinity of Snaith, Thorne, and Doncaster; and, owing to the extraordinary flatness of the country, the rivers Ouse, Aire, and Don have frequently altered their course. That portion of the valley which lies immediately about the lower part of the Ouse, and between it and the Wolds which separate the valley from the Holderness district, is called 'The Levels;' and though fertile and pretty thickly inhabited, it is entirely flat. Farther south, towards Sheffield, and on the western side of the valley, the surface is diversified by the hills which gradually rise towards the mountainous district.

Hydrography and Communications.—The description of the great valley of the Ouse and its principal tributaries will give a general idea of the position of the rivers of this county. The drainage of the extensive tract which supplies the waters of the Ouse tends towards the point where the Aire unites with the Ouse at Armin, about 20 miles S.S.E. in a straight line from the city of York, and to this point converge a great number of small rivers, commencing in the south-west with the Rother, which flows from the border of the county near Rotherham, and embracing the numerous rivers which descend along the valleys of the high lands on the west of the county, and those which flow through almost the whole of the western and northern districts, as well as the drainage of the totally distinct high lands on the north-east, which finds its way into the course of the Derwent. In the article TRENT AND HUMBER the leading features of the great basin, of which this forms a part, are more fully described. It is computed that the drainage of about seven-ninths of the total area of Yorkshire, or about 4500 square miles, runs into the basin of the Humber; and, with the exception of the district between the Wolds and the sea, the whole of this district pours its waters into the Ouse.

The Ouse, which is sometimes called, to distinguish it from other rivers of the same name, the Northern Ouse, is formed mainly by the union of the Ure or Yore and the Swale. The total length of this stream may be estimated at from 130 to 135 miles, whether we reckon from the source of the Swale or from that of the Ure.

The Ure rises in the high mountains at the western extremity of the North Riding, near the border of Westmorland, and flows first towards the south-east, and then eastward, near Hawes and Askrigg, along Yoredale and Wensleydale to Middleham, receiving in its course

several small tributaries on each side. A little below Askrigg the Ure falls over a succession of limestone rocks, forming what is called the Aysgarth Force. Below Middleham it is joined on the south by the Cover, a stream which rises at the head of the long narrow valley of Coverdale; and shortly afterwards it flows past Masham, a few miles below which place it reaches the boundary-line between the North and West Ridings, and receives on the right side the small river Binn. It then pursues a very irregular course by Tanfield to Ripon, where it receives on the right the united streams of the Skell and the Laver. At Ripon the Ure quits the boundary-line and enters the West Riding, but it rejoins the boundary near Boroughbridge, and passes by that place and Aldborough to the junction of the Swale. The united stream—which, according to different authorities, may at this part be called either the Ure, the Swale, or the Ouse—continues in an irregular course to the south-east, forming the boundary of the North Riding as far as York, receiving the Linton with its tributaries on the left, and the much more important river Nidd on the right side. At York the Ouse receives the river Foss on the left side, and from that city to near Cawood its course runs southward, a little inclining to the west. Near Nun-Appleton, a little above Cawood, it receives on the right side the Wharfe, and in the remaining part of its course the Ouse constitutes the boundary between the East and West Ridings. Inclining now to the south-east, it pursues a very irregular course by Cawood and Selby, and, after receiving successively the Derwent on the left, and the Aire with its tributaries on the right side, it pursues a very tortuous course near Howden; and by the newly-formed port of Goole, where it is joined by the Dutch River, or River Dunn Navigation, to the confluence with the Trent at Faxfleet, whence the united stream, under the name of the Humber, pursues an eastern course to the ocean. [TRENT AND HUMBER.] The Ouse and its principal northern tributaries have been the subject of several Acts for the improvement of the navigation.

The *Swale* is formed principally of two streams, which, rising respectively near two hills called the Lady's Pillar and Shunnon Fell, flow in an easterly direction along the opposite sides of the high ground called the Water Crag, which has an elevation of 2180 feet, until, the first-mentioned and principal branch having turned to the south, after flowing through the valley called Swale-Dale, they unite at Muker. From Muker the river has an irregular course towards the east past Reeth to Richmond, below which its course inclines somewhat to the south, and it receives, together with several minor streams, the river Gilling on the left side. Not far from Northallerton it receives on the right the Bedalebeck, or Bedale River; and farther south, in the latitude of Thirsk, it is joined on the left by the Wike, a stream which rises near Osmotherley, on the west escarpment of the Eastern Moorlands. From this point the course of the Swale, though very tortuous, continues in a south-south-east direction to its junction with the Ure, receiving in its course on the left side two considerable streams which descend from the Hambleton Hills, on the escarpment of the Eastern Moorlands, the northern and most important of which flows by Thirsk, and is called the Codbeck.

The *Nidd* rises about 3 miles N.E. from Kettlewell, on the adjacent mountains called the Great Wharfedale and Black Fell, and after flowing eastward to Bleasfield Scar, it enters the earth by a wide and rocky cavern called Goydon-Pot-Hole. It reappears about two miles south of that point by two issues, the streams of which shortly unite, and then, after receiving the Stone, a little river which rises in Netherdale Forest, very near the source of the Nidd itself, the river takes a tolerably direct course towards the south-east to Pateley Bridge. It then inclines more to the east, and descends along the slope of the Western Moorlands, by Ripley and Knaresborough to Colthorpe, whence its general direction is north-east to the Ouse at Nun Monkton.

The *Wharfe*, the next tributary on the same side of the river Ouse, and which is one of the most beautiful streams in the island, rises also in the Western Moorlands, very near the source of the Ribbles. The main stream, rising about three miles north of the Pennine Mountain, flows eastward through Langstrath-dale or Langstrath-dale to Buckden, very near the border of the North Riding, where it turns nearly due south along Kettle-dale, passing Kettlewell, near which place it receives a considerable tributary. After pursuing the same direction to Grassington the river becomes very tortuous, but inclines generally to the south-east, by Barden Tower and Bolton Abbey, where it forms the main feature of several miles of scenery of surpassing beauty. A short distance below Barden Tower the stream rushes with great impetuosity through a narrow passage in the rocks, and forms a remarkably picturesque object. This chasm, known as the 'Strid,' is only about six feet wide. It is the scene of a legend which forms the subject of poems by Wordsworth and Rogers. One of the small tributaries of the Wharfe forms a picturesque waterfall in Bolton Park, not far from the Strid. From Bolton Abbey the Wharfe flows south-east to Ilkley, near Rommell's Moor, whence it turns east by Otley and Harewood to Wetherby. From Wetherby the Wharfe inclines more to the south-east, and passing by Tadcaster, up to which place it is navigable, joins the Ouse at Nun-Appleton, a little above Cawood.

The source of the *Aire*, Air, or Are, is in Malham Tarn or Water, 5 or 6 miles E. by N. from the town of Settle, in the district of Craven,

among the Western Moorlands; but for about a mile south from this lake the stream runs underground, and reappears at the base of a perpendicular rock 286 feet high, which forms the centre of a romantic amphitheatre of limestone rocks called 'Malham Cove.' The course of the Aire, and of those subsidiary streams which unite with it in the upper part of its course, is generally towards the south for a few miles, until near Gargrave it is crossed by the Leeds and Liverpool Canal, which passes over it by a large aqueduct at an elevation of about 414 feet from the sea at low water, and which from that point follows the valley of the Aire to Leeds, and the levels of which, hereafter noticed, will give some idea of the descent of the valley. From Gargrave the general course of the river is south-east, passing to the south-west of Skipton, Rumbold's or Rommell's Moor, and Bingley, east of Keighley, and north of Bradford, along the picturesque valley of Alredale, to Leeds, passing in its course the ruins of Kirkstall Abbey. At Leeds the canal terminates, the river itself being made navigable below that town. It proceeds in the same direction from that town to Castleford, where it receives the Calder from the west, and from which point it pursues a very irregular course, the main direction of which is nearly due east, but inclining a little to the south, by Knottingley, Ferrybridge, and Kellington, to Snaith, a little below which town it receives the Don from the south, and from this junction it runs east by north for 5 or 6 miles (direct distance) to its junction with the Ouse at Aspley Island, near Armin, or Airmin, a little to the south-west of Howden. The improvement of the Aire, with its important tributary the Calder, for the purposes of navigation, forms an important feature in the history of this class of improvements, these rivers having been made navigable under the powers of an Act passed in 1699 (10 and 11 Will. III., c. 19), upwards of half a century prior to the date of any enactment for a canal navigation. As before intimated, the Aire is not navigable above Leeds; but under the powers of the Act referred to, the navigation was formed from that town to the junction with the Calder, a distance of 11½ miles, in which there is a fall of 43½ feet, effected by six locks, and also from the junction of the two rivers to Weeland, a farther distance of 18½ miles, with a fall of 34½ feet, by four locks, making a total navigable length of about 30 miles, with which several short connections have been formed by private canals and railroads extending to quarries and collieries in the vicinity. [CALDER RIVER.]

The *Don*, or *Dun*, rises near Salterbrook, upon the high ground called Snealsden or Snailsden Pike, near the border of Cheshire, and pursues an easterly course to Penistone, then turns south-east towards Sheffield, receiving on its way the Little Don, the Ewden Brook, and the Loxley River. At Sheffield the Don is joined by the Sheaf or Sheaf, which rises in the Derbyshire Mountains, and runs north-north-east, skirting the boundary of the county for a short distance, and receiving another small stream from the highlands to the west. From Sheffield the Don runs north-east by Rotherham and Doncaster to Thorne, when it turns north, and runs to the Aire just below Snaith. The principal tributaries received along this part of its course are the Rother, which rises in Derbyshire [DERBYSHIRE], enters Yorkshire a few miles south of Rotherham, and joins the Don at that town; the Dearn, or Darn, the longest branch of which rises at the hill called Denby Moor, to the north of Penistone; a stream of considerable length which descends from Hemsworth, Kirkby, and Clayton in the Clay, and flows westward to the Don at Barsley; and the Went, which originates in the last slope of the high lands on the west of the Ouse Valley, and flows by Wentbridge and Kirk-Smeaton to the Don about midway between Thorne and its junction with the Aire. The navigation of the Don or Dun commences at Tinsley, south-west of Rotherham, at which point the river is joined by the Sheffield Canal, a separate undertaking, though forming part of the same extended line of communication; but in many parts below that point a navigation is effected by artificial cuts to avoid bends and difficulties in the bed of the river. The first Act for this navigation was passed in 1726, and there have since been several others, of which that of 1826 empowered the company of proprietors to make very extensive improvements by new cuts and other works. The portion of navigation from Tinsley to Doncaster, which by the old course was 21 miles long, is thus reduced to 18 miles, with a fall of 67½ feet by 11 locks. Similar improvements have been effected in other parts of the navigation, and the total length of the improved Don navigation is about 39 miles, with a total rise from the low-water mark in the Dutch River of 92½ feet, effected by 16 locks. This navigation is of very great importance for exporting the produce of the extensive coal- and iron-works which abound at its western extremity, as well as the vast quantity of manufactured iron goods and cutlery produced in Sheffield and its neighbourhood. The trade of Rotherham, the limestone and plaster at Sprotborough and other places on the line, and the agricultural produce of the neighbourhood of Doncaster, also constitute considerable branches of traffic; while the imports embrace every article required for the supply of an extensive and populous manufacturing district.

The rivers which join the Ouse on the north-eastern side are far less numerous and important than those on the south-west. The *Linton*, which joins it near Newton-upon-Ouse, and which is the first of any consequence below the junction of the Ure and the Swale, rises on the Howardian Hills, a little north of Easingwold, and flows

south-west to near Alna, where it receives another small stream from the south of Easingwold, and one on the opposite side from the lower ground of the Vale of York. Its principal tributary rises a few miles north of York, near the river Foss, and runs first north and then west through the tract called Galtres Forest.

The *Foss* rises near Newbergh Hall, about 4 miles N. from Easingwold, then crosses Oulstone Moor, where is a reservoir for supplying the navigation in dry seasons, and passing towards the south-east, reaches Sheriff Hutton Bridge, from which point it has been made navigable by the aid of a cut of about 2 miles, to avoid a considerable bend, for a distance of 12½ miles, with a fall of 47 feet 8 inches to the level of the Ouse in its ordinary summer state. The lower part of its course is to the south, with a slight inclination westward, and after passing through the eastern quarter of the city of York, it falls into the Ouse on the south side of the castle.

The *Derwent*, which is the only important stream descending from the highlands on the eastern side of the county, rises near the Flaak Inn, about 3 miles S.W. from Robin Hood's Bay, in the Eastern Moorlands. From this point it runs nearly parallel with the coast in a southern direction, with a very tortuous course, to the Vale of Pickering, receiving several tributaries from the west, from Harwood-Dale, Long-Dale, Deep-Dale, and Trout's-Dale. Near Ganton it is joined by the Hertford or Hartford, which rises very near the coast at Filey Point, and the Derwent then runs westward along the valley which separates the Eastern Moorlands from the Yorkshire Wolds, to Yedingham Bridge, below which it is navigable for barges, and its course becomes south-west, and at length nearly due south. Below Yedingham or Yeddingham, the Derwent is greatly augmented by the waters of the Rye. From the junction of the Rye, which gives name to the wapentake of Ryedale, the Derwent flows by New Malton through a beautifully diversified district, past the ruins of Kirkham Abbey, by Stamford Bridge, to East Cottingham, where it receives the Pocklington Canal from the north-east, by Bubwith and Wreath, to its junction with the Ouse at Barnby, about 7 miles below Selby. The navigation is the property of Earl Fitzwilliam, and extended originally to New Malton, about 38 miles. The additional length of nearly 11½ miles to Yedingham Bridge was made navigable in 1805.

The *Hull* rises at the eastern foot of the Wolds, in the East Riding, about 3 miles W. by N. from Great Driffield, and flows south-east to near Frodingham, where it receives the Old How Drain, which rises near the sea-coast, a little north of Hornsea. From the junction the Hull runs southward to the Humber at Kington-upon-Hull, to which town it gives the name by which it is most familiarly known. The Hull is navigable from the junction of its two principal feeders, the upper part of the navigation being effected by an artificial channel, and it communicates with the Driffield, Leven, and Beverley canals. This river drains the greater part of the country which is cut off from the valley of the Ouse by the Wolds: but the northern portion of that district drains into a small stream which rises near Wharram-le-Street, and follows the course of the northern range of the Wolds, partly by a subterranean channel, to the sea near Bridlington; and a part of the southern extremity of Holderness drains into an independent stream which flows by Hedon into the Humber.

The *Est*, with its numerous tributaries, drains the northern portion of the Eastern Moorlands. It rises about 20 miles in a straight line west from Whitby, and, collecting the streams from several dales which run at right angles or nearly so to its course, flows eastward through the narrow but beautiful valley of Eskdale to the sea at Whitby.

The *Torne* rises in the neighbourhood of Tickhill, near the south-east boundary of the county, and flows in a very irregular course to the north-east, being separated from the valley of the Don by the intervention of some comparatively high ground. After meandering through the low levels in the vicinity of Hatfield Chace, it joins the county boundary near the Stainforth and Keadby Canal, and for the remainder of its course to the Trent, which it joins just before its confluence with the Ouse, this stream forms the boundary between Yorkshire and Lincolnshire.

The *Ribble* rises in the north-western extremity of the West Riding, and flows first to the west past Cam Hill, and then to the south by Horton, Settle, and near Long Preston and Gisburn, to the county boundary at Grindlston. It turns towards the south-west above Gisburn, and continues in that direction along the border of the county for a few miles, past Clitheroe, until the boundary turns northward, while the Ribble pursues its former direction through Lancashire. [LANCASHIRE.]

The *Tees* joins the county boundary at its north-western extremity, at the junction of Yorkshire, Westmorland, and Durham, in the Lune Forest, and it continues to form the boundary between Yorkshire and Durham for the whole of its course from that point to the sea. This river being fully described under DURHAM, it is sufficient here to notice its principal tributaries on the Yorkshire side, which are as follows:—The *Lune*, which rises near the border of Westmorland, and flows north-east through Lune Forest to the Tees, a little below Middleton. The *Bander*, which flows in the same direction, and enters the Tees about midway between the junction of the Lune and Barnard Castle, passing in its course those hills in Stainmoor Forest which, in common with the heights near Robin Hood's Bay, bear the name of Robin

Hood's Butta. The *Greta* River or Beck, sometimes called the Barney, the longest branch of which rises in Westmorland, but which, though very winding, pursues the same general course towards the north-east, the river being the centre of the beautiful scenery about Greta Bridge to the Tees: the junction of the two rivers forms a remarkably picturesque scene. The *Leaven*, which collects the waters of numerous rivulets from the north-western escarpment of the Eastern Moorlands, and of the Tame from the Vale of Cleveland, and, flowing westward by Stokesley to Rudby, thence turns north by a winding course to the Tees below Yarm.

Other streams which rise in this county, but soon cross the boundary into the adjacent counties, are of little importance; the chief are:—the *Blythe*, which rises to the east of Rotherham, flows westward into Lincolnshire, and there joins the Idle; the *Tame*, a tributary of the Mersey, which leaves Yorkshire at its junction with Cheshire and Lancashire; the *Wenning*, a tributary of the Lune of Westmorland and Lancashire, which rises north-west of Settle, and flows westward into Lancashire; the *Greta*, being a second rivulet of that name, which rises at two points near Wharfedale, the streams from the two sources flowing southward toward Ingleton, where they unite, and turn westward across the county boundary to the Lune, a short distance north of the Wenning; the *Dee*, which rises north-east of Wharfedale, flows west-by-north along Dentdale to Sedburgh, beyond which place it turns west-by-south, and, after forming the county boundary for a short distance, enters the Lune in Westmorland; and the *Rother*, the second river in the county of that name, which rises on the north-west boundary, near the sources of the Eden, flows first north-west along the boundary of Westmorland, and then turns southward by the Calf and Cautley Crag and the hill called Serker to Sedburgh, where it receives a stream which flows westward through Garsdale, and below which place it joins the Dee.

Canals.—The North Riding of Yorkshire is almost entirely destitute of either artificial canals or navigable rivers, and the canals of the East Riding are few and unimportant; but the West Riding is peculiarly rich in this species of communication, while the exceedingly difficult character of the country through which the principal canals are conducted has rendered necessary the construction of engineering works of astonishing boldness and magnitude, in order to effect navigable communications between the eastern and western sides of the island, across the central mountain chain on the Lancashire side of this county. Of the formidable nature of the difficulties to be overcome some idea may be formed from an examination of the section given by Priestley of the inland navigation between the ports of Liverpool, Goole, and Hull, by the river Mersey, the Duke of Bridgewater's and Rochdale canals, the Calder and Hebble and Aire and Calder navigations, and the rivers Ouse and Humber, a distance of 158½ miles by that route. Commencing along the tideway of the Mersey, the level is suddenly raised by locks at Runcorn to an elevation of about 90 feet above the level of the Mersey at Liverpool. The next material rise takes place beyond Manchester, on the Rochdale Canal, which, in a distance of 17 or 18 miles, rises to the summit-level near Stansfield, at an elevation of 600 feet above low-water mark on the Mersey at Liverpool, or 610½ feet above the sea at low water. From this point, which is about 60 miles by the navigation from Liverpool, and a very short distance west of the western boundary of Yorkshire, the level of the canal falls very suddenly to Todmorden, and after entering Yorkshire continues to descend, until, at the junction with the Calder and Hebble Navigation, about 73 miles from Liverpool, the elevation is only about 250 feet. From this point the descent, though far less rapid, continues considerable until arriving at the junction of the Calder and Hebble and Aire and Calder navigations at Wakefield, while the total fall in the remaining distance of about 62 miles to Hull is only about 70 feet. Other lines of water-communication from the Irish Sea to the German Ocean are formed by the more circuitous route of the Leeds and Liverpool Canal with the Aire and Calder Navigation, and by the more direct cut of the Ashton-under-Lyne and Huddersfield canals, which communicate with the Calder and Hebble Navigation through Sir John Ramsden's Canal. For convenience of reference, we notice the principal canals of Yorkshire in alphabetical order.

The Aire and Calder Navigation has been sufficiently noticed in the article CALDER, and in a previous part of this article. The Barnsley Canal commences in the Calder, a little below Wakefield Bridge and the junction of the Calder and Hebble Navigation, and proceeds southward for about 10 miles. It then turns westward, and after crossing the river Dearne by a stone aqueduct and forming a junction with the Dearne and Dove Canal, passes Barnsley and extends to Barnby Basin, in the township of Cawthorne, where it communicates with a railway from the Silkstone collieries. Its total length is 15½ miles. Beverley Beck is a short canal, or creek, connecting Beverley with the river Hull. The Bradford Canal is a cut of about 3 miles from the Leeds and Liverpool Canal southward to the town of Bradford. It is very useful for exporting paving-stone, coal, and iron.

The Calder and Hebble Navigation, a considerable portion of which consists of artificial cuts, is noticed under the river CALDER. The Chesterfield Canal, which belongs chiefly to NOTTINGHAMSHIRE and DERBYSHIRE, crosses the southern extremity of Yorkshire between Shire Oaks and the village of Wales, near which there is a tunnel of

2850 yards upon the summit level of the canal. The Dearne and Dove Canal commences at Swinton, in a side-cut which forms part of the Don or Dun Navigation, and proceeds north-west to the aqueduct for conducting the Barnsley Canal across the river Dearne, near Barnsley, a distance of $9\frac{1}{2}$ miles. It has a branch of 2 miles to Worsborough, which communicates by a railway with extensive collieries near Stainborough Hall; and there is also a branch canal of $2\frac{1}{2}$ miles, belonging to Earl Fitzwilliam, to the Elsecar iron-works. The Derwent River Navigation is sufficiently noticed in the account of the river in a previous column. The Driffeld Navigation commences in the river Hull, at Aike Beck Mouth, about $4\frac{1}{2}$ miles N. from Beverley, and half a mile N. from the junction of the Leven Canal. For a distance of $5\frac{1}{2}$ miles northward the navigation is chiefly in the natural bed of the river, and it extends a short distance up Frodingham Beck, the chief feeder of the Hull, which has a short private cut to Foston Mills; but a little north of the junction of Frodingham Beck with the Hull the canal proceeds by an artificial cut of nearly $5\frac{1}{2}$ miles, partly parallel with the Hull, to Driffeld on the north-west. The Don or Dun River Navigation is described already under the river *Don*; so likewise is the Foss Navigation under the river *Foss*. The Hedon Haven Navigation, from the Humber to Hedon, in the promontory of Holderness, is simply a natural creek or stream improved for the purpose of navigation. The Huddersfield Canal is one of the most stupendous works of the kind, considering its limited extent, ever executed. This canal, which is fitted for small craft 7 feet wide, and is capable of admitting boats of 24 tons burden, commences on the south of the town of Huddersfield, and takes a south-west direction by Slaithwaite, being nearly parallel to one of the branches of the river Colne, a tributary of the Calder, which it crosses by aqueducts in three places. Approaching Marsden in the same direction, it rises 436 feet by 42 locks, and thereby attains its summit level, which is rather more than 656 feet above the level of the sea at low water, and higher than any other canal in the kingdom. This level it maintains for a distance of 4 miles, of which a distance of 5451 yards, or more than 3 miles, is in a tunnel under the mountain ridge generally called Standedge. As there is no towing-path, the boats are hauled through this tunnel by manual labour in about 1 hour and 20 minutes. Emerging from the tunnel at Diggles, the canal pursues the same direction by Saddleworth along the valley of the Tame, which river it crosses several times, and after running parallel with the boundary of Lancashire for some miles, it turns westward near Dukinfield, and passes for a very short distance through that county to its junction with the Ashton Canal. Its total length is $19\frac{1}{2}$ miles. By this means a water-communication is obtained between the eastern and western shores of the island. The Hull and Leven Canal extends about three miles eastward from the river Hull to Leven, for the conveyance of lime, manure, corn, and other produce. The Knottingley and Goole Canal, forming part of the Aire and Calder Navigation, has been already described.

The Leeds and Liverpool Canal, which is partly described under *LANCASHIRE*, commences at the north-western termination of the Aire and Calder Navigation at Leeds Bridge, proceeds a short distance along the river Aire, and then enters an artificial channel, which pursues a north-western course to Shipley, where it receives the Bradford Canal. From Shipley it proceeds westward to New Mill, where it crosses the Aire by an extensive aqueduct; after which, to the neighbourhood of Gargrave, it continues a winding course to the north-west along the northern bank of the river. At Bingley, a short distance beyond the New Mill aqueduct, the canal rises suddenly by a series of locks a height of 88 feet 8 inches, and thereby attains a level which extends for 18 miles without a lock. Beyond Gargrave the canal turns south-west, crosses the Aire again by a large aqueduct, and runs southward across the Craven Moors, attaining at the summit-level at Greenberfield an elevation of 411 feet 4 inches above the Aire at Leeds, and about 500 feet above the level of the sea at low water. On the summit-level it receives a branch from limestone-quarries at Rainhill Rock; and this level continues beyond the point where the canal enters Lancashire at Foulridge, near Colne. The length from Leeds to the summit-lock at Greenberfield is 41 miles. This great undertaking was 46 years in progress, and was not completed so as to allow vessels to pass from Leeds to Liverpool until 1816. The Market Weighton Canal is important both for the purposes of navigation and the drainage of the low levels through which it is conducted. It commences at a point called New River Head, near Market Weighton, in the East Riding, and pursues a nearly straight course to the south, joining the Humber by a sea-lock very near the confluence of the Ouse and Trent, passing through Walling Fen, which contains 20,000 acres of land. The Ouse River Navigation is described among the rivers in a previous page. The Pocklington Canal was formed for the conveyance of coal and lime to, and agricultural produce from, the neighbourhood of Pocklington, in the East Riding, near the Wolds. It commences in the river Derwent, at East Cottingwith, and runs nearly parallel with one of its feeders in a circuitous north-eastern course, to near Pocklington. Its length is about $8\frac{1}{2}$ miles. Sir John Ramsden's Canal commences at the river Calder, at Cooper's Bridge, and runs south-west for about $3\frac{1}{2}$ miles to Huddersfield. In addition to its importance as a link in the communication across the island by the Huddersfield Canal, this navigation has been the chief means of raising the

town of Huddersfield, the greater part of which was built on Sir John Ramsden's property, to its position as one of the principal markets for woollen goods in the county. The Ripon Canal is a short cut parallel with the river Ure, for connecting Ripon with the navigable part of that stream. The Rochdale Canal commences in the Calder and Hebble Navigation, at Sowerby Bridge wharf, near Halifax, and runs west-by-north along the valley of the Calder to Hebden Bridge, where it turns with the river west-by-south, leaving the county near Todmorden, where it enters *LANCASHIRE*. This canal is made of sufficient size to receive vessels capable of navigating the tideways of the Humber and the Mersey. The Selby Canal is a short cut connecting Selby, on the Ouse, with the Aire at West Haddlesey. The Sheffield Canal commences in a cut communicating with the river Don or Dun at Tinsley, and pursues a course of little more than four miles, nearly parallel with the Don, to Sheffield, crossing by an aqueduct over the road from Worksop to Attercliffe. The Stainforth and Keadby Canal commences in the River Don Navigation, near Stainforth, and proceeds eastward by Thorne into Lincolnshire, where it joins the Trent at Keadby, crossing the county boundary near Crowle. Its total length is 15 miles, of which about half is in Yorkshire, and passing through a very flat country, it has no lock, except at its junction with the Trent. The Thanet Canal is a short branch from the Leeds and Liverpool Canal to limestone-quarries near Skipton, formed by the Earl of Thanet under an Act of 1773. The River Ure Navigation is noticed under the river itself, and a part of it also under the title of the Ripon Canal. Nearly all the canals of Yorkshire have been either leased or purchased by the several railway companies.

Roads and Railways.—The great north road from London to Edinburgh, by Goldstream or Berwick, enters Yorkshire from Nottinghamshire at Bawtry, and proceeds in a tolerably direct course to the north, inclining a little westward, by Doncaster, Boroughbridge, and Northallerton, to the border of Durham, near Darlington. A branch leading also to Edinburgh, by Carlisle, leaves this line at Boroughbridge, proceeds nearly parallel with it by Leeming and Catterick, and afterwards turns westward by Greta Bridge, and enters Westmorland near Brough; while another route from London to Edinburgh leaves the first-mentioned road at Ferrybridge, proceeds north to Sherburn and Tadcaster, and then inclines north-west to York, from which city it proceeds north-north-west by Easingwold and Thirsk, and rejoins the direct road a little south of Northallerton. The road to Whitby branches off at York, and runs pretty direct north-north-east through New Malton and Pickering; and from the latter town is a branch to Scarborough. Another branch from the great north road enters Durham at Yarm, near Stockton; and there are numerous other connections with towns in Yorkshire and Durham. The road from London to Hull and Scarborough, through Lincolnshire, enters the county by a ferry across the Humber near Barton, to the west of Hull, and proceeds northward through Beverley and Driffeld, with collateral branches to Bridlington and New Malton. The road from London to Leeds and Ripon enters Yorkshire from Chesterfield a little to the south of Sheffield, and passes through that town, Barnsley, Wakefield, Leeds, Harrogate, and Ripley, to Ripon, in a course nearly due north, and beyond the latter place it inclines north-east, and crosses the great north road to Thirsk. Skipton is approached by a road which extends from Manchester to Clitheroe, and then enters Yorkshire with a north-eastern course, and also by a road from London, through Bedford and Nottingham, which enters the county near the eastern boundary of Derbyshire, and passing by Rotherham, Barnsley, Huddersfield, Halifax, Skipton, and Settle, crosses the northern extremity of Lancashire, and enters Westmorland by Kirkby Lonsdale, whence it is continued to Kendal. Notwithstanding the difficult nature of the country, abundant lines of road have been formed in every direction between the several towns of the woollen district in the West Riding, and also between the West Riding and Lancashire.

Of the railways of Yorkshire it is unnecessary to particularise such as have been formed merely for communication with mines and quarries, for the most part by private individuals, and without parliamentary powers; but one railway of this class is worthy of mention because of the peculiar interest attached to it as one of the first, if not absolutely the first, formed under the powers of an Act of Parliament, as well as being probably the first upon which locomotive engines were regularly employed. This is called Brandling's railway, from the name of its constructor and proprietor, and sometimes, from the collieries with which it communicates, the Middleton railway, and it was formed under an Act granted to Charles Brandling, Esq., and other persons, in the year 1758. It connects the Middleton collieries, about 3 miles to the south of Leeds, with that town; and on this road, about the year 1811, was introduced a kind of locomotive engine patented by Mr. Blenkinsop, which was propelled by a toothed wheel working into a rack-rail.

The Yorkshire passenger railways may be noticed in connection with the companies to which they severally belong:—

1. *London and North-Western.*—This company has taken at a rental dependent on the dividend of the parent line, the Huddersfield and Manchester and the Leeds and Dewsbury railways. The former joins the Sheffield line near Ashton, and terminates at Huddersfield, passing through the 'Back-bone of England' by a tunnel three miles long, close and parallel to the tunnel of the Huddersfield and Manchester

Canal. The Dewsbury railway joins the Lancashire and Yorkshire line near Mirfield.

2. *Midland*.—The Midland line enters Yorkshire a little south-east of Sheffield, and proceeds by way of Normanton and Leeds to Bradford and Skipton, having one or two short branches within the county.

3. *Lancashire and Yorkshire*.—This railway affords remarkable accommodation to the clothing district of the West Riding. The original Manchester and Leeds line entered the county at Todmorden, and proceeded nearly east till it joined the Midland at Normanton; but great additions have since been made to it within this county. Three branches spring out northward from the main line to accommodate Halifax, Bradford, Bowling, Low Moor, and Heckmondwike; another extends south to Huddersfield and Holmfirth; another prolongs the original line east to Pontefract and Goole; and there are several others of minor importance.

4. *Manchester and Sheffield*.—This railway passes through Yorkshire from the Woodhead tunnel, through Penistone and Sheffield to the Nottinghamshire boundary of the county; there is a branch from Penistone to Huddersfield.

5. *Great Northern*.—This company's railway was originally intended to extend to the city of York; but other companies have offered facilities which have stopped it short of that limit. The railway enters Yorkshire between Bawtry and Doncaster, and soon afterwards links itself to several other lines within the county.

6. *York and North Midland*.—This company occupies a wide area in the south-east part of the county. The original line extended from Normanton to York; but there have since been constructed branches from York to Scarborough, from Pickering to Whitby, from Leeds to Hull and Selby, from York to Market Weighton, from Selby to Market Weighton, from Hull to Beverley and Scarborough, from Church Fenton to Harrogate, from York to Knaresborough, and a few small connecting lines with the railways of other companies, all within this county.

7. *York, Newcastle, and Berwick*.—The main line of this company passes through Yorkshire from York to the Tees near Darlington, with branches in Yorkshire to Boroughbridge, to Bedale, to Richmond, and to one or two other places.

8. *Stockton and Darlington*.—A small portion of this company's railway extends along the Tees-mouth shore of Yorkshire, from Middlesbrough to Redcar; partly for passenger traffic, but much more largely for coals.

9. *Leeds Northern*.—This railway extends from Leeds through Harrogate and Ripon to the Tees at Stockton, with a branch from Ripon to Thirsk.

10. *North-Western*.—This railway (which is often called the 'Little' North-Western, to distinguish it from the greater undertaking known by the same name) extends from Skipton north-west to the neighbourhood of Ingleton, and then south-west to Lancaster, thereby completing a line of railway communication from Hull on the east coast to Lancaster on the west.

These railways, from the nature of the country which they traverse, have necessitated the construction of works of extraordinary magnitude and cost. Some of the longest and most difficult tunnels in the country, and very expensive and heavy cuttings and embankments, as well as viaducts and bridges, have called into exercise some of the greatest efforts of engineering skill and constructive ingenuity.

Owing to the abundant railway communication provided between Hull and Liverpool, the traffic of Yorkshire has remarkably increased. Goods from the Baltic and goods for Ireland or for America can be forwarded to Liverpool, and goods for Germany can be forwarded to Hull, with a facility which has made the south of Yorkshire a great highway of traffic.

Geology.—In this great county, which stretches from the eastern to nearly the western coast of England, a great proportion of the stratified rocks of the British series may be advantageously observed: the exhibitions of igneous rocks and mineral veins are of an interesting character; the superficial deposits are extensive and remarkable; the series of ancient organic life is extremely large. The leading physical features of the county are very obviously dependent on its geological structure, and the modifications to which they are subject by the action of the sea and modern atmospheric agencies are various and instructive.

If through the city of York a line be drawn to the north-north-west and south-south-east, it will pass along the centre of a wide continuous vale, rarely elevated more than 100 feet above the sea. Were the general level of the land altered by a depression quite within the limits of well-known instances, this vale would be a sea-channel, bordered by the cliffs of an island on the east, and more slowly rising lands on the west. The district on the west rises to assume a mountainous character along nearly all the western border of Yorkshire; the eastern region is somewhat mountainous in its northern portion, and in the southern rises into a curved range of hills, 'the Wolds,' between the flat district of Holderness and the vale of Pickering.

The elevated western district is based on Palaeozoic rocks; the central vale and the larger part of the eastern districts are formed on the Mesozoic strata; while in Holderness and in other limited tracts are tertiary and diluvial deposits which may be referred to the Cainozoic period.

In the condensed descriptions which follow, the deposits are ranged in the order of their relative position in the earth.

CAINOZOIC DEPOSITS.

Alluvial.

Silt Lands.—The great rivers of Yorkshire which concentrate in the Humber, flow in all their lower parts through vast breadths of fine sediments, left by the rivers or inundations of the sea, and a great portion of this surface is still below the level of spring-tides, and only defended from floods by banks. In the valley of the Aire, at Ferrybridge, hazel-branches partly petrified, and nuts with the kernels changed to calcareous stone, were found in considerable numbers ('Phil. Mag.,' 1828.)

Peat or Turf Moors, at no higher level than the silt lands just noted, occupy extensive areas (Thorne Waste and Hatfield Chase), and in some situations deposits of like nature occur under 20 or more feet of silt. Trees in considerable abundance lie in these deposits, and have been stated to show traces of the axe and marks of fire. (De la Pryme, in 'Phil. Trans.'). In such peat, on Thorne Waste, skeletons of the fallow deer occur, and in one remarkable case the bones were found to have lost their earthy phosphates and carbonates, and by the action of sulphuric acid to have been subsequently converted to leather by the action of tannin on the remaining gelatine. ('Reports of the British Association,' 1831.)

Shelly Marls.—Under the peaty tracts of Holderness, which are of remarkably small extent, lie marls often filled with lacustrine shells; and amongst them rarely the remains of the Irish elk (*Cervus giganteus*) have been found.

Raised Beaches.

The shelly gravels and sands of some tracts near Ridgmont, in Holderness, may possibly deserve this name, but it is more certainly applicable to some shelly sand-beds on the cliffs near Filey, from which several marine shells of existing species have been extracted.

Diluvial Deposits.

Accumulations of local gravel are common in the valleys of most parts of Yorkshire, but over great breadths of the district of Holderness, in some of the oolitic and chalk hills, and in many of the valleys in these formations—over great part of the area of the central Vale of York—in the elevated country between the Swale and the Tees, and in a very few situations in the valley of the Calder, occur abundance of stones of various sizes and qualities, which have been drifted from great distances, even from beyond the limits of the county, especially from the north or north-west. Of these stones some are of a size to arrest attention, and of such a peculiar nature as to be easily referred to the original situation from which they were drifted. Such in particular are the 'erratic blocks' of porphyritic granite, which lie near the surface in many situations in the northern and eastern parts of Yorkshire, on areas which converge to the north-west, and finally terminate in the porphyritic granite fells of Shap, in Westmorland. From that point they were certainly removed across ridges of hills, and great breadths and valleys, as far as Flamborough Head and Scarborough; but whether by force of water when the land was at a lower level or was rising out of the sea, or by icebergs floating on water, or by glaciers moving across the land, or by a combination of these, is perhaps still a problem for discussion. A considerable proportion of small drifted stones lies in a great body of clay which is not stratified, and incloses stones of all sizes, without any arrangement of size, gravity, or mineral quality. Bones of the elephant, hippopotamus, horse, ox, &c., occur in these gravelly and argillaceous deposits, but not frequently, except in valleys where the materials may have been displaced and subjected to fluvial action. (Vale of York; Middleton, On the Wolds, &c.)

Osiferous Deposits.—At Hesale Cliff, flinty gravel, stratified under diluvial clay, contains elephantoid and other remains; at Beilbecks, near Market Weighton, marls which have some drifted gravel below and other gravel above, contain bones of the elephant, rhinoceros, feline, urus, and many other animals, with 13 species of land and fresh-water shells of existing species. Few of the numerous caverns in Yorkshire, which occur in the great limestone districts of the North Riding, have been explored for bones. The Cave of Kirkdale has been rendered famous by Dr. Buckland's descriptions ('Reliquiæ Diluvianæ'), which enumerates more than 20 vertebrated animals among the reliques.

Tertiary.

On the sea-coast, immediately north of Bridlington Quay, green and ferruginous sands enter into the composition of the cliff, and, under favourable conditions of the tide, have been explored with success, and have yielded a considerable number of shells of tertiary date, perhaps of the age of the crag of Suffolk, in which some of the species certainly occur.

MESOZOIC STRATA.

Cretaceous System.

Chalk (500 feet thick).—It constitutes the Wold Hills. This is usually a harder rock than that of the south of England, and the nodular flints which it contains are scattered through a great part of its thickness. The lower part assumes in places a grayer and softer aspect. Fossils occur in the upper part, especially sponges, maras,

rites, and *Behinodermata*, but *Mollusca* and *Conchifera* are less plentiful than in the south of England. The lowest band of the chalk is red, as in Lincolnshire. The chalk is unconformed to all the strata below, resting on each of them in succession in different parts of the Wold edge, as far as the lower beds of the lias.

Speeton Clay (150 feet thick).—This blue argillaceous deposit lies under the chalk, but does not graduate into it. It appears on the coast at Speeton, and inland at Knaption and other points. The organic remains are numerous, different from those in the chalk, and also different from those in the strata below. They appear to have analogies to the gault of the south of England, and also to the Kimmeridge clay; the former analogies perhaps predominate. Some of the shells occur in the 'Neocomian' formations of France, which are supposed to be nearly equivalent to our lower greensand.

Oolitic System.

Kimmeridge Clay.—This occurs along the north side of the Vale of Pickering, and under the escarpment of the Wolds, near Cave. It is not clearly seen in contact with the Speeton clay above, into which it gradually passes. It contains *Ostrea deltoidea*.

Upper Calcareous Grit (60 feet thick).—This is seen on the hills above Wass Bank, and near Pickering. It contains a few fossils.

Coralline Oolite (60 feet thick).—This rock forms generally the uppermost stratum of the ranges of tabular hills which extend from Scarborough to the Hambleton Hills, and then turns southward to Walton and Aoklam. Its oolitic grains are of various sizes, some beds being coarse pisolite. A few bands of chert nodules occur in it, and crystallisations of calc-spar and quartz, and deposits of chalcedony, lie in the cavities left by the decomposition of organic remains. It is not generally durable in buildings. In this rock is situated Kirkdale Cave. Several rivers sink into it, and reappear after long subterranean passages. The organic remains are extremely numerous; the coral bands being local, but characteristic.

Lower Calcareous Grit (80 feet thick).—It forms the edges of the tabular hills above mentioned, and occasionally broad and very poor heath surfaces. Though called calcareous, it has little of carbonate of lime in its composition, and some of the shells which it contains are silicified. Locally it is a good building-stone. The fossils are very numerous, and almost exactly like those of the same rocks in Oxfordshire. *Ammonites vertebralis* is common.

Oxford Clay, or Gray Earth of Scarborough Castle Hill (150 feet thick).—It appears in the steep slope of the escarpments of the tabular hills, under the 'Nab Ends,' and on the breast of the sea-cliffs south of Scarborough. The fossils which it yields are more like those of the calcareous grit than those of the Oxford clay of the south of England.

Kelloways Rock, or Hackness Rock (90 feet thick).—It lies at the base of the tabular hills, and at the foot of the sea-cliffs south of Scarborough. It is more ferruginous than the calcareous grit; is in places somewhat oolitic, and everywhere rich in fossils, such as *Ammonites calloviensis*, *A. sublavie*, *Gryphaea dilatata*, and other shells characteristic of the same rock in Wiltshire, where it is much thinner and of less importance. The Hackness rock has proved a fair building-stone in the museums at York and Scarborough.

Cornbrash (10 feet thick).—This impure calcareous rock is separated from the sandy Kelloways stone by a thin band of clay containing *Crustacea*. It is very rich in fossils, and is nearly continuous from Scarborough to the vicinity of Malton.

Below the cornbrash, the oolitic series of Yorkshire is very much unlike that of the south of England. In that is little sandstone, in this little limestone; the clays of the south are shales in the north; and with the shales and sandstones are fossil plants, coal-beds, and ironstone layers, very much like those of the older coal-fields. To these strata it is not desirable to apply always the same names as those which belong to (perhaps) contemporaneous beds in the south, but we shall indicate the probable analogies.

Upper Sandstone, Shale, and Coal (nearly the equivalent of the Hinton sands and Forest marble of Somersetshire), 200 feet thick.—This series of sandstones (conglomeritic, or fine-grained, or laminated), shales, coal, and ironstone courses, may be studied about Scarborough and in the cliffs to the northward. The coal is thin, and of small value.

Gray Limestone (equivalent of part of the oolite of Lincolnshire), 30 feet thick.—It occurs at the White Nab, south of Scarborough, at Cloughton, Staintondale, and other points north of Scarborough and west of Whitby, always in an impure, rarely at all oolitic, state. But as we turn south along the foot of the Hambleton Hills, it becomes oolitic; and as the upper and lower sandstones diminish, it thickens and acquires more of the usual oolitic aspect. It is in places very ferruginous. The organic remains are numerous. They agree partly with those of the cornbrash, and partly with those of a lower zone, to be mentioned below.

Lower Sandstone, Shale, and Coal (500 feet thick).—The coal in this great mass of arenaceous and argillaceous deposits is thick enough to be worked on the moors west of Whitby and north of Helmsley, and on the sea-coast at Haiburn Wyke. Over it is a bed of sandstone, in which stems of *Equisetia* stand erect, and below is a bed of shale. This series of rocks ascends to the highest parts of the Cleveland Hills, 1300 to near 1500 feet above the sea.

Ferruginous Beds (inferior oolite and sand of Somersetshire), 60 feet thick.—These appear in the Peak Hill at Robin Hood's Bay, at Kettle-ness north of Whitby, and in various places round the base of the Cleveland and Hambleton Hills, as Osmotherley and Craike Castle. In the Peak Hill the slightly calcareous and ironous beds are very fossiliferous, and the species of fossils generally resemble those of Dundry Hill near Bristol. The transition from these beds to the lias formation below is very easy and gradual, the base of the one and the top of the other being softened by intervening pale micaceous sands.

Upper Lias Shale (called also *Alum Shale*, from its being the principal seat of the manufacture near Whitby, Lofthouse, and Guisborough), 200 feet thick in the cliffs near Whitby, and in the Cleveland Hills it gradually loses this thickness in going to the south of England, till near Bath and at Lyme Regis it can hardly be said to exist at all. In these strata lie most of the Saurian remains and many of the fishes, and in general a large proportion of the ammonites, belemnites, and other shells for which the Whitby coast is famous. It yields coniferous wood, often changed to jet.

Marlstone.—A series of sandy, ferruginous, and slightly calcareous beds, which divides the lias shales into two parts, and is very rich in fossils, receives this name. At Robin Hood's Bay, Staithes, and the head of Bilsdale, it is very conspicuous. Thickness 150 feet. These are the strata which contain *Ophiura* rather frequently about Staithes.

Lower Lias Shale (500 feet thick).—It forms the base of the lofty cliffs to the west of Staithes, and supports the high moorlands of the carbonaceous sandstones and shales, and continues to the south under the Wolds. In its lower parts are bands of gryphites, especially where its course approaches the Humber. Hardly any true lias limestone-rock occurs in Yorkshire farther north than about Cave and Market Weighton. The ammonites and other fossils of this series much resemble those of the Lyme Regis and Somersetshire lias, and it contains coniferous wood, sometimes changed to jet.

New Red Formation.

Red Marls with Gypsum.—These marly clays, with local occurrences of gypsum (Pocklington, Holme), form a broad band on the eastern side of the Vale of York, at the western foot of the oolitic and chalky hills, but, being much covered by gravel drifted against these hills, are less known as to thickness and properties than any other of the Yorkshire strata. They may be several hundred feet thick. They contain no fossils.

Red Sandstone.—This is found on the western side of the Vale of York, in an irregularly undulating tract of dry land, especially about Ripon and Boroughbridge. It has mixed with it a considerable mass of white or yellow sandstones, dug near Boroughbridge. Its thickness is unknown. It contains no fossils.

PALÆOZOIC STRATA.

Magnesian Limestone Formation.

Brotherton Limestone (45 feet thick).—This is a pale gray limestone, much laminated with clay, and nearly devoid of magnesia: a few shells occur in the lower beds. It is of vast importance in agriculture, the stone from hundreds of acres having been excavated and burnt to lime, which is of especial value on the peat and silt lands in the levels of Yorkshire. It ranges from the valley of the Wharfe near Tadcaster in a nearly straight course of rising ground to near Tickhill.

Red Clay and Gypsum (50 feet thick).—This is well known in the vicinity of Fairburn and Brotherton, and has been cut through on the York and North Midland railway. It separates the nearly pure limestone of Brotherton from the magnesian limestone of Weldon, and makes a continuous belt of rather wet land. It has no organic remains.

Magnesian Limestone (150 or 200 feet thick).—The composition of this important rock is usually a mixture of carbonate of magnesia and carbonate of lime. Sometimes the mixture is atomic. It is generally granular, and the grains are often crystalline. Colour usually yellowish, and the quality excellent for the mason, but of uncertain durability. Huddleston and Roche Abbey stone are the most in request. Tadcaster yields abundance of stone, some good. Spar veins and cavities are common. Small veins of carbonate and sulphate of copper, oxide of iron, sulphate of barytes, and sulphate of strontian occur in the rock. In the vicinity of Garforth the lower portion is laminated somewhat like the marl-slate of the county of Durham, and yields *Productæ* and other fossils. *Axini*, *Mytili*, *Nautili*, spiral shells, and a few corals occur in the limestone near Ferrybridge. The springs which issue from the magnesian limestone often contain carbonate of lime, but seldom much magnesia. The course of the magnesian limestone is in a range of low tabular hills from near Masham, by Knaresborough, Pontefract, Broadsworth, and Roche Abbey. These hills are finely escarped to the west and slope gently to the east. The soil is not in general good, especially for grass, but it is applicable to various cultivation.

Lower Red Sandstone, or Pontefract Rock.—In places this is 100 feet thick, and consists of red, purplish, and yellowish sands and clays, with stems and other parts of plants. Near Pontefract it is usually a mass of yellowish sands, of the greatest excellence for the use of the metal-founder in the construction of his moulds. This is a property which accompanies it along a great part of its course which is

a narrow belt, on the west side of the magnesian terrace. Between this and the strata beneath a great unconformity is observed, in the direction of the edges of the strata, the magnesian formation resting on coal, millstone-grit, or mountain-limestone indifferently.

Carboniferous System.

Coal Formation.—From beneath the southern part of the nearly straight edge of the magnesian deposits rise the sandstones, shales, ironstones, and coal of the West Riding of Yorkshire, and fill an enormous area in the valleys of the Aire, Calder, Went, Dearn, Dove, and Dun. Leeds, Bradford, Halifax, Huddersfield, Penistone, and Sheffield are all situated near the curved lower edge of the coal strata, while Aberford, Kippax, Pontefract, Elmsall, Conisborough, and Laughton le Morthen are near its straighter eastern boundary. The whole of this large area (600 square miles) yields coal; the whole series of strata is about or above 4000 feet thick; and of the coal which lies in this series there are about 20 workable beds, yielding about 40 feet of coal, generally of good quality. Ironstones of excellent quality accompany the lower parts of this coal deposit, and the circumstances of the country permit the full attainment of these advantages.

In this great coal-field the most useful classifications are founded on the nature and accompaniments of the beds of coal. The most complete general view yet made public is that given by Dr. Wm. Smith, in his valuable 'Geological Map' of the county founded on the succession of grit-rocks and shales containing coal and ironstones.

The following is the classification of Dr. Smith, proposed in 1821:—

Coal Measures.	a. Pontefract rock.	The upper part of the coal series contains thin beds of swift-burning coal, which leaves white ashes.
	b. Shales and coal beds.	
	c. Ackworth rock.	
	d. Shales and coal.	The midway part thick beds of hard coal, good for furnaces.
	e. Chevet rock.	
	f. Shales and coal.	
	g. Red rock.	
	h. Shales and coal.	The lower part, excellent bituminous coal, as at Silkstone, Flockton, &c., accompanied with cannel coal and ironstone.
	i. Bradgate rock.	
	k. Shales and coal (the shell ironstone).	
l. Wortley rock.		
m. Shales and coal.		
n. Flagstone and other rock.	On the extremity of the coal-field a thin coal extends north-west to some of the moors.	
o. Shales and coal.		

The Pontefract rock is here ranked by Dr. Smith among the coal-measures.

Below is the millstone-grit series.

The Ackworth rock yields soft freestone, and grindstone occurs at Ackworth, Kirkby, Mexborough, and Denaby.

The Chevet rock is of limited range and little value.

The red rock, often a coarse gritstone, occurs at Woolley Edge, Newniller Dam, &c.

The Bradgate rock yields freestone and grindstone.

The Wortley rock is in thin beds.

The flagstone is evenly laminated, micaceous, and yields fine paving and roofing flags.

Beds of coal are worked in the west of Yorkshire as thin as 18 inches (near Halifax and Penistone), and one as thick as 8, 9, or 10 feet (Barnsley), but the average is from 3 to 6 feet. The finest coal of Bradford (called the 'better bed'), and some of the finest Silkstone coal may vie with all but the very choicest Newcastle and Durham coal; the furnace coals of the middle series are excellent; the upper swifter-burning coal is in general of less value. There is no anthracite bed in the district, and very little cannel coal. The dip is generally to the east-south-east, and very moderate. There are some very great and many small dislocations, sometimes accompanied by pyritous and sparry veins, and even by galena. Over several beds the large stems of *Lepidodendra* and *Sigillaria* stand vertical; under some coals the *Stigmaria* spreads in much abundance, especially in the beds below the flagstone, which have a rock floor called 'ganister,' or 'galliard.' The shelly ironstones of Tankersley Park, &c., are much esteemed in the furnaces, from the lime which the shells yield.

A valuable deposit of iron-ore in the Cleveland district, between Guisborough and Stokesley, has been recently discovered. It is said that the ironstone contains between 30 and 40 per cent. of metal; that it lies at a very small depth below the surface; that the bed or seam varies from 12 to 20 feet in thickness; and that the yield is of considerable value. The ironstone is combined with calcareous matter in rather a peculiar way. Some thousands of tons have been smelted in Northumberland, affording an average yield of 33 per cent. of iron. The proprietors of the seam have contracted to supply an iron-work with 200,000 tons per annum for seven years. It is regarded as very probable, from iron being on the spot, and coal not far distant, that iron-works may be profitably constructed, and iron smelted at a cost which will successfully compete with that produced elsewhere.

There is a small detached coal-field in the line of a fault south of Ingleton.

The organic remains of the Yorkshire coal-field consist of fishes

(*Coilacanthus*, *Holoptychius*, *Megalichthys*, *Palæoniscus*, &c.), and many shells, the most numerous and diffused being *Unionide* of various species, such as are common in coal-fields; but the most remarkable group of fossils is that which lies in a very thin band in the part of the series below the flagstone rock, and consists of *Goniatites*, *Orthoceratites*, *Avicula*, and other marine genera, such as occur in the mountain limestone strata far below. The fish remains form thin beds (as in Lancashire) over the Middleton coal, near Leeds. The plants are variously distributed in the shales, sandstones, and ironstones.

The **Millstone Grit**, a series of coarse and fine and laminated sandstones and shales, with poor ironstones and coals, generally thin and bad in quality, surrounds the true coal-field on all the west and north, from Sheffield, by Huddersfield, Keighley, and Otley, to Harwood. It spreads to the boundary of the county, constituting the mountainous border against Lancashire, and occupies along the confines of Westmorland and Cumberland the summits of all the great ridges about the sources, between the dales of the Ribble, Rother, Wharfe, Nidd, Swale, Greta, and Tees. Where these rivers pass away from the highest ground to the south and east, they enter a connected area of millstone-grit, which thus appears to occupy a very large space in the West and North Ridings. It in fact constitutes most of the high healthy moors of these districts, and contributes much both to their barrenness and their picturesque effect. The most characteristic rock is the quartzose conglomerate, still used in making millstones; and where, as in Bramham Crags, the atmosphere has produced unusual waste, the appearance of the huge blocks is most singular and impressive. The whole series is about 1000 feet thick, and contains, besides the beds already named, a few thin limestones and cherty bands. Its fossils are like the shells of the mountain limestone, and like the plants of the coal series.

Mountain Limestone.—Yoredale Series.—This is about 1000 feet thick, and consists of five principal bands of limestone, alternating with gritstones, shales, thin coals, and some ironstone nodules. This is the character presented along all the northern dales; but in Nidderdale and towards Craven the limestones lose their importance, and almost vanish as we proceed south; the coal also vanishes, and the gritstones become less frequent, till the whole assumes an argillaceous type, and is called in Derbyshire the limestone shale.

Many of the magnificent mural precipices ('scars') which surround the great mountains of Ingleborough, Penyghent, Pen Hill, and Mickelfell, and range along the sides of the romantic dales of the Swale and the Yore, are formed of the limestones of this series; and many of the finest waterfalls (Hardrow, Millgill, &c.) happen where they cross the rivers. Swallow-holes abound on the edge of the limestones, and receive the water of rains and small streams. Some of the limestones (especially the upper thick belt, called the main, or twelve-fathom limestone) are very rich in lead-ore. The flagstone and some of the building-stones are of excellent quality, and the farther north we go the better is the quality of the coal. The lowest limestones yield black marble, and the upper ones encrinal marble.

Mountain Limestone.—The Lower Series.—This is in the south of Yorkshire, almost wholly calcareous, and makes in the vicinity of Clitheroe and Settle, round Pendle Hill, Ingleborough, and Penyghent, mighty ranges of rock 400 or 500 feet thick, and nearly perpendicular. Farther north and west, near Kirkby Stephen and Brough, it begins to admit shales, sandstones, and beds of coal; and as we advance into Northumberland these interpolations grow more and more important, the limestones grow thinner and less pure, and the whole group resembles closely the Yoredale rocks as they are seen in Yorkshire. The grandest exhibitions of these rocks are at Greenhow Hill in Nidderdale, in Wharfedale, in Ribblesdale, about Settle, Clapham, Ingleton, and Kirkby Lonsdale. In these parts they are full of caverns of great size and beauty, sometimes giving subterranean passages to the rivers, and forming enormous breadths of bare weather-worn rock. Lead and copper are found in veins in this limestone, but not very frequently. Culamine occurs in it, in the district of Bowland Forest, and oxides of zinc on Malham Moor. The organic remains of the mountain limestone in Yorkshire are extremely numerous and interesting.

Old Red-Sandstone.

This rock hardly occurs in Yorkshire except as a conglomerate, locally accumulated in the valley of the Rother, near Sedburgh, and not in connection with the mountain limestone which rests on the slaty Silurian rocks, and in its lowest beds contains pebbles of these rocks and lumps of quartz.

Silurian System.

This class of strata appears to be unconformed to the limestone series above. It is found in two separate districts: one near Sedburgh, west of the summit of drainage, and naturally associated with Westmorland, rising into a characteristic group of hills called Howgill Fells; the other a narrow band exposed along the line of an enormous dislocation on the south side of the mountains of Graygarth, Ingleborough, and Penyghent. In both localities slaty cleavage disguises the original stratification of the Silurian sediments. Fine blue flags are dug at the Crooks of Lune, near Sedburgh, and about Horton in Ribblesdale, and at Ingleton a greener rock is cleft into tolerable slates.

It is a most singular geological scene which is presented in the vicinity of Ingleton and Horton, for there slaty rocks of extremely various qualities, with vertical cleavage and inclined beds, are covered for many miles by a horizontal cap of mountain limestone 500 feet thick. *Orthoceras* and other fossils occur in the dark thin flags of Horton in Ribblesdale.

Disturbances of Strata.

Such is the series of Yorkshire strata, much thicker, more complete, and more varied than belongs to any other county of the empire. It will be found that three cases of general conformity have been noted: the oldest is between the Silurians and the mountain limestone; the next between the Coal and the Magnesian series; the last between the Oolitic series and the Chalk. The prevailing dip of the strata is eastward; indeed, except in the western parts of Craven and in the line of great faults, this general dip is very little modified. In the district of Craven several anticlinal axes of limited extent, mostly ranging north-east, make elliptical elevations about Greenhaw Hill, Skipton, Lothersdale, and in Bowland Forest. These are often connected with the production of metallic veins. A slight broad anticlinal axis affects the oolitic strata beneath the chalk.

Some of the dislocations, which occasion great vertical movement of the strata, are very striking. The Great Craven Fault, which ranges nearly east and west from Wharfedale to near Kirkby Lonsdale, and is in part of this course double, causes a downthrow to the south of from 1000 feet to more than 1000 yards, and is accompanied by a grand and characteristic change of physical geography. North of this line the country rises to the height of 2400 feet, and south of it sinks to a few hundreds of feet. Where this fault turns to the north from near Kirkby Lonsdale, and receives the name of the Pennine Fault, its effects are equally extraordinary, and the western border of Yorkshire derives its peculiar bold escarpment from Wharfedale to Mickie Fell from the operation of this fault.

There are several curious faults visible in the oolitic and lias strata of the coast near Whitby and Scarborough, and the coal-field is full of them. The magnesian limestone is dislocated near Robin Hood's Well and in a few other places. These and many other fractures of the earth's crust are wholly or principally unconnected with great masses of igneous rock, and devoid of such rocks along the line of fissure. Under Ingleborough however a curious red felspathic dyke is seen to coincide with the Craven Fault, and a very large and remarkable greenstone dyke, accompanied by a dislocation of strata, traverses the northern parts of this county, and the southern part of Durham, from near Middleton in Teesdale to near the High Peak, south of Whitby. Along the line of this great 'whindyke' the argillaceous strata are bleached and the sandstones indurated. It is geographically related to the east end of the great 'whin sill,' as it has been called, which fills a considerable space on the Yorkshire side of the Tees, and causes the great waterfalls of Caldron Snout and the High Force. This mass is in places 200 feet thick, and in others only 24 feet thick. It is a sort of 'interposed bed,' which was formed from lava poured out on the sea-bed with some local violence and rending of the strata. It is in a few places subcolumnar, and varies in crystallisation. The limestones have been altered by its heat to white crystalline masses, the sandstones hardened, and the shales locally changed, so as to yield in one spot garnets. No particular dislocations appear to mark its course, and its relation to the local richness in lead of the mining district of Teesdale and Alston Moor is obscure. Lead-veins traverse it in the mines about Hilton and Dufton, and yield ore, a circumstance in which it appears to differ from the toadstone of Derbyshire, which is also interposed in the limestone series.

Climate, Soil, and Agriculture.—The great extent of the county of Yorkshire, and the variety of surface, occasion considerable differences in the climate in various districts. Tuke, in his 'General View of the Agriculture of the North Riding of Yorkshire,' published in the year 1800, observes, that the climate of the coast is, from its situation, cold and bleak, but that in some of the vales near it, which are sheltered from the westerly winds and from the sea-air, the climate is such as to favour the ripening of corn. The Vale of Cleveland, near the Tees, is very cold, being open to the sea on the north and east, and to the cold winds from the central mountains on the west. The Eastern Moorlands, from their great altitude, have a climate so severe as to present a serious impediment to agricultural improvements. The Howardian Hills partake, though in a less degree, of the coldness and severity of the Eastern Moorlands; and the Wolds of the East Riding are subject to cold winds from the sea, though their diminished elevation and the different character of the soil make them more favourable to cultivation. Ryedale has a mild climate, which greatly promotes the perfection of crops. The districts between the Wolds and the coast are liable to cold winds and fogs from the sea and the Humber. In the Vale of York the climate is generally mild and temperate, but the northern part is subject to cold winds from the adjacent moorlands, while the extensive levels in the southern parts of the county, though comparatively mild in consequence of being sheltered from easterly winds by the Wolds, are very liable to a damp and foggy atmosphere. The climate of the West Riding generally appears to be tolerably healthy. The Western Moorlands are more liable to rain than the Eastern, and, owing to

their greater altitude and not being exposed to sea-air, the snow remains longer upon them. That part of the high lands which lies in the West Riding, though tempestuous and very rainy, is considered salubrious for strong constitutions, perhaps in consequence of the frequent purification of the atmosphere by high winds. The quantity of rain which falls annually in the vicinity of Ingleborough Hill is about 48 inches; and, though the lower tracts are very much milder and less rainy, the average annual fall of rain at Sheffield is 33 inches, which is 5 inches more than the general average of England. Tuke attributes the almost unceasing rains which fall upon the mountain district to the arresting of the clouds brought from the Atlantic by the westerly winds by the mountains themselves, and still more by the violent conflict which frequently takes place between the currents from opposite sides of the island. During March, April, and May, the east winds are usually accompanied by a bright sun in the day-time and sharp frosts at night, with frequent showers of snow and sleet, the united effect of which is to parch the surface and greatly to arrest the process of vegetation.

Yorkshire is one of the most important counties in an agricultural point of view; but from its great extent, and the varieties of soil and differences of climate which are found there, it is absolutely necessary to treat of its subdivisions or Ridings separately, and consider them as though they were separate counties.

In the North Riding the soil on the coast is mostly a brownish clay, or a loam incumbent on a clay or on freestone; and in some valleys west of Whitby the soil is a rich deep loam. The soil of Cleveland is mostly a fertile clay or fine red sand. In the neighbourhood of Kildale there is a good deal of deep rich loam. The surface is diversified with hills, and there are very few level fields. Near the Tees, in the valley of York, there is generally a rich gravelly loam. On the whole, it may be asserted that in all the valleys and on the lower hills the soil is fertile and mostly fit to bear good crops with proper management. The extensive tract of high hills called the Eastern Moorlands, occupying a space of about 30 miles by 15 miles, is penetrated by many cultivated valleys more or less fertile. The Western Moorlands are covered with green pastures; and even where it is brown with ling there are sweet grasses interspersed with it, which the cattle and sheep soon find out. The farmhouses are not in general conveniently situated for the occupation of the land, but are often crowded in villages at a distance from the fields. Where new buildings have been erected on the inclosures of common lands, they are however much better situated. The cottages for labourers are small and mean, and generally consist of two small rooms on the ground-floor, which is often damp, and consequently unhealthy. The farms in the North Riding of Yorkshire, as in the rest of the county, are of every imaginable size, from 50 to 1000 acres and more. Most Yorkshire farms have extensive pastures attached to them, where horses and cattle are bred, for which the county is celebrated. The Cleveland horses are very strong and active, and many good carriage-horses are bred from Cleveland mares. Threshing-machines were very early introduced from Scotland, and there is scarcely a farm of any extent which has not one. More modern and complicated implements, such as scarifiers, drills, horse-hoes, &c., are used by gentlemen and the wealthier farmers; and every new improvement is soon introduced and tried. On an average of farms, the grass-land is two-thirds of the whole farm, and the arable one-third; in the drier portions of the Riding, as in Cleveland, the proportion of arable is greater; towards the west it is less, the climate being there better adapted for grass. Clean fallows were once universal on all the heavy soils, but on the lighter loams turnips have entirely superseded clean fallows; and even on the heaviest, fallows do not recur so frequently as they did formerly, seldom sooner than after an interval of six years. Lime and guano, and the various other natural and artificial manures, are in general use.

The corn, when not mown, is reaped with the sickle, generally by women; the men seldom reap, but they often tie up the sheaves. The best wheat is grown in Cleveland, but the crops are not so abundant as those in Ryedale. Much wheat is exported from the ports of the North Riding, chiefly to the manufacturing districts, besides what supplies its own population; but till of late years oat and rye-meal were the chief food of the labourers, as well as mealin, that is, wheat and rye sown together, which makes good wholesome bread. On the good light soils as much as six quarters of rye per acre has been grown. Ryedale is remarkable for its fine oats. The kind used is generally the Friesland oat, and the farmers are particular in getting a change of seed from Holland every four or five years. Oats are sown in March and April. Eight quarters per acre is an average crop in Ryedale.

Rape is sown extensively for seed on the best lands, and the preparation is often by paring and burning grass-lands, which is sure to secure a crop. The seed is sown in July or August, and the plants are thinned out or transplanted in October. Where there is a great breadth of rape the plants are raised in seed-beds, and transplanted with the plough. Rape is usually ripe in July, and threshed out on a cloth in the field, by which much shedding of the seed is saved. These threshings are a kind of festival, like hop-picking in hop countries, and draw together many labourers and more idlers; but the work must be finished rapidly in so precarious a climate, for a wet day would spoil all. The straw and refuse of the rape is excellent

fodder for the cattle in winter. The crop usually averages the same as wheat, but the price fluctuates greatly. Turnips used to be sown on grass-land pared and burnt, or ploughed two or three times after having been fed off late in spring; but now the usual cultivation of this root on the Northumberland plan is generally adopted, with a very careful preparation and manuring.

Potatoes are a very essential crop on many farms, and are mostly shipped to London, where they fetch a good price. The Yorkshire reds are a favourite sort in the market. The produce is from 200 to 300 bushels per acre. Flax is still sown, but to a much smaller extent than formerly. A considerable quantity of mustard is sown in the neighbourhood of York, which is ground and sold as Durham mustard.

The principal part of the North Riding consists of grass-lands, and is appropriated to the dairy. There was once a fair proportion of timber-trees both in the woods and hedge-rows of this Riding, but they have been much thinned. Ash still abounds in the dairy districts, being useful for butter firkins and other dairy implements which require a white wood.

The short-horned breed of cattle is the prevailing sort all over Yorkshire, and of this there are some varieties. Those of Cleveland and the Vale of York are known by the name of the Tees-water breed, and in England are called the Holderness breed. Oxen are fatted to a great size, and seldom used for draught. In the West Moorlands the cattle are smaller, and on the borders of the West Riding and Westmorland the long-horned breed is very common. Many heifers and cows of the Tees-water breed are sent to the dairymen in London.

The old Tees-water breed of sheep is large and coarse, but the breed has been much improved by crosses from the Dishley breed. The sheep on the Western Moorlands are horned, with gray faces and legs; and many of them have a black spot on the back of the neck: their wool is coarse.

The breed of horses all over Yorkshire is well known and highly appreciated. For carriage-horses, Cleveland bays are in high repute when they have some blood. In the dales of the Eastern Moorlands and on the coast many useful horses are bred, of a moderate size and very compact, which suit the manufacturing districts. Mares are used very generally for farm work, and are made to give foals every year.

Many of the observations made on the agriculture of the North Riding of Yorkshire are equally applicable to the whole county, and consequently need not be repeated: we shall only notice those points which are peculiar to each Riding, and begin with the East Riding. This riding extends along the German Ocean, from the river Hartford, southward to the Humber. The length of this riding from the south-east to north-west is 52 miles, and from south-west to north-east 42 miles, containing above 750,000 acres, mostly cultivated. The high hills called the Wolds are cold and bleak, from their exposure and want of shelter; but they are healthy, and form strong robust constitutions; and although the winters and springs are cold the soil is fertile, and the crops are generally abundant, especially in very dry seasons. There is a moisture arising from the chalky subsoil which is very favourable to vegetation. The Wolds, however suited to pastures and spring corn, produce no good wheat. In Holderness, where the land is sheltered and the soil fertile, abundant crops of excellent wheat are raised, and the flat rich pastures along the Humber are equally remarkable for good grass. The climate on a level with the sea is much milder.

Howdenshire, with Ouse and Derwent, being situated inland, and sheltered by the Wolds from the north-east, have a milder climate than the districts nearer the sea, although the frost and snow are of longer continuance in winter.

The soil of the Wolds is a light friable calcareous loam over a chalk rubble, which covers the solid mass of chalk. There are flints in the soil, but not of such a size and in such quantities as in other chalk districts in the south. On the banks of the Humber there are above 14,000 acres of warp-land, a stiff clay rendered by the process of warping of extraordinary fertility. A certain proportion of fine sand in the warp is essential to its greatest fertility. Sunk Island, now a most fertile spot, forming part of the coast, was once a mere sand-bank in the Humber.

A large tract of poor sandy land extends in a north-west direction from South Cave nearly to York. Parallel to this, and along the Ouse, lies a tract of a very fertile alluvial soil, fit for any kind of agricultural produce. In the Vale of Derwent the soil varies greatly. The East Riding is very well watered; the Derwent, being navigable from its junction with the Ouse to Malton, greatly facilitates its communications.

The farms and estates in the East Riding are of considerable extent. The farmhouses and labourers' cottages are generally comfortable. There is a peculiarity in the harvesting of oats in this Riding, which is worthy of notice. The oats are cut by the sickle, as wheat is elsewhere: the sheaves are tied loosely very near to the corn, and the butts are spread out and set singly and upright; so that the wind readily finds access to dry them. Some time after a fresh band is made, and the first sheaf is tied round the middle, while the upper band is loosened; this serves to bind the next sheaf, and so on. There is a little extra labour in this mode of tying, but it is well repaid in a moist climate by the condition in which the oats thus

treated are stacked, and by the goodness of the straw, which otherwise often acquires a musty taste in the stack, even if the oats are not injured.

Beans are a profitable crop in the heavy soils of this Riding. Rape is extensively grown in Holderness both for sheep feed and for seed. About Hedon, Patrington, Sunk Island, and other rich warp-lands, much cole-seed and rape-seed are raised, which are sent to the oil-mills at Hull. On breaking up the sheep-walks on the Wolds rape is often successfully grown. Sainfoin has been introduced wherever the subsoil is chalk, where it is an invaluable plant. Potatoes are very extensively cultivated in Holderness and Howdenshire. The best sorts have been long known by the names of Red-nose kidney, Flat white, Purple kidney, and Cape kidney; the Green top and Ox noble are very productive, but better suited to feed cattle with than for the table. Swedish turnips, cabbages, and carrots are extensively grown.

In the East Riding the proportion of grass-land on the farm is much less than in the other Ridings. Most of the pastures have been ploughed up, even on the Wolds; and those only which lie low along the rivers have been left as permanent meadows. The salt-marshes along the sea are very useful, especially to recover horses which have been overworked; sheep likewise get fat on them after a time. There is but little timber in this Riding, either in woods or hedge-rows. The Wolds are naturally quite bare of trees. Some plantations have been formed on them, but they contain little useful timber. Draining, on a very extensive scale, has been done in Holderness and other flat and low parts of the Riding, by which low and marshy grounds have been rendered fertile. Works have been erected at great expense under the authority of several Acts of parliament, from 1762 to the present day. Near the sea-coast 'wreck' or sea-weed is very extensively used for manure; and after a storm the farmers' carts may be seen busily employed at low water collecting it. It is laid in heaps, where it soon ferments, and, as soon as is convenient, is carried on the land; if left to rot, it would waste away and be of little use. Bones and various other manures are now extensively used on the lighter soils.

Holderness cattle have been mentioned before, and scarcely any other breed is found in the East Riding.

On the rich pastures the improved Leicester breed of sheep is found the most profitable; on the Wolds the Southdowns have been introduced with great success.

No part of England produces such fine and valuable horses as the East and North Ridings of Yorkshire. We have mentioned the Cleveland bays. The introduction of full blood into this breed has produced some clever hunters, which have been sold at high prices; but for the carriage many still prefer the pure Cleveland bays.

The West Riding of Yorkshire is situated nearly in the centre of the kingdom, but, from its numerous rivers and canals, has a free intercourse with the east and west coasts. In an area of more than 1,700,000 acres, the soil and climate naturally vary. It is in general dry and healthy. The eastern and northern portions are similar to the Ridings so situated, while the west partakes of the moist and hilly nature of the counties bordering on the Atlantic. We need only observe on the agriculture of the West Riding, that a great part of the Riding is in pasture, the arable land being chiefly found on the northern and eastern portion, where it is cultivated much in the same manner as in the adjoining Ridings.

As grazing is well understood in this Riding, much cattle is purchased to be fatted here, but not many are bred; consequently a much greater variety may be observed in the stock than in the other Ridings. The grass will nearly fatten an ox in summer. With the addition of turnips and hay in autumn, oxen are made very fat, especially with the help of linseed-cakes, which is sometimes succeeded by oatmeal and hay for the last 10 days, in order to avoid the flavour so readily discoverable in beef fed with oily food. Many hogs are fatted in this Riding, the hams being cured for the London market, while the fitches are readily disposed of among the manufacturers, who never find bacon too fat.

This Riding was formerly better wooded than the rest of Yorkshire, but the forests have been destroyed, and the land divided and cultivated. There is a considerable demand for oak and ash of small size for the use of the mines and collieries. Much land in the Riding is fit for little else than planting firs and larch, and where the latter wood has thriven considerable profit has been made in a few years by well-managed plantations.

The properties and farms in the West Riding are generally smaller than in other Ridings.

Manufactures.—In its industry, as well as in other respects, Yorkshire is an exceedingly varied and interesting portion of the kingdom; and the West Riding forms one of the most important manufacturing districts in England, comprising important seats of the woollen, cotton, linen, iron, and hardware and cutlery manufactures, as well as considerable quarries and mines. Of these the woollen manufacture may be considered the great staple of the district. Cotton factories have been established at various places in the West Riding. Flax-spinning is carried on to a greater extent at Leeds than anywhere else in England. The flax manufacture arose in Yorkshire, probably from the extensive growth of flax in the county; and when the culture of flax declined the manufacture still continued. Leeds and Barnsley

are the centres of the manufacture: the one for the spinning and the other for the weaving. At Leeds the flax-mills are on a very large scale: especially so is the remarkable building of the Messrs. Marshall. The flax is heckled and spun in these large mills, chiefly into yarn for weaving, but partly also into thread for sewing. Scarcely any linen-weaving is practised at Leeds; this is done (far more than in any other town in England) at Barnsley. The Barnsley manufacturers buy the flax-yarn from Leeds, and either give it out to hand-loom weavers, to work-up at their own houses, or weave it by power-loom in large factories; but Barnsley has hitherto been known rather for hand-loom than power-loom productions. Extensive iron-works are seated at Rotherham, Low Moor, and Bowling, in the neighbourhood of Bradford. The manufactures of hardware and cutlery at Sheffield, and in the district surrounding that town, are very extensive, and in some departments excel those of Birmingham. In cutlery and plated goods Sheffield stands pre-eminent, and it maintains a high reputation in other branches of manufactures, which are noticed under SHEFFIELD. The manufactures of the North and East Ridings are of comparatively small importance, and even the mineral productions of the county, consisting of freestone, limestone, coal, iron, copper, and lead, are most extensively found in the West Riding. At Wickersley, 4 miles E. from Rotherham, several thousands of grindstones, some of them as much as 6 feet in diameter, and suitable for the finer descriptions of cutlery, are made annually for the use of the Sheffield manufacturers. The coal, which forms an important source of the manufacturing prosperity of the district, is found chiefly in the vicinity of Leeds, Sheffield, Bradford, and Wakefield. The coal of the Silkatone and Barnsley district has been, since the opening of the Great Northern railway, brought to London in large quantities. There has also been a great increase in the shipment of coals from the Yorkshire side of Teessmouth, where Redcar and Middlesborough are becoming important places. Alum-works have been carried on in the county, ever since the time of Queen Elizabeth, first at Guisborough, and more recently at Whitby.

The manufacturing district of the West Riding extends from north to south about 40 miles, has a mean width of about 20 miles, and includes an area of about 800 square miles, comprising the hardware as well as the clothing district. The clothing district commences below the part of the county which bears the name of Craven, and extends over the tract which comprises the towns of Leeds, Bradford, Halifax, Huddersfield, and Wakefield. In the several articles on those towns will be found particulars of the respective branches of which they may be considered the centres. The principal varieties of woollen broadcloth are classed under the coloured or 'mixed-cloths,' which are wholly made of dyed wool, and the white broadcloths. Halifax produces the finest kinds of stuff goods as well as a fair proportion of all other kinds. Bradford is now the great centre of wools, stuffs, and merinos. The chief district for blankets and flushings lies between Leeds and Huddersfield. Worsted-spinning is largely practised at Bradford. In and near Huddersfield are made narrow cloths; and Saddleworth produces kerseymers and broadcloths nearly equal to those of the west of England. Wakefield is chiefly celebrated for its wool-fairs and the skill of its cloth dyers. From the nature of its manufactures, consisting of baizes, flannels, kerseys, and broadcloths, Rochdale may, though situated in Lancashire, be considered to belong to the woollen district of Yorkshire.

The business connected with the cloth-trade is chiefly transacted in the great cloth-halls in the respective towns, but much cloth is produced and sold without passing through the halls.

Formerly the greater proportion of the woollen goods produced in Yorkshire consisted of the coarser kinds of cloth: but the manufacture has been so greatly improved that Yorkshire cloths are no longer looked upon as inferior to those of other districts, while the finer qualities of cloth made in the West Riding are excellent. The introduction of llama and alpaca wools has opened new and important sources of industry in the manufacture. At about a mile from Shipley, on the road to Bingley, is Saltaire, the largest spinning and weaving establishment perhaps in the world, employing about 4000 workmen. It belongs to Mr. Titus Salt, who carries on at Bradford a very extensive manufacture of stuff and alpaca goods. The Saltaire mill affords all the advantages of concentration. On the same estate a complete town has been built to accommodate the workpeople and their families. There are a road, a river, a canal, and a railway, all passing through the estate; and five bridges over the Aire.

Divisions, Towns, &c.—Yorkshire is divided into three Ridings—a division now peculiar to this county, but which at the Domesday Survey obtained also in Lincolnshire. In its present form the term Riding is a corruption of the Anglo-Saxon name of the divisions 'trithing' or 'thriding,' and the division of the county into thirds or trithings is generally ascribed to the Saxons; but Worsaae, perhaps fancifully, attributes it to the Danes, suggesting that the term completely answers both in sound and meaning to the Scandinavian division of a county or district into thirds or 'Tredinger.' Several of the old feudal divisions of Yorkshire, though no longer possessed of a legally recognised boundary, are still popularly known and their names used for many purposes. Cleveland, Craven, Holderness, and Richmond, either give, or have given, titles to some of our noble families. Holderness has given its name to a valuable breed of cattle; and the Cleveland

bay is the origin of our best kind of coach-horses; and while no such districts as Cleveland or Craven appear on our maps, they are used as distinguishing appellations in Shipton in Craven, Kirkby in Cleveland, &c. It may be worth while therefore to describe briefly the localities indicated by these names. *Cleveland* is in the North Riding, and forms now the two wapentakes of the east and west division of Langbaugh, extending along the coast from the mouth of the Tees to near Whitby, and inland to the moors of the wapentake of Ryedale, including 37 parishes. *Craven* occupies somewhat more than what now forms the wapentake of Staincliff, and with the wapentake of Ewcross, a former member of Craven, forms the north-west portion of the West Riding. The Ribble, the Wharfe, the Aire, and the Nidd, all rise within it. Craven contains 26 parishes. *Hallamshire*, in the West Riding, appears to have been a large manor at the time of the Conquest. The Domesday Book states that "Hallum, one manor, with its 16 hamlets," was held by Earl Waltheof; but Sheffield, which is now part of Hallamshire, is not mentioned. It is wholly in the West Riding, but the boundaries are not very well defined. *Holderness* is yet a seignior, a liberty, a manor, and a wapentake, in three divisions of the East Riding. It occupies the coast east of the river Hull and of the Humber, after the Hull falls into it, from Bridlington Bay to Spurn Head. *Richmondshire* occupies the whole western portion of the North Riding, from a line running nearly straight from Yarm to Boroughbridge. It was erected into an earldom by the Conqueror in favour of a follower and kinsman, Alan, a son of the Duke of Brittany. It contains the wapentakes of East and West Gilling, Hang, and East and West Hallikeld.

The legal division of Yorkshire is into the East Riding, North Riding, and West Riding. The East Riding is divided into the wapentakes of Buckrose, Dickering, Harthill, Holderness, Howdenshire, and Ouse and Derwent. The North Riding is divided into the wapentakes of Allertonshire, Birdforth, Bulmer, East Gilling, West Gilling, Hallikeld, East Hang, West Hang, Pickering Lythe, Ryedale, Yarm, and the liberties of Langbaugh and Whitby Strand. The West Riding is divided into the wapentakes of Agbrigg, Ainsty, Barkstone Ash, Claro, Morley, Oagoldcross, Skyrack, Staincliff and Ewcross, Staincross, Strafforth and Tickhill, and the liberty of Ripon. The Ainsty of the city of York has been annexed to the West Riding as a wapentake; though for electoral purposes it is joined with the North Riding.

The following places are described in separate articles:—ALDBOROUGH, ALMONDBURY, BAINBRIDGE, BARNLEY, BARWICK, BAWTRY, BEDALE, BEVERLEY, NORTH BIERLEY, BINGLEY, BOROUGHBIDGE, BRADFORD, BRIDLINGTON, CARLTON, DEWSBURY, DONCASTER, GREAT DRIFFIELD, EASINGWOLD, GOOLE, GURBOROUGH, HALIFAX, HARBOROUGH, HELMSLEY, HEMSWORTH, HOWDEN, HUDDERSFIELD, HULL, KEIGHLEY, KIRKBY MOORSIDE, KNARESBOROUGH, LEEDS, LEYSBURN, NEW MALTON, NORTHALLERTON, OTLEY, GREAT OUSEBURN, PATELEY BRIDGE, PATRINGTON, PENISTONE, PICKERING, POCKLINGTON, PONTEFRAC, GREAT PRESTON, REETH, RICHMOND, RIPON, ROTTERHAM, SADDLEWORTH, SCARBOROUGH, SEDBERGH, SELBY, SETFLE, SHEFFIELD, SKIPTON, SKIRLAUGH, STOKESLEY, TADCASTER, THIRSK, THORNE, WAKEFIELD, WHITBY, WORTLEY, and YORK.

Of the other towns of importance we give a notice here:—

In the *East Riding*:—

Cave, South, a small market-town, population of the township 927 in 1851, about 10 miles S.W. from Beverley, near the western foot of the Wolds. The town contains a neat church, built in 1601, and dedicated to All Saints, places of worship for Wesleyan and Primitive Methodists and Independents, and a National school. A corn-market is held weekly on Monday; and there is a fair on Trinity Monday. The imports include coal, lime, freestone, flags, and general commodities. *Flamborough*, population of the parish 1297 in 1851, about 28 miles N.E. from Beverley, is now a mere fishing-village, occupying the centre of the promontory called Flamborough Head. It was frequently used as a principal station by the Danes during their predatory inroads. The church consists of a nave and chancel, with aisles. The Wesleyan and Primitive Methodists have chapels, and there are National schools. *Hedon, Headon, or Heydon*, population of the parish 1029 in 1851, about 6 miles E. from Hull, is a borough and market-town, about 2 miles from the left bank of the river Humber, with which it is connected by Hedon Haven, a creek formerly navigable. It is now chiefly dependent on the agriculture of the rich district in the midst of which it stands. A charter was granted to the burgesses of Hedon by Athelstan, and it received several other charters at later periods down to the first year of James II. It first sent members to Parliament in the 23rd Edward I, but was disfranchised by the Reform Act. A great part of the town was destroyed by fire in 1656; it was afterwards rebuilt in a superior manner. The parish church is an elegant and spacious edifice. The Wesleyan Methodists, Baptists, and Roman Catholics have places of worship. There are National schools, a mechanics institute, and a library and reading-room of the Holderness Agricultural Society. A county court is held. There are cattle-markets on alternate Mondays, and fairs on August 2nd, September 22nd, November 17th, and December 6th. Grain is the chief article of export. Rope-making, tanning, nail-making, brewing and malting, and market-gardening are carried on to some extent. *Hornsea*, population 945 in 1851, about 15 miles E.N.E. from Beverley, at one time a market-town, is situated

on the sea-coast. The town is said to have been formerly 10 miles inland, but the encroachments of the sea have brought the coast within about half a mile. The church is a spacious building, and had formerly a spire, which formed a noted landmark, but it was long since blown down, and has not been restored. The Wesleyan and Primitive Methodists and Independents have places of worship, and there are National and Infant schools. Fairs for horses and cattle are held on August 13th and December 18th. Races are run annually about the end of July. The town has a fine chalybeate-spring, and good accommodation for sea-bathing. In the neighbourhood is the lake called Hornsea Mere. *Husmanby*, population of the township 1291 in 1851, formerly a market-town, is pleasantly situated near the sea-coast, about 30 miles N. by E. from Beverley. The church contains a handsome monument of the Osbaldeston family, to whom most of the township belongs. The Wesleyan and Primitive Methodists and Baptists have places of worship, and there are National schools and two public libraries. *Market Weighton*, population of the town 2001 in 1851, about 10 miles W. by N. from Beverley, is a market-town, situated at the western foot of the Wolds, on the little river Foulness. It has a good water-communication with the Humber by the Market Weighton Canal, and is connected by railway with the city of York. The church is an ancient edifice, with a comparatively modern spire; and the town contains chapels for Wesleyan and Primitive Methodists and Independents. There are National schools, and a temperance-hall. The market for corn, held on Wednesday, is well attended. Fairs for horses, cattle, and sheep are held on May 14th and September 25th.

In the *North Riding* :—

Akrigg, population of the township 633 in 1851, is a market-town, situated in Wesley-Dale, about 17 miles S.W. from Richmond. The church is an ancient edifice dedicated to St. Oswald; the Wesleyan Methodists have a chapel, and there are National schools. Dyeing, the manufacture of knitted hosiery and of carpets, and worsted spinning are carried on. There is a market on Thursday, and fairs are held in May, June, July, and October. The neighbouring moorland country is exceedingly picturesque, and contains some fine waterfalls, of which may be mentioned Millgill Force and Whitfield's Force. *Egton*, population of the parish 1129 in 1851, is a small market-town, about 7 miles W. by S. from Whitby, on the edge of the Egton Moors. The church was consecrated in 1349 by the Bishop of Damascus. Egton also contains a Roman Catholic chapel and a public school. A fine spring, called Cold Keld Well, is much resorted to for strengthening weakly children. *Hawes*, population of the chapelry 1708 in 1851, is a market-town, situated at the head of Wesley-Dale, about 23 miles S.W. by W. from Richmond. The houses are generally built of stone. The chapel of ease is a plain edifice; there are places of worship for Wesleyan Methodists, Quakers, and Sandemanians; National schools, and a subscription library. Nail-making, clog-making, and dyeing are carried on. Cattle fairs are held on alternate Tuesdays, from the last Tuesday in February till Whitsuntide. At a short distance from the town is a magnificent cascade, called Hardraw Scar, or Force, with a perpendicular fall of 102 feet. *Masham*, population of the township 1139 in 1851, is a market town, about 14 miles S. by E. from Richmond. The church is small, but handsome, with a lofty spire; there are places of worship for Wesleyan Methodists, Baptists, and Quakers, a Grammar school, a Charity school, and an Infant school. The town has a considerable manufacture of woollen-yarn, and a flax-mill. Rope-making, brewing, and dyeing are carried on. Fairs for cattle and sheep are held during spring on alternate Wednesdays. *Middleham*, population of the parish 966 in 1851, is a small market-town about 10 miles S. by W. from Richmond. The church was made collegiate by Richard III., when duke of Gloucester. The town contains chapels for Primitive and Wesleyan Methodists, and a school of industry. Middleham is built, chiefly in the form of a square, upon a gentle acclivity on the right bank of the Ure. Fairs are held on Easter-Monday and Whit-Monday; and on the 5th of November is held on Middleham Moor one of the largest fairs in England for horned cattle and sheep. Middleham castle was built about 1190, by Robert Fitz-Ranulph, and has been the scene of some important historical events. It is said to have been reduced to ruins by Cromwell. The ruins of the castle stand on a rocky eminence near the town. The Duke of Leeds is hereditary constable of Middleham Castle. *Middlesborough*, or *Middlesburgh*, population 7431 in 1851, is about 28 miles N.E. from Richmond, on the right bank of the Tees, close to its mouth. The town is lighted with gas. The church of St. Hilda, erected in 1840, is an elegant gothic structure. The Wesleyan and Primitive Methodists, Independents, Quakers, and Roman Catholics, have places of worship. There are a British and an Independent school, a savings bank, a mechanics institute, and a subscription news-room. Middlesborough is now a considerable sea-port and market-town, with several foundries, ship-building yards, rope-walks, a sail-cloth manufactory, an anchor, chain-cable, and railway rail manufactory, brick- and tile-works, a pottery, and other manufactories. *Musker*, population 1321 in 1851, a customary market-town, about 17 miles W. by S. from Richmond, stands in an angle formed by two streams which contribute to form the river Swale. The chapel of ease was erected in 1580. There are a National school and a subscription library. The market is held on Wednesday, and there is an annual fair. *Yarm*, popula-

tion of the parish 1647 in 1851, occupies a low peninsula nearly surrounded by the river Tees, about 22 miles N.E. from Richmond. It has several times suffered greatly from inundations. In 1753, and again in 1822, the water covered the town to the depth of 7 feet, and in 1771 it rose still higher, being as much as 20 feet in some parts. The Tees is here crossed by a bridge of five arches, built in 1400 by Walter Skirlaugh, bishop of Durham, and since much improved. The church, which stands to the west of the town, was rebuilt in 1730. The Primitive and Wesleyan Methodists, Quakers, Independents, and Roman Catholics, have places of worship. There are a Free Grammar school, and a National school. There is a salmon fishery in the Tees. In the neighbourhood are extensive flour-mills and a paper-mill. The market is on Thursday, and there are several fairs, including a great cheese fair on the 19th of October.

In the *West Riding* :—

Aberford, population of the township 737 in 1851, is a small market-town about 15 miles S.W. from York. The parish church is an ancient edifice. The Wesleyan Methodists and Roman Catholics have chapels, and there are National schools. Rope-making, wire-working, malting, and basket-making employ a few persons. *Cawood*, population of the parish 1195 in 1851, is a small town about 10 miles S. from York. There is here a ferry over the Ouse. Besides the church, which is small, there are a chapel for Wesleyan Methodists, and Duffield's Charity school. The archbishops of York had a castle at Cawood as early as the 10th century. The castle was demolished by order of the Parliament. *Dent*, population of the chapelry 1630, about 5 miles S.S.E. from Sedburgh, is a small market-town near the Westmorland border. Considerable quantities of black and gray marble are quarried, polished, and exported, chiefly to the metropolis. Besides a chapel of ease, there are chapels for Wesleyan and Primitive Methodists, Independents, and Quakers, a Grammar school, and National and Infant schools. The making of chairs, shoes, and clogs employs some of the inhabitants. *Giggleswick*, population of the township 855 in 1851, is on the right bank of the river Ribbles, about one mile N.W. from Settle. There are a large and handsome parish church and a Free Grammar school. About a mile north-west from the village is a curious ebbing and flowing well; the water is clear, cold, and wholesome. *Gisburn*, population of the township 518 in 1851, is about 11 miles W. by S. from Skipton. Cattle fairs are held on alternate Mondays, and cattle and pedlery fairs on Easter Monday and September 19th. *Harewood*, population of the township 895 in 1851, about 8 miles N. from Leeds, is pleasantly situated near the right bank of the river Wharfe. Harewood House, the magnificent seat of the Earl of Harewood, stands in a park a short distance west from the town. On an eminence are the remains of a Norman castle. Besides the parish church there are a chapel for Wesleyan Methodists, and a Free school. *Ripley*, population of the township 233 in 1851, is about 25 miles N.N.W. from York. The church is ancient. There is a Free school. The chief distinction of the place is the castle of the family of Ingilby, which was built in 1555, and is still the family residence. Monday is the market-day: fairs are held on Easter Monday and Tuesday, and on the 25th, 26th, and 27th of August, chiefly for cattle, horses, and sheep. *Sherburn*, population of the township 1440 in 1851, is about 16 miles S.S.W. from York. In the neighbourhood are stone-quarries, flour-mills, and orchards. Teasel is extensively grown in the vicinity. The parish church, which is ancient, is a handsome and commodious edifice; there are also the Hospital school, a Charity school, and a National school. *Snashall*, population of the township 840 in 1851, is about 23 miles S. by E. from York. The church is of the later English style, with a low square tower surmounted with pinnacles. There is a Free Grammar school. Flax is grown in the vicinity. An extensive steam flour-mill and several windmills are near the town. Basket-making and rope-making employ some of the inhabitants. *Sowerby Bridge*, population 4365, about 3 miles S.W. from Halifax, is of modern origin and growth. The woollen-cloth manufacture employs many of the population. There are several large iron-works, malting-houses, and corn-mills. There are two Episcopal chapels, and one each for Wesleyan and Primitive Methodists and Independents; also a Church school, a National school, a school supported by Wesleyan Methodists, and a mechanics institute. *Tickhill*, population of the township 2087 in 1851, is situated in a fertile valley, about 7 miles S. from Doncaster. The market-cross is a plain circular stone building erected in 1776. Rope-making, paper-making, nail-making, and malting are carried on. There is a fair in August for cattle and merchandise. Tickhill was a place of importance in the middle ages. The castle is said to have been erected by Roger de Bual, one of the Norman followers of William the Conqueror, but it several times reverted to the crown. On a pleasant situation at the west end of the town are the remains of an Augustine priory, founded in the reign of Henry III. The parish church, erected in the 13th century, is a very handsome edifice with a noble tower. There are several interesting monuments: an altar-tomb in the church is of the date of 1386. The Independents and Wesleyan Methodists have large chapels. There is a National school. *Wetherby*, population of the township 1494 in 1851, is a market-town situated on the left bank of the river Wharfe, about 15 miles W. by S. from York. There is a neat town-hall, built of stone, and containing the public news- and reading-rooms. Over the Wharfe there is a handsome stone bridge.

A little above the bridge is a very fine stone weir, by means of which some extensive flour-mills are worked. There are also several oil- and logwood-mills. St. James' church is a handsome edifice, built in 1839. The Wesleyan Methodists and Independents have chapels, and there are National schools and a savings bank. The market, held on Thursday, is of importance for corn. Fairs are held on Holy Thursday, August 5th, and October 10th: there are also fortnightly stock fairs, which are well attended. A little below the town is St. Helen's Ford, where the Roman military way crossed the river. The scenery in the vicinity of the town is diversified and beautiful. A county court is held.

The following are some of the more important villages in the county: the population is that of 1861; the letters E, N., and W. after the several places indicate that they are respectively in the East, North, or West Riding:—

Ackworth, W., population 1835, about 8 miles E. by S. from Wakefield, is chiefly noticeable for the Free school maintained here by the Quakers, for children of members of their society. There are also the Lowther Endowed school and an Infant school. **Addingham, W.**, population of the township 1553, about 6 miles E. by S. from Skipton, has an ancient parish church; places of worship for Wesleyan Methodists and Quakers; and a National school. Worsted spinning, the making of worsted goods, the cotton manufacture, malting, tanning, and nail-making are carried on. **Armsley, W.**, population of the chapelry, which forms part of the borough of Leeds, 6190, is on the right bank of the river Aire, about 2 miles N. by W. from Leeds. It has an extensive woollen manufacture. There are a chapel of ease; chapels for Wesleyan and New Connexion Methodists and Baptists; endowed Town's schools; National schools; and schools connected with the Baptist and Wesleyan Methodist congregations. Tanning, malting, and brewing are carried on. There are flour-mills, and scribbling- and fulling-mills. Flax spinning, and the manufacture of thread and of linen goods, employ some of the inhabitants. The jail and house of correction was erected in 1847, at an expense of 45,500*l.* **Askern, W.**, a village of some celebrity for its sulphureous waters, is 7 miles N. from Doncaster: population of the township 382. The earliest notice of the Askern waters occurs in a work by Dr. Short, published in 1734. There are several wells, and Dr. Lankester analysed the waters of six of them. The water contains sulphate and carbonate of lime, and traces of sulphur. A bath charity was established in 1825 for enabling poor persons to avail themselves of the benefit of the wells. The Wesleyan Methodists have a chapel, and there are National schools, partially endowed. **Attercliffe** forms part of the borough of Sheffield. [SHEFFIELD.] **Aysgarth, N.**, population of the township, 253, of the parish, which has an area of 77,308 acres, 5635, about 13 miles S.W. from Richmond, is situated in Wensleydale, on the right bank of the river Ure, which has here a remarkable fall over an irregular ridge of rocks, called *Aysgarth Force*. A bridge of one arch, 71 feet in span, crosses the river above the Force. Besides the parish church, there is a National school. **Ayton, N.**, population of the parish 1804, about 16 miles N.E. from Northallerton, has a plain old church; places of worship for Wesleyan and Primitive Methodists, Independents, and Quakers; a British school; a Free school; and an Agricultural school, supported by the Quakers. Tanning, shoe-making, the linen manufacture, and nail-making afford employment. **Barnoldswick, W.**, population of the township 1938, is about 8 miles S.E. from Gisburn. Besides the parish church, which is ancient, there are a chapel of ease, chapels for Wesleyan and Primitive Methodists, and Baptists, and a National school. The cotton manufacture is carried on. An abbey was founded here in the 12th century. **Bailey, W.**, population of the township 9308, is about 6 miles N.W. from Wakefield. The parish church is an ancient building, of the perpendicular style. There are places of worship for Wesleyan and Primitive Methodists, a Free Grammar school; a National school; and a literary institution. The inhabitants are chiefly employed in various branches of the woollen manufacture. **Beeston, W.**, population of the township, which forms part of Leeds borough, 1973, about 2 miles S. by W. from Leeds, has an ancient chapel. The neighbouring collieries, and several branches of the woollen manufacture, give employment to many of the inhabitants. **Bentham, W.**, population of the township 2143, is on the right bank of the river Wenning, close to the Lancashire border. Besides the parish church, there is a Grammar school. The inhabitants are engaged in the flax manufacture. **Birstall, W.**, population of the parish, which is very extensive and contains eight populous townships, 36,222; the village is about midway between Leeds and Huddersfield. The church is of the perpendicular style; there are chapels for Wesleyan and Primitive Methodists, and a National school. **Bishopthorpe, W.**, population 406, about 3 miles S. by W. from York, has a handsome parish church, which was repaired in 1842 by the late Archbishop Harcourt; the windows are of fine stained glass. The carved chair, for the use of the Archbishop, was constructed from wood saved from York Cathedral when it was partially burned in 1829. There are a chapel for Wesleyan Methodists, and National schools. The palace of the Archbishop of York is a fine gothic structure, much enlarged and somewhat modernised by Archbishop Drummond. The tea-gardens at Bishopthorpe attract numerous visitors from York. **Bolton Abbey, W.**, is a small township in the parish of Skipton, population of the township 109, beautifully situ-

ated on the right bank of the Wharfe, 6 miles E.N.E. from Skipton. The place is only noteworthy on account of the beautiful scenery of its immediate neighbourhood, and the picturesque ruins of the abbey, for which it is much visited. A priory is said to have been founded at Embsay in 1124, by William de Meschines and Cicilia, his wife, but removed three years later to Bolton, on the death of their son Romilly, who was drowned in leaping across the Strid in Bolton Park: the story has been celebrated by Wordsworth, Rogers, and some minor poets. Bolton Priory is now the property of the Duke of Devonshire. The ruins are chiefly of the priory church; they are partly of Norman date. The remains of Barden Tower are on the heights, about 8 miles N.W. from Bolton Abbey. **Boston, or Boston Spa, W.**, about 4 miles N.W. from Tadcaster, on the right bank of the river Wharfe, is visited by invalids, for its chalybeate spring. Commodious baths have been erected, and there are good lodging-houses. Several boarding-schools are in the village and its vicinity. **Bowes, N.**, population of the township 725, is on the left bank of the Greta, 4 miles S.W. from Barnard Castle. Besides the church there is a Free school. There are here remains of an extensive castle of Norman date. **Bradfield, W.**, population of the chapelry 6865, about 7 miles N.W. from Sheffield, in the midst of barren moors, has a chapel of ease, a chapel for Wesleyan Methodists, and Endowed schools. Some of the inhabitants find occupation in preparing cutlery articles for the Sheffield manufacturers. **Bramham, W.**, population of the township 1818, about 3 miles W. from Tadcaster, is pleasantly situated. The church is an ancient gothic structure, with a western tower; the Wesleyan Methodists have a chapel, and there are National schools, and a superior school or college. Lime and freestone are abundant in the district. On the south side of the town is Bramham Moor, a great part of which is still a rabbit warren. **Bramley, W.**, population of the chapelry 8949, near the right bank of the river Aire, about 4 miles N.W. by W. from Leeds, has a chapel of ease; chapels for Wesleyan and Primitive Methodists, and Baptists; National schools, and schools supported by Wesleyan and Primitive Methodists. The woollen-manufacture is largely carried on; also rope-making, tanning, iron-founding, and malting. **Brampton-Bierlow, W.**, population of the township 1741, about 6 miles N. by W. from Rotherham, has a National school, originally founded as a Free school, in 1711. Earl Fitzwilliam has here extensive coal-mines and iron-foundries. **Brighouse, W.**, population of the township 6091, on the left bank of the river Calder, about 4 miles E.S.E. from Halifax, is favourably situated for trade, from its excellent roads to neighbouring towns, the railway, and the Calder navigation. There are here a district church, chapels for Wesleyan and New Connexion Methodists, and a Free school. Worsted spinning, the manufacture of fancy woollen goods and worsted stuffs, the making of carding machinery for the manufactories, currying, tanning, and malting are carried on. **Brompton, N.**, population of the chapelry 1491, about a mile and a half N. by E. from Northallerton, has an ancient church of Norman character, and a British school. The linen manufacture is the chief occupation. Here was fought the battle of the Standard between the English and the Scotch armies in 1138; the site of the battle-field is still called Standard Hill. **Brotherton, W.**, population of the township 1454, about 3 miles N.E. from Pontefract, has a parish church, which has recently undergone a complete repair; chapels for Wesleyan and Primitive Methodists, and Independents; and National and Infant schools. Basket-making, boat-building, the manufacture of glass bottles, lime-burning, malting, and rope, sail, and twine-making, give some employment. **Burley, W.**, population of the township 1894, about 2 miles W. by N. from Otley, has a chapel of ease, and chapels for Wesleyan Methodists and Independents. Some of the inhabitants are employed in the cotton-manufacture, and in worsted-spinning. Considerable attention is given by the neighbouring farmers to the rearing of sheep, cattle, and horses. **Calverley, W.**, population of the township of Calverley with Farsley 4392, is on the right bank of the river Aire, about 8 miles N.W. from Leeds. There are here a parish church, a new district church opened in 1843, chapels for Wesleyan and Primitive Methodists, and National, British, and Town's schools. There are fulling-mills and flour-mills. **Carleton, W.**, population of the chapelry 214, about 2 miles N. by E. from Snaith, is pleasantly situated near the left bank of the river Aire. Besides the parish church, there are chapels for Wesleyan and Primitive Methodists, and Roman Catholics. **Castleford, W.**, population of the township 2150, about 3 miles N.W. from Pontefract, is on the right bank of the river Aire. There are a church, chapels for Wesleyan and Primitive Methodists, and an Infant school. Coal-mines, glass-manufactories, and pottery-works employ a considerable number of workpeople. Over the river Aire is a handsome stone bridge. **Catterick, N.**, population of the township 640, is about 5 miles S.E. by E. from Richmond, near the right bank of the river Swale. The parish church was erected in the reign of Henry V. There are a Free school founded in 1645, and an hospital for six poor widows. **North Cave, E.**, population of the township 899, about 10 miles W. by S. from Beverley, contains a parish church, places of worship for Wesleyan and Primitive Methodists and Quakers, and Endowed and Free schools. Agricultural implements are manufactured. **Cawthorne, W.**, population of the parish 1254, is about 4 miles W. by N. from Barneley; it has a parish church, a chapel for Wesleyan Methodists, a Grammar school, and Mrs. Stanhope's Charity school.

Chapel Allerton, W., population of the township 2312, about 2½ miles N. by W. from Leeds, is pleasantly situated, and contains many handsome dwellings, the residences of respectable families. The chapel of ease has been enlarged and improved; the Wesleyan Methodists have a chapel, and there are National subscription schools. Paper-making, tanning, and dyeing afford some employment. *Cleckheaton, W.*, population of the chapelry 5173, about 7 miles E. from Halifax, is pleasantly situated in a rich valley. There are two Episcopal chapels; chapels for Wesleyan Methodists, Independents, and the Christian Brethren; also National and British schools. The manufacture of carding and spinning machinery is the principal occupation. The manufacture of worsted goods, and of woollen-cloth of a low quality, blankets, and flannels is carried on. *Conisbrough, W.*, population of the parish 1551, about 6 miles S.W. from Doncaster, now an insignificant village, appears to have been a royal town both in British and in Saxon times; the ruins of an ancient castle are on the top of a steep hill at the east end of the village overlooking the river Don. The circular keep is in a state of good preservation. The parish church is of Norman character, with some portions of decorated and perpendicular. There are a chapel for Wesleyan Methodists, and an Endowed school. Basket-making, malting, and nail-making are carried on. *Cottingham, E.*, population of the parish 2854, about 5 miles S. by E. from Beverley, had formerly a market. Of Baynard Castle, erected in the beginning of the 13th century, and destroyed by fire in 1541, only the ramparts and ditches are now traceable. Besides the parish church, there are chapels for Wesleyan and Primitive Methodists, and Independents, and National, Free, and Infant schools. In the vicinity are market-gardens. Coach-making, brewing, and the manufacture of oil-press bagging, are carried on. *Coxwold, N.*, population of the township 330, is a small village, 5 miles N. from Easingwold. Besides the chapel, there are a Free school, and hospitals for 10 poor men and 8 poor women. Laurence Sterne for a while held the curacy of Coxwold. *Darley, W.*, population of the township of Menwith with Darley 718, about 5 miles W. from Ripley, on the right bank of the river Nidd, the waters of which work the machinery of several mills for spinning flax, and for grinding corn. Grazing is much attended to in the neighbourhood. *Deighton, W.*, population returned with the parish of Huddersfield, about 2 miles N.E. by E. from Huddersfield, is distinguished by the manufacture of velveteens and woollen cords. Christ church, a new district church in the style of the 13th century, was erected in 1829 at the cost of John Whitacre, Esq. The Wesleyan Methodists have places of worship, and there are National and Infant schools. *Drighlington, W.*, population of the chapelry 2740, about 6 miles S.W. from Leeds, has a chapel of ease, a chapel for Wesleyan Methodists, and a Grammar school. Malting, boot- and shoe-making, and the manufacture of woollen goods are the chief occupations. *Dunnington, E.*, population of the parish 779, about 4½ miles E. by N. from York, has a neat parish church and a National school. There are here a very extensive establishment for the manufacture of chicory; agricultural machines are also made. *Ecclesfield, W.*, population of the township 10,005, is about 5 miles N. from Sheffield. The inhabitants are chiefly engaged in various branches of the Sheffield cutlery trade. There are here a parish church and chapels for Wesleyan Methodists and Independents; in the parish are several schools and almshouses. Rope- and twine-making, flax-dressing, linen-weaving, nail-making, and malting are carried on, and there are flour-mills. *Elland, W.*, population of the joint township of Elland with Greetland 7225, about 4 miles S. by E. from Halifax, on the right bank of the river Calder, which is here crossed by a bridge of three arches; the coach-road is carried across the valley of the Calder by an extensive viaduct. The chief manufacture of the place is coarse woollen-cloth. Some branches of the cotton manufacture are also carried on. Wool-carding and other machines are made. There are chemical-works, flour-mills, dye-works, fulling-mills, collieries, and an iron-foundry. An ancient chapel, a Grammar school, and National and Charity schools are in the village. *Emley, W.*, population of the township 1706, is about 6 miles E. by S. from Huddersfield. Besides the parish church, there are chapels for Wesleyan and Primitive Methodists and a British school. The inhabitants are employed in the neighbouring collieries, and in wool-combing and weaving. Fairs are held on Lady-day and Michaelmas-day. *Farnley, W.*, population of the chapelry 1722, stands on elevated ground about 4 miles S.S.E. from Leeds. It has a chapel of ease, a chapel for Wesleyan Methodists, and National schools. Woollen cloth of fine quality is made. There are corn-mills, malt-houses, iron-foundries, and boiler-making factories. *Filey, E.*, population of the township 1511, is situated on the coast, at the northern extremity of Filey Bay. The church was repaired and enlarged a few years back; there are chapels for Wesleyan and Primitive Methodists, National and Infant schools, and a Wesleyan school. Filey is resorted to as a bathing-place. Fishing is carried on to a considerable extent. *Flockton, W.*, population of the chapelry 1040, about 5 miles E. by S. from Huddersfield, contains a chapel of ease and an Independent chapel. The inhabitants are chiefly dependent on the neighbouring collieries. *North Frodingham, E.*, population of the parish 846, near the Hull River, about 5 miles S.E. from Great Driffield, was once a market-town. It contains, besides the parish church, chapels for Wesleyan and Primitive Methodists and Independents, and National and British schools. *Fulford Gate, E.* population of the township 1939, is a

pleasant village on the left bank of the Ouse, a mile and a half S. from York. Fulford contains the parish church, National and Infant schools, York barracks, and the excellent lunatic asylum of the Society of Friends, called the Retreat. *Gargrave, W.*, population of the township 1214, stands on the right bank of the Aire, 3 miles W. by N. from Skipton. Besides the parish church, there are chapels for Wesleyan and Primitive Methodists, and National and Infant schools. Factories for spinning worsted and cotton give employment to many of the inhabitants. On the Leeds and Liverpool Canal, which passes through the parish, are extensive warehouses. Petty sessions are held here. A large cattle-fair is held on December 11th. *Gildersome, W.*, population of the chapelry 2126, is about 4 miles S.W. from Leeds. Besides the ancient parochial chapel, there are places of worship for Wesleyan Methodists, Baptists, and Quakers. The inhabitants are chiefly employed in the woollen manufacture, and in the neighbouring coal-mines and quarries. *Glusburn, W.*, population of the township 1320, on the Aire, is 5 miles S. from Skipton. In the village are a Wesleyan and a Primitive Methodist meeting-house. The stuff manufacture is carried on. *Golcar, W.*, population of the chapelry 4212, is about 3 miles W. by S. from Huddersfield. The church was erected in 1829. There are two Free schools and a National school. At Golcar are several extensive factories of coarse woollen-cloths for the Huddersfield houses; fine cloth is also made. *Gomersal, W.*, population of the township 9926, is situated about 7 miles S.W. from Leeds. The Wesleyan Methodists, Independents, and Moravians have chapels. There are National and Infant schools, and a Moravian school for girls. The manufacture of woollen-cloths and worsted-yarns is carried on. *Hatfield, W.*, population of the township 1840, about 2 miles S.S.W. from Thorne, is a large and handsome village. The church, which is ancient, has a lofty tower. There are an Independent chapel and a National school. Nails, tiles, and bricks are made here. A fair is held on November 16th. Petty sessions are held in the village. William de Hatfield, second son of Edward III., was born here. Hatfield Chase, a level waste of 180,000 acres, was granted by Charles I. to Cornelius Vermuyden, who drained it at a vast and to himself ruinous expense. [A. HOLME, ISLE OF.] *Haworth, W.*, population of the chapelry 6848, is on the edge of the Morro, 10 miles W. by N. from Bradford. The village contains the district chapel, rebuilt in 1757; two chapels for Baptists, and one each for Wesleyan and Primitive Methodists; and National and Wesleyan schools. The manufacture of stuffs and worsted spinning are the chief occupations. *Headingley, W.*, about 2 miles N.W. from Leeds, population 6105, is chiefly dependent on the woollen manufacture. Several good villa residences are occupied by Leeds merchants. *Hebden Bridge, W.*, population of the ecclesiastical district 3763, about 8 miles E. by N. from Halifax town, is pleasantly situated near the junction of the rivers Calder and Hebden. An aqueduct of four arches, strongly built of stone, carries the Leeds and Liverpool Canal over the united streams. In the village are a district church, and chapels for Wesleyan and Association Methodists, and Baptists. The cotton and worsted manufactures, with spinning and dyeing, are carried on extensively. *Heckmondwike, W.*, population of the township 4540, about 8 miles E. by S. from Halifax, contains a chapel of ease, built in 1831, chapels for Wesleyan and Primitive Methodists and Independents, and National and Subscription schools. The blanket, carpet, woollen-cloth, and woollen-yarn manufactures are the chief sources of employment. Cattle-fairs are held in May and November. *Hesley, W.*, population of the ecclesiastical district 2662, is about 2 miles S. from Sheffield, of which it may be regarded as a suburb. The church is a neat cruciform gothic edifice, erected in 1848; there are a Wesleyan Methodist chapel and a National school. *Heptonstall, W.*, population of the township 4177, about 8½ miles W.N.W. from Halifax, has extensive cotton manufactures, with some mills for worsted spinning and the worsted manufacture. There are a chapel of ease, chapels for Wesleyan Methodists and Baptists, a Grammar school, and an Infant school. *Hessle, E.*, population of the parish 1576, on the left bank of the Humber, about 5 miles W. by S. from Hull, has a parish church, chapels for Wesleyan and Primitive Methodists, Free schools, and a small Endowed hospital. Hessle House is a lunatic asylum for female patients. Over the Humber is an ancient ferry. *Hipperholme, W.*, population of the township 6091, is about 2½ miles E. from Halifax; it is a place of residence for many persons engaged in business in Halifax. In the township are two Episcopal chapels and an Independent chapel, a Free Grammar school, and a National school. *Holme, E.*, population of the parish 1713, about 4 miles W.S.W. from Market Weighton, has an ancient parish church, chapels for Wesleyan and Primitive Methodists and Roman Catholics; National schools; a school supported by Wesleyan Methodists; and a Roman Catholic Free school. *Holme-ferth, W.*, population included with the parishes of Almondbury and Kirk Burton, is situated near the union of the Holme and Ribblesden streams, about 7 miles S. from Huddersfield. On both these streams there are mills for the woollen manufacture. There are also flour-mills, fulling-mills, hat manufactories, dye-works, machine-factories, &c. Holmeferth is lighted with gas. There is a town-hall, erected in 1842. Petty sessions and a county court are held here. Besides the Episcopal chapel, there are chapels for Wesleyan Methodists and Independents; a National school; and a mechanics institute, with a library, museum, and reading-room. Three annual fairs are held

On the night of the 4th of February, 1852, the Bilberry Dam reservoir, a short distance above Holmefrith, burst its embankments, carrying away many mills and dwelling-houses, and causing a great loss of life and destruction of property. Public sympathy was much excited, and a subscription was entered into, which reached so large an amount, that after alleviating as much as possible the distresses of survivors, more than a third of the sums subscribed was returned to the subscribers to the fund. The embankments of the reservoir have since been repaired and strengthened. *Honley, W.*, population of the township 5595, about 3½ miles S. from Huddersfield, has extensive manufactories of fancy and other woollen goods, dye-works, scribbling and fulling-mills, machine-factories, collieries, tan-works, &c. There are a chapel of ease, chapels for Wesleyan Methodists and Independents, National and Infant schools, and a mechanics institute. *Horbury, W.*, population of the chapelry 2803, is about 3 miles W.S.W. from Wakefield. The inhabitants are dependent on the woollen manufacture. It contains a handsome chapel of the establishment, erected by Mr. John Carr, architect, at his own cost; two Methodist chapels; a Free school, and National and Infant schools. *Horsforth, W.*, population of the chapelry 4584, about 5 miles N.N.W. from Leeds, has large manufactories for woollen-cloth, fulling-mills, paper-mills, flour-mills, stone-quarries, and malting-works. There are here a neat chapel, erected in 1775; a district church, and chapels for Wesleyan Methodists and Baptists. *Hovingham, N.*, population of the township 622, about 7 miles S.S.E. from Helmsley, has a parish church, a chapel for Wesleyan Methodists, and a Free school. In 1745, a Roman hypocaust and bath were found in the garden attached to Hovingham hall. *Hoyland, Nether, W.*, population of the chapelry 2912, is about 9 miles N. from Sheffield. The church was erected in 1831; there are a Wesleyan Methodist and an Independent chapel, a National school, and a mechanics institute. Lime-burning, tanning, nail-making, and malting are carried on. At Elsecar, in the chapelry, is a new church, erected in 1843, by Earl Fitzwilliam, who is proprietor of the Elsecar iron- and steel-works. At Milton iron-works, near Hoyland village, very extensive operations are conducted in iron manufactures, including steam-engines, bridges, and works of similar magnitude. *Idle, W.*, population of the chapelry 7118, about 3 miles N. by E. from Bradford, is pleasantly situated on elevated ground. Worsted spinning, several branches of the woollen manufacture, stone and slate quarries, malting, and basket-making furnish employment to many of the inhabitants. There are here a neat gothic church, chapels for Wesleyan and Primitive Methodists, Independents, and Baptists, and National and Infant schools. *Ilkley, W.*, population of the township 811, stands in a very picturesque situation on the right bank of the Wharfe, about 6 miles N.W. from Otley. Ilkley is resorted to in summer on account of a cold bath, the waters constituting which flow from the side of a high hill which overlooks the village. The Wharfedale Hydropathic establishment and hotel are at Ben Rhydding near Ilkley. There are here an ancient parish church, an old Free school, and a mechanics institute. *Kivham, E.*, population of the parish 1247, about 5 miles N.N.E. from Great Driffield, is pleasantly situated on a declivity of the Wolds. There are here an ancient and commodious parish church, chapels for Baptists, and Wesleyan and Primitive Methodists, a Free Grammar school, and National and Infant schools. Fairs are held on August 21st and November 12th. *Kirk Burton, W.*, population 3560, about 5 miles S.E. from Huddersfield, has a parish church, erected in the time of Edward III., chapels for Wesleyan and Primitive Methodists and Independents, and National and Free schools. The manufacture of fancy goods and of woollen-cloth is carried on. Fairs are held in April and October. *Kirk Heaton, W.*, population 3086, about 3 miles E.N.E. from Huddersfield, has an ancient parish church, three chapels for Methodists, and a free school. There are collieries, chemical-works, and dye-works. *Kirk Leatham, N.*, population of the township 789, is about 14 miles N.N.E. from Stokesley. Turner's hospital has an income of about 1600*l.* a year. *Kirkstall, W.*, population of the ecclesiastical district 2934, about 3 miles N.W. from Leeds, is chiefly known on account of its celebrated abbey, but has a considerable manufacture of woollens. There are also extensive iron-foundries, manufactories of machinery and steam-engine boilers, railway-wheels, agricultural instruments, and mechanical tools; and on the Aire are extensive corn-mills. A large and handsome gothic church, with a lofty spire, was erected here in 1831; the Wesleyan Methodists have a chapel, and there are National and Wesleyan schools. Kirkstall Abbey was founded for monks of the Cistercian order by Henry de Lucy in 1147. The remains consist of portions of the refectory, dormitory, chapter-house, and cloisters. *Knottingley, W.*, population of the chapelry 4540, is a large and busy village on the right bank of the Aire, at its junction with the Knottingley and Goole Canal, 2½ miles N.E. from Pontefract. Christ church is a handsome edifice erected in 1848; there is also a chapel dedicated to St. Botolph. The Wesleyan Methodists and Independents have places of worship, and there are National, British, and Infant schools, and Banks's Free school for girls. There is a marine insurance society. The village is lighted with gas. There are large brick- and tile-works, lime-works, and potteries; also corn-mills of great power. Brewing is carried on, and there are yards for building of boats and vessels of light burden. *Lepton, W.*, population of the township 8592, is about 3½ miles E. by

S. from Huddersfield. The manufacture of woollen-cloth and of fancy woollen goods, the making of cards for jacquard looms, scribbling and fulling-mills, and chemical works, furnish employment to the working population. *Linthwaite, W.*, population of the township 3802, about 4½ miles S.W. from Huddersfield, has a district church, two chapels for Baptists, two for Wesleyan Methodists, and a National school. The manufactures are those of woollen-cloth and small wares. *Lytke, N.*, population of the township 1094, is on the coast, 4 miles N.W. from Whitby. The church was restored a few years back; there is a Dissenting chapel. Many of the inhabitants are employed in alum-works. *Marsden, W.*, population of the chapelry 2665, about 7 miles S.W. from Huddersfield, is situated on the banks of the rivers Wessenden and Colne. The woollen-cloth manufacture is extensively carried on. There are also a mill for the spinning of silk and a very extensive iron-foundry, in which water-wheels, steam-engines, steam-engine boilers, and other large pieces of machinery are made. There are in Marsden a chapel of ease, chapels for Wesleyan Methodists and Independents, a National school, a Town school, and a school conducted by Independents. Fairs are held at Marsden in April, July, and September; that in September is a great cattle fair. *Medham, W.*, population of the chapelry 3758, about 5 miles S.S.W. from Huddersfield, contains numerous mills for the manufacture of woollen-cloth; for cotton-spinning; for the manufacture of sewing-cotton; and for silk-throwing. There are also collieries, an iron-foundry, dye-works, and fulling-mills. In 1835 the parish church was enlarged, and the present tower erected. There are chapels for Baptists and Wesleyan Methodists, and a Church school. *Meorborough, W.*, population of the township 1506, is about 6 miles N.N.E. from Rotherham. Besides the parish church, a spacious ancient edifice with a tower and spire, there are chapels for Wesleyan, Primitive and New Connexion Methodists; and National and British schools. Here are an extensive iron-foundry, engineering and railway wheel-works; the Don bottle- and glass-works; an extensive pottery; and stone-quarries and collieries. *Mirfield, W.*, population of the parish 6966, about 3 miles W. by S. from Dewsbury, has a large share of the woollen-cloth manufacture; malting is carried on, and there are several corn-mills. There are here an ancient parish church; chapels for Wesleyan, Primitive, and New Connexion Methodists, Baptists, and Moravians; a Moravian school, and a National school. *Monk Bretton, W.*, population of the township 1810, is 2 miles N.E. from Barnsley. Besides the church there are Wesleyan and Primitive Methodist chapels, National schools, and Talbot's hospital for six poor widows. The inhabitants are chiefly employed in linen-weaving and bleaching. *Morley, W.*, population of the township 4821, about 4 miles W. from Leeds, has manufactories of woollen-cloth. In the village are a parochial chapel; chapels for Wesleyan and Primitive Methodists, and Independents; National schools, and schools supported by Independents and Wesleyan Methodists. *Newport Walfingen, or New Village, known also as Riverbridge, E.*, population of the township 873, about 7 miles E. by N. from Howden, is a village of recent origin. The place was a fen, or uncultivated morass, but towards the close of last century, the manufacture of bricks, tiles, and coarse earthenware was commenced, and has continued to increase. There are chapels for Wesleyan and Primitive Methodists. *Norton [NEW MALTON]. Osmotherley, N.*, population of the township 985, is about 7 miles E.N.E. from Northallerton. There are here a parish church, places of worship for Wesleyan Methodists, Quakers, and Roman Catholics; and a National school. Linen-weaving and bleaching are carried on. *Osett, W.*, population of the joint township of Osett with Gawthorpe 6266, about 4 miles W. from Wakefield, is important for its extensive woollen manufactures; worsted-spinning also employs many of the inhabitants. There are here a district church, chapels for Wesleyan and Primitive Methodists and Independents; National, Free, Wesleyan Methodist, and Infant schools; and two subscription libraries. *Oulton, or Oulton, W.*, population of the township 1771, about 5 miles S.E. from Leeds, is a neat village, containing a fine gothic church, with a lofty spire, a chapel for Wesleyan Methodists, and National and Infant schools. Tanning, paper-making, nail-making, malting and brewing are carried on. *North Owsam, W.*, population of the township 15,285, about 2 miles N.N.E. from Halifax, has extensive stuff manufactories, and stone-quarries. There are a chapel for Independents, and an Infant school. *South Owsam, W.*, population of the township 7880, about 2 miles S.E. from Halifax, possesses important stone-quarries; and many of the inhabitants are engaged in the worsted manufacture. There are here a chapel of ease, a chapel for Wesleyan Methodists, and a National school. *Paddock [HUDDERSFIELD]. Paul, or Paghil, E.*, population of the township 606, about 2 miles S.W. from Hedon, on the left bank of the Humber, possesses an extensive shrimp fishery. Several line-of-battle ships were built here during the French war. Paul's church is a small cruciform church of the decorated style. A lighthouse was erected at Paul in 1886. *Pudsey, W.*, population of the ecclesiastical district 1948; of the township 11,603, about 4 miles E. by N. from Bradford, possesses extensive manufactories of woollen-cloth. There are here a handsome gothic church, chapels for Wesleyan and New Connexion Methodists, and Independents, and National schools. Rope-making, tanning, hat-making, and brewing are carried on. *Rastrick, W.*, population of the chapelry 3917, is about 6 miles S.E. from Halifax. Machine-making, card-making, and the manufacture of stuff and fancy

goods, employ some of the population. The village possesses a neat church, places of worship for Independents and Quakers, an Endowed Free school, and a British school. *Rawmarsh, W.*, population of the parish 2583, about 2 miles N. by E. from Rotherham. In the vicinity are extensive steel-works, a manufactory of sheet-iron and rails for railways, and considerable pottery establishments. There are here a parish church, two chapels for Dissenters, a Grammar school, and an Infant school. *Redcar, N.*, population of the township 1032, about 6 miles N. from Guisborough, is situated on the shore of the North Sea, near the mouth of the river Tees. The coast at this point is extremely dangerous, in consequence of which a life-boat is maintained at the place. The town is much resorted to by visitors for sea-bathing. *Ripponden, W.*, is about 6 miles S. from Halifax, finely situated on the river Ryburn, in a fertile vale. There are here cotton-spinning establishments, and manufactures of fustians and other cotton goods. In the village are a district church and a National school. Cattle fairs are held on the Wednesday in Easter week, and the Thursday after Michaelmas day. *Rishworth, W.*, population of the township 1540, is about 7 miles S.S.W. from Halifax. Wheelwright's School, established in 1725, has an income from endowment of about 2000*l.* a year. The inhabitants are largely engaged in cotton-spinning. *Rothwell, W.*, population of the township 3052, about 6 miles N. by E. from Wakefield, has a parish church, a chapel for Wesleyan Methodists, and National, Wesleyan, and Infant schools. Near the church are remains of a castle or castellated mansion. Rope- and twine-making, basket-making, malting, hat-making, and paper-making, are carried on in the village. *Ruswarp, N.*, population of the township, 2163, is about 2 miles S. from Whitby. Across the Eak here the Whitby and Pickering railway is carried by a wooden bridge of excellent construction. At a short distance is an elegant suspension-bridge. *Saltwaite, W.*; the village of this name will be found under *Manufactures*, ante, col. 1205. *Great Sandall, W.*, population of the township 1586, about 2 miles S.E. from Wakefield, possesses a neat parish church, a Free school, a School of Industry, and an Infant school. *Shipley, W.*, population of the township 3272, is about 3 miles N. by W. from Bradford, on the right bank of the river Aire. The woollen manufacture employs many persons in the village. The making of machines, railway-carriage wheels, whiting, and paper is carried on. There are here a district church, chapels for Wesleyan Methodists and Baptists, a Church school, and a British school. *Silkestone, W.*, population of the township 1037, is about 3 miles W. from Barnsley. The church is of the early English style. There are chapels for Wesleyan and Primitive Methodists, and a National school. The collieries of the neighbourhood are very extensive. *Siladen, or Sighelden, W.*, population of the hamlet 2508, is about 4 miles N. from Keighley. Considerable quantities of nails are made here. There is a handsome gothic church, rebuilt in 1815, with a fine square tower. In the village is a National school. *Skelmanthorpe, W.*, about 8 miles N.W. by W. from Barnsley. A handsome new church and school-house have been recently erected. The Wesleyan and Primitive Methodists have places of worship, and there is a National school. Fancy woollens are manufactured here. *Staithe, W.*, population of the chapelry 2852, about 5 miles S.W. from Huddersfield, possesses extensive manufactories of woollen-cloth and small wares. Cotton-spinning, machine-making and brewing are carried on; and there are fulling- and scribbling-mills. There are here a large chapel of the Establishment, a National school, and a Classical and Commercial academy. *Sowerby, or, as it is commonly called, Sowerby Town, W.*, population of the township 7908, about 3½ miles S.W. from Halifax, stands on an elevated site. In the chapel of ease is a statue of Archbishop Tillotson, who was born at Sowerby. A district church was erected in 1840 in the Norman style, and dedicated to St. George. The Wesleyan Methodists, Independents, and Baptists have chapels, and there is a National school. Weaving and wool-combing are carried on to a large extent. *Spafforth, W.*, population 1118, about 15 miles W. from York, has a parish church and a chapel for Wesleyan Methodists. This place was in ancient times the chief seat of the Percy family. Of the castle, there are ruins of the grand hall, upwards of 70 feet long, with large pointed gothic windows. *Stainland, W.*, population of the township 4173, is about 4 miles S. from Halifax. The woollen manufacture and cotton spinning employ a considerable number of the inhabitants. There are here a church, erected in 1840, and chapels for Wesleyan Methodists and Independents. *Staithe, N.*, population included in the chapelry of Roxby, is situated on the coast, about 11 miles N.W. by W. from Whitby. The inhabitants cure a considerable portion of their take of herrings for exportation. A short distance along the coast westward are extensive alum-works. *Stanningley, W.*, population included with the parishes of Leeds and Calverley, is about 3½ miles N.E. from Bradford, on the road between Bradford and Leeds. There are in the village a district church, chapels for Wesleyan and Primitive Methodists and Baptists, and a Town's school. Besides woollen and worsted manufactories there are extensive iron-foundries; and factories for steam-engines and railway wheels, and for machines used in the woollen manufacture. *Stannington, W.*, is 4 miles W. by N. from Sheffield: population of the ecclesiastical district 2856. The church was erected in 1830; there are a Wesleyan Methodist and a Unitarian chapel, and a National school. *Swinfleet, W.*, population of the township 1162,

on the right bank of the river Ouse, about 2 miles E. by S. from Goole, has a chapel of ease, an ancient brick building; chapels for Wesleyan and Primitive Methodists; a National school; and a school supported by Wesleyan Methodists. *Swinston, W.*, population of the chapelry 1817, about 5 miles N. by E. from Rotherham, is the chief seat of the china and earthenware manufacture in this part of the country. The principal works are the well-known Rockingham Works and the Don Pottery. There are also iron-works, stone-quarries, and collieries. St. Mary's church was rebuilt in 1816; there are chapels for Wesleyan Methodists and Independents; a National and an Infant school. *Thornhill, W.*, population of the township 2791, is about 2 miles S. from Dewsbury, on the right bank of the river Calder. The parish church is an early English structure. There are chapels for Wesleyan Methodists and Baptists, a Free Grammar school, and a Free school. Tanning, lime-burning, malting, and boat-building are carried on. In the vicinity are chemical-works, glass-bottle-works, iron-works, and coal-mines. *Thornton, W.*, population of the township 8051, about 4 miles W. from Bradford, is largely engaged in the worsted manufacture; there are here a chapel of ease, chapels for Wesleyan Methodists and Independents, and National and Free schools. The manufacture of Heald yarn, shuttle-making, and clog-making, give some employment. *Thornton Dale, N.*, population of the parish 927, about 2½ miles E. by S. from Pickering, contains, in addition to the parish church, chapels for Wesleyan and Primitive Methodists, Lady Lumley's Free Grammar school, almshouses, and a British school. *Thurstone, W.*, population of the township 2018, is one mile and a half W. from Penistone, in the midst of a wild moorland tract. The Wesleyan Methodists and Independents have places of worship. The woollen-cloth manufacture is carried on; in the vicinity are numerous gritstone-quarries. *Thurstonland, W.*, population 1320, is about 7 miles S. from Huddersfield, in the Holme-firth valley. The inhabitants are engaged in the woollen manufactures, and in the coal-mines of the vicinity. There are here a chapel of ease, a chapel for Wesleyan Methodists, and a Free school. *Topcliffe, N.*, population of the township 710, about 4 miles S.S.W. from Thirsk, occupies a romantic situation on the left bank of the river Swale. The parish church is of considerable antiquity: the Wesleyan Methodists have a chapel, and there is a Grammar school. Fairs for sheep, horned cattle, and horses are held on July 17th and 18th. In the parish are some remains of Maiden Bower, a seat of the Percys. *Wadley, W.*, population of the ecclesiastical district 4333, occupies a pleasant situation on an eminence above the right bank of the Don, 4 miles N.W. from Sheffield. There are here a neat gothic church, and Free, National, and Infant schools. The inhabitants are engaged in the manufacture of the coarser kinds of pocket-knives. At Wadley Bridge are extensive steel-works. *Wath-upon-Dearne, W.*, population of the township 1495, is situated on a slope near the Dearne and Dove Canal, 5 miles N. by E. from Rotherham. Besides the parish church there are a Wesleyan Methodist chapel, an Endowed Free school, a Girls and an Infant school. Many of the inhabitants are employed in extensive potteries, iron-works, and collieries. *Wellton, E.*, population of the township 682, about 10½ miles E. from Hull, has a very ancient parish church, a Wesleyan Methodist chapel, and a National school. *Wentworth, W.*, population of the township 1556, is pleasantly situated about 4 miles N.W. from Rotherham. Besides the parish church there are Free, National, and Infant schools, a mechanics institute, and an hospital for six poor men and six poor women. Wentworth is the property of Earl Fitzwilliam, whose splendid seat, Wentworth House, stands in a fine park, a little to the south-east of the village. The mansion has a facade 300 feet long; the gallery, 130 feet long, contains a fine collection of paintings by the great Italian masters. In the park is a mausoleum erected in honour of the celebrated Marquis of Rockingham. *Whitely, W.*, population of the township 636, about 11 miles N.W. by W. from York, has a parish church, a Wesleyan Methodist chapel, and Tancred's hospital for 12 decayed gentlemen. Tanning is carried on, and in the vicinity are market-gardens and nurseries. *Widens, W.*, population 3454, about 5 miles N.W. from Bradford, has extensive manufactories of worsted-yarn and worsted-cloth. There are a district church, chapels for Wesleyan Methodists and Independents, National schools, and a mechanics institute. *Witton, East, N.*, population of the parish 610, is pleasantly situated about 2 miles S.E. from Middleham. The church is a neat building, erected about 1810 by the Marquis of Ailesbury. The village is the property of the Marquis of Ailesbury, whose mansion is at a short distance from the ruins of Jervaulx Abbey. This abbey was founded about the middle of the 12th century. The ruins are much visited. *Wooddale, W.*, population of the township 5600, about 5½ miles S. from Huddersfield. The woollen-cloth manufacture and the collieries are the chief sources of employment. The Wesleyan Methodists and Quakers have places of worship, and there is a Wesleyan school. *Worsborough, W.*, population of the township 4250, is situated in Worsborough Dale, 3 miles S. from Barnsley. Besides the parochial chapel, which is ancient, the Wesleyan Methodists have a chapel, and there is a Free school. In the village and its immediate neighbourhood are iron- and glass-works, paper-mills, and collieries. *Yeadon, W.*, population of the ecclesiastical district 4109, about 3½ miles S. by E. from Otley, is a busy manufacturing village, with a new church, and chapels for Wesleyan and Primitive Methodists.

Divisions for Ecclesiastical and Legal Purposes.—Yorkshire is in the archiepiscopal province of York. The county is divided between the dioceses of York and Ripon, which are subdivided as follows:—The diocese of York consists of the archdeaconry of York, or the West Riding, containing the deaneries of the city of York and Ainsty, and of Doncaster; the archdeaconry of the East Riding, containing the deaneries of Buckrose, Dickering, Harthill and Hull, of South Holderness, and of North Holderness; and the archdeaconry of Cleveland, containing the deaneries of Bulmer, Cleveland, and Ridall. The diocese of Ripon consists of the archdeaconry of Craven, containing the deaneries of Craven and of Pontefract; and the archdeaconry of Richmond, containing the deaneries of Boroughbridge, Richmond, Ripon, Catterick, and Clapham.

Yorkshire is in the northern circuit, and the assizes are held at York. The quarter sessions for the city are held at York, those for the East Riding at Beverley, those for the North Riding at Northallerton, and those for the West Riding at Pontefract, Skipton, Bradford, Rotherham, Knareborough, Leeds, Doncaster, Wakefield, and Sheffield. County courts are held at Barnsley, Beverley, Boston, Bradford, Bridlington, Dewsbury, Doncaster, Great Driffield, Easingwold, Goole, Halifax, Hedon, Helmsley, Holmfirth, Howden, Huddersfield, Keighley, Kingston-upon-Hull, Knareborough, Leeds, Leyburn, New Malton, Northallerton, Otley, Pocklington, Pontefract, Richmond, Ripon, Rotherham, Saddleworth, Scarborough, Selby, Settle, Sheffield, Skipton, Stokesley, Thirsk, Thorne, Wakefield, Whitby, and York. In our notice of PICKERING it is erroneously stated that a county court is held in that town. The county jail is at York, the house of correction for the North Riding at Northallerton, that for the East Riding at Beverley, and that for the West Riding at Wakefield; and there are other prisons at York, Richmond, Beverley, Hull, Leeds, Bradford, Knareborough, Ripon, Pontefract, Rotherham, Doncaster, Halifax, Sheffield, and Rothwell. A new lunatic asylum for the East and North Ridings, capable of containing 320 patients, has been recently erected at Clifton near York, at a cost of about 50,000*l.* The lunatic asylum for the West Riding is at Wakefield. For poor-law purposes the three Ridings are treated as distinct counties. By the Poor-Law Commissioners the East Riding is divided into 10 Poor-Law Unions:—Beverley, Bridlington, Driffield, Howden, Kingston-upon-Hull, Patrington, Pocklington, Seuloates, Skirlaugh, and York. These unions include 370 parishes and townships, with an area of 714,661 acres, and a population in 1851 of 250,463. The North Riding is divided into 16 unions:—Bainbridge, Bedale, Easingwold, Guisborough, Helmsley Blackmoor, Kirkby Moorside, Leyburn, Malton, Northallerton, Pickering, Reeth, Richmond, Scarborough, Stokesley, Thirsk, and Whitby. These unions include 485 parishes and townships, with an area of 1,218,180 acres, and a population in 1851 of 195,735. The West Riding is divided into 30 unions:—Barnsley, Barwick, North Bierley, Bradford, Carlton, Dewsbury, Doncaster, Ecclesall Bierlow, Goole, Halifax, Hemsworth, Huddersfield, Keighley, Knareborough, Leeds, Ouseburn, Pateley Bridge, Penistone, Great Preston, Ripon, Rotherham, Saddleworth, Sedburgh, Selby, Settle, Sheffield, Skipton, Thorne, Wakefield, and Wortley. These unions include 642 parishes and townships, with an area of 1,602,584 acres, and a population in 1851 of 1,237,675.

Each of the three Ridings of Yorkshire has a distinct lord-lieutenant. The county of York anciently sent two members to parliament, but this number was increased to four before the passing of the Reform Act, by the addition of two members taken from the disfranchised borough of Grampound, in Cornwall. Under the Reform Act each of the three Ridings has the right of electing two members, those for the North Riding being elected at York, those for the West Riding at Wakefield, and those for the East Riding at Beverley. The same Act disfranchised the boroughs of Aldborough, Boroughbridge, and Hedon; reduced Thirsk and Northallerton from two members each to one each; gave one member each to Huddersfield, Wakefield, and Whitby; and two each to Bradford, Halifax, Leeds, and Sheffield. The places which formerly sent members, and retained two each under the Reform Bill, are Beverley, Hull, Knareborough, New Malton, Pontefract, Richmond, Ripon, Scarborough, and York. The total number of members returned from the county prior to the Reform Act was 32; the number abolished by that Act was 8, and the number added 13; thus making the present number of representatives 37.

History and Antiquities.—At the time of the invasion of Britain by C. Julius Cæsar, this part of the island, together with the neighbouring counties, was inhabited by the Brigantes. The Roman power was not established in this district until the reign of the Emperor Vespasian, when, about the year A.D. 71, the Brigantes were subdued by Petilius Cerialis. Nearly half a century later, about the year 120, the Emperor Hadrian formed a wall or rampart of earth across the island from Solway Frith to the German Ocean, and subsequently took up his residence for a time at Eboracum, now the city of York. After Hadrian left, the Brigantes attempted to throw off the Roman yoke; but the next remarkable event in the history of Yorkshire is the visit of the Emperor Septimius Severus, who, about the year 206 or 207, came over in person, and after proceedings of which a brief account is given under BRITANNIA, died about the year 210 or 211, at York. The Emperor Constantius Chlorus resided for a considerable

time at York, and died there in 306 or 307; and his son Constantinus, commonly called Constantine the Great, was proclaimed emperor at that city by the soldiery.

Being chosen by the Romans as an occasional residence and a centre of government, York and the surrounding country were supplied with many marks of their power and skill. They bestowed great attention upon the public roads. The Watling-street entered the county from Nottinghamshire near Bawtry, and, according to Baines, "it has been traced by Doncaster, over Scausby and Pigburn Leas to Barnsdale, through Pontefract to Castleford, a little below the junction of the Aire and Calder, from which point the road was conducted by Tadcaster to York." Another military road led from Mancunium, now Manchester, to York, and passing by Stainland, about 5 miles S. from Halifax, and Almondbury, about 2 miles S.E. from Huddersfield, crossed the Calder about a mile below Dewsbury, and proceeded along the line of the present turnpike-road to Wakefield, whence it continued in the direction of the present road about half way to Pontefract, and then, turning to the left, joined the military way from Doncaster to York. The Romans had numerous other roads of minor importance in the county. Traces of Roman encampments, as well as of Saxon and Danish encampments, may be found in several parts of the county; and Roman antiquities have been discovered in many places, especially in York and its vicinity. The Wolds contain many tumuli; and of the other prehistoric antiquities may be mentioned a curious assemblage of rocks called Bramham Crags, about 9 miles N.W. from Ripon, which from indications of rude sculpture have been by many supposed to have been a Druidical temple; and three gigantic obelisks or single stones, called the Devil's Arrows, noticed under BOROUGHBRIDGE. The principal Roman stations were at Eboracum, now York; Cataracton, or Cataractonium, now Catterick; Cambodunum, at Slack; Laurium, at Aldborough; Legiolium, a little below the junction of the Aire and Calder; Danum, at Doncaster; Olicana, or Alicana, at Ilkley; Calcaria, at Tadcaster; Derwentio, near Stamford Bridge; Delgovitia, near Londesborough; and Prætorium, at Flamborough.

Yorkshire formed part of the British kingdom of Deifyr, or Deira. The boundaries of the Saxon and subsequently the Danish kingdom of Northumbria, in which Deira was included, varied frequently with the fortunes of war, but it generally included the greater part of Yorkshire. Of the history of the kingdom of Northumbria, and the varying governments of its principal divisions, Bryneich, or Bernicia, in the north, and Deifyr, or Deira, the southern or Yorkshire division of the kingdom, an account is given under NORTHUMBERLAND. Christianity appears to have been introduced into Yorkshire about the year 628, during the reign of Edwin, king of Northumbria. The history of this district down to the time of Harold, the last of the Anglo-Saxon kings, is noticed in the article NORTHUMBERLAND. Of the events which followed Harold's victory at Hastings, so far as they relate to this county, some particulars are stated under YORK. In the Domesday Survey, Yorkshire is called Ewrewickscire, and appears then to have comprehended very nearly its present limits.

In the year 1138, during the reign of Stephen, the north of England, as far as York, was invaded and ravaged by David, king of Scotland, who was defeated near Northallerton, at the famous battle of the Standard. Piers Gaveston, the favourite of Edward II., was taken prisoner in Scarborough Castle, by the earls of Pembroke and Warren. In 1318 the northern part of the county was ravaged by the Scotch under Douglas. In the following year another invasion of the Scotch, under the Earl of Murray, advanced as far as York, and set fire to the suburbs, an indignity which so roused the Archbishop of York, that he, accompanied by the Bishop of Ely and a great number of clergymen, collected an army of about 10,000 men, and pursued Murray as far as Myton on the river Swale, about 12 miles from York, where a battle was fought, in which the English were routed. Shortly after, in 1321, Thomas, earl of Lancaster, leader of the barons, was defeated and taken prisoner at Boroughbridge; and he, with several of his party, was shortly afterwards beheaded at Pontefract. In 1347, David Bruce devastated the country as far as York, but was defeated by the English under Queen Philippa, at Neville's Cross, near Durham. Yorkshire formed the scene of many interesting events during the struggle between Richard II. and Bolingbroke, afterwards Henry IV. Richard II., after his deposition, was confined, successively, in the castles of Leeds, Knareborough, and Pontefract. In 1405 one of the conspiracies formed for the purpose of deposing Henry IV., by Percy, earl of Northumberland, Mowbray, earl marshal, and several other northern barons, and headed by Soroop, archbishop of York, was defeated by some of the leaders being drawn into a conference, and taken prisoners, and beheaded. Percy escaped on this occasion, but in February, 1408, being again in arms, he was defeated and slain at the battle of Bramham Moor, near Tadcaster, by Sir Thomas Rokesby, then sheriff of Yorkshire. During the long war between the houses of York and Lancaster this county was the scene of several remarkable events, among which was the defeat of Richard, duke of York, by the army of Queen Margaret, in 1460, at the battle of Wakefield, in which he lost his life. In the battle of Towton, when Richard's son, Edward IV., defeated the forces of Henry VI., the total number slain is reported to have been 38,776, including many leaders of distinction. Events having turned in favour of Henry, Edward fled to Holland in 1470; but in March of the following year he returned to England, landed at

Ravenspur with 2000 men, and, being well received, proceeded to York, where he planted a garrison, and thence marched towards London, and won the battle of Barnet, which established him on the throne.

During the reign of Henry VII. an insurrection of the northern counties against a new land-tax took place, but was eventually put down by the Earl of Surrey. In the following reign an insurrection was raised by Robert Aske, Lord D'Arcy, Sir Robert Constable, Sir Thomas Percy (brother to the Earl of Northumberland), and other powerful persons, to oppose the sweeping changes involved in the suppression of monasteries and other religious establishments; and, in consequence of the sacred character of the objects for which, professedly, they took up arms, they styled their march 'The Pilgrimage of Grace.' A similar but less important insurrection was raised in 1587 near Scarborough and Malton; the rebels obtained possession of Hull, and held it for about a month. A third insurrection, raised in the same neighbourhood in 1548, was dispersed with less difficulty.

Some of the earliest movements in the civil war by which Charles I. was dethroned took place in this county, Charles having, early in the year 1642, left London for York, where his adherents flocked to him. The sieges of HULL are noticed under that town, and many of the other proceedings under YORK. In 1643 Leeds was taken for the Parliament by Sir Thomas Fairfax, who subsequently took possession of Bradford, where he was besieged by the Earl of Newcastle, who failed in his attempts to carry the place by storm, but subsequently obtained possession owing to the exhaustion of the ammunition of the garrison, Fairfax escaping with a party of horse by cutting his way through the ranks of the besieging army. In the same year Queen Henrietta Maria landed at Bridlington with a supply of arms, which were safely conveyed to York, where she remained three months. The Earl of Newcastle subsequently defeated Fairfax at Beverley. In 1644 Fairfax gained a battle against the Royal forces near Selby, and afterwards, with the Scottish forces of the Earl of Leven, laid siege to York; but receiving intelligence of the approach of Prince Rupert, they raised the siege after it had been continued from April 19th to June 30th, and went to Marston Moor with a view of meeting the Royal army, which however having taken a different route arrived at York. Contrary to the advice of the Marquis of Newcastle, Prince Rupert left York on the 2nd of July to give battle to the Parliamentary army, by which he was completely routed in the destructive battle of Marston Moor. The Parliament soon afterwards obtained possession of York, after it had sustained in the whole siege 22 assaults; and they also took Tickhill Castle, Sheffield Castle, Knarborough town and castle, Helmsley Castle, and the town of Pontefract. At Scarborough the Royalists made a vigorous and protracted defence, but both town and castle at length fell into the hands of the Parliament. An insurrection was raised in the West Riding in 1663 by a body of misguided people, led by old parliamentary soldiers and others disaffected to the restored government; but it was quickly suppressed.

Among the more remarkable antiquities of Yorkshire, excepting those of the city of York itself, are the remains of the following fortresses:—Conisborough or Conisborough Castle, about 6 miles W. from Doncaster, is one of the earliest and most interesting ruins of the kind in England; in its immediate vicinity is a tumulus; Knarborough Castle, which was in a great measure destroyed during the civil wars, and about a mile from which, on the summit of a hill, are the remains of an ancient camp; Pontefract Castle, the walls of which were of enormous thickness, and which formerly covered seven acres; Skipton Castle, which, as well as that of Pontefract, was erected shortly after the Norman conquest; and the castles of Cawood, Harewood, Great Sandall, Sheffield, and Tickhill: these are all in the West Riding. The principal buildings of this character in the North Riding were the castles of Helmsley, Malton, Mulgrave, Pickering, Richmond, Scarborough, Sheriff-Hutton, and Skelton; while the more important castle in the East Riding was that of Wressle, an ancient seat of the Percys. There are a few ancient mansions in the county which remain tenable, among which are Temple Newsome, near Leeds, and Gilling Castle, near Helmsley.

The county of Yorkshire contained, according to Burton's 'Monasticon Eboracense, or Ecclesiastical History of Yorkshire,' about 106 religious houses, of which 14 were abbeys, 44 priories, 7 alien priories, 18 cells, and 28 houses of priors of various orders. There were also three preceptories, and three commanderies in the county. Of the above ecclesiastical establishments many ruins yet exist, some of which are exceedingly beautiful. The principal ruins of abbeys are those of St. Mary's, at York; of Fountains, Kirkstall, Roche, and Selby, in the West Riding; and of Byland, Rievaulx, and Whitby, in the North Riding. The chief priories are Bolton and Knarborough, in the West Riding; Guisborough, Mountgrace, and Wikeham, in the North Riding; and Bridlington, Kirkham, and Walton, in the East Riding. Many of the churches present striking specimens of ecclesiastical architecture, and some of them contain curiously sculptured ancient fonts.

Statistics, Religious Worship, and Education.—According to the Returns of the Census in 1851, it appears that there were then in Yorkshire 3609 places of worship, of which 1855 belonged to Methodists, as follows:—Original Connexion of Wesleyan Methodists, 1177;

Primitive Methodists, 476; Reformers, 77; New Connexion, 73; Wesleyan Association, 52. The Church of England had 1143 places of worship, Independents 242, Baptists 126, Roman Catholics 65, Quakers 58, Unitarians 23, Plymouth Brethren 17, Mormons 11, Swedenborgians 6, Presbyterians 4, and Jews 4. The total number of sittings provided was 1,006,156. Of Day schools there were 4684, of which 1595 were public schools with 141,735 scholars, and 3089 were private schools with 84,897 scholars. The number of Sunday schools was 2486, of which 1031 belonged to the Established Church. The total number of Sunday scholars was 277,669. There were 258 Evening schools for adults, with 8019 scholars, of which 237, with 7785 scholars, were in the West Riding. The literary and scientific institutes were returned as follows:—

Divisions.	Institutes.	No. of Members.	Volumes in Libraries.
East Riding, with York city	17	3,099	15,467
North Riding	17	2,082	13,734
West Riding	154	19,953	123,926
Total	188	25,134	152,127

Savings Banks.—In 1853 Yorkshire possessed in all 36 savings banks—at Barnsley, Bedale, Beverley, Birstal and Batley, Bradford, Doncaster, Goole, Guisborough, Halifax, Harewood, Howden, Huddersfield, Keighley, Kingston-upon-Hull, Knarborough, Leeds, Leyburn, Malton, Middlesborough-on-Tees, Northallerton, Otley, Pickering, Pontefract, Richmond, Rotherham, Saddleworth, Scarborough, Settle, Sheffield, Skipton, Stokesley, Thirsk, Wakefield, Wentworth, Whitby, and York. The total amount owing to depositors on November 20th, 1853, was 2,625,057*l.* 1*s.* 2*d.*

YOUGHAL, county of Cork, and province of Munster, Ireland; a sea-port, borough, market- and post-town, and the seat of a Poor-Law Union, about 31 miles E. from Cork, in 51° 57' N. lat., 7° 52' W. long.; population 7410 in 1851, besides 1801 in the Union workahire. The borough is governed by commissioners elected under the Act 9 Geo. IV. cap. 82; and returns one member to the Imperial Parliament. Youghal Poor-Law Union comprises 14 electoral divisions, with an area of 70,624 acres, and a population in 1851 of 32,588.

Youghal stands at the mouth of the Blackwater, which here separates the eastern extremity of the county of Cork from the adjacent county of Waterford. The town is built along the western shore of Youghal harbour, which is capable of receiving vessels of 400 or 500 tons at spring-tides. The harbour is safe and commodious; but though vessels drawing 12 feet water may float off the town, the entrance is obstructed by a bar, on which there are only 5 feet of water at low tides, and 13 feet at high-water of neap tides. A harbour lighthouse has been lately erected at the southern end of the town. The streets are paved, lighted with gas, and cleansed under the superintendence of the town commissioners. Youghal is much frequented for sea-bathing during the summer season, having a fine, smooth, and level strand extending nearly three miles along the bay.

The old church formerly belonged to a collegiate establishment founded in 1464 by one of the earls of Desmond. It was a magnificent structure, in the decorated style, of which the nave and aisles have been converted into a parish church. There is a small chapel of ease in a pseudo-gothic style, near the south end of the town, on the cemetery of the ancient Dominican friary. The town also contains a handsome Roman Catholic chapel with a spire; a convent for nuns of the Presentation order, attached to which are a small chapel, and girls National schools; places of worship for Independents, and Wesleyan and Primitive Methodists; two or three Endowed and several other schools. The Clock Gate, a curious old structure, a remnant of the old fortifications, which stands across the principal street and divides the town into north and south, consists of an archway, above which is a square tower of four stories, surmounted by a clock turret. There are besides a town-hall, a court-house, a savings bank, a fish-market, the Union workhouse, a prison, an infirmary, a fever hospital, a dispensary, a lying-in hospital, and other benevolent institutions.

Although a dependency to Cork, the port of Youghal has a considerable trade, for the accommodation of which there are extensive and commodious quays, and a custom-house. The exportations consist chiefly of agricultural produce, and the importation of coal, culm, timber, Staffordshire ware, porter, and groceries. An extensive fishery is carried on along the coast. The salmon fishery of the Blackwater is important, and employs numerous hands.

The chief manufactures are of bricks, coarse pottery, ropes, and malt liquors. There are also establishments for the purchase and exportation of salmon in ice; and near the town is a quarry of good building-stone. In the town are police barracks, infantry barracks, and a coast-guard station. Quarter and petty sessions are held. The market is held twice a week, and there are fairs on the first Thursday of every month, and on Ascension day.

About a mile and a half north-east of the town, the Blackwater is crossed by a light and elegant timber bridge. The bridge is approached by a raised causeway 1500 feet in length, and is itself 1787 feet long,

including a drawbridge of 40 feet; it is 22 feet wide between the railings; and is supported by 57 sets of piers or pillars. Among the interesting objects in the town is the house called Myrtle Grove, which some say was erected, and which doubtless was for a considerable time inhabited, by Sir Walter Raleigh, in 1586. Raleigh was mayor of the town in 1588, and here, according to tradition, the first potatoes brought by him from America were planted. There are some ruins of the old Dominican priory; considerable remains of the old wall, especially on the western side of the town; and there are several ancient houses in the town and neighbourhood.

YOULGREAVE. [DERBYSHIRE.]

YOKAL, [STAFFORDSHIRE.]

YOXFORD. [SUFFOLK.]

YPRES. [FLANDERS, West.]

YRIELX, ST. [VIENNE, HAUTE.]

YSENNEAUX. [LOIRE, HAUTE.]

YTHAN, RIVER. [ABERDEENSHIRE.]

YUCATAN. [MEXICO.]

YURGOWETZ-POWOLSKOL. [COSTROMA.]

YVERDUN. [VAUD.]

YVERDUN, LAKE. [NEUCHÂTEL.]

YVETOT. [SEINE-INFÉRIEURE; SEINE-MARITIME.]

YVIÇA. [VIZIA.]

Z

ZAANDAM. [HOLLAND.]

ZAB, GREATER and LESSER. [BAGHDAD, Pashalic of; KURDISTAN.]

ZABATZ. [SERVIA.]

ZACATECAS. [MEXICO.]

ZACYNTHUS, or ZANTE. [IONIAN ISLANDS.]

ZAFRA. [ESTREMADURA, Spanish.]

ZAIRE. [CONGO.]

ZAMA. [NUMIDIA.]

ZAMBEZI. [SENNAR.]

ZAMORA. [LEON.]

ZAMOSZ. [POLAND.]

ZANA, LAKE. [ABYSSINIA.]

ZANDVLIET. [ANTWERP.]

ZANESVILLE. [OHIO.]

ZANGUEBAR, a name given by the Portuguese and after them by other European nations, to a country of eastern Africa, probably from Zanzibar, the largest of the islands belonging to it. It extends from the Mozimba (11° 50' S. lat.), which separates it from Mozambique on the south, to Ras Assoad (4° 10' N. lat.), on the north, where it joins the coast of Ajan. The extent of the coast-line exceeds 1500 miles.

But little is known of Zanguebar except the sea-coast. The interior is entirely unknown, and occupied by native tribes, which are always at war with the inhabitants of the coast, who are mostly foreign settlers. The most northern portion from Ras Assoad to the mouth of the river Juba (a few miles south of the equator) is called Barra Somali, or the country of the Somali, because occupied by that nation. The country north of Mukdeesha, or Magadoxo, as seen from the sea, exhibits a very small degree of fertility, but in the interior of the country there seems to be a fertile populous basin traversed by the HAINES RIVER. To the south of Mukdeesha the country improves considerably; it is far more fertile and more populous. There are several towns on the coast, as Mukdeesha [MAGADOXO]; Geserat and Denana; Havaly and Goondarsha; Marka; Mongooya and Torra; and Brava. All these towns are built on rocky promontories, either entirely or nearly insulated. Along the coast there are in most places dangerous reefs. The river, called Juba or Jubb by the Arabs, and by the Africans Wow-weenda, is stated to be of considerable length, rising in Abyssinia, and being navigable by boats for three months from its mouth. Across the mouth, which is not wide, there is a bar, but the bar is narrow and has plenty of water.

The country south of the river Juba is much more indented, and contains numerous fine harbours. The shore as well as the islands are formed of madrepore. Between the mouth of the river Juba and the Bay of Kwyhoo, a distance of 150 miles, is a labyrinth of small islands and rocks. The country opposite this labyrinth of islands is a succession of hills covered with verdure and of well-wooded lowlands. These parts contain many antiquities, consisting of tombs, obelisks, and other ruins. Though the soil of this tract is apparently fertile and the climate healthy, it is very thinly peopled, having been laid waste by the Galla, who have extirpated the former inhabitants, or obliged them to take refuge in the islands.

At the southern extremity of this region (near 2° S. lat.) begins a low coast-line, which however contains many excellent harbours, as those of Kwyhoo, Patta, Lamoo, Formosa, Melinda, and Mombas. There are only a few coral islands along it. The shores of the bays and harbours are low and mostly swampy; they are overgrown with mangroves, but at a short distance inland the country rises into low hills, between which are wooded levels of moderate extent. The surface presents a soil varying from red to a dark black, which appears to possess a considerable degree of fertility. In Formosa Bay is the mouth of the river Ozy, which is one mile wide at its entrance, and, although deep inside and a large river, it is difficult of access on account of a dangerous quicksand-bar, over which at low tide there is only four feet of water. According to the statement of the natives, this river rises greatly during the rainy season, and inundates the surrounding country for many miles, destroying innumerable wild animals, among the rest many elephants. At the distance of fifteen

days' journey in a canoe there is said to be a large town, Zoobakey, beyond which the current is too strong for farther progress. There seems little doubt that this large river and the numerous other streams that fall in on this coast, have their sources in the recently discovered Kilimadgaro Mountains, which rise above the line of perpetual snow and reach their culminating point in a lofty dome-shaped summit towering high above several lower snow-crowned peaks that surround it, near 3° 40' S. lat. This high mountain range, which (it is asserted by some) stands at the head of the Nile River, runs nearly due north and south at a distance of about 200 miles from the coast, to which it presents its steepest slope.

South of Mombas the general appearance of the coast is low, but not swampy, and well defined, having a sandy shore, and in some places a small intervening cliff of coral. But at some distance appear various insulated mountains of curious shapes. The bay of Lindy has a flat shore, which is formed by the alluvial deposit brought down by the river Lindy, which appears to be large, and at a distance of about eight miles from its mouth branches into several small channels, forming a complete archipelago of low swampy islets covered with mangroves. A few miles farther south is the river Rowoona, which discharges a vast volume of water.

Opposite this country are the largest islands along the eastern coast of Africa, the islands Pemba, Zanzibar, and Monfeea. The most northern Pemba, or *Al Huikera*, extends from north to south thirty miles, and from east to west ten miles. It is not in any part more than 200 miles above the sea, and rests on a coral foundation. It is one of the most fertile spots in the world, being covered with a very productive soil, and it abounds in excellent ship-timber: but the largest part of the surface is cultivated, and produces, besides other plants, rice of the finest quality. Zanzibar is nearly twice the size of Pemba, and resembles this island in soil and fertility. Besides every kind of grain which grows between the tropics, it produces great quantities of sugar. There are numerous harbours between Zanzibar and the main, formed by the islands and reefs which are dispersed over the channel which separates it from the continent, and which is about fifteen miles wide. These harbours are safe, and not difficult of access; but within the shores of Zanzibar there is not one land-locked port. The inhabitants manufacture from rhinoceros hides great numbers of round shields, about one foot and a half in diameter, for the soldiers of the Imam of Muskat, who exercises the sovereignty along the greater part of this coast. Monfeea is little known, being surrounded with a labyrinth of shoals and several islets, which render access to it difficult. It seems to be somewhat smaller than Pemba. It rises abruptly from an unfathomable depth, and is based upon a coral foundation. The surface is covered with trees, and it appears to be tolerably well peopled. The channel between the island and the main is about twelve miles across, but so thickly studded with coral shoals as to be impassable for vessels of any size without considerable danger. Nearly opposite the mouth of the Mozamba River are the Querimba Islands, a numerous archipelago, low, and formed of coral, with excellent harbours between them.

The year is divided between the dry and the rainy season. The rains are very abundant, and the rivers swell so as to inundate the adjacent countries for miles. The heat in summer is very great.

The productions known along the coast are rice, millet, peas, beans, melons, pumpkins, the sugar-cane, coconuts, bananas, plantains, &c. The forests contain the India-rubber-tree and many large timber-trees. Cattle, mostly of the humped kind, abound. The sheep are of the Tartar breed; they are very small, but their flesh is delicate and sweet. Fowls are very abundant. The larger wild animals in the interior are the elephant, rhinoceros, lion, leopard, and several kinds of antelopes. The rivers contain hippopotami and crocodiles. Fish are abundant; there are several kinds of shell-fish. Cowries are collected in great quantities for export.

Zanguebar is partly subject to native princes and partly to the Imam of Muskat. North of the river Juba the inhabitants are Somali, and their chiefs appear to be independent. From the river Juba to the Bay of Kwyhoo the Galla have advanced to the shores of the sea, and keep possession of that tract. The country between

Kwyhoo and Melinda is subject to the Imaum of Muscat. From Melinda to the river Pangany extend the territories of the Shaik or Sultan of Mombas. The remainder of the coast, as far south as Cape Delgado, is again subject to the Imaum of Muscat.

The inhabitants are either tribes of African origin or settlers from other parts of the world. The African tribes are the Somauli, Galla, Dowla, Wanyekas, and Sowhyless. The Somauli are a mild people, living on the produce of their herds and flocks, or the profits of the commerce which they carry on with Arabia and the Red Sea. Along the Indian Sea they inhabit the coast as far as Magadoxa; but they are entirely confined to the coast, the whole of the interior being occupied by the Galla, who occupy the southern portions of Abyssinia, and extend southward to the Bay of Kwyhoo. The Galla are a nomadic people, who ramble about over a great extent of country, and terrify all their neighbours by their warlike disposition, ferocity, and cruelty. They are black, of large stature and athletic make, and wear no dress except a small piece of cloth wrapped round their loins. The Dowlas occupy the country at the back of Lamoo. They are far more tractable than the Galla, and the Arabs have uninterrupted commercial intercourse with them. The Wanyekas inhabit the country surrounding the Bay of Mombas. They seem to have attained a considerable degree of civilisation: some of their towns are large and populous, and strongly defended by a double hedge of thorn-bush and by gates. The Sowhyless occupy nearly all the villages and towns of the coast south of Kwyhoo Bay, and at some places tracts extending to a great distance into the interior. They are not so black as the other tribes, but approach in colour and features to the Moors of North Africa. They differ in language, person, and character from the Arabs and the other native Africans. Their language is still spoken from Kwyhoo to Mozambique. They are Mohammedans, and therefore more closely united to the Arabs than the other tribes. They are mostly engaged in agriculture.

The Portuguese had numerous settlements on this coast in the 16th and 17th centuries. Before their arrival the Arabs had not settled there, except in small numbers and as merchants. But after the Portuguese had been obliged to abandon the country the Arabs appeared as conquerors, and there are a considerable number of them at present in the large towns. Several Banyans from Hindustan are settled at Mombas as merchants.

The towns of MAGADOKO, MELINDA, MOMBAS, and QUILOA are noticed under separate heads. *Patta* is built on an island, which lies between the bays of Kwyhoo and Patta, and is divided from the mainland by a narrow sandy creek, through which boats only can pass. A good deal of commerce is carried on here. The Portuguese had a castle here, the ruins of which still remain. *Lamoo* is at present the most considerable town on the east coast of Africa, next to Mozambique, and has a population of more than 5000. It is built on the southern shore of the Bay of Lamoo, at the foot of a sandy ridge of hills which constitute the southern boundary of the harbour, which is formed by a small river and some creeks. The houses are of an oblong form, and are made of reeds and stakes plastered with mud; the roof is supported by rafters, which project far beyond the walls. Their mosques are built with a flat roof, supported by low clumsy arches. The houses are crammed together as close as space will allow, so as to leave only narrow alleys between them. *Lindy* (near 10° S. lat.) is situated at the bottom of a deep bay formed between reefs, which in some parts extend two or three miles from the land. The river Lindy falls into this bay, and on its northern banks the town is situated. It is built on low ground, and consists of a great number of straggling huts interspersed with groves of cocoa-nut and other trees. It formerly carried on a considerable trade in slaves.

The exports of Zanguebar to Arabia are rice, sugar, molasses, dried and salted fish, ivory, gums, and shields. The chief imports are dates, arms, and some Indian manufactures. The commerce with Hindustan is limited to the harbour of Mombas, from which the Banyans, who are settled there, send ivory, gold, cowries, and a few minor articles to Bombay, whence they receive Indian and English manufactures. Many vessels are employed in the coasting-trade, carrying chiefly dhol (small peas), rice, and salted and dried fish from one place to another.

ZANTE. [IONIAN ISLANDS.]

ZAPOROGH COSSAKS. [COSSAKS.]

ZARA. [DALMATIA.]

ZARAFSHAN, RIVER. [BOKHARA.]

ZARAGOZA (in English generally written *Saragossa*), a city of Spain, capital of the ancient kingdom and former province of Aragon and of the modern province of Zaragoza, is situated in 41° 47' N. lat., 0° 53' W. long., 180 miles N.E. from Madrid. It is the see of an archbishop and the residence of a captain-general. The population in 1845 was 40,482.

The city of Zaragoza stands on the south bank of the Ebro, and is connected with a suburb on the north bank by a good stone bridge 600 feet in length, which was constructed in 1437. The small river Huerba flows from the south towards the central part of the city-wall, and then, sweeping round the outside of the wall, falls into the Ebro on the east side of the city. The Gallego falls into the Ebro on the north bank a short distance below the city. The wall is low, built of brick, and is entered by eight gates. The adjacent plain is fertile, and is well irrigated from the canal of the Ebro. [ARAGON.] The houses

are solidly built, some of stone, but mostly of brick; the streets are narrow, tortuous, ill paved, and ill lighted.

Zaragoza possesses two cathedrals, in each of which the chapter resides alternately six months. The older of the two, called *La Seu* (the See, or Seat, 'cathedra') is a gothic structure, with one octagonal belfry-tower, the other being yet to build. The second cathedral, dedicated to *Nuestra Señora del Pilar*, is a quadrangular building about 500 feet in length, and with three naves. In the centre of the church, in a small chapel under the central dome, is the sacred pillar, surmounted by a small wooden figure of the Virgin Mary. The legend is, that the Virgin stood on this very pillar, and thence directed St. James (Santiago) to build a chapel on the spot. This pillar is held in great veneration by the Aragonese, who resort to it from all parts of the province. Several of the other churches, and most of the conventual buildings, were either destroyed or greatly injured during the two sieges of 1808-9.

An octagonal clock-tower, built in 1504, and called *La Torre Nueva*, is as much out of the perpendicular as the leaning tower of Pisa. It is of brick-work, much ornamented. The university, with its valuable library, was destroyed by the French, but has since been partially reconstructed. The students amount to about 1000. The General Hospital is also a new structure, the former having been burnt during the siege. The *Aljaferia* (so named from *Abu-Jafar*, the Moorish sovereign who built it), the palace-citadel, or *alcasar*, is outside the north-western gate. It was much damaged by the bombs of the French, and is now in a ruinous condition. The *Poor-House* and *Orphan Asylum* (*Casa de Misericordia*), has accommodation for 600 or 700 individuals. Near to this building is the *Plaza de Toros* (bull-arena), where grand fights are occasionally exhibited in honour of the Virgin, on which occasions the profits are applied to the support of the hospitals. The *Lonja*, or Exchange, is a fine stone edifice, round which marble busts of most of the kings of Aragon are placed in niches. Nearly opposite is *La Casa de la Diputacion*, a noble building erected by *Alfonso V.*, in the principal hall of which are portraits of the kings of Aragon. The other principal buildings consist of a theatre, a museum, or academy of fine arts, and a public library. The *alamadas* extend on the outside of the city-wall as far as the *Casa Blanca* on the canal; they are lined with poplar-trees, and much frequented by the inhabitants.

The principal manufactures are silks, woollens, and leather, and there is a considerable trade in agricultural produce by the canal of the Ebro.

By the Celt-Iberians Zaragoza was called *Salduba* or *Saldyva* (Plin. lib. iii.). It was colonised by the Romans, and the Emperor Augustus named it *Cesar Augusta*, which the Moors corrupted into *Saracosta*, anciently written *Çaragoça*, whence the present name Zaragoza. It was taken by the Goths about A.D. 470, by the Moors in 713, and by Alfonso I. of Aragon in 1118. Zaragoza was twice besieged by the French in the early part of the Peninsular War. It was first invested June 15, 1808. The French carried some of the exterior works, and forced their way into the city; but the garrison and inhabitants attacked the enemy with irresistible fury, and after 49 days of open trenches and 21 days of bombardment, the siege was raised on the 4th of August. Being a military position of great importance, where several roads meet, the siege was recommenced on the 20th of December. It was bombarded till the 27th of January 1809, when a general assault was made, and the French forced their way through the breaches into the city. The city itself however was defended with desperate valour by the inhabitants as well as by the garrison, house by house as well as street by street, and was not conquered till the 22nd of February 1809.

ZARIA, or ZEGZEG. [SOODAN.]

ZARITZIN. [SARATOV.]

ZARKI. [POLAND.]

ZARUMA. [ECUADOR.]

ZBARACZ. [GALICIA, AUSTRIAN.]

ZEA (*Kées, Cea*), an island in the *Ægean*, about 18 miles S.E. from Cape Colonna; the island of *Makronisi* is nearly in the mid-channel. The capital, *Zea*, is situated in about 37° 38' N. lat., 24° 20' E. long., on the northern declivity of Mount St. Elias. The island is 14 miles long and 10 miles broad. It is one broad-based hill rising from the low shore-line to the central peak of Mount St. Elias. The capital is situated on the brink of a ravine between 2 and 3 miles inland from its port *Raphitlimani* (which has a sufficient draught of water for vessels of the largest size), and contains about 3000 inhabitants; and the whole island about 5000. The climate is healthy. The products are barley, fruits, wine, cotton, sheep, and silk-worms. *Zea* has no relics of antiquity except the ruins of a temple and the ancient walls of the capital.

ZEALAND, a province of the kingdom of the Netherlands, situated between 51° 14' and 51° 45' N. lat., 3° 13' and 4° 7' E. long., is formed of the ancient province of that name, of Dutch Flanders, and of a group of islands formed by the several arms of the Schelde. It is bounded N. by two branches of the West Schelde; E. by North Brabant and Antwerp; S. by Flanders; and W. by the North Sea. Its area is 670 square miles. The population at the end of 1853 was 165,075. The surface is only a few feet above the sea, and the monotonous plain is only broken here and there by artificial mounds,

The province is protected from the sea by numerous dykes, which run along the coasts and the sides of the rivers. The soil is a rich black mould, and very fertile. The climate is damp, and unfavourable to foreigners, though the natives enjoy good health. The inhabitants are steady, industrious, and wealthy people, devoted chiefly to agriculture, cattle-breeding, and the sea fisheries. Zealand wheat, especially that of the island of Schouwen, is very highly esteemed. The province produces likewise fine rye and malting barley. Kidney-beans and peas, rape-seed and flax, are important articles of exportation, and the island of Schouwen alone produces 20,000 cwt. of fine madder annually. The sheep are small, and the wool of indifferent quality. The horses are large, heavy, and strong. Poultry, rabbits, ducks, wild-fowl, and fish abound. Besides grain and pulse, the people cultivate potatoes, melons, fruit, and teazels. The inhabitants have a considerable export trade, and some manufactures of linen, woollen, and fine yarn; distilleries, breweries, salt-works, and dockyards for ship-building. The following are the islands:—

1. *Walcheren*, in which are the following towns:—*Middelburg*, the capital of the province, a fortified town, connected with the West Schelde by a navigable canal half a league in length. It is a seaport, and has 15,000 inhabitants. *FLUSHING*. *Veer*, or *Terveere*, a fortified town at the mouth of the East Schelde. 2. and 3. *BEVELAND*, North and South. 4. *Wolferdyk*, with the village of Oosterland, separated by the Zuyd Vliet from North Beveland. 5. *SCHOUWEN*, separated by the East Schelde from North Beveland. In this island are the towns of—*Zierickzee*, with 7000 inhabitants, who derive their subsistence from the fishery, salt-works, trade in madder, &c. *Brouwershafen*, mostly inhabited by seamen and fishermen. 6. *Duiveland*, separated from Schouwen by the Dyl. 7. *Tholen*. This island produces the finest flax, and it manufactures the finest thread, of which one pound costs 300 florins (nearly 25*l.* sterling). The town of *Tholen* has 2000 inhabitants, and is partly fortified.

In Dutch Flanders are the following towns:—*Sas de Gand*, a well-fortified town, with 1200 inhabitants, situated on a canal which leads from Ghent to the West Schelde. *Sluys*, or *l'Écluse*, a well-fortified place, situated on a bay of the North Sea, at the mouth of the Schelde, and on a canal to Bruges. The population is 1200. *Aardenburg*, on a canal which joins the Zwin, has 1400 inhabitants. *Cadsand*, on the island of Cadsand (which is 5 leagues long and 4 broad; it has rich pastures, and is famous for its cheese), is a mere village. *Azel*, on an island in the Schelde, on a canal from the West Schelde, has 2300 inhabitants. *Hulst*, a fortified town, with 2000 inhabitants, with a harbour communicating with the Helle Gat, a creek of the West Schelde.

ZEALAND, or SIZELAND. [DENMARK.]

ZEALAND, NEW, one of the British colonies, consists of a group of islands situated in the Pacific Ocean and in the southern hemisphere. This group includes two large islands and a small island at the southern end of them. Many other islands still smaller are scattered along the shores. The northern of the two large islands is called by the natives *Eaheimomauwe*, and the southern *Tavai-Poenammoo*; they are separated by a wide strait, called from its discoverer, Cook Strait. The northern island is called by the colonists *New Ulster*; the central large island is called *New Munster*, and the small island is *New Leinster*, or *Stewart Island*. The islands lie between 166° and 178° 35' E. long., 34° 25' and 47° 20' S. lat. The entire length of the two large islands is about 1200 miles, and the mean breadth about 140 miles. The area is about 95,000 square miles. *Stewart Island* is about 60 miles long and 60 miles wide. The native population in 1850 was estimated at 120,000. In 1851 the census taken in the settled districts gave a population of 26,656, of whom 14,996 were males and 11,660 females.

Coast-line, Harbours, &c.—*New Ulster*, the most northerly of the islands, is of a very irregular shape, extending north-east and then north-west, with a large promontorial projection near the middle on the east. It lies between 34° 25' and 41° 40' S. lat., 172° 30' and 178° 49' E. long. The most northern portion is a narrow tongue of land about 40 miles in length, but hardly anywhere more than 8 miles across, except at the most northern extremity, where it expands in the form of a dovetail, and where it is more than 20 miles from west to east. This is chiefly occupied by a ridge of hills of moderate elevation, which extends from the western cape, called *Cape Maria Van Diemen*, by *Tasman*, to the North Cape, or *Cape Otou*. About 4 miles from *Cape Maria Van Diemen*, on the western coast, begins a cliff which rises almost perpendicularly from the sea, and continues for 6 miles. From this place the ridge of hills recedes from the shore, and runs inland towards the harbour of *Pa-reinga* on the eastern coast; but it sends short offsets to the north and south, so that it is intersected by several small valleys. North Cape is high and bold, presenting steep sides to the northern and eastern coast, but a flat and swampy tract about 3 square miles in extent runs from the northern to the eastern shores, separating the promontory from the hilly tract, which terminates on the eastern coast in perpendicular cliffs of volcanic conglomerate. A narrow isthmus 30 miles in length, consisting of low hills and swamps, connects this promontory with the broken part of the peninsula. On the western shore of the isthmus is *Pa-reinga Bay*, which has always two fathoms of water, and a rise of 10 feet at high tide. On the eastern shore is an isolated hill, called

Mount Camel, or *Houhours*, which rises 500 feet above the sea. On its southern side is a harbour capable of receiving the largest vessels, with anchorage close to the eastern shore; but the entrance is not more than 40 or 50 yards wide. Where the isthmus terminates on the south there is an extensive alluvial district, which stretches from the western to the eastern coast, and follows the serpentine course of the *Awaroa*, a river which empties itself into the estuary of *Ranganui*. The *Awaroa*, though a small river, is navigable for boats at high water to the distance of about 10 miles; the tides rise 10 feet, and the river has little fall in its lower course. There are several European settlements in this district, and the natives have made roads to the shores of the sea and for internal communication.

On the south of the Valley of the *Awaroa* extends a hilly region from sea to sea. The coast on both sides of this region is indented by several inlets, and some of them contain good harbours. On the eastern coast are *Doubtless Bay* and *Wangaroa Harbour*, and on the western coast *Whangapi* and *Hokianga*.

The Bay of Islands, called *Kororarika* by the natives, lies on the eastern coast: it is open to the north and north-east, and the entrance between *Cape Pooooke* and *Cape Brett* is 11 miles wide. It extends south-west about 12 miles, and is studded with several islands, whence it has received its name. There is deep water close to the shore, and there are several good anchorages, even with northerly and north-easterly winds, behind the rocky and elevated islands. It is one of the best harbours in *New Zealand*. Between the Bay of Islands and *Hauraki Gulf*, the shores of the sea are bounded by high precipitous cliffs, in which several small indentations occur; but none of them will receive ships above the size of coasting-vessels, except *Wangari Bay*, which is formed by the mouth of the *Wangari River*. The harbour is about half a mile wide and 4 miles long, and has good anchorage in from 6 to 10 fathoms, and is completely sheltered from all winds. *Hauraki Gulf*, now called the *Frith of the Thames*, from its most northern point, *Cape Rodney*, to its most southern inlet, which terminates at the mouth of the river *Thames*, is about 70 miles long. The entrance is from the north, where it is 40 miles wide, between *Cape Rodney* and *Cape Colville*. It preserves this width to half its extent, but farther south it grows rapidly narrower, and terminates with the estuaries of the *Thames*, or *Waiho*, and the *Piako*, which empty themselves into it within a few miles of each other. *Great Barrier Island*, opposite *Cape Colville*, is nearly 80 miles in circumference, and has an excellent harbour, called *Great Barrier Harbour*, at its most north-western extremity. There are several islands in the wider portion of the gulf, of which those of *Rangitoto* and *Waiheke* require notice. *Rangitoto* is a cone, rising gradually from the sea, and terminating in three peaks, the middle one being the highest. This cone contains a very perfect crater, about 150 feet deep: the highest point of it rises 920 feet above the sea-level. Between *Rangitoto* and the mainland is the best channel into *Waitemata Harbour*, which leads to *Auckland*. *Waiheke* is about 30 miles in circumference, and has a harbour for small vessels, with anchorage for larger vessels in the channel which separates the island from the mainland.

The peninsula which terminates with *Cape Colville* contains two harbours, called *Coromandel* or *Waiho Harbour*, and *Mercury Bay* and *harbour*. From *Mercury Bay* there is no good harbour till we reach that of *Tauranga* in the spacious Bay of *Plenty*. There is here a native village, whence a great number of pigs are exported; they are mostly brought from the valley of the river *Waiho*, to be shipped here. Between *Tauranga* and *Katikati* which lies about 20 miles north from it, the coast-line is formed by several large islands, which in structure and configuration exactly resemble the mainland, but are separated from it by narrow channels.

In the Bay of *Plenty* is the island of *Tuhua*, or *Mayor's Island*, which is of considerable extent, and consists of rugged basaltic rocks, with narrow but fertile valleys. The natives cultivate the land, and occasionally provide passing whalers with provisions. *White Island*, or *Puhia-i-Wakari*, is small and low; it contains an active volcano, similar to *Stromboli*, and produces sulphur. Near *Highland Bay*, one of the indentations in the Bay of *Plenty*, is *Mount Edgecombe*, or *Putawaki*, which reaches a height of 10,000 feet. Other bays on this coast are *Hicks Bay*; *Poverty Bay*, where *Captain Cook* first landed in 1769; and *Wairoa*. *Cape Kawakawa* constitutes, with *Cape Campbell*, the southern entrance of *Cook Strait*. West of the cape is a wide bay, which on the west is sheltered by the high lands terminating with *Baring Head*, or *Cape Tourakira*. It is open to all winds except those from the north and east, and affords no safety nor good anchorage. It is appropriately called *Useless Bay*, also *Palliser Bay*, and by the natives *Wairapara*. At the innermost recess of the bay is the mouth of a river, the *Wairapara*. West of this bay a headland projects into *Cook Strait* in a direction from south-west to north-east. It is traversed by two chains of mountains, which terminate at *Baring Head* and *Cape Terawiti*. Between these rocky capes *Port Nicholson* extends northward. It is surrounded by high and steep rocky hills, generally covered with wood, except opposite the entrance of the harbour, where a sandy beach occurs about 2½ miles in length. This leads to the alluvial valley of the river *Hutt*, or *Eritonga*, which is surrounded by steep mountains, and extends 7 miles inland, where the hills approach each other and form the gorge of the river. This tract has great fertility. The bay extends about 8 miles, and that

portion of it which is adjacent to the eastern hills is exposed to a heavy swell during southern winds. At its extremity Cape Terawiti bends eastward in the form of a hook, and thus it protects the western portion of the bay against the swell and winds. Here is Lambton Harbour, on which the town of Wellington is built.

After rounding Cape Terawiti the coast turns nearly northward, and at the upper end of Cape Terawiti is the harbour of Porirua, not far from the head of the Hutt Valley. At Porirua is a barrack station. Proceeding north there are several harbours, formed by the mouths of the numerous short streams that descend from the western sides of the neighbouring hills, and several settlements have been established on them. The most important is Petre, at the mouth of the Wanganui, which is also the most important river coming from the north, for a considerable distance. The coast then stretches away to the north-west to Cape Egmont, near which is Mount Egmont or Taranaki, 8500 feet high. It then turns north-east, and about 80 miles from the cape is New Plymouth, at the mouth of the Hua. Part of the coast further north is cliffy, part has a low sandy beach, and part is lined by sand-hills, but on it are the following harbours—Mokau, near which coal is stated to have been found. Kawia, a large and safe harbour (near 38° S. lat.), one of the most important on the western coast of the island. It has a clear entrance about a mile and a quarter wide, with two fathoms at low water of spring-tides. The tide rises 12 feet. Aotia, a long and shallow estuary, with a bar at its mouth, admitting only vessels under 20 tons burden. Wangaroa, a long inlet, with a bar at the entrance, in which however there is a channel with 12 feet at low water. Smaller vessels find good anchorage and shelter in several coves on the north shore. From Wangaroa the coast trends to the north-west, and at a distance of about 20 miles is the harbour of Waikato, at the mouth of the river of the same name, the largest in the island, up which vessels of 30 tons burden can ascend for a distance of 100 miles in a south-easterly direction. The next harbour is that of Manukao, which forms part of the Auckland district, and its shores are colonised. It is, as already observed, separated from an inlet of Waitemata Harbour by a portage of less than 2 miles, and from that of Tamaki by another not exceeding a quarter of a mile. It is a fine basin, about 15 miles long, and 8 miles broad in the widest part. Several other harbours occur on the west coast. Some of them are commodious, but deficient in shelter.

Surface and Hydrography.—The mountain system is not yet thoroughly known. The northern headland and the long and narrow isthmus have been already noticed. Where the island widens, it is flat, with a few hills, till we reach 35° 5' S. lat., where commences a ridge of elevated hills, lying nearly north and south, in which are the upper sources of the Wairoa River, the basin of which lies between it and a parallel ridge along the western coast. Another small ridge lies in the same direction north of Auckland, throwing off numerous streams on their western slope into the harbour of Kaipara. The country extending along the western coast south of Manukao, as far as the river Mokau, appears to rise to a higher level than the northern districts of the island. The shores have in many places a low sandy beach; in others they are lined by sandhills, but there are also large tracts where the sea washes the base of steep cliffs composed of sandstone and conglomerate. A few miles from the sea the country rises higher, and contains numerous hills, whose declivities are gradual. Some miles north of Waitemata Harbour the hills sink down, and the narrowest part of the island, which is between this harbour and Manukao Harbour on the western coast, has a slightly undulating surface, on which several isolated hills rise to some height. Where the Gulf of Hauraki grows narrow, opposite the island of Waibeke, the country rises to a higher level, and presents towards the gulf a hilly ridge, in which several narrow valleys open to the estuary of the Waiho. This hilly ridge continues southward, where it separates the valley of the Thames or Waiho and of the Piako from the basin of the Waikato River; but it sinks lower as it proceeds towards the source of the Thames, or rather the general level of the country rises higher. This chain of hills is mostly composed of basalt, and wood is only found in some small valleys and ravines. The valley of the river Thames, which lies to the east of this hilly range, and begins at the most southern branch of the Gulf of Hauraki, is the largest known plain in New Zealand. It extends about 60 miles south, terminating in the low hills of Horohoro, where the river Thames originates. At its northern extremity it is about 20 miles wide, but grows narrower as it runs southward, though probably in no part does it fall short of 10 miles in width. The plain of the Thames is separated from the Bay of Plenty by a ridge of rocky hills, which begins at Cape Colville, at the entrance of the Gulf of Hauraki, and continues without interruption for more than 100 miles to the Horohoro Hills at the source of the Waiho. They are called the Ahora (Love) Mountains, and rise about 1500 feet above the sea. North of the mouth of the Thames they fill up the whole extent of the peninsula terminating with Cape Colville, but farther south they are a few miles distant from the banks of the river. Their western declivity is very steep, and rises like a wall over the plain of the Thames, but towards the Bay of Plenty they descend with a gradual slope. They are almost entirely covered with wood. North of 38° S. lat., the highest portion of this tract does not appear to rise more than 1500 or 2000 feet above the sea-level, and the hills do not run in any determinate direction.

South of the parallel just mentioned they take the shape of a continuous ridge, running parallel to the western coast, and rise much higher. This chain is called, in its northern portion, Rangitoto; in the centre, Rua Wahine; and towards its southern extremity, Tararua, which last terminates at Cook Strait. Mount Taranaki or Egmont occupies the centre of a projecting headland, and is about 20 miles from the shore, in 39° 3' S. lat., 174° 1' E. long. It is an extinct volcano, which rises 8839 feet above the sea-level, and is above the snow-line. It is a perfect cone, from the base of which the country slopes slowly towards the sea on the north, west, and south; and on the east it is surrounded by a hilly region, which extends to the Rangitoto Chain and the volcano of Tongariro. Taranki is the western extremity of a volcanic region, which traverses the island from south-west to north-east, and terminates on the southern shores of the Bay of Plenty. The Rangitoto Mountains contain the active volcano of Tongariro and the extinct volcano of Ruapahu. North of the first-named peak is the Lake of Taupo, which is surrounded by hills of volcanic formation, from the rents of which numerous hot-springs rise, and which are interspersed with mud volcanoes. Towards the shores of the Bay of Plenty is a large cluster of lakes, some of them filled with hot-water, and others surrounded by hot-springs and volcanic rocks, the most remarkable of the lakes being that of Rotorua. The Rangitoto range extends from 38°, after throwing off the branch to Taranaki south by east, to the peak of Tongariro, and then south to that of Ruapahu, about 70 miles. Their general elevation probably does not exceed 2000 feet above the sea, at least not north of Tongariro. This summit rises to 6200 feet, and that of Ruapahu reaches far above the snow-line, and is supposed to be at least 9000 feet high. Between these two summits and in their neighbourhood the range appears to attain its greatest elevation. But these mountains occupy a comparatively small width, hardly more than 4 or 5 miles. On the west of them extends a hilly region, whose general level is probably less than 1000 feet above the sea, but the hills upon it rise about 500 feet higher. On the east of the Rangitoto Range is the basin of the Waikato River. Beyond the valley of the Waikato to the east, in the tract forming the great promontory ending at East Cape, the country is broken and mountainous, but with few remarkable heights, though there are several which rise to a considerable height at its northern extremity, and Mount Edgcombe to the east of Rotorua. The two mountain ridges which inclose Port Nicholson and the valley of the Eritonga unite at the source of the river, and are there called the Tararua Range. This chain, consisting of several ridges, runs south and north, and extends to the elevated peak of Ruapahu, where the Rangitoto Mountains begin, which are to be considered as their northern continuation. The geological structure of the Tararua Mountains is argillaceous schist, interrupted, especially on the western side, by bulky and irregular dykes of red, black, and greenish Lydian stone. Sometimes the clay is more quartzose and granular, and forms a good stone for building purposes. These mountains apparently do not rise more than 3000 feet above the sea-level. They extend in longitudinal ridges, with narrow crsts here and there rising to a somewhat higher summit. In many places they are overgrown with forest, in others the woody region does not quite reach to the top. In the country extending from the Tararua Mountains to Cook Strait the southern portion, as far as Paripari, is filled up with the offsets of the mountains. At the last-mentioned place the chain begins to recede from the sea-shore, increasing its distance from the coast-line as it runs north. The mountains are now succeeded by a belt of low sandy hills, commencing at high-water mark and widening as the mountains fall back, till, at the Manawatu River, the sandy belt is 9 miles broad. From the south-eastern extremity of the island a range of mountains extends to near Cape Matau, known as the Mamigaraki and Pakatoai Mountains.

Though possessing almost innumerable streams, New Ulster, in consequence of the mountain ridges running in general in a north and south direction through the length of the island, has but few considerable rivers. They are chiefly mountain streams, which, falling from the eastern or western slopes, enter the sea, and are seldom capable of being used for navigation. Of the larger ones we proceed to give a short notice. The first, beginning at the northern end, is the *Hokianga*, which, rising near Ngate, about 20 miles from the junction of the isthmus, proceeds in a north-easterly course to the head of the estuary of the Hokianga on the west coast, its course not exceeding 10 miles. The *Wairoa* is one of the largest of the rivers. The remotest branches rise in the country between Hokianga and the Bay of Islands; it flows in a south-easterly direction; its whole course is perhaps not less than 200 miles, measured along the windings, and it falls into the Kaipara Harbour at its northern end. It is navigable for large vessels for about 70 miles above the head of the harbour. Canoes can ascend about 70 miles farther, beyond which their advance is prevented by rapids. The valley through which the river flows is generally two miles wide, and of great fertility. The *Otamatea* rises in the hills in the neighbourhood of Wangari Harbour, and runs probably less than 100 miles. The valley is also fertile, but of smaller extent than that of the Wairoa. It falls into Kaipara Harbour nearly opposite its entrance: it is navigable for many miles from its mouth. The *Kaipara River*, which falls into the most southern inlet of the basin, flows north-westerly, has a very winding course in a moderate-

sized valley bounded by the hills which extend along the sea-coast between Kaipara and Manukao Harbour, and is separated from an inlet of the harbour of Auckland in the Gulf of Hauraki by a neck of land about three miles wide, consisting of low hills, across which the natives frequently dragged their canoes in time of war. The tide ascends the Kaipara for several miles from its mouth, and so far it is navigable for large vessels. The *Waikato* is the largest river in New Ulster. Its source is in the Rangitoto Mountains, or rather in a continuation south of them, called the Kai Munatoa Range. It is a combination of numerous streams which fall into Lake Taupo, the *Waikato* being the outlet of that lake. Lake Taupo is 1337 feet above the sea-level, or higher than the Lake of Geneva. The *Waikato* leaves the lake at its north-eastern extremity, and is there about 300 yards wide and very deep. It runs first north-east, but afterwards in a general north-north-west direction, until it reaches 37° 30' S. lat., when it is joined by its great tributary the *Waipa*. In approaching Manukao Bay it turns south-west, and falls into the sea. The whole course of the *Waikato* probably exceeds 250 miles. In the middle part of its course the navigation, if not entirely interrupted, is rendered difficult by numerous rapids. The mouth of this river does not form a bay, but is a narrow channel, which at low water only vessels of about 30 tons can enter; but inside the headlands it is a full river, and when the tide is in it is navigable for large vessels for about 40 or 50 miles to the place where it is joined by the river *Waipa*. This river rises in the Rangitoto Mountains north-west of Lake Taupo, and runs above 100 miles, of which about 60 miles are navigable for large boats. To the east is a plain drained by three rivers, the *Waiho*, the *Waitou*, and the *Piako*, which receives the *Waitou* before it and the *Waiho* fall into the Gulf of Hauraki, at the east and west corners of its southern end. The *Waiho*, which is also called the *Thames*, drains the plain in its whole extent, rising in the Horohoro Hills, on the border of the table-land of Roturua. Its course is about 100 miles, of which 90 miles are navigable for large boats. The *Piako*, which rises on the hills bordering the western side of the plain, is much smaller, and runs only about 30 miles. The *Mokau* rises on the western side of the Rangitoto Mountains, and after a course of about 20 miles falls into the sea in 38° 30' S. lat. Somewhat south-east of the upper sources of the *Waiho* lies the table-land of Roturua, so called from the largest of the numerous lakes which are dispersed over its surface. The *Lake of Roturua* is about 24 miles in circumference, and nearly circular. Near it there are many hot-springs, and some of them close to its banks. From some of the openings in the ground every five minutes a column of steam and water, two feet in diameter, is thrown up to the height of three or four feet. Other lakes are filled with warm water, and in some of them the thermometer rises to 95°, or 30 degrees higher than the air. There are several cones of pure sulphur, and mud volcanoes. The soil consists of a black mould a few inches thick, resting on a substratum of pumice gravel. It is in general light, but possesses a considerable degree of fertility. The *Wanganui* rises on the north-western declivity of the volcanic peaks of Puki Onaki, and runs with numerous windings to Petre, on Cook Strait. The mouth is more than half a mile wide, and has on the bar 8 feet of water. Vessels of 230 tons have passed over it, but at low water the sea breaks across the bar. Inside the bar the river grows deeper, and is about 300 yards wide. The banks are here low and sandy, and covered with drift-wood and pumice-stone, which the river brings down from the volcanic region surrounding its source. At the distance of some miles an extensive flat extends along the banks, which is bare of timber and even of bushes, and in its natural state is covered with flax and fern: it is considered well adapted for grazing. About 30 miles from the mouth the river flows between hills, which are well wooded, and extend to the base of Mount Tongariro. But in approaching that summit the country is again more open and flat, though much broken. The *Wangaiti* rises from the same source on Ruapahu as the *Waikato*, and falls into the sea 9 miles south from the *Wanganui*. The *Manawatu* takes its rise on the southern declivity of Mount Ruapahu, and runs along the eastern side of the Rua-Wahine Range, southward, in a valley between mountain ridges, about 70 or 80 miles, when it pierces the range through a cleft by turning westward, and enters the lower country along Cook Strait, about 40 miles south from Petre. As, with all the rivers in Cook Strait, the force of the current is not strong enough to remove the sand which is thrown up at its mouth by the south-westerly and north-westerly winds, and the depth over the bar is only 6 feet at low water: the tide rises 8 feet. The breadth at the mouth is about 300 yards at half tide.

Cook Strait, which separates New Ulster from New Munster, is about 150 miles long, and lies from south-by-east to north-by-west. At its southern entrance, between Cape Kawakawa in New Ulster and Cape Campbell in New Munster, it is about 50 miles wide; but the promontories which form its northern entrance, Cape Farewell in New Munster and Cape Egmont in New Ulster, are more than 100 miles distant from each other. At the narrowest part, opposite Cape Terawiti, the strait is not quite 30 miles across. The tide runs from the south at the rate of five knots an hour during spring-tides. The prevailing winds near the southern entrance, for the greater part of the year, are from the south and south-east, and often increase to heavy gales, augmenting the rush of water through the straits, and making considerable inroads on the coast. In the northern and wide

portions of the strait the prevailing winds all the year round blow from the north-west and south-west, and cause a heavy swell to set against the shores of New Ulster, between the island of Kapiti and Cape Egmont. This coast has no harbours, and as the sea to a great distance from the shore is shallow, vessels are obliged to keep a good offing. The island of Kapiti, called by Cook the Island of Entry, is the most remarkable of the islands of the strait. It is about 25 miles in circumference, and consists of a ridge of hills rising in some places to the height of 600 feet. These hills descend abruptly to the westward and eastward, but at the southern extremity they are low and undulating. At the north-eastern point is an extensive alluvium, with a lagoon in the middle. To the east of the southern extremity of Kapiti are three small islands, which, together with Kapiti, form a roadstead, which is sheltered from the prevailing north-west winds by Kapiti, and from the south-east winds by the three islets, and affords a safe anchorage.

Tavai-Poenammoo, now called New Munster, is separated from New Ulster by Cook Strait. It extends from 40° 25' to 46° 40' S. lat., and lies between 166° 20' and 174° 30' E. long. It contains, according to a rough estimate, about 50,000 square miles. The interior of this large island is not so well known as New Ulster. Seen from the sea, a chain of apparently uninterrupted mountains is observed at some distance from the shore on the western side; on the eastern side are other ranges at a greater distance from the shore; and at the northern end, which terminates on Cook Strait, are three extensive masses of high mountain rock, with valleys between them, which, considering the wide masses of rocks that inclose them, must be called narrow. The mountains, even at a small distance from the shores, rise to 3000 feet, and farther inland they attain a much greater elevation. The highest of these ranges seems to be the western, which fills up the whole country west of Tasman Bay, and falls off with a steep declivity to Massacre Bay. In the centre of it stands Mount Arthur, which is always covered with snow, and probably rises 8000 feet above the sea-level. It is divided from the central mass by a narrow depression, extending, as it appears, far inland. This depression is not a plain, but is traversed by several ridges of high and steep hills running in the direction of the island from south-west to north-east. The lower tracts between these hills are in some places extensive, and drained by several rivers, of which the *Waimea* is the largest. The central mass of mountains is called Pelorus Ridge, and occupies the whole country between Tasman Bay and Cloudy Bay. It terminates on the shores of the strait in three projecting peninsulas, which inclose two very long inlets, Admiralty Bay and Queen Charlotte Sound, in which several safe anchorages are found, well protected against all winds, as the surrounding mountains rise to an elevation of from 2000 to 3000 feet. As the mountains generally rise from the water's edge with a steep ascent, only a few places of small extent occur near the shores, on the slopes or in the ravines, which are fit for cultivation. On the east side of this mass is an indentation, which constitutes the harbour of Underwood. This port is a deep inlet formed by hills, from which numerous buttresses run out towards the sea, and form as many small coves, in which vessels find good shelter. Port Underwood opens to the south-west into Cook Strait, and is frequently resorted to by whaling vessels. South of Port Underwood the mountains run inland, and give way to a wide depression, which extends along the shores of Cloudy Bay to the vicinity of Cape Campbell. This elevated cape is the termination of the range of mountains which is called Kaikora, or the Southern Alps, and is covered with snow nearly all the year round. The country between Port Underwood and Cape Campbell is comparatively level, and drained by several small rivers, among which the largest is the *Wairao*, which has a bar at its entrance. From Cape Campbell, on the eastern coast, the mountains stretch inland in a south-west direction; Mount Kaikora being 9300 feet high, and other peaks ranging from 4000 to 5000 feet in height. It joins a mountain group near 43° S. lat., from which all the other ranges in the island appear to diverge. From Mount Grey, in 43° 5' S. lat., a crescent-shaped ridge runs at the back of the Canterbury settlement, and ends on the left bank of the Kakaunui River; near the sea, in 45° 10' S. lat., a great part of the range is above the snow-level, but there are passes through it into the central plain. Rowley Point is 5000 feet high, and Mount Peel, Mount Somers, Mount Richards, and Mount Torless, are probably about the same height. Of the western coast Captain Cook says:—"From Cape Farewell to 41° 30' S. lat. there is a narrow ridge of hills that rises directly from the sea and is covered with wood: close behind these hills are the mountains, extending in a ridge of stupendous height, and consisting of rocks that are totally barren and naked, except where they are covered with snow, which is to be seen in large patches upon many parts of them, and has probably lain there ever since the creation of the world. A prospect more rude, craggy, and desolate than this country affords from a distance at sea cannot possibly be conceived; for, as far inland as the eye can reach, nothing appears but the summits of rocks, which stand so near together, that instead of valleys there are only fissures between them." From 41° 30' to 45° S. lat. the country presents a better aspect. Well-wooded hills and some extensive valleys occur. All the indentations of this coast, which are numerous, are open to the westerly winds and the swell of the sea, except Milford Haven (44° 30' S. lat.). The south-western extremity of New Munster is

bounded by elevated chalky cliffs, which are intersected by numerous narrow arms of the sea. These inlets afford safe anchorage to shipping from every wind. The principal of these ports are called Dusky Bay, Preservation Harbour, and Chalky Bay. The most southern part of New Munster is the widest part, and in Favourite Strait, which separates it from New Leinster, are a few good bays, the principal being Bluff Harbour. There are no mountains to be seen here from the sea. This comparatively level tract, which is moderately elevated, continues north-eastward to Port Otago, where a settlement has been effected. Port Otago is an inlet of the sea, running in a west-south-west direction about 13 miles: it is well sheltered by highlands. The entrance has a bar across, with $3\frac{1}{2}$ fathoms of water. Within the harbour it deepens to 9 fathoms. The navigable river Clutha, formerly called the Molyneux, falls into the most western corner of the bay. North of Otago high land and a bold coast extends to Banks Peninsula, around and upon which the settlement of Canterbury has been formed.

Banks Peninsula has an oval form, and is nearly 70 miles in circumference. The surface is very irregular and hilly, and some of the hills are visible at sea from a distance of 40 miles. The higher parts are barren, but the lower slopes of the hills are well wooded and the soil is favourable to vegetation. It has harbours on each side. The most capacious, called Akaroa, is near the eastern extremity of the peninsula; it has sufficient depth for large vessels, is easy of access, and well sheltered. On the northern side of the peninsula are Port Victoria and Port Ashley, which are little inferior to that of Akaroa. Pegasus Bay, extending between the peninsula and the mainland, is shallow and not safe. The country in the vicinity of the bay is in general level, and rises gradually from the shore. The shores north of Banks Peninsula are very high and rocky, and generally there is no beach between the high grounds and the sea. At a few places inlets occur, but they are open, and not well sheltered from the prevailing south-east winds. The best harbour is in Lookers-on Bay, a small estuary, into which two rivers fall, both of them navigable some miles from their mouth.

Opposite the southern extremity of New Munster lies New Leinster, or Stewart Island. The strait which separates it from the mainland was discovered in 1816 by Stewart, the captain of a sealing vessel, and called 'Foveaux Strait,' but it is now called Favourite Strait. This strait is about 40 miles long and 12 miles wide on an average. It is very dangerous on account of numerous rocks which are dispersed over it, especially at the eastern entrance of the strait. New Leinster has nearly the form of an equilateral triangle, and measures in its greatest length and width about 40 miles. The coast is generally rocky and high. Along the western coast it has only anchorage under the lee of some small islands, but on the northern shores there are some small bays which afford good anchorage. The south-eastern shore has one of the finest harbours on the globe, called Pegasus, or Southern Port. At its entrance are two islands, which divide it into three channels, and each of them is deep enough to admit large vessels. The island is rather mountainous than hilly, and is almost covered with forests, which contain abundance of ship timber. Between the hills are many fine valleys and some plains of moderate extent.

Climate, Soil, and Productions.—The climate of New Zealand is frequently compared with that of Great Britain, and certainly there is a great similarity between the two countries, so far as respects the frequent changes of the weather, the moderate heat and cold, and the limited annual range of the thermometer, the limited daily range of the thermometer, and the slow passage from heat to cold, and *vice versa*, at the change of the seasons. The following is the mean temperature at Auckland, Wellington, Nelson, and London, from the observations of one year only at each place, but not the same year:—

Months.	At Auckland.	At Wellington.	At Nelson.	At London.	Months.
January . .	69.5°	66.4°	65.5°	62.97°	July
April . . .	59.0	63.5	53.3	50.79	October
July . . .	49.5	48.7	46.0	36.34	January
October . .	58.6	59.2	54.0	47.61	April
Summer . .	67.2	65.3	65.2	61.7	Summer
Autumn . .	60.1	59.3	55.0	50.3	Autumn
Winter . .	51.9	50.4	47.5	38.2	Winter
Spring . .	57.4	57.7	53.7	48.3	Spring
Annual Mean } .	59.2°	58.4°	55.4°	49.6°	{ Annual Mean

The temperature of the air thus appears more equable at Auckland than at London; as at Auckland the difference between the hottest and coldest months is not more than 19.8°, and at London it is 26.6°. At Nelson the temperature is lower than at Auckland, and the daily range of the thermometer is greater. The daily range of the thermometer on the coast frequently does not amount to more than 4°, and probably it never exceeds 8°; but on the table-land surrounding Lake Taupo, which may be considered as 1500 feet above the sea-level, it sometimes amounts to 25°, and in these parts the ponds

and swamps are sometimes covered with ice about half an inch thick. On the table-land the trees shed their leaves in winter; but along the whole coast the natives plant their potatoes at all seasons of the year, and the forest is always green.

The climate of New Zealand is very humid. In ten months (from April, 1841, to February, 1842), there fell 34.49 inches of rain in Wellington, and in 1846 there fell 28.78 inches at Nelson. In London the mean annual quantity of rain is 24.10 inches, but in some districts in the west of England double that quantity falls. Dews are frequent and particularly heavy during the winter months. Fogs are rare on the sea-coast, owing to the brisk winds, which hardly ever cease to blow; but in the interior they rest upon the lakes and watercourses until they are dispelled by the sun or driven away by the winds. This abundant moisture renders vegetation so vigorous, that it covers even the rocks where only a thin layer of vegetable mould is found: it is not injurious to health, as the country is generally so well drained that swamps are comparatively rare and of small extent; besides, it feeds the numerous streams and rivulets, which render the island one of the best-watered countries on the globe. Rain falls in New Zealand in all the months of the year, but the largest quantity falls in winter and spring.

Every part of New Zealand seems to be subject to frequent winds and heavy gales. The winds at Wellington blow either from north and north-west or from south and south-west. In 1841 it blew from north and north-west for 213 days, and from south and south-west for 119 days. During the winter the north-west wind prevails; but when the sun has a southern declination southerly winds are most general. But in Cook Strait, which is nearly inclosed by high mountains, the direction of the wind changes so frequently and suddenly that no two puffs follow each other from the same quarter, and the nearer the shore the more this is felt. At Nelson the prevailing winds are north-east and south-west: in 1846 it blew from the north-east on 219 days, and from the south-west on 71 days. At Auckland, and in general on the northern narrow peninsula, south-west and west winds prevail. They generally commence about 10 o'clock in the morning, and increase gradually almost to a smart gale, but subside at sunset into a calm. Easterly gales generally occur at the full and change of the moon, and continue for two or sometimes for three days. In the winter months they sweep with great violence over the more exposed part of the country. These winds nearly always bring heavy rains. Northerly winds are of rare occurrence.

The seasons are not very distinctly marked. At Wellington the fair season commences in the middle of December, and continues to the middle of April. After the middle of April the weather is more variable, the winds increase in force, and the showers are heavier and last longer. The air becomes chilly. This weather continues to the beginning of July, when the bad or tempestuous season begins. Heavy rains occur almost daily, and sometimes they continue for many days together: the wind is almost a constant gale, and often blows with the strength of a hurricane. At Auckland the fair season lasts from October to April and even May. It is regularly interrupted by the heavy rains which occur at the full and change of the moon, attended by gales, and irregularly by squalls and showers. During the remainder of the year showers are frequent, and the westerly winds blow with considerable force. In December and January regular land and sea breezes are experienced. The sea-breeze sets in from the north-east in the forenoon, and veers to the south in the evening. Thunderstorms are frequent in August, and are sometimes heavy. Earthquakes have been experienced at several places, but the shocks have always been slight, and have caused no damage.

Two plants were cultivated by the natives at the time of the arrival of the Europeans, the taro (*Caladium esculentum*) and the kumera, or sweet potato (*Convolvulus batata*). Among the fruit-trees the most remarkable is the *Areca sapida*, of which the undeveloped plaited leaves or the heart are eaten, and the leaves are used in roofing the houses. The leaves of the *Piper excelsum* are used as tea. Some shrubs bear berries, which are much liked by the natives, especially the *Solanum laciniatum* and the elderberry-tree (*Cornaria sarmentosa*), whose leaves however contain an acrid poison, which produces violent symptoms if eaten by cattle.

The greater portion of the island is still covered with forests. There is a great variety of trees, and perhaps in no part of the globe do they attain a larger size and exhibit a more luxuriant vegetation, which is to be attributed to the humidity of the atmosphere. There are various kinds of *Conifera*, and they produce the most valuable timber. One, peculiar to New Zealand, is the kauri (*Agathis Australis*), whose timber is so highly prized that it was one of the greatest inducements to Europeans to visit the island. It is however only found on the northern peninsula. There are numerous other useful timber-trees, but the quantity of timber exported from New Zealand is not large.

The other kinds of plants requiring notice are—the ferns, the *Phormium tenax*, and the raupe. There are ninety-four species of ferns in the island, and some attain the size of trees. The *Cyathea dealbata*, the highest, is sometimes forty feet in length. One species, the *Pteris esculenta*, has a root which was formerly much used as food by the natives; but since the cultivation of several other plants has been introduced by Europeans, it is only used to feed pigs, which

quickly fatten on it. The *Phormium tenax*, or flax, covers many extensive plains; it grows on mountains and in swamps. It was formerly used by the natives to make clothing, and considerable quantities of flax obtained from it were exported; but since the demand for provisions by the vessels which visit the island has increased the value of labour, the natives have produced much less of this article for the market. Many swamps are overgrown with a kind of bulrush called raupu (*Typha angustifolia*), which is a useful building material for the natives, who make the walls and roofs of their houses of them, tying them together in bundles with a climbing fern.

The most important of the plants introduced by Europeans is the potato, which is extensively used by the natives, partly for food and partly for exportation: most vessels that touch at the island take large quantities of them. Maize, or Indian corn, was introduced early, and in the northern district forms a considerable article of export. Wheat was introduced by the missionaries more than twenty years ago, and its cultivation has spread rapidly. Turnips are very extensively cultivated: they are dried in the oven, wind, or sun, and they keep for a long time. The other vegetables are pumpkins, shallots, onions, garlic, beet-root, endive, celery, leeks, purslain, radishes, Spanish radish, Spanish onions, cabbages, brocoli, artichokes, cucumbers, capsicums, Chili pepper, and mustard. The fruit-trees of Europe have also been planted, and most of them succeed very well, especially in the northern districts, as pomegranates, figs, quinces, nectarines, peaches, apples, pears, vines, olives, raspberries, strawberries, and Cape gooseberries. Some attempts have been made to introduce the fruits of India, but without success. The bananas and mango-trees do not flower. Tobacco is cultivated at several places by the natives for their own consumption, and the sugar-cane succeeds very well at Hokianga.

The dog, a smaller variety of the Australian dingo, existed here at the arrival of the Europeans, and is still, though rarely, met with, as almost the whole race of the island has become a mongrel breed. This was the only domestic animal at that time. The white settlers have introduced the horse, cow, ass, sheep, and pig. Pigs are very numerous; they are easily fed and fattened on the fern-root. The other animals, though not yet numerous, succeed well, particularly sheep. A considerable amount of wool (about 700,000 lbs. in 1858) is exported to Great Britain. No wild animals are found, with the exception of a kind of bat, called *Mystacina tuberculata* by Gray. Formerly a native rat, which was eaten by the aborigines, was very common, but it has been nearly exterminated by the European rat, and is now only found on the table-land of Roturua.

Seals and whales of various kinds are found in the neighbouring seas, but not so plentifully as formerly; and many sorts of fish, several of which are edible. Fish and eels are also found in the rivers. There are numerous species of birds, the most remarkable of which is the kiwi of the natives (*Apteryx australis*), a struthious bird, unable to fly on account of its want of wings, instead of which it is provided with flappers. Among other birds are a rail, found in the swamps, as large as an English pheasant, and of splendid colours: some small and gaily-coloured parrots; a sort of mocking bird, called tui by the natives, which makes a variety of fanciful noises, coughing, whistling, and chattering; and a small owl, called by the settlers 'More Pork,' from the sound which it is said it distinctly pronounces towards day-break for half an hour continuously.

Very little is known of the mineralogy of New Zealand. In October 1852 gold was discovered at Coromandel, about 40 miles E. from Auckland, on the peninsula forming the eastern side of Hauraki Gulf, between the harbours of Waihou on the western side and Mercury Bay on the eastern side. Neither lead nor silver have been traced, but Dieffenbach states that from the island of Otea, or Great Barrier Island, which is north of Cape Colville before the entrance of Hauraki Gulf, he obtained specimens of a copper-ore, some of which contained nearly 25 per cent. of copper. Iron-ore is said to exist at several places; coal has been found and worked at Maasacre Bay, on the Waikato River; at Motunao; at Mokau, in New Ulster; and at Saddle Hill, near Otago; and also at various places in the neighbourhood of Tasman Bay, in the island of New Munster. Thick layers of lignite are observed in the cliffs which skirt the western and eastern coasts, but especially in the former. Limestone is found on the west coast, especially on the deeper inlets, and some limestone-rocks would yield marble. Indurated scoriae and some kind of sandstone are fit for building materials. Slates are met with in many places. Immense quantities of sulphur could be collected in the volcanic region.

Population and Inhabitants.—The population is composed of European settlers and of the native tribes. The natives call themselves Maori (aborigines), in contradistinction to the foreigners, or Pakehah. They are generally tall, muscular, and well-proportioned, and do not vary in size as much as Europeans do. The form of the cranium approaches that of the European. Their language is derived from the same stock with the Malay language, but that of the Malays has been greatly enriched by foreign words from the Sanscrit, Arabic, &c., whilst that of New Zealand preserved its originality until the missionaries and Europeans introduced new ideas and new signs for them.

When the voyages of Cook first made us acquainted with New Zealand, the inhabitants derived their food from plants which they cultivated, lived in houses constructed so as to protect them against rain and the weather, were possessed of large war-canoes, and wore

more clothing than the people in the other islands; but they were divided into many tribes, which were frequently at war with one another. On the hills which are so numerous they built villages, which were fortified with palisades and ditches, and to these small fortresses they retired when attacked by an enemy. These fortresses were called 'paha.' Their wars were carried on with great cruelty; they ate their enemies who fell in battle, and frequently killed and ate their prisoners. Women and children were carried off as slaves. These wars greatly impeded their progress in civilisation.

The intercourse of the natives with Europeans effected a great change. The New Zealander became acquainted with the use of fire-arms and adopted them. The tribes that first became possessed of fire-arms immediately acquired a superiority over their neighbours; and this circumstance led to the annihilation of several tribes which had formerly been numerous and powerful, and it is probable that the whole race would have been extirpated if the missionaries had not arrived.

The most singular custom among the New Zealanders, as well as among the inhabitants of many other islands dispersed over the Pacific, is what is called 'tapu,' which signifies that a thing must not be used or touched, and heavy penalties are attached to the violation of the tapu. Many things are always tapu, as the plantations of the sweet potato, property contained in a house left uninhabited by its proprietor, a house containing seeds, a canoe left unprotected on the beach, or a tree selected for being worked into a canoe at a future period. A married woman and a girl promised in marriage are invariably tapu. A burying-place and the utensils and clothes used in interments are strictly tapu. It is evident that this tapu supplies the want of prohibitory laws. But a thing may also be declared tapu by the priests, and it cannot be used until the tapu is taken off. Even men or women may be pronounced tapu, and then they are not allowed to touch their food or drink, but are fed by others until the tapu is taken off, which is done by the priest or priestesses by some simple ceremonies and prayers.

The natives have considerable talent for the mechanical arts, and a great inclination to cultivate their minds. Cook found among them war canoes, which were 80 feet long, and constructed with considerable ingenuity. They have applied themselves successfully to the acquisition of the various trades introduced by Europeans, are good farmers, and bold and skilful seamen. There are now few natives who have not learned to read and write; and even those who live in parts of the country which have only occasionally been visited by missionaries, have acquired these elements of civilisation by mutual instruction.

The governor, Sir George Grey, writes of the natives in 1850, in his Report to the British Secretary of State, in terms of high commendation, in reference to their industrial capabilities, their desire for mental improvement, their agreeable manners, their moral character, and their material prosperity.

History and Colonisation.—There is reason for supposing that some Spanish navigators discovered New Zealand in the 16th century, but nothing is on record which can prove it. We must therefore consider that the islands were discovered by the Dutch navigator Abel Tasman, who, in December, 1642, reached the west coast of Tawai-Poenammoo, near 42° 10' S. lat. He sailed along the coast northward, and entered the western entrance of Cook Strait in the wide open bay called on our maps Blind Bay, but by the Frenchman D'Urville, Tasman Bay. Here he anchored in a harbour, which he called Massacre Bay, as four of his seamen were killed there by the natives. From that time New Zealand was considered a part of the Australian continent by the geographers of the period. No European seems to have visited it till the time of Cook, who in his first voyage spent nearly six months on the coasts, in 1769 and 1770, during which he circumnavigated the islands and surveyed the coasts. In December 1769, a French ship commanded by Surville anchored for some time in Doubtless Bay, as it is called by Cook, but which Surville named Lauriston Bay; and in 1772 two French vessels, under the command of Marion and Crozet, sailed along the west coast of New Ulster, and remained for some time in the Bay of Islands, where Marion and 27 Frenchmen were killed by the natives. Cook visited New Zealand in his second voyage three times, and in his third voyage for the fifth time. Vancouver also visited it in 1791, but merchant-vessels came to it only towards the close of the last century. In fact, these remote seas were hardly visited by trading-vessels before the foundation of the British colony at Port Jackson in Australia.

When the colony at Port Jackson had gone through its first trial and began to rise, it became the centre of a new branch of commercial industry. Before the end of the last century a few vessels, English and American, departing from Port Jackson, began to prosecute the whale-fishery in the sea east of New Zealand. As the number of whales was immense their success was very great, and they soon learned that provisions and other necessaries of life were to be got much cheaper and with less labour in New Zealand than at Sydney, and thus New Zealand began to be the resort of the whalers, who visited the Bay of Islands in preference to all other parts on account of its geographical position and the excellence of its harbour. To facilitate the intercourse between the natives and the crews of these vessels, a few English settled in that harbour and in some others on the east coast. About the same period the New Zealand flax began

to be considered a useful article both in England and in New South Wales, and many vessels visited the islands to procure it. The tracts where the *Phormium tenax* grows in greatest abundance are situated on the west shores of New Ulster; and settlements were made there in order to get cargoes for the vessels whose arrival was expected. During the first twenty years of the present century the coasts of New Munster and of Cook Strait were overrun by sealers in every direction, who caught many thousand seals every season; the skins were sent to China, where they fetched a high price. When the seals began to fail the whale-fishery in Cook Strait was established. This led to the settlement of several Englishmen on the shores of the strait, and thus a considerable number of Englishmen had become domiciled in New Zealand at an early period. Most of them married native females, and finding that the country possessed a considerable degree of fertility, and that immense tracts were not cultivated, they began to acquire landed property before a regular colony had been established. Meanwhile the Church Missionary Society had directed its attention to the natives of New Zealand, and sent several missionaries in 1814. They were soon followed by some Wesleyan and Roman Catholic missionaries, and though their labours were not attended with immediate success, they ultimately succeeded, and at present the natives are nearly all at least nominally Christians.

The English government having been informed that every foot of ground in New Zealand was the property of somebody did not think it expedient to send a colony there, and made a declaration to that effect; but the English who were settled in the island wished to have some protection, and they complained that many runaway convicts from New South Wales had entered the country, where they exercised a pernicious influence over the natives, who were excited by them to acts of violence against their neighbours and the settlers. The use of fire-arms began to be introduced among them, and the conflicts became more numerous and deadly than ever. This induced the English government in 1833 to send there a consul or agent to decide disputes between the English according to the law of their country, and to remove vagabonds.

In 1835 a French adventurer, Baron de Thierry, announcing himself as sovereign chief of New Zealand and king of Nuhuhwa (one of the Marquesas Islands), published a formal declaration that he was about to go to New Zealand and to establish an independent sovereignty. He went in 1837 to Hokianga with a few settlers, but being soon abandoned by his companions he left the country. The British settlers now addressed a petition to William IV., praying for the establishment of a regular government in the form of a British colony. In 1838 an Englishman arrived in London who had been residing for some time in New Ulster, and had bought an immense tract of country, which he wished to dispose of. This gave rise to the New Zealand Company, which sent there the first regular colony in 1839. Several settlements were made in New Ulster, and on the shores of Tasman Bay in New Munster. In 1840 the English government made a regular settlement on the shores of Port Waitemata in the Bay of Hauraki, where the town of Auckland was built. Subsequently settlements were made at Canterbury and Otago, both in New Munster, the former by members of the Church of England, the latter by Free Church Presbyterians; but both have ceased to be exclusive.

Neither the settlements nor the conduct of the New Zealand Company gave satisfaction to the colonists. The Company had endeavoured to act equitably by the natives in founding their colonies, purchasing all the lands required, and reserving certain portions, mingled with the others, as inalienably appertaining to the original owners. Difficulties had however arisen. The native wars had in many instances transferred districts from the conquered to the conquerors. The latter had sold the lands; the former, on something like peace being restored, claimed them, and showed no disinclination to refer the arbitrement to force. In addition, there were the claims of private individuals, who asserted that they had purchased tracts of land varying from two acres to 500 square miles, for merchandises, tobacco-pipes, and blankets, often from the same chiefs who had sold the land to the New Zealand Company, and in frequent cases produced their signatures. Captain Hobson, who was at first only consul, but was afterwards named lieutenant-governor, concluded the treaty of Waitangi with the native chieftains, by which the sovereignty of the islands was transferred to Queen Victoria; but all the proprietary rights, "the lands, estates, forests, fisheries," &c., were secured to the chieftains, while the right to purchase any part thereof which they might feel disposed to alienate was restricted to the crown; it was declared that any future sale by the natives, except to the crown, would be null and void; and the title of the New Zealand Company to their lands was left unsettled. Numerous disputes arose between the natives, the Company, and the governor. In September, 1842, Captain Hobson died, and his chief adviser, Mr. Shortland, carried on the government till the arrival of Captain Fitzroy, in January 1844. In the meantime an event had occurred which produced a long and disastrous war with the natives. A dispute had arisen respecting the lands in the valley of the Wairau, near Cloudy Bay, on the opposite side of Cook Strait, in New Munster. Two of the most powerful chiefs, Rauperaha and Rangihæta, had used force to prevent a survey of the district being taken, and had burned some of the dwellings,

and a magistrate's warrant was issued to arrest them on a charge of arson. On June 17th, 1843, Captain A. Wakefield, one of the magistrates, and a party of the settlers, amounting in the whole to 49, attempted to execute this warrant, but the Maori chiefs, as might have been expected, laughed at the notion of submission to the authority of the law; and, when told they would be compelled, Rauperaha replied that he "did not want to fight, but if the white people fought he would fight too." An attempt was made to arrest the chiefs. A conflict took place; and though the natives did not number more than 80 or 90, only half of whom were armed with muskets, Captain Wakefield and 21 others were killed, several after they had laid down their arms and offered to surrender; many more were wounded, and all who escaped did so with difficulty. This affair inspired the natives with yet greater boldness, which was not lessened by Captain Fitzroy's declaring, after an interview with Rauperaha, whom he visited to hear his statement, that the settlers were in the wrong, and ought not to have continued the survey at Wairau. In June, 1844, Heki, another chief, and previously a missionary student, proceeded to cut down the British flag-staff at Russell, in the Bay of Islands, at the northern end of New Ulster, and plundered and burned the town. This gave rise to hostile proceedings, which continued for more than a year. In November, 1845, Captain Fitzroy was succeeded by Captain (now Sir George) Grey, who came as governor-in-chief, with a force augmented to 2500 men. Within a month he succeeded in tranquillising the north. He then turned his attention to the south. Rauperaha was suddenly seized in his pah, or fortified village, and kept for a considerable time as a prisoner at large. He cleared the valley of the Hutt, near Wellington, of the intrusive natives, and he pursued Rangihæta and his people till they were subdued and forced to submit. During these dissensions a great portion of the native population adhered faithfully to the British side, and were of the greatest service, particularly in the latter part of the war, when tracking Rangihæta through the pathless and almost impenetrable forests. An attack on Wanganui in the spring of 1847, which was easily repulsed, was the last hostile conflict of the European and native races. The governor employed the military in laying out and completing a number of roads. The natives now mix on the best terms with the British; they live amongst them, they found towns, build churches, and have projected newspapers of their own; they have elevated themselves to an equality, perhaps more—for it is stated, that so eager are they for knowledge that there is scarcely a Maori who cannot read and write.

The New Zealand Company have given up their efforts at colonisation. They resigned in 1852 their claims to the government, upon receiving a compensation for their outlay to the amount of 268,370*l.*, to be paid out of the sale of waste lands in New Zealand; an arrangement which excited much dissatisfaction in the colony.

Government.—The government of New Zealand has hitherto been intrusted to a governor (till 1845 he was only lieutenant-governor, subordinate to the governor-in-chief at Sydney), with an executive council, consisting of the colonial secretary, the treasurer, and the attorney-general; and a legislative council consisting of four colonists, nominated by the governor. The seat of the government is at Auckland. In 1852, by the act 15 and 16 Vict., cap. 72, a new constitution was provided for New Zealand. By this act the following provinces are established in New Zealand, namely, Auckland, New Plymouth, Wellington, Nelson, Canterbury, and Otago, the limits of the same to be fixed by the governor of New Zealand; each province has a superintendent and a provincial council, and the colony at large has a legislative council and a house of representatives. The waste lands are under the superintendence of the General Assembly, but arrangements with respect to lands held in common by the natives cannot be entered into except with the crown.

New Zealand was created a bishopric in 1841, as suffragan to Sydney, when the Rev. G. A. Selwyn was appointed, whose residence is at Auckland, and who has been indefatigable in the discharge of his duties. A second bishopric, that of Christchurch, was founded in 1854.

The government revenue in 1849 was 43,589*l.*, in 1850 it was 57,743*l.*; of the increase 4000*l.* arose from the customs, and 5000*l.* from the land. There has been always a deficiency in the revenue as against the expenditure, which has been made up by a parliamentary vote by England. In 1850 this vote was for 20,000*l.*; but in 1849 there was a decrease in the expenditure in New Ulster of 5075*l.*, and in New Munster of 11,587*l.*, a total decrease of 16,662*l.*

Towns and Villages.—The chief towns and villages in the colony are the following:—

Auckland, the seat of the government of the colony, is built on the southern shores of the harbour of Waitemata, which opens into the Gulf of Hauraki. The harbour has sufficient depth for vessels of considerable burden. The town stands on cliffs of sandstone of moderate elevation, backed by rising ground. Several volcanic cones rise in its immediate neighbourhood, at the base of which are hard scorise, fit for buildings and roads, and easily worked; the sandstone of the cliffs, though soft, hardens by exposure to the air, and is also a good building material. Some of the caves that occur in the cliffs have been used by the natives as places of sepulture, and the bottoms are covered with human bones. The houses in the town are mostly of wood. The town is situated in a part of the island where the soil, though light,

is fertile and easily cultivated, and it has an easy communication with all the countries both to the north and to the south. Many of the English, who settled on the island before the foundation of the colony, reside in the harbours north of Auckland, and a great number of small coasting-vessels visit Auckland. Around Auckland are four pensioner-villages for discharged soldiers. Auckland was incorporated as a borough on July 29th, 1851, the district by which it is formed extending 16 miles in length, and from 5 to 7 miles in width. It is divided into 14 wards, of which three are in the town itself. The Tamaki Creek intersects the borough, is navigable for boats, and is made available for the commerce of the district. The borough is governed by a mayor, aldermen, and burgesses. The principal buildings in the town are—St. Paul's church, a handsome building; two sets of barracks built of scoria; a public hospital; a market-house; a native hostelry; public washing, bathing, and drying grounds; several chapels; and a bank. There are also several bridges, wharfs, and landing-places. The governor's residence and the bishop's are closely adjacent, and four miles from the town, on the banks of the Tamaki, is St. John's College. There is a church at each of the pensioner-villages mentioned above. The population of the town is about 4000; in the district in 1851 there were 8840, of whom 4921 were males and 3919 females. The flag-staff of the barracks is in 31° 51' 27" S. lat., 174° 45' 20" E. long.

Wellington, the principal settlement of the New Zealand Company, founded in 1840, is on the shores of Port Nicholson, in the island of New Ulster, but for government purposes the town and the whole of the district are comprised in the province of New Munster. Port Nicholson lies in 41° 15' S. lat., 174° 47' E. long.; it is surrounded by mountains, except at the alluvial tract through which the river Hutt, or Eritonga, reaches the sea. These mountains rise abruptly from the water's edge, except in the most south-western corner of the harbour, where a strip of flat land extends at their base, about one-third of a mile broad and two miles long, the soil of which is composed of sand, shells, shingle, and vegetable earth. On this flat ground, which surrounds that portion of Port Nicholson called Lambton Harbour, the town of Wellington has been built. It extends about three miles in the form of a semicircle round the harbour. The flat ground not being considered sufficient for the town, the hills south of it were included. As these hills are generally too steep to build on, only the more convenient parts were selected for that purpose, and thus the most distant points of the town are nearly four miles from the harbour. In 1848 there were 525 houses, of which 45 were of brick or stone, 308 of wood, and 177 of clay and wood, or other materials. Other houses, and large warehouses of brick, have been constructed since, near the wharfs and jetties, which have been built so that vessels of 70 tons can unload alongside of them. There are two churches, and an Episcopal chapel, a Presbyterian chapel, five Wesleyan chapels, three other Dissenting chapels, and one Roman Catholic chapel, with a Roman Catholic bishop; there are also a hospital, a bank, a savings bank, a mechanics institute, a horticultural society, a custom-house, an exchange, a jail, two sets of barracks, and the residence of the lieutenant-governor. There are also 38 schools of various kinds. Most of the public buildings are of wood only. The population of the district in 1851 was 5722, of whom 3135 were males and 2587 females. The town is well supplied with water by streams which run through it; it is lighted at night by lamps, which every public-house is compelled by the terms of its licence to keep burning; the streets are not paved, but excellent roads have been made in several directions along the coast to the valley of the Hutt, and towards that of Wairarapa. Two newspapers are published in the town. Three cemeteries have been provided, all of them at some distance outside the town, one for the Jews, one for Roman Catholics, and the other, a large one, picturesquely situated, is used by all the Protestant sects, European and native. The harbour is safe, and has good holding-ground.

Akaroa is a small settlement formed, in 1840, by the French, who had attempted to land in the Bay of Islands, but were prevented by Governor Hobson; and under his direction, and accompanied by an English magistrate under the British flag, they were settled at Akaroa. Akaroa is near the south-east point of Banks Peninsula in New Munster, in 43° 52' S. lat., 173° E. long. The harbour is an inlet 7 miles in depth, with steep shores, and has a bar at the entrance, but it is perfectly landlocked within, though exposed to furious gusts from the highlands around it, and there is 14 fathoms water inside the harbour. The town contains a church, the residence of the magistrate, a jail, and the cottages of the inhabitants, who are chiefly agriculturists. *Bay of Islands*, at the northern end and east coast of New Ulster, was originally the seat of a whaling station, and was at first selected by Governor Hobson for the site of the capital, but was abandoned in favour of Auckland. Two towns however sprung up, Russell and Kororarika; the first was burnt down and the inhabitants expelled by Heki, and from the other they withdrew to Auckland. Still some Europeans have kept their position here, and the government returns state the population as 400. *Canterbury* is the name of a settlement in New Munster, first founded in 1849, upon strictly Church of England principles, and with a large ecclesiastical establishment. It comprises the whole of Banks Peninsula, and a large district running back westward to the range of mountains, and extending along the eastern coast for a direct length of about 100 miles. The population

in 1850 was estimated in the government returns at 1600; but Mr. Fox, in his 'Six Colonies of New Zealand' (1852), gives the number at 3784; and two towns had been formed, Lyttelton, at Port Victoria, and Christchurch, on the plains, where temporary churches had been built, and a college and schools founded. *Kaitiaki* is a native village, and a missionary settlement in New Ulster, in the valley of the Awaroa, a few miles S.W. from Doubtless Bay, and 8 miles from the western coast. The natives in the valley are estimated at 8000. The village is extremely picturesque, and much resembles an English one. There is a large church, with a wooden steeple, the work almost entirely of native builders; the houses are adorned with gardens in front, where roses and other flowers are cultivated; as are also various fruit-trees, the vine, vegetables, and some tobacco; they grow wheat and hops, and they have cut a road 32 miles long through the forest to Waimate on the Bay of Islands. *Mongamoi* is a small settlement on an excellent harbour within Doubtless Bay, on the eastern coast, towards the northern end of New Ulster. *Motueka* is a native village, with a slight admixture of Europeans, about 50 miles E.N.E. from Nelson. In this village, of which the population is about 1400, agriculture seems to be the chief pursuit, though lying close on the shore of Queen Charlotte Sound in Cook Strait. *Nelson*, situated on Nelson Harbour, in Blind Bay, New Munster, on the southern side of Cook Strait, in 41° 15' S. lat., 173° 16' E. long., was the second settlement of the New Zealand Company, and was made in 1843. The port is a good one, but the district is chiefly agricultural. The population of the whole district, which is extensive, amounted in 1851 to 4287, of whom 2317 were males and 1970 females. There are in the town one church, one Wesleyan chapel, two other chapels for Dissenters, and one Roman Catholic chapel. There are three other churches and six chapels at various villages. We have noticed the great extent of sheep farming in this district, and as the pastures lie wide it has led to the construction of a great length of road; from 60 to 70 miles have been already formed, and a communication by land has been opened with Canterbury, a direct distance of about 170 miles, to Lyttelton. Coal exists in great abundance in the vicinity; one seam at Nelson and one at Waikati have been worked for some years, and in the latter end of 1852 a new seam of superior quality was discovered by a landslip at South Wanganui, at the north-west corner of the island, about 60 miles from Nelson in a direct line by land, but easily accessible by sea. Copper is also found near the Dun Mountain, about 8 miles from Nelson. *New Plymouth*, in New Ulster, is situated between two small streams, the Huatoki and the Henui, near their entrance into the sea, on the northern side of the peninsula of which Cape Egmont is the western termination, and in the midst of which stands the extinct volcano of Mount Egmont. There is no harbour properly so called, as the rivers are not navigable, and the mouths are small, nor is the roadstead a secure one. But this is the only drawback for the country around has been called the garden of New Zealand. The land is so dry and so level that good roads are made with but little trouble, and the soil is the most fertile of any yet cultivated in New Zealand. The settlement was founded in 1841. In 1851 the population was 1532, of whom 845 were males and 687 females. The town fronts the sea, about half a mile from the beach, lying scattered on the slope of a hill, and contains two churches, one of them of stone, a Wesleyan chapel also of stone, two Dissenting chapels; a jail, schools, and some other buildings, all constructed of wood; and there are a brewery and three flour-mills. Several bridges have been formed over the various small streams that descend from the sides of Mount Egmont and traverse the country. Iron and coal exist in the neighbourhood. Coal is found in abundance near the Mokau River, about 50 miles N. from New Plymouth. *Otago*, in New Munster, is the district in which a settlement has been made by members of the Free Church of Scotland. It is toward the southern end of the island, on the eastern coast. The town named *Dunedin* is on the Molyneux River, which has been re-named the Clutha. The harbour formed by the mouth of the river is an excellent one; it is 13 miles long, and averages 2 miles in width; but the channel had difficulties which have been guarded against by laying down guiding buoys. The settlement was made early in 1848; in 1851 the population was 1740, of whom 994 were males and 746 females. The chief town, Dunedin, stands at the head of the harbour, and another has been formed nearer the mouth, named *Port Chalmers*, which lies in 45° 46' S. lat., 170° 43' E. long. There was in 1848 only one place of worship, a Free Church chapel; but in 1850 the number of adherents to that doctrine barely reached a majority. The Clutha is a fine river, and, though difficult of entrance from a bar and consequent surf at its mouth, is said to be navigable for 60 miles for vessels of considerable burden. Coal is found at Coal Point, about 10 miles N. from the mouth of the Clutha, and at a spot within a quarter of a mile of the left bank of the Clutha, about 4 miles inland; traces have also been found in other places. A kind of green serpentine or jade is found here. *Otaki* is an exclusively native village on the western shore of Cook Strait, about 50 miles N.N.E. from Wellington, and was the village where the celebrated Rauperaha lived, and where he died. The church missionaries have taken much interest in this village, and not without success. Mr. Tyrone Power ('Sketches in New Zealand') describes it in 1848 as consisting of "houses neatly built, in the midst of well-fenced gardens; and there is abundant

proof of prosperity in the number of pigs, cattle, and horses feeding about." The houses are of Maori architecture, with English doors, windows, &c. Mr. Power adds, that several of the chiefs kept a banking account at Wellington, and relates a story of one of them asking an English officer to cash a cheque for him, having immediate occasion for money, which was done, and the cheque duly honoured. Rauperaha, after peace was restored, exerted himself greatly in forwarding the building of a church, which was done entirely by the Maories. It is only of timber, but it is the largest building they have ever yet erected, being 300 feet long, and in the churchyard attached to it Rauperaha was buried in 1849 with due Christian rites. His son is still the acknowledged chief, and is described as dressing in black, and looking like a clergyman. The population in 1850 was 664. *Petre* is a small but flourishing little place on the west coast of New Ulster, and on the right bank of the Wanganui River, 4 miles from its mouth, and about 100 miles N. from Wellington. The population in 1850 was 452, of whom 276 were males and 176 females. It consists of about 40 houses, a church, a school, a post-office, and a small jail, all of wood. It was founded in 1842, soon distinguished itself by its agriculture, and acquired a great local reputation for its hams and bacon. In 1847 however an unfortunate quarrel with the natives of the valley led to the destruction of the place. On peace being restored the colonists returned, and have resumed their occupations successfully. A small detachment of military is stationed at *Petre*. *Putikiwarans* is a native village on the Wanganui, opposite to the town of *Petre*. It has about 2000 inhabitants, but the whole number in the district probably amounts to 5000. The inhabitants have now applied themselves sedulously to industrial pursuits, bringing their produce down the Wanganui in canoes, which they manage with great dexterity down the rapids, with a cargo sometimes weighing a ton, and contrive even to ascend them with their canoes light. *Waikenas* is a native village about 20 miles S. from Otaki, at the mouth of a small river of the same name. It is in the same style as Otaki, but smaller. In this village one of the natives set up an ordinary—an unlimited dinner for a shilling; but as his fellow-citizens prepared themselves for it by fasting the whole of the previous day he found it unprofitable, and restricted the meal to two pounds of pork, two pounds of potatoes, and a pint of coffee. It has a timber church—like a huge barn, says Colonel Mundy ('Our Antipodes')—and the military coast-road from Wellington passes through it. *Wangaroa Bay* (celebrated as being the scene of the massacre of the crew of the *Boyd* in 1809) is about 25 miles N. from the Bay of Islands in New Ulster. The entrance to the harbour is narrow, between steep rocks of great height; but the water is deep, and the inner harbour is very spacious, and sheltered from all winds. The country around is mountainous, and not adapted for cultivation; but the hills are covered with timber, among which the *Kauri* pine was particularly abundant, but has been much thinned. A few Europeans are settled here, and there is a native village of about 2000 persons, with Protestant and Roman Catholic missions, both persuasions having chapels. Timber is still occasionally exported, and some small craft have been built here.

Trade, Commerce, and Manufactures.—The shipping returns show the following results for the year 1851:—Inwards, 253 vessels, 67,856 tons; outwards, 236 vessels, 64,734 tons. The total imports in 1851 amounted to 349,540*l.*, of which 122,733*l.* went to New Ulster, and 226,807*l.* to New Munster, which, as we have before noticed, includes for such purposes Wellington and its district. The exports in the same year amounted to 34,160*l.*, of which 47,707*l.* were from New Ulster, and 36,453*l.* from New Munster. The chief articles of export were cordage, flax, and hemp; leather and skins; whale and sperm oil; whalebone; and wool. In 1853 the declared value of articles produced or manufactured in the United Kingdom sent from Britain to New Zealand was 230,809*l.* Of trades and manufactures, there are breweries, brick-kilns, candle-manufactories, stocking-loom, cooperages, flax-mills, rope-walks, sacking-loom, wind, water, and steam flour-mills, lime-quarries, lime-kilns, coal-mines, salt-pits, ship- and boat-building yards, tanneries, and saw-mills. In all the towns, and particularly in Wellington, the usual trades and professions have their practitioners.

ZEBU. [PHILIPPINES.]

ZEGZEG. [SOODAN.]

ZEILA (*Zeilah*), a town and harbour in Africa, on the western shore of the Gulf of Aden, near the Strait of Bab-el-Mandeb, is situated in 17° 45' N. lat., 43° E. long. The harbour is small and shallow; small vessels anchor at a distance of nearly half a mile from the beach. The town is inclosed by walls, now in ruins. The inhabitants are engaged in trade. Three kafilas arrive annually from the interior, especially from Hurrar, with slaves, gum, myrrh, coffee, jowari, ghee, ostrich feathers, millet, wheat, and beans. Most of these articles are sent to Mocha and Aden. In return they take back blue and white coarse cloths, piece-goods, prints, silks, silk thread, shawls, red cotton yarn, beads, zinc, copper-wire, frankincense, and Austrian dollars. Zeila is subject to the Pasha of Egypt.

ZEITZ. [MEXICO.]

ZELAYA. [MEXICO.]

ZELLE. [LÜNEBURG.]

ZELLERFELD. [CLAUSTHAL.]

ZEMIN-DEWAR MOUNTAINS. [AFGHANISTAN.]

ZENJAN. [PERSIA.]

ZERBST, formerly the capital of Anhalt-Zerbst, but now belonging to Anhalt-Dessau, is situated in 51° 58' N. lat., 12° 10' E. long., on a level sandy spot on the river Nuthe, about 5 miles from the river Elbe and 90 miles from Berlin: population about 9000. A little without the town is the ducal palace, the birthplace of the empress Catherine II. of Russia. The church of St. Nicholas is a handsome building in the ancient gothic style. The town has two other churches, two hospitals, an orphan asylum, a house of correction, a workhouse, and a high school called the Franciscœum. The chief industrial products are bear, articles of gold and silver, tobacco, stone-ware, and woollen cloths. A saline mineral spring was recently discovered here, and handsome baths have been erected.

ZERINL. [CYPRUS.]

ZETLAND, the ancient name of the SHETLAND ISLANDS, and still occasionally applied to them. Shetland was called by the Norwegian colonists Hjalmland and Healtland, which became changed into Yetland and Zetland. From this name the late Lord Dundas, one of the principal proprietors of Shetland, took the title of Earl of Zetland when elevated to that rank in the peerage in 1838. The name is also retained in the title of the lord-lieutenant and sheriff of Orkney and Zetland.

ZIEGENRÜCK. [ERFURT.]

ZIMAPAN. [MEXICO.]

ZIRKNITZ. [CZEKKNITZ.]

ZIRMIE. [SOODAN.]

ZITTAU. [LAUSITZ.]

ZNAYM. [MOBAVIA.]

ZOMBOR. [TRMESVAR.]

ZUG, one of the Swiss cantons, is situated nearly in the centre of Switzerland, and is bounded N. by the canton of Zürich, E. and S. by Schwyz, and W. by Luzern and Aargau. It is about 14 miles long from east to west, and about 10 miles in its greatest width. The area is 85 square miles, and the population at the end of 1850 was 17,461, all Catholics except 125, who were Calvinists. It lies in the basin of the Reusa. The northern part of the lake of Zug occupies the centre of the canton; the southern part is in the territory of Schwyz. The lake is a fine piece of water, about eight miles long, and between one and two miles wide, surrounded by a delightful country. The small lake of *Aegeri* lies in the south-east part of the canton of Zug, near the borders of Schwyz, from which it is separated by the ridge of Morgarten. The river *Lorse* is the outlet of the lake of *Aegeri*, and after a very tortuous course it enters the lake of Zug below *Baar*, and issues out of it again near the village of *Cham*, and flows northward into the Reusa. The canton of Zug is entirely agricultural; the soil is fertile. Fruit-trees are in great abundance; some districts appear like a continuous orchard. There are also fine meadows, and the horned cattle are remarkably large and fine. Wine is made in several localities. The principal articles of exportation are dried fruit, *kirschwasser*, cattle, butter, cheese, and honey. The lakes abound with fish. Offsets of the mountains of Schwyz enter the canton of Zug from the east and south, and slope towards the banks of the lake.

The head town, *Zug*, is built on the east bank of the lake, and at the foot of the *Zugerberg*, which is covered with vineyards and orchards: population 3302. The principal church is dedicated to St. Oswald, a Saxon king and saint. The adjoining cemetery is planted with flowers. The arsenal of Zug contains, among other curiosities, the banner of the canton, stained with the blood of the landamman, Peter Kollin, who fell with his sons at the battle of *Belinzona*, fighting against the Milanese, in 1422. Zug has a gymnasium with four professors.

The other towns of the canton are:—*Baar*, about 3 miles N. from Zug, on the road to Zürich, which has 2000 inhabitants; and *Mes-singen*, which has about 2200 inhabitants.

The constitution of the canton of Zug is a representative democracy. The landrath, or legislative body, consists of 162 members, who sit for one year, but are re-eligible. There is also a general assembly of the whole canton, which meets once a year, and appoints the landamman and other officers of the state. The canton returns one member to the National Council of Switzerland. [SWITZERLAND.]

ZUIDER ZEE, or SOUTH SEA, is so called by the Dutch in contradistinction from the North Sea, though it is only a wide bay of the North Sea, from which it is separated by a series of islands which extend in the form of a segment of a circle along the north-west border of the Zuider Zee. These islands are called *Texel*, *Vlieland*, *Ter Schelling*, and *Ameland*.

The Zuider Zee lies between 52° 15' and 53° 30' N. lat., 4° 15' and 6° E. long., and covers about 12,000 square miles. Near the middle it is narrowed by a projecting peninsula, on the east point of which the town of *Enkhuizen* is built. South of this the sea is generally from 25 to 36 miles wide. At its south-western extremity an inlet branches off to the west, which extends about 15 miles into the province of Holland. It is from one to two miles wide, and called *Hot Y*. This inlet is deep enough for vessels of considerable size, and constitutes the harbour of *Amsterdam*, which is built on its southern shore. The entrance to this inlet is between shoals, and is called the *Pampus*.

The shores of the Zuider Zee are generally low. On its eastern side they are well defined, and on the south-east, in the province of *Gulder-*

land, they rise several feet above the level of the sea. But the western shores are very low, so that a great portion of the adjacent countries is defended from the encroachments of the sea by dykes. Along the eastern shores the sea has sufficient depth for vessels of moderate size, and in general also for large vessels. But along the western shores several shoals occur, the most extensive of which are near the Texel and at the entrance of the Y; and at low tides there is so little water in them that the larger merchantmen were formerly obliged to discharge a portion of their cargo at the Texel before they could sail to Amsterdam. It was to obviate this disadvantage that the Helder Canal was cut. [HOLLAND, North.]

In ancient times the site of the Zuider Zee was a low swampy marsh drained by the Yssel, which was not then, as now, an arm of the Rhine. But after the Roman general Claudius Drusus, about B.C. 12, had caused a canal to be made from the Rhine to the Yssel, a portion of the water brought down by the Rhine was discharged by this canal into the Yssel. In A.D. 1219 a great portion of the low country was inundated by the sea, after continued north-western gales, which broke down the dykes that protected it against the water. The last great inundation took place in 1282, and gave to the Zuider Zee the form and depth which it still preserves. Since the completion of the drainage of the sea of Haarlem it has been recently proposed to attempt the drainage of the Zuider Zee by means of steam-engines.

ZULLA. [ADULE.]

ZÜRICH, one of the Swiss cantons, is bounded N. by Schaffhausen and Baden, E. by Thurgau and St. Gall, S. by Schwyz and Zug, and W. by Aargau. The territory of Zürich lies in the basin of the Rhine, all its watercourses flowing northward into that river. The area is 684 square miles. The population in 1850 was 250,698, of whom 6690 were Catholics and the rest were Protestants of different sects, the great majority being Calvinists. There are no high mountains in the canton; but several ridges of hills, some of which attain a height of 2700 feet, run from south-east to north-west, screening valleys through which flow the principal rivers of the canton, the Thur, the Toas, the Glatt, and the Limmat. The Lake of Zürich, the eastern extremity of which belongs to the cantons of Schwyz and St. Gall, is long and narrow; it runs through the middle of the canton, extending for about 25 miles from south-east to north-west, with a breadth of one to two miles. The banks are strewn with thriving small towns and villages, and country-houses. The surrounding country, rising in gentle slopes on both sides, is planted with vineyards and orchards, intermixed with fields. The Limmat, a rapid clear stream, issues out of the lake at its north-west extremity, intersects the town of Zürich, and is joined by the Sihl, a river coming from the south, which has its source in the canton of Schwyz.

Agriculture is diligently attended to. The principal products are, corn, bad wine, fruit, and pulse. Horned cattle are numerous; sheep and goats are kept in small numbers. Considerable tracts of ground are covered with forests.

More than one-eighth of the population of the canton is occupied in manufactures. The cotton and silk manufactures are by far the most important. [SWITZERLAND.] The canton of Zürich carries on an active trade, especially with Italy. The Swiss-German is commonly spoken; but the written language is the high German, which is also spoken by educated persons. The canton of Zürich is a representative democracy; all citizens who have attained 20 years of age enjoy the elective franchise, except bankrupts, paupers, and criminals. The Great Council or Legislature consists of 242 members, who must be

at least 30 years of age, and of whom 83 are chosen by the Great Council itself to complete its number. The Council appoints the executive council, which consists of 19 members for six years, and is presided over by the burgmeister. The Great Council appoints also the members of the court of appeals, of the criminal court, and those of the ecclesiastical council. The canton returns 13 members to the National Council of Switzerland. [SWITZERLAND.]

Zürich, the head town of the canton, is situated at the north-west extremity of the lake, and is divided by the river Limmat into two nearly equal parts; of which the one on the right bank is called the Grosse Stadt, and the other the Kleine Stadt. The Grosse Stadt is built on the slope of a hill; the Kleine Stadt lies on more even ground between the Limmat and the Sihl, just above the confluence of the two rivers. Both towns are surrounded by ramparts and ditches, with bastions and ravelins. The streets are mostly narrow and irregular, the houses high, massive, and ancient looking, and the general appearance is that of a town of the middle ages. There are however several modern and handsome constructions, especially in the Kleine Stadt. The münsterhof, or cathedral, is a fine old building of the 11th century. The other remarkable buildings of Zürich are—the frauenmünster, once a nunnery, built in the 13th century; the Prediger church; the church of St. Peter, with its handsome tower and clock; the town-house; the orphan asylum; the Wasserkirche, with the town library annexed to it; the new university; the Casino, or assembly-rooms; the Wellenberg tower and dungeon, in a small island in the middle of the river, where state prisoners were formerly confined; the arsenal; and the new police- and guard-house. The principal promenades are the Lindenhof, in the Grosse Stadt; the Katsbastion, from which there is a splendid panoramic view; Gessner's avenue, at the confluence of the Sihl and the Limmat; and the Hohe promenade on the ramparts of the Grosse Stadt. Zürich is the seat of a University, which has four faculties: divinity, medicine, law, and philosophy, with eight ordinary professors, besides supernumeraries; and is attended by about 200 students. There is a botanical garden, a zoological cabinet, and several collections of mineralogy. Zürich has also a gymnasium, a school of industry, and a veterinary school, besides several private institutions for education. The town library contains 45,000 volumes.

Zürich is a thriving busy town, and one of the most commercial and industrious in all Switzerland. The population amounts to 17,040. Zürich was formerly one of the three cities in which the Swiss Diet assembled. Zürich lies 63 miles E.N.E. from Bern, 42 miles W. from St. Gall, and about 60 miles N. from St. Gothard, which is the most direct road from Zürich to Italy. A railway forming part of a line to Basel runs from Zürich to Baden in Aargau. Winterthur, the only other town of importance in the canton, is situated in a plain 12 miles N.E. from Zürich, and is one of the handsomest and neatest towns in all Switzerland. The population is 5341, who are occupied chiefly in manufactures and trade. In the town are several handsome buildings, a public library, and cabinets of medals and ornithology. The site of the ancient *Vitodurum*, where the Romans had a fortified encampment, is at Ober Winterthur, on the road to Frauenfeld in Thurgau. Many remains of antiquity have been found on the spot.

ZUTPHEN. [GUELDERLAND.]

ZVORNICK. [BOSNIA.]

ZWEIBRÜCKEN. [DEUX PONTA.]

ZWOLLE. [OVERYSSEL.]

THE END.

