

the repast approaches, he sends them a third paper, with a servant to conduct them, and to acquaint them how impatient he is to see them. After the company are assembled, and when they are about to sit down to table, the master of the house takes a cup of gold or silver, and, lifting it up with both his hands, salutes that person who of all the company holds the greatest rank on account of his employment: he then leaves the hall, and proceeds to the outer court, where, after having turned himself towards the south, and offered wine to the tutelary spirits who preside over the house, he pours it out in form of a libation. After this ceremony, every one approaches the table destined for him. The guests, before they sit down, waste above an hour in paying compliments; and the master of the house has no sooner done with one, than he begins with another.—Have they occasion to drink, compliments must begin afresh: the person of greatest distinction drinks first; the rest, afterwards; and all salute the master of the house. Although their cups are very small, and scarce deeper than the shell of a walnut, they however drink a great deal, but slowly and at several times. When they begin to grow merry, they discuss various topics; and they sometimes

play at small games, in which those who lose are condemned to drink.

Comedies and farces are often represented during these repasts; but they are always intermixed with the most wretched and frightful music. Their instruments are basons either of brass or iron, the sound of which is harsh and shrill; drums made of buffalo's hide, which they beat sometimes with the foot, and sometimes with sticks; and flutes, that have a most melancholy and plaintive sound: the voices of the musicians have nearly the same harmony. The actors in these domestic comedies, are boys between the age of twelve and fifteen. Their manager conducts them from province to province; and they are every where considered as the dregs of the people. These youths have most astonishing memories; they know by heart forty or fifty comedies, the shortest of which generally lasts five hours. They carry their theatrical apparatus along with them, together with a volume containing their comedies which they present; and when a piece has been fixed on, they can immediately perform it, without any preparation.

About the middle of the entertainment, one of the performers goes round to all the tables,
and

and begs some small reward from each of the guests; the servants of the house do the same, and carry to their masters whatever money they receive: a new repast is then displayed before the company, which is destined for their domestics.

The end of these entertainments is generally suited to the beginning. The guests praise in detail the excellence of the dishes and the politeness and generosity of their host, who, on his part, makes a number of excuses, and begs pardon, with many low bows, for not having treated them according to their merit.

The Tonquinese physicians pretend that they can discover the greater part of diseases, by the beating of the pulse alone, which they feel in three parts on each side of the body.—By the pulse of the right wrist, they know those which affect the lungs; by that of the veins where we usually let blood, they judge of the state of the lower belly; and by that of the temple, those which have their seat in the reins: the pulse of the left wrist discovers to them the state of the heart; that of the arm-pit, the condition of the liver; and lastly, that of the left temple gives them farther insight into maladies of the reins.

These physicians, for the most part, use nothing but roots, or simples, in the composition of their medicines: however, for head-aches, fevers and dysenteries, they commonly prescribe the juice of a certain fruit, which is said to have a wonderful effect in the cure of these disorders. This fruit resembles a pomegranate, and is called *miengou*. The tree which produces it generally grows in hedges, and rises to the height of the fig-tree, which it is very like; its wood is soft and spongy, its branches are pliant and delicate, and its leaves are almost round and of a pale-green colour. During wet weather, a tart, milky sugar distils from it, which the peasants collect with great care in small porcelain vessels, where it soon hardens. With regard to the fruit, it resembles, as we have said, a pomegranate; however, it is longer, and smaller towards the end, which is hard, and difficult to be broken; when it has attained to a certain degree of maturity, it is gathered and a kind of cyder made of it, without any mixture of water. This liquor may be kept a long time, and is used with success in those diseases which are occasioned by excessive heats.

The purple fever is a disease very dangerous in Europe; but few die of it in Tong-king.—

The

The Tonquinese treat it in the following manner: they take the pith of a certain reed, dip it in oil, and apply it successively to all the purple spots on the body: the flesh then bursts with a report as loud as that of a pistol; and after the corrupted blood has been squeezed out, they finish the cure by rubbing the wounds with a little ginger. This remedy must be very painful; but we are assured that its efficacy is certain.

People are very often bit by serpents at Tongking; but it is easy to cure them. A small stone is found there, much resembling a chestnut, the virtue of which is almost miraculous: it is called *serpent's stone*. When one has been bit by any venomous reptile, the blood is pressed out, and this beneficent stone applied to the wound. It at first adheres closely to the part affected, and gradually sucks out the poison; but when it becomes impregnated with it, it falls off. It is then carefully washed in milk or water in which lime has been diluted, and applied a second time to the wound, from which it again detaches itself in the like manner, after having extracted all the poison. In less than an hour, the patient finds himself without any fever, and quite free from pain.

Bleeding is not much used in Tong-king: this is the last resource of the physicians; and they never have recourse to it, until they are well assured of the inefficacy of other remedies. The Tonquinese perhaps have not so much occasion for frequent bleeding as the Europeans: their blood is naturally poorer, and their exercises are various and more violent; at the same time, they make so great use of herbs and roots, that they are much less subject to those diseases which are occasioned in Europe by the abundance and corruption of the humours: besides, when the Tonquinese feel themselves heavy or oppressed, they administer a remedy, the effect of which is equally speedy and salutary. This remedy is as follows.—There is found in the sea which washes the shores of the island of *Hai-nan*, in the neighbourhood of Tong-king, a species of crabs which have the property of purifying the blood. This animal being cast on shore by the waves, in length of time, becomes petrified, without losing any thing of its natural figure: when it attains that degree of hardness which is common to stones, it is reduced to powder, and administered to the patient in water, wine, or oil, according to his
 cir-

circumstances, or as his case is more dangerous. The same remedy is used also with success for wounds, fevers, and dysenteries.

CHAP. III.

TONG-KING CONTINUED.

Religion, Agriculture and Animals.

THE religion of the Tonquinese is a mixture of the Chinese worship and other superstitions.—Some of them believe the immortality of the soul; others confine this privilege to the souls of the just only. They worship spirits, with which they imagine the air to be filled, admit the doctrine of transmigration, believe the world to be eternal, and acknowledge one supreme being. Men of learning, and the literati, follow the doctrine of *Confucius*, and conform to the customs of the people in all their religious ceremonies. There are few cities in Tong-king, in which one temple, at least, has not been raised to *Confucius*. The statue of this celebrated philosopher is always seen

seen ~~there~~ in the most honourable place, surrounded by those of his disciples, who are considered as so many demi-gods : they are placed around the altar, in attitudes which mark the respect and veneration they formerly had for their master. All the magistrates of the city assemble there on the days of new and full moon, and perform a few ceremonies, which consist in offering presents on the altar, burning perfumes, and making a number of genuflections.

Every year, at both the equinoxes, they offer up solemn sacrifices, at which all the literati are obliged to assist. The priest, who is commonly one of those mandarins called literati, prepares himself for this ceremony, by fasting and abstinence : the evening before the sacrifice is made, he provides the rice and fruits which are to be offered, and disposes in proper order on the tables of the temple every thing that is to be burnt in honour of *Confucius*. His altar is ornamented with the richest silk stuffs, and his statue is placed on it, with several small tablets, on which his name is inscribed in characters of gold. The priest tries the animals intended for the sacrifice, by pouring warm wine into their ears : if they shake their heads, they are judged proper to be sacrificed ; but if they

they make no motion, they are rejected. Before they are killed, which is done in the evening, the priest bends his body very low; after which, he cuts their throats, and reserves their blood and the hair of their ears for the next morning.

On the day of the ceremony, the priest repairs early in the morning to the temple, where, after a number of genuflections, he invites the spirit of *Confucius* to come and receive the homage and offerings of the literati, while the rest of the ministers light wax-candles, and throw perfumes into fires that are prepared at the door of the temple. As soon as the priest approaches the altar, a master of ceremonies cries out, with a loud voice, *Let the blood and hair of the slaughtered beasts be presented.* The priest then raises with both his hands a vessel containing the blood and hair; and the master of the ceremonies says, *Let this blood and hair be buried.* On these words, all the assistants rise up, and the priest, followed by his ministers, carries the vessel, with much gravity and respect, to a kind of court which is before the temple, where they inter the blood and hair of the animals. After this ceremony, the flesh of the victims is uncovered, and the master of the ceremonies says, *Let the spirit of the great CONFUCIUS descend!* The priest immediately

diately lifts up a vessel filled with spirituous liquor, which He sprinkles over a human figure made of straw, at the same time pronouncing these words: *Thy virtues, O, CONFUCIUS! are great, admirable and excellent.—If kings govern their subjects with equity, it is only by the assistance of thy laws and incomparable doctrine. We offer up this sacrifice to thee; and our offering is pure. May thy spirit, then, come down among us, and rejoice us by its presence.* When this speech is ended, the priest takes a piece of silk, offers it to the spirit of Confucius, and afterwards burns it in a brazen urn, saying, with a loud voice, *Since the formation of men, until this day, who is he among them, who hath been able to surpass, or even equal the perfections of CONFUCIUS? O, CONFUCIUS! all that we offer thee, is unworthy of thee: the taste and smell of these meats have nothing exquisite; but we offer them to thee, that thy spirit may hear us.* This speech being finished, the priest drinks the liquor, while one of his ministers addresses this prayer to Confucius; *We have made these offerings to thee with pleasure; and we are persuaded, that thou wilt grant us every kind of good, favour and honour.* The priest then distributes among the assistants the flesh of the sacrifices; and those who eat of it, believe, that

Confucius

Confucius will load them with blessings, and preserve them from every evil. At length, they terminate the sacrifice, by re-conducting the spirit of the philosopher to the place from which it is supposed to have descended.

On the first day of every new year, the Tonquinese celebrate a solemn feast in honour of the manes of those who during their lives performed illustrious actions, or distinguished themselves by their courage and bravery, even when fighting against their country. More than forty thousand soldiers are drawn up in a vast plain, to which all the princes and mandarins are ordered to repair, and where the king himself attends them. After sacrificing, they burn incense before a number of altars, which are inscribed with the names of the generals and great men in commemoration of whom they are then assembled. The king, princes, and all the grandees of the court, afterwards incline themselves before each of the altars, excepting those which contain the names of the rebellious generals, against which the king discharges five arrows. The whole ceremony concludes with the firing of cannon and by three volleys of musquetry, in order to put to flight all these souls.

These

These people have three particular idols, to which they render the most superstitious homage: the first is the *Spirit of the Kitchen*, the second, the *Master of Arts*, and the third, the *Lord of the Place where they reside*. The *Spirit of the Kitchen* takes its origin from a tale preserved by tradition in the country: ‘A woman,’ say they, ‘having formerly separated from her husband on account of some discontent, married a second time. This action gave her former husband so much uneasiness, that the unfortunate wretch put an end to his days by throwing himself into a large fire. The report of this event was no sooner spread, than the unfaithful spouse, touched with repentance, went and expiated her fault by throwing herself into the same fire which had consumed her husband. Her second husband, having been informed of it, hastened thither also; but having found his wife reduced to ashes, he was so much affected with grief, that he rushed into the middle of the same fire, and was destroyed in an instant.’—Such is the origin of this idol. This *spirit* is believed to animate three stones of which the Tonquinese form their hearth; and they worship these three stones on the first day of every new year.

The

The idol called *Master of Arts* is the image of one of the literati, but different from that of *Confucius*, whom the people of Tong-king believe to have been the most ingenious, learned, and wisest of mankind. Merchants invoke it before they buy or sell; fishermen, before they throw their nets into the sea; and artists, before they begin any work.

The idol called *Lord of the Place where they reside* is no less revered than the preceding. When any one intends to build a house, he begins by considering, that the ground upon which he builds is not so much the property of the king, but that it may have some other master, who after his death will preserve the same right as he enjoyed during his life. He afterwards sends for a magician, who by beat of drum invites the soul of the deceased master to come and take up its abode under a small hut, which has been prepared for it, and where it is presented with bits of gilt paper, perfumes, and small tables covered with dainties. The intention of this ceremony is to engage the ancient proprietor to suffer a new tenant in his field.

Some of the Tonquinese are so superstitious, that before they undertake any journey, they never fail to inspect the feet of a chicken:
others,

others, after they have set out, suddenly return, because they have sneezed once; had they the misfortune to sneeze twice, they would think themselves obliged to double their pace, and to return with the greatest haste possible.

There are some who divide the earth into ten parts, and who from time to time make a profound reverence to each: others divide it into five equal portions, the fifth of which is supposed to be in the middle, and they wear different colours when they adore any of these parts. When they pay their homage to the north, they dress themselves in black, and use only black utensils in their sacrifices; they clothe themselves in red when they adore the south; in green, when they sacrifice to the east; in white, when they invoke the west; and in yellow, when they pay their adorations to the middle part.

When a Tonquinese is about to purchase a field, undertake a journey, or marry one of his children, he goes and consults a conjurer, who pretends to be blind, in order to let him know that he hears and sees nothing but truth: before he gives an answer, he takes a book; but he opens it only half, as if he were afraid of suffering prophane eyes to see what it contains.

After

After having asked the age of the person who comes to consult him, he throws into the air two small pieces of copper, on which are engraved, on one side only, certain cabalistical figures or characters. If, when the pieces fall to the ground, the figures are turned towards the earth, it presages misfortune; but if, on the contrary, they are turned towards the heavens, the omen is happy. This manner of fortunetelling is very common among the Tonquinese.

There are other magicians, who are only consulted for the cure of diseases.—If the conjurer announces that the disease proceeds from spirits, they call them wicked genii, and shut them up in earthen vases; if it comes from the devil, they invite the father of liars to a grand feast, which is given at the expence of the sick person's family; they assign him the most honourable place, pray to him, invoke him, and offer him presents; but if the disease does not abate, they load him with injuries, and fire twenty or thirty muskets to drive him from the house. If it is the god of the sea who has occasioned the distemper, they repair to the banks of some river, where they offer up sacrifices to appease him, and intreat him to quit the sick person's chamber and return to the waters. However, the sick

person finds himself no better; and the magician takes his leave, loaded with gold and presents.

Tong-king has its *Miao-tché*, as well as China. These are savage and ignorant mountaineers, who, having shaken off the yoke of every nation, have retired to inaccessible mountains, where they lead a life much resembling that of those ferocious wild beasts which inhabit the same rocks with them. They form a kind of republic, of which their priest is the head. This chief has devised a particular system of religion and rites, which have no relation with those of the Tonquinese. It is generally in the houses of the priests, that their gods deliver oracles. A great noise announces their arrival. These mountaineers, who in waiting for them pass the time in drinking and dancing, immediately put a stop to their diversions, and send forth loud shouts of joy, which are more like howlings than acclamations: *Father!* say they, addressing themselves to their principal god, *art thou already come?* A voice then answers, *Be of good cheer, my children, eat, drink and rejoice; it is I who procure you all those advantages which you enjoy.* After these words, to which they listen with silence, they again return to their pleasures.

pleasures. The gods however become thirsty in their turn, and ask for something to drink; vases ornamented with flowers are immediately prepared, and the priest receives them to carry them to the gods; for he is the only person who is permitted to approach, or converse with them.

One of these gods is represented with a pale visage, a bald head, and an unlucky countenance, which inspires horror. This deity never attends those assemblies with the rest, to receive the homage of his worshippers, because he is continually employed in conducting the souls of the dead to the other world. It sometimes happens, that this god prevents a soul from quitting the country, especially if it be that of a young man; he then plunges it into a lake, where it remains until it is purified. If this soul is not tractable, and resists the will of the god, he falls in a passion, tears it to pieces, and throws it into another lake, where it remains without hopes of ever being liberated.

The paradise of these mountaineers holds forth nothing very inviting. The common opinion is, that a great quantity of large trees are found there, which distil a kind of gum, with which the souls are nourished; together with

delicious honey, and fish of a prodigious size. They imagine that apes are also placed there to amuse the dead ; and an eagle, so large, that his extended wings shelter all paradise from the heat of the sun.

Tong-king presents a fertile soil, under a healthful and temperate climate. Besides the rice common to the rest of India, the Tonquinese cultivate five other kinds, which are peculiar to their country. The first is the *small rice*, the grain of which is long, thin and transparent ; it is accounted the most delicate, and is generally the only kind which the physicians allow their patients. The second is the *long, thick rice*, the form of which is round. The third is the *red rice* ; it is so called because its grain is covered with a reddish-coloured pellicle. These three kinds of rice require much water, and never grow but in lands that are frequently overflowed. The *dry rice*, which is of two kinds, grows in a dry soil, and has no occasion for any water but what falls from the heavens. These two last kinds produce a grain as white as snow, and are the principal articles of their trade with China. They are never cultivated but on the hills and mountains, where they are sown in the same manner as our wheat, about the end

of

of December, or beginning of January, at which time the rainy season ends. The dry rice is generally three months on the ground, and is very productive.

Father *Horta* thinks that the culture of these two kinds of rice might easily succeed in France: 'In 1765,' says he, 'I several times traversed the mountains of Tong-king, where rice is sown: they are exceedingly high, and the temperature of the air there is cold. I observed, in the month of January, that the rice was very green, and more than three inches in height, although the mercury in one of Reaumur's thermometers stood only four degrees above the freezing point. I have since sown in the Isle of France some of this grain, and it produced more than any species of the country. The planters received my present with the greater gratitude, as this rice, which is more fruitful and better-tasted than any other, has no need of watering, and because, ripening twenty days sooner, it may be gathered and carried into the barn before the tempestuous season, when hurricanes often destroy whole crops of the other kinds. There was reason to hope, that these advantages would have induced the planters to cultivate

‘ the dry rice with care ; but they left it to the
 ‘ management of unskilful slaves, who mixed
 ‘ it with other kinds, so that the Tonquinese
 ‘ rice ripening much sooner, the grain fell be-
 ‘ fore it was cut down, and this species was
 ‘ gradually lost in the island.’

The Tonquinese cultivate common rice almost in the same manner as it is cultivated on the coast of Coromandel. They cover the surface of their lands with water to the depth of a few tenths of an inch ; and when the rice is five or six inches in length, they pull it up, form it into small bundles, of four or five stalks each, and transplant them into large fields, at the distance of six inches one from the other. This labour is generally allotted to their women and children.

The Tonquinese employ only buffaloes in their agriculture. These animals, which are of a very large species, are more vigorous than oxen in warm countries, and they extricate themselves with less difficulty from the dirt and clay. They are yoked in the same manner as our horses. These people have no occasion for any machines to inundate their fields : a chain of mountains hangs over their plains, from one end of the kingdom to the other, which abounds
 with

with springs and rivulets, that in their natural course water their grounds.

Next to rice, the most important object of cultivation in Tong-king is the sugar-cane. This country produces two kinds: the one is large, and grows exceedingly high, and its joints are at a great distance one from another; it always appears green, and contains abundance of juice. The other is smaller and shorter, and the joints are nearer to one another; when ripe, it is of a yellow colour, and affords less liquor than the first; but this liquor abounds with more sugar.

When the Tonquinese intend to plant sugar-canes, they begin by turning up the earth to the depth of two feet; they then plant two or three cane-shoots, a little inclined, and almost in the same manner as vines are planted in several parts of Italy. These slips are sunk about eighteen inches into the earth, and planted chequer-wise, at the distance of six feet. They choose the end of the rainy season for this operation.

Twelve or fifteen months after the cane has been planted, it is fit to be cut. When the juice is pressed out, they boil it for several hours, until some of the watery part is evaporated;

they then transport it to the nearest market, and sell it in that state. The labour and profits of the Tonquinese planter end here. This sugar, which as yet resembles pure water, is purchased by merchants, who boil it again, throwing into the coppers some alkaline substances, such as the ashes of *musa* leaves, or calcined shells. These ingredients produce a considerable froth, which the refiner takes care to skim off. The action of alkali hastens the separation of the water from the sugar: at length, by force of boiling, the juice is reduced to the consistence of syrup; and when it begins to granulate, they pour it into a large earthen vessel, where they leave it to cool for about an hour. This syrup soon becomes covered with a thin, soft crust of a yellowish colour: after which, it is poured into a vessel of a conical figure.

As soon as the syrup appears to have acquired the consistence of salt throughout the whole vessel which contains it, they put it in tierces to whiten and purify it. The remaining operations are almost the same as those used in our West Indian islands.

The Tonquinese have few good fruits; the best are pine-apples, oranges, and a kind of red figs, which are every where esteemed. They have

have other figs much resembling those of Provence, both in taste and figure; but, what is most extraordinary, is, that these figs do not grow on the branches: they spring up from the root of the tree, and sometimes in such abundance, that twenty men might easily satisfy their hunger with them.

Large trees are seen in Tong-king, the branches of which bear neither leaves nor fruit; they produce nothing but flowers. There is another kind, the branches of which bend naturally down to the earth, where they take root, and from which other trees spring up: the branches of the latter incline in the like manner, and shoot forth roots, as the former; and these trees in process of time occupy so extensive a space, that thirty men might commodiously repose under their shade.

The Tonquinese cultivate the mulberry and varnish trees, cotton, tea, indigo, saffron and pepper; they have few greens, and they seem to have little desire of procuring them; they neglect the vine, although it is the natural production of their country; but they employ great care in raising a plant called *tsai*, which, being put into a state of fermentation, throws up a scum of a green colour, which is used for dying, and
which

which gives a beautiful and durable green. They believe that this plant is to be found no where but in Tong-king and Cochinchina.

Elephants are very common in Tong-king; more than five hundred of them are kept for the use of the king. The Tonquinese pretend that their flesh is good, and that the prince sometimes eats of it. Neither lions nor sheep are seen in this kingdom; but there are a prodigious number of stags, bears and tygers. The apes here are remarkable for their size and boldness; it is not uncommon to see them, to the number of two or three thousand, enter in a hostile manner the fields of the planter; eat what they can; afterwards roll large girdles of straw around their bodies, which they fill with rice; and return loaded with booty, in sight of the peasants, who dare not attack them. Among the birds of this country is a species of goldfinch, which sings so melodiously, that it is distinguished by the name of the *celestial bird*; its eyes sparkle like the most brilliant ruby; it has a round, sharp bill, an azure ring round its neck, and a small tuft of party-coloured feathers on its head, which adds greatly to its beauty. Its wings, when it is perched, appear variegated with beautiful shades of blue, green and yellow; but

but when it flies, they lose all their splendour. This bird makes its nest in the closest thickets, and breeds twice a year; it conceals itself in time of rain; but, as soon as the rays of the sun begin to dart through the clouds, it immediately quits its retreat, flutters round the hedges, and, by its warbling, proclaims to the labourers the return of fine weather. This bird is said to be a mortal enemy to the *ho-kien*, another singular bird, which is to be found only in marshes. As soon as it perceives the *ho-kien*, the feathers of its neck stand erect, it extends and agitates its wings, opens its bill, and makes a noise like the hissing of a serpent; its attitude is that of a bird ready to dart on its prey: in short, its whole body indicates a kind of terror, mixed with fury; but, whether it be, that it feels the inferiority of its strength, or whether such is its instinct, it contents itself with looking at its enemy with a fixed and disordered eye, without offering an attack.

The *ho-kien* has its wings, back and tail of a dazzling white; its head is covered with a reddish down, and its belly is generally of a bright yellow, interspersed with gray and black spots. This bird, which is almost of the size of a quail,
never

never makes its nest but among reeds, and breeds only once a year.

This country abounds with game of all kinds, such as stags, antelopes, wild goats, peacocks, hares, pheasants, &c. Every person is free to hunt; but this diversion is dangerous, on account of the great number of elephants, rhinoceroses, tygers, and other voracious animals which inhabit the forests. The domestic animals raised here, are horses, for travelling; buffaloes, for tilling the ground; oxen, hogs, goats, fowls, geese and ducks.

C H A P. IV.

COCHINCHINA.

WE have already seen, in the second chapter, that Cochinchina had a share in the early revolutions of Tong-king; that, subject at first to the Chinese government, engaged afterwards in rebellion, and exposed to different usurpers, these two states had been compelled to return to their former dependance, after the successful expedition of General *Mayven*, about the year 50 of the Christian æra.

The

The imperial authority, after its re-establishment, subsisted in Cochinchina till the year 263, when a nobleman, named *Kulien*, undertook to deliver his country, and to free it from a foreign yoke. He caused the Chinese governor to be massacred, and usurped the throne, of which he remained afterwards peaceful possessor. His grandson, *Fan-y*, had the imprudence during his reign to adopt a slave, named *Ouen*, born at *Kouang-nan* in Tong-king, whom he caused to assume the name of *Fan-ouen*. This obscure foreigner, admitted into the royal family, acquired soon, by this adoption and his own intrigues, an unlimited power. After the death of his benefactor, he found little difficulty of seizing the throne. To signalize the commencement of his reign, and to gain the esteem of his subjects by some glorious exploit, he entered Tong-king at the head of an army, took possession of *Kouang-nan*, his native country, and ravaged all the territories of *Tsin-hoa*. This expedition was made in the year of our æra 347.

The descendants of this successful usurper for a long while enjoyed the throne of Cochinchina. This royal line, called *Fan*, did not end until 653. We have little information respecting the reigns of these different princes: we only know, that

that they were very punctual in paying their tribute to the emperors. The Chinese history is also very defective with regard to the succeeding kings.

The prince who filled the throne in 1179 turned his arms against Camboya, entered it at the head of an army, and committed great devastations, without making any conquest. The king of Camboya for a long time dissembled his keen resentment, that he might put himself into a better state of obtaining ampler and more certain revenge. He past eighteen years, without indulging in any act of hostility; but, in 1197, he attacked the king of Cochinchina, made him prisoner, and dethroned him; and, after ravaging his territories, established a lord of Camboya on the throne.—But this change of government did not long subsist.

The king of Cochinchina having learned in 1280 the revolution which had rendered the Mogul Tartars masters of all China, sent without delay to the new emperor, who had taken the name *Chit-sou*, deputies loaded with presents, in order to pay that prince homage. These deputies were honourably received; but the emperor did not content himself with tribute: he carried his pretensions farther; and resolved

resolved to send some of the grandees of his court to Cochinchina, to form a tribunal there, which alone should be entrusted with the government of the kingdom. This plan was executed; but two years afterwards, *Pouti*, the king's son, being fired with indignation at seeing a council of foreigners give laws to Cochinchina, refused to acknowledge their authority, and prevailed on his father to imprison the grandees who by order of the emperor composed this tribunal.

As soon as the emperor was informed of this outrage, he resolved on revenge. He caused a fleet to be immediately equipped in the ports of the province of Canton, in which he embarked a great number of Tartar and Chinese troops, under the command of *Sotou*. This fleet set sail, and arrived at Cochinchina. *Sotou* landed his army, marched towards the capital, and soon made himself master of it. The king and his sons, who were obliged to fly, took refuge in the mountains. Thence they dispatched secret orders, to assemble large bodies of troops in different places, while they fortified themselves in a small town, the gates of which were defended by some strong works, and batteries of cannon, called *batteries of Mahometan cannon*. They then
privately

privately put to death the Tartar and Chinese lords who composed the tribunal established by the emperor; and their whole thoughts were employed in devising means to amuse *Sotou*, and to destroy his army. With this design, they sent rich presents to the general, for himself and his troops, at the same time assuring him, that they were disposed, for the future, to comply with the will of the emperor.

Sotou at first suffered himself to be deceived by this apparent submission; but he was informed by a deserter, soon after, of the massacre of the Tartar and Chinese nobility, of the intrigues of the king and his son, and of the march of a formidable army which had orders to cut off his retreat. He perceived then, that he had no time to lose, made his troops advance, and laid close siege to the fortified town. The attack and defence were equally resolute; but the disadvantage of the ground, and the obstinate resistance of the besieged, having occasioned a great slaughter among his troops, he thought it prudent to retire, lest he should lose his whole army.

The king of Cochinchina, who flattered himself that this repulse would render the emperor more moderate in his demands, sent a deputa-
tion,

tion to him, of some of the grandees of his court, to assure him of his respectful submission; but he only sought to appease him for the present, in order to gain time. In this however he was disappointed; for the bad success of the expedition had so chagrined the Chinese monarch, that he refused to admit the ambassadors to his presence, and gave orders to his son, to assemble an army, and to lead them in person against the king of Cochinchina. *Sotou* was commanded at the same time to join the prince, that, by their united forces, they might entirely crush the enemy. However prudent these measures may appear, they were not attended with the desired success: all these preparations ended in a few acts of hostility, and some ravages committed by the troops of *Sotou*. The emperor *Chit-sou* died before he could revenge himself on Cochinchina; and the kings of that country maintained their independence, by paying the usual tribute, which they still send to the emperor.

The *Ming* having expelled the Mogul Tartars from China, the new emperor, chief of that dynasty, sent notice to the king of Cochinchina, of his accession to the throne, and, what had until that time been without example, caused

sacrifices to be offered up in honour of the spirits of mountains, forests and rivers. *Italaha*, who was then reigning, sent his tribute to the new monarch, from whom he received magnificent presents. In 1373, having sent a fleet against some pirates who infested the seas, and having taken twenty of their ships, he presented to the emperor seventy thousand pounds weight of precious wood, which had been found in the captured vessels.—But the friendship between these two courts did not long subsist.

The king of Cochinchina, contrary to the advice, and even orders of the emperor, carried fire and sword into the territories of Tong-king. This war employed the rest of his reign, and continued under those of his successors. There are few examples of so long and bloody a war : it was not terminated until 1471, when, after a desperate and decisive battle, the king of Tong-king became absolute master of Cochinchina. His enemy had exposed himself too much in battle ; he was taken prisoner, and the people of Cochinchina, being without resource, were obliged to submit to the conqueror.

The Chinese historians speak little of Cochinchina after this revolution ; we however know, that it again recovered its independence, and

continued afterwards to be governed, as it is at present, by its own kings. In 1671 the Tonquinese attempted an expedition against Cochinchina. The grand preparations which they had made, and an army of eighty thousand effective men, seemed to promise success and an easy conquest. The troops of Cochinchina amounted only to twenty-five thousand. The two armies engaged, and the battle continued three days; but, notwithstanding their superiority in number, the Tonquinese lost seventeen thousand men, and the enemy gained a complete victory. Since that time, the Tonquinese have remained peaceably within their own boundaries, while Cochinchina has aggrandized herself by subduing the mountaineers, and even the kings of *Tsiampa* and *Camboya*, whom she has compelled to become tributaries to her.

We shall not enter into any detail concerning the people of Cochinchina. As they have a common origin with the Tonquinese, they differ very little in their manner of living, laws and customs, which they have in a great part borrowed from the Chinese.

In four islands situated near the coasts of Cochinchina are found those celebrated nests so

much sought after for seasoning ragouts. They are made by a small bird that is almost of the size of our swallow, and are cemented with a kind of gum, the different layers of which may be separated in the same manner as the coats of an onion. When this gum has been dissolved in warm water, it is used for seasoning fish and dishes of various kinds; to sauces it communicates a most exquisite taste. To the east of these isles, there are five others, that are smaller, where prodigious numbers of turtles are found, the flesh of which is so delicate, that the Tonquinese and people of Cochinchina often fight desperate battles in order to take them from one another.

The commodities for which there is readiest sale at Cochinchina, are saltpetre, sulphur, lead, fine cloths, barred or flowered chints. Pearls, amber and coral were formerly in great request there; but at present the two last only are saleable; and this is not the case, unless the beads of coral are round, well polished, and of a beautiful red colour. With regard to amber, it must be extremely clear, the beads must be of an equal size, and not larger than an ordinary nut. The principal exports of Cochinchina are silks, sugar, ebony and Calamba-wood, those
nests

nefts before mentioned, gold in duft or in bars, which is fold for only ten times its weight in filver ; and laftly, copper and porcelain, transported thither from China and Japan.

European merchants feem to complain unjuftly of the demands made in Cochinchina for entrance, clearance and anchorage. Thefe duties are very trifling ; thofe even of the custom-houfe amount only to four per cent. It is true, that on the arrival of a fhip, nothing can be removed from her until fhe has been infpected ; the custom-houfe officers unload her, weigh and count the fmalleft pieces, and generally take poffeffion of what they find moft valuable, in order to fend it to the king, who keeps what he thinks proper, and returns the value. If the *king* only took this liberty, no great lofs would enfue ; but it is faid, that the *grandees* of the court follow his example, and that they are not *quite* fo punctual in their payments. The principal part of the lading being thus difpofed of, the ordinary goods (which, had they been accompanied with valuable merchandize, would have had a ready market) can fcarce find a purchafer.

This inconvenience, though unavoidable does not however appear to be without re-

medy. When the Dutch sent to CochinChina, from Surat and Coromandel, vessels loaded with cloths, lead and saltpetre, their cargoes were suffered to remain entire, because they had taken the precaution to pay every year a certain sum for each vessel that entered. Other nations might have had recourse to the same expedient; but, by attempting to free themselves from a very small duty, which it would have been prudent to pay, they gave a mortal stab to their commerce. The people of CochinChina, for several years past, have been much more moderate; and whatever their exactions may be, they are by no means so great as those of the Tonquinese, whose trade however is still kept up merely by their continual intercourse with foreigners.

The Japanese is the only current money in CochinChina: it is paid and received by weight. The money of the country, which is of copper, is as large as our common counters, of a round figure, and has a hole in the middle, by which it may be strung in the same manner as beads. Three hundred pieces are put on one side, and three hundred on another, which pass in CochinChina for a thousand, because in six hundred there are found ten times sixty, which

which make a century, among almost all the people of the east. There is no country perhaps where merchants are more liable to be deceived with regard to the value of money; this is owing to the pieces being unequal in figure and quality, and to the difficulty of determining their value, which is regulated only by a few characters that are stampt upon them. On one side they have four Chinese letters; on the other, nothing. Prudence requires, that they should have honest and skilful people to ascertain the goodness of these pieces, and to specify their value; otherwise, they run a great risque of becoming dupes to the merchants of Cochin-china, who make a great merit of being able to cheat an European.

A report has been spread throughout Europe, that when a trading vessel happens to run aground in Cochin-china, or to be driven into any of its harbours by stress of weather, the king seizes the cargo, if the rudder be broken. This report is entirely void of foundation. When a ship has been wrecked on the coasts of Cochin-china, she is much safer from pillage than any where else. Barks are sent immediately to the relief of the crew, and people are employed to drag the sea with nets, in order to recover the

goods that are lost; in short, neither labour nor expences are spared, to put the ship in the best condition possible. There are only two things that can hurt the trade of foreigners at Cochinchina; and one of these may be easily avoided. The first regards the clearing out of vessels. While the master is waiting, on the evening before his departure, or on the day fixed for sailing, in order to receive his dispatches, it often happens that he loses his voyage, which causes an immense loss, and often ruins a trader for ever. Care must be taken to solicit for a clearance a month before; and by using this precaution, one is certain of obtaining it, and of departing on the day appointed. The second, which is unavoidable, is the necessity of selling goods on credit, because payment is seldom made at the time stipulated. This however is contrary to the inclination of the prince; for, every merchant who is able to convey to him his complaints respecting these unjust delays, is sure of being immediately paid, and often even with interest.

C H A P. V.

T H I B E T.

THIBET is known under different names. The Chinese call it *Tsang*; the Tartars, *Barantola*, *Bouttan* and *Tangout*. Both distinguish it also by the name of *The Kingdom of Lasa*, because it is in the country of *Lasa* that the *dalai-lama* keeps his court. This vast kingdom is reckoned to be six hundred and forty leagues in extent from east to west, and six hundred and fifty from north to south. Thibet is enclosed by the country of Kokonor, the provinces of Se-tchuen and Yun-nan, the kingdom of Ava, the states of the Mogul, Bukaria, and the great desert of Cobi.

We can discover nothing certain or distinct in the history of Thibet, till about the year 420. We are told, that a prince then existed who was known by the title of *Toufan*, who subdued the people of the provinces of Chen-si and Se-tchuen, and extended his conquests, so as to make himself master of Thibet. This conqueror and his successors reigned there for more than a century, without having any communication with China.

Long-

Long-han, a *Toufan* prince, is the first sovereign of Thibet, who began about the year 634 to send ambassadors to China. Seven years after, the same prince espoused the emperor's daughter; and this alliance added so much to his power, that he was able to subjugate all those nations which were to the west of China. This power of the *Toufan* princes subsisted for near two hundred years; but it gradually declined, and was almost entirely annihilated about the year 907, towards the end of the dynasty of *Tang*. Several small states were then formed in Thibet. The priests of this country insensibly became possessed of vast domains; and the superiors of several monasteries, by degrees, rendered themselves so powerful, that they exercised an authority almost sovereign within their districts. It however appears, that there was always a prince who had the title of *King of Thibet*; but these princes, under the dynasty of *Song*, were tributary to China.

Thibet continued to decline more and more, until *Cbi-tsou*, first emperor of the dynasty of *Tuen*, divided the country into several provinces, or departments, the principal of which was *Ousse-hang*—the most fertile part of Thibet, and that which enjoyed the mildest climate.

Lasa, now become the ordinary residence of the sovereign lama, is situated here. There was then in this province a bonze, or priest, named *Passepa*. The emperor conferred on him the title of prince, honoured him with a golden seal, and permitted him to establish tribunals in the country of *Ouffé-bang*, and other parts of Thibet. He obtained also the titles of master or tutor to the emperor, doctor of the empire, head of the law, and even that of *ouang*, which signifies king or prince. His successors were honoured with the same titles, and were, like him, tributary to the emperors of China.

In 1414, about the middle of the reign of *Yong-lo*, eight other bonzes received from the emperor the title of *ouang*, with the same prerogatives as those before mentioned. They were styled great doctors, masters of the law, and zealous propagators of that law; but these pompous titles did not exempt them from paying the tribute which had been imposed on them.

The bonzes of Thibet, about the year 1426, assumed the title of *grand lamas*. The most powerful among them, named *Tsong-kepa*, made *Lasa* the place of his residence, and was acknowledged chief of all the lamas. It was he
who

who established the law respecting the *yellow cap*; for it must be observed, that there are two kinds of lamas, distinguished by *red* and *yellow caps*. His successor was the first who appointed a *typa* or prime minister, whom he entrusted with the government of his states. The next in order was the first who took the distinguished title of *dalai-lama*, by which he was raised far above the rest; for *dalai* signifies *morally and physically extended, great, and almost without bounds*.

The lama-princes were not yet however sole sovereigns of Thibet. About the beginning of the last century, a prince, named *Tsang-pa-ban*, possessed great part of it, to the west of Lasa. His power extended as far as the sources of the Ganges, and over the country of *Sirinigar*, which is watered by the same river. Father *Andrada*, a Jesuit, who in 1624 was at the court of this prince, assures us, that he was a zealous protector of the Christian religion, and that he seemed greatly inclined to embrace it. The Tartar history of the same period corroborates this circumstance; for it relates, that this prince despised the lamas, that he abandoned the law of the god *Fo*, and that he sought every opportunity of destroying it.

The

The dalai-lama, being highly incensed at not receiving the homage of *Tsang-pa-han*, formed a league with the Tartars of Kokonor, whose prince, named *Kouchi*, entered Thibet at the head of a powerful army, attacked *Tsang-pa-han*, defeated him, and took him prisoner, and, some time after, caused him to be put to death. To this Tartar prince the dalai-lama was indebted for his sovereignty over all Thibet. Far from appropriating to himself the fruits of his victory, *Kouchi* declared himself a vassal of the supreme chief of his religion, and was satisfied with receiving from him the title of *han*, which he had never before enjoyed. This prince, to continue his protection to the dalai-lama, and secure to him the quiet possession of his new conquests, established himself, together with his troops, in the neighbourhood of Lasa. His sons had no great inclination for returning to a country that their father had abandoned: they followed his example, and remained in Thibet.

In 1642 the dalai-lama sent ambassadors to *Tsong-te*, father to the first emperor of the present dynasty of the Mantchew Tartars, threw himself under his protection, and paid him tribute. Ten years after, the dalai-lama himself went to Pe-king, and paid homage to the emperor.

peror. He was loaded with honours, received a golden seal and magnificent presents from the emperor, and was confirmed in his title of dalai-lama.

Kang-bi, being desirous of honouring the *typa* or prime minister of the dalai-lama, declared him a prince in 1693, and granted him a golden seal. This minister however was far from being attached to the interests of the emperor. On the contrary, he was a traitor, who secretly betrayed him, and seconded the ambitious views of *Kaldan*, king of the Eleuthes, who was a declared enemy to the Mantchew Tartars. He even endeavoured to persuade the grand lama not to go to Pe-king, to which place the emperor had called him; and when the dalai-lama died, he kept that event so secret, that the emperor was not informed of it.—But all these intrigues were at length discovered in 1705. *Latsa-ban*, prince of the Tartars of Kokonor, caused this perfidious minister to be put to death. *Kang-bi*, informed of the crimes which he had committed, approved of the punishment he had met with, and sent some of the grandees of his court to Thibet, to govern it, in conjunction with the Tartar prince, whom he loaded with presents. He afterwards appointed
a new

a new dalai-lama, who was the sixth who had borne that title.

Tchong-kar, or the principal king of the Eleuthes, in 1714, made an irruption into Thibet, and committed the most horrid ravages. The Tartar prince, who endeavoured to oppose this torrent, was killed in combat; and the celebrated pagod of *Poutala* was almost reduced to ashes. The king of the Eleuthes carried away from this pagod, and from all the others of the country, immense riches in gold, silver, copper, precious stones, silk stuffs, &c. He put a great number of the lamas to the sword, and sent several of them into Tartary, enclosed in sacks, which were thrown across the backs of camels. This prince pretended to be the only and real sovereign of Thibet; and he ordered the lamas to renounce all their authority over the people, to retire to their monasteries, and to employ themselves only in saying their prayers.

The lamas immediately fled, and dispersed themselves on all sides. The dalai-lama lost no time to implore the protection of the emperor *Kang-bi*; and the princes of Kokonor, whose country had been exposed to the same ravages, united with him in begging for relief. The emperor, moved by their importunate solicitations,

tions, immediately assembled a numerous army, commanded by experienced Tartar and Chinese officers, and placed one of his sons and a grandson at their head. This army marched into Kokonor, drove from thence the king of the Eleuthes, and entered Thibet, while another body of Chinese troops penetrated thither also by the province of *Se-tchuen*.

The dalai-lama was re-established, and the rest of the lamas were put in possession of their pagods. The remainder of the troops of the Eleuthes made their escape through the defiles of the mountains. Although good order and tranquillity seemed to be restored in Thibet, the emperor commanded some of the Tartar nobility to remain at *Lasa* and in *Kokonor*, to govern there in his name, and to watch the motions of *Tchong-han*. The same plan of conduct was adopted and followed by the emperor *Yong-tching*, the son and successor of *Kang-hi*. He continued to keep up strong armies, that were always in readiness to oppose the inroads of the king of the Eleuthes. However, some lords of Thibet revolted in 1727, one of whom even took the title of governor-general of the country, and caused a Tartar prince of the fourth rank to be put to death.—But these slight com-
motions

motions were soon suppressed. *Kien-long*, the present emperor, raised, in 1739, to the dignity of prince of the second rank a person whom the emperor *Yong-tching*, his father, had appointed viceroy of Thibet. Peace has been since preserved there, and it appears to be now firmly established, as the Thibetians have nothing more to fear from the incursions of the Eleuthes, who, since 1759, have been subjects of the empire.

The tribute which the sovereign of Thibet sends to the emperor of China consists generally of gold or copper statues of the god *Fo*, perfumes, amber, coral, precious stones, woollen stuffs, and sword blades. The emperor also requires from the dalai-lama a certain number of vessels, or small pitchers, filled with water from the Ganges. Since the latter end of the reign of *Kang-hi*, the emperor has always had some of this water in his palace, and he even carries it with him when he travels.

A very extraordinary custom is sanctioned in Thibet, which permits women to have several husbands at one time. The degrees of consanguinity between the husbands are no obstacle to these unions; for a woman may marry all the brothers of a family; the children are di-

vided among them; the eldest has the first born, and the younger, those that are brought into the world afterwards. When the lamas are reproached for permitting and authorising this indecent custom, they plead in their excuse the scarcity of women in Tartary and Thibet. It is true, that more boys than girls are to be found in their families; but it may easily be seen, that the Tartars use this pretence in order that their women may be permitted to espouse several husbands.

The dalai-lama does not reside in the city of Lasa, but on a mountain in the neighbourhood, called *Poutala*. On this mountain there is a great number of pagods, the most sumptuous of which he inhabits. He passes great part of his life on a kind of altar, where he sits motionless, in a cross-legged posture, on a large and magnificent cushion, and receives, with the greatest gravity, the adoration, not only of the Thibetians, but also of a prodigious multitude of strangers and pious pilgrims, who undertake long and difficult journies to go and worship him on their bended knees, and to receive his benediction. The grand lama salutes no one; he neither uncovers nor rises up to any person, whatever his rank may be; with the same
eye.

eye, he beholds at his feet the greatest princes and the meanest of their subjects. He contents himself with laying his hand on the head of his adorer, who imagines that he obtains, by this imposition alone, the remission of all his sins.

Next to the Thibetians, the Tartars are the most zealous worshippers of the grand lama; they arrive in crowds at *Poutala*, from the remotest corners of the country; even the weakest of the female sex are not terrified by the fatigues that inseparably attend these long journeys. When the army of the Eleuthes were ravaging the territories of Thibet, among the number of pilgrims then at *Lasa* was a Tartar princess, accompanied by her son, whose usual place of residence lay beyond the Caspian sea, between *Astracan*, *Saratoc* and the river *Jauk*. Surrounded by soldiers, and exposed to their insults, she found it necessary, in so dangerous a situation, to apply to the emperor for protection, who assigned her the revenues of some land in Tartary for her subsistence; and, having afterwards obtained permission for her to pass through Siberia, this prince sent her back to her own country, under a proper escort of Chinese officers.

This profound veneration, which draws so many people to Lasa, to prostrate themselves at the feet of the grand lama, is founded on the idea which they entertain of his great power and sanctity. They are fully persuaded, that all the divinity of *Fo* resides in him, that he is omniscient and omnipresent, and that he has neither need of information, nor occasion to ask questions, in order to discover the secret thoughts of men. They believe him to be immortal, and that, when he appears to die, his soul and his divinity only change their place of residence, and transmigrate into another body. All their care is then employed to discover the place where it hath pleased him to be born again; even some of the Tartar princes themselves have assisted in this important search; but they are obliged to be directed by certain lamas, who alone are acquainted with the signs by which the new-born god may be discovered, or rather, they only know what child the preceding dalai-lama appointed to be his successor.

Large pagods are frequently to be seen in Thibet, where the most distinguished of the lamas reside. They assume different titles of honour; that of *houtouctou* is one of the most venerable, and is never granted but to those
who

who are accounted living *Fos*. These *houtouctous* are not always fixed to the same place; they have liberty to reside wherever they please, and to choose for their abode whatever spot appears to them most agreeable. They are not even confined to Thibet; some of them are to be found in the neighbouring states, especially in Tartary.

The inhabitants of Thibet are not the only people who may attain to the dignity of lama. Tartars, and even Chinese, have aspired to the priesthood, and repaired to *Lasa*, in hopes of obtaining it. If they can get themselves admitted among the disciples of the grand lama, the number of whom is fixed at two hundred, they consider this admission as the commencement of their promotion, and as the first step towards dignity and power: the subaltern grand lamas are chosen from among these disciples. The *houtouctous*, however, whatever signs they may have in them of the presence of the god Fo, are not acknowledged as such until after having passed a certain time in the school of the grand lama. When they have arrived at this dignity, they live amidst splendour and opulence, and are continually surrounded by a crowd of adorers, who load them with presents.

The richest and most considerable of the Tartar lamas who inhabit Thibet are those whom the Chinese call *mong-fan*: they possess extensive domains to the north of the province of Yun-nan, between the beautiful rivers of *Kin-che-kiang* and *Vou-leang*. These lands were granted to them by *Ousan-guei*, who became master of Yun-nan when the Mantchew Tartars subdued China, in order to bring them over to his party, and that he might by their means gain the support of all the lamas of Thibet.

These lamas had great power in China while the Tartar family of *Tou* were in possession of the throne. There are still to be seen at Peking several monuments which were erected in honour of the lamas of that time; but the Chinese having again become masters, under the dynasty of *Ming*, the lamas were expelled with the rest of the Tartars: they have however recovered a good deal of their consequence under the present family. Although the Mantchew Tartars had never any lamas, they no sooner undertook the conquest of China, than they protected them openly, through policy; and soon after, government caused magnificent pagods to be erected for them. This example was followed by a great number of princes, princesses

princesses and wealthy people, who seemed to vie with one another in their eager desire for building them temples ; and it is not astonishing, that, to possess all these pagods, the lamas have multiplied so much in China. They must even be rich there ; for the greater part of these lamas appear in public in vestments of red and yellow fatten, ornamented with the richest and most valuable furs. They are all mounted on excellent horses, and are followed by a number of domestics, proportioned to their rank as mandarins ; for the emperor permits them to carry a cushion and the other badges of dignity which belong to the quality of mandarin.

The lamas of Thibet are not so magnificent in their dress ; they wear only a napped kind of woollen stuff, called in China *pou-lou*, which is used for covering seats, because it generally lasts long, and retains its colour. The grand lama was seen at *Lasa* in 1717 clothed in a red dress of this stuff, having on his head a yellow cap, ornamented with gilding.

Besides this cap, the lamas have several bonnets, or tiaras, that are the distinguishing marks of the different degrees of honour to which they have arrived. The cap which strikes Europeans most, has a great resemblance to a bi-

shop's mitre: they wear it on horseback, as well as on foot; but the cloven part of this kind of mitre descends directly to the middle of the forehead. The obligations which the office of lama imposes, are neither few nor trifling; but there is no one among them who engages to discharge them all. They divide and share the burden. One takes the charge of observing one precept, and another obliges himself to practise another; and so of the rest: they however have certain common prayers, which they chaunt in a very agreeable manner; and they are all obliged to renounce the vanities of the world, to live in celibacy, and to have no concern with trade or commerce.

The language spoken in Thibet is entirely different from that of the Tartars, whether Mantchews or Moguls. It is almost the same as that of those people called *Si-fans*: the only difference consists in the acceptation of certain words, and some few particularities of pronunciation.

The physicians of Thibet are not destitute of skill; and some of the astronomers of this country are acquainted with the motions of the heavenly bodies, and able to calculate eclipses; but the lamas are generally very ignorant. It

is rare to find any of them who understand their ancient books, or who are able to read them. This difficulty arises from the characters of these books being different from those used in Thibet and Tartary, and from the language in which they are written being now dead, as it is never used, either in speaking or writing.

The Thibetians have no fortified towns, or places of defence. Their cities, in general, are very small. *Lasa* itself, where the dalai-lama keeps his court, is rather a celebrated temple than a city.

C H A P. VI.

THE COUNTRY OF HA-MI.

THE country of *Ha-mi* is situated to the north-east of China, at the extremity of that desert which the Chinese call *Cha-mo*, and the Tartars, *Cobi*. It is only ninety leagues distant from the most westerly point of the province of *Chen-si*. This country was inhabited in the early ages by a wandering people, named *Iong*. About the year 950 before the Christian æra, they sent deputies to pay homage to the emperor

emperor of China, and presented some fables by way of tribute. The civil wars by which China was torn about the end of the dynasty of *Tcheou* having prevented assistance from being sent to these people, they fell under the dominion of the *Hiong-nou*, who appear to have been the same as the *Huns*, and who at that time were a formidable nation. The Chinese several times lost and recovered the country of *Ha-mi*. In 131 (the sixth year of the reign of *Chun-ty*, of the dynasty of the eastern *Han*), the emperor kept an officer there in quality of governor. Under the following dynasties, the same vicissitudes were experienced: *Ha-mi* was sometimes united to the province of *Cher-fi*, sometimes independent of it, and sometimes even of the whole empire. The situation of these people (separated by vast deserts from China, to which, besides, they had no relation, either in language, manners or customs) must have greatly contributed to facilitate these revolutions. All the tributary states of the empire having revolted in 610, that of *Ha-mi* followed their example; but it again submitted to the yoke, under *Tai-tsong*, second emperor of the dynasty of *Tang*, who had sent one of his generals with an army to reduce it. This great

prince paid particular attention to his new conquest. He divided it into three districts, and connected its civil and military government in such manner to that of the province of Chen-si, and other neighbouring countries, that tranquillity prevailed there during his reign and several of those that followed. Through *Ha-mi* all the caravans which went from the west to China, or from China to the west, were obliged to pass. The emperors, predecessors of *Tai-tsong*, were satisfied with causing wine to be transported from *Ha-mi* in skins carried by camels; but, *Tai-tsong*, says the Chinese history, *having subdued the kingdom of Ha-mi, ordered some vine-plants of the species called majou, to be brought him, which he caused to be planted in his gardens; he, besides, learned the manner of making wine, the use of which proved both serviceable and hurtful to him.*

Luxury and effeminacy having weakened the dynasty of *Tang*, the Mahometans (who had made a rapid progress in all the countries that are situated between Persia, Cobi and the Caspian sea) advanced as far as *Ha-mi*, which they conquered. It appears, that this country afterwards had princes of its own, but dependent on the Tartars, who successively ruled these
immense

immense regions. The *Yuen*, or Mogul Tartars, again united the country of *Ha-mi* to the province of *Chen-fi*; and this re-union subsisted until 1360, at which time the emperor formed it into a kingdom, on condition of its princes doing homage and paying tribute. The king of *Ha-mi* was honoured with a new title in 1404, and obtained a golden seal. After a contest of several years for the succession to the throne, the kingdom of *Ha-mi* fell a prey to the king of *Tou-eulb-fan*. This yoke soon became uneasy to the people of *Ha-mi*: they revolted from their new masters, and made conquests from them in their turn. The new king whom they made choice of, did not long possess the throne: he was conquered and killed in a bloody battle which he fought with the king of *Tou-eulb-fan*, who also perished some time after. Since this epocha, the country of *Ha-mi* has been successively exposed to anarchy, or governed by its own princes. The prince who filled the throne in 1696, acknowledged himself a vassal of the empire, and sent as tribute to *Pe-king* camels, horses and sabres. *KANG-HI* received his homage with the usual ceremonies, and published a diploma, which established the rank that the king of *Ha-mi* should hold among
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the tributary princes, the time when he should come to render homage, the nature of the presents necessary for his tribute, the number of auxiliaries he was bound to furnish in time of war, and the manner of his appointing a successor. All these regulations have subsisted till this time.

The country of *Ha-mi*, though surrounded by deserts, is accounted one of the most delightful in the world. The soil produces abundance of grain, fruits, leguminous plants, and pasture of every kind. The rice which grows here, is particularly esteemed in China; and pomegranates, oranges, peaches, raisins and prunes have a most exquisite taste; even the jujubes are so juicy, and have so delicious a flavour, that the Chinese call them *perfumed jujubes*. There is no fruit more delicate or more in request than the melons of *Ha-mi*, which are carried to Pe-king, for the emperor's table. These melons are much more wholesome than those of Europe, and have this singular property, that they may be kept fresh during great part of the winter*.

* Some of the seeds of these melons, brought to Paris in 1778, were sown the year following, and succeeded very well.

But

But the most useful and most esteemed production of the country of *Ha-mi*, is its dried raisins. These raisins are of two kinds. The first, which are much used in the Chinese medicine, seem to have a perfect resemblance to those known in Europe by the name of Corinthian. The second, which are in much greater request for the table, are smaller and more delicate than those of Provence. The Chinese authors perfectly agree with Messrs. *Lemery* and *Geoffroy*, respecting the virtue and qualities of these dried grapes or raisins; but they attribute so much more efficacy to those of *Ha-mi* than to those of China, that they prescribe them in smaller doses. They observe, that an infusion of the first is of great service in facilitating an eruption of the small-pox about the fourth day, when the patient either is or seems to be too weak; and to promote a gentle perspiration in some kinds of pleurifies, or malignant fevers. The dose must be varied, according to the age, habit of body and strength of the patient; and great care must be taken to administer this remedy seasonably and with judgment.

The emperor caused plants to be transported from *Ha-mi* to Pe-king, which were immediately planted in his gardens. As these plants
were

were cultivated with extraordinary care, under his own eyes, they have perfectly succeeded. The raisins produced by them are exceedingly sweet, and have a most exquisite flavour.

Although the country of *Ha-mi* (the latitude of which is $42^{\circ} 53' 20''$) lies farther towards the north than several of the provinces of France, we are assured, that its climate is more favourable to the culture of vines, and that it gives a superior degree of quality to the grapes. It never rains at *Ha-mi*; even dew and fogs are scarcely ever seen there; the country is watered only by the snow which falls in winter, and by the water of this snow when melted, which is collected at the bottoms of the mountains, and preserved with great care and industry. The method of drying grapes in *Ha-mi* is much simpler than that practised in the provinces of China. The people of *Chen-fi* hold them over the steam of hot wine, and even sometimes boil them a few seconds in wine in which a little clarified honey has been diluted. In the kingdom of *Ha-mi* they wait until the grapes are quite ripe; they then expose them to the scorching rays of the sun; afterwards, pick them, and leave them in that manner until they are quite dry. However dry these grapes may

may be, they become shrivelled, without losing any of their substance, and without growing flat : good raisins ought to be almost as crisp as sugar-candy.

The kingdom of *Ha-mi* contains a great number of villages and hamlets; but it has, properly, only one city, which is its capital, and has the same name. It is surrounded by lofty walls, which are half a league in circumference, and has two gates, one of which fronts the east, and the other the west. These gates are exceedingly beautiful, and make a fine appearance at a distance. The streets are straight, and well laid out; but the houses (which contain only a ground-floor, and which are almost all constructed of earth) make very little shew: however, as this city enjoys a serene sky, and is situated in a beautiful plain, watered by a river, and surrounded by mountains which shelter it from the north winds, it is a most agreeable and delightful residence. On whatever side one approaches it, gardens may be seen, which contain every thing that a fertile and cultivated soil can produce in the mildest climates. All the surrounding fields are enchanting; but they do not extend far; for on several sides they terminate in dry plains, where a number of
beautiful

beautiful horses are fed, and a species of excellent sheep, which have large flat tails that sometimes weigh three pounds. The country of *Ha-mi* appears to be very abundant in fossils and valuable minerals: the Chinese have, for a long time, procured diamonds and a great deal of gold from it; at present, it supplies them with a kind of agate, on which they set a great value. With regard to the inhabitants of this small state, they are brave, capable of enduring fatigue, very dexterous in all bodily exercises, and make excellent soldiers; but they are fickle and soon irritated; and, when in a passion, they are extremely ferocious and sanguinary.

C H A P. VII.

THE ISLES OF LIEOU-KIEOU.

THESSE isles (hitherto little known to geographers, who have been satisfied with marking their existence and latitude in their charts) form a powerful and extensive empire, the inhabitants of which are civilized, and ought not to be confounded with other

savage nations dispersed throughout the islands of Asia. Father *Gabil*, a Jesuit, has furnished us with some interesting details respecting these islanders, which he extracted from a Chinese relation, published in 1721, at the end of a voyage that was undertaken on the following account.—The emperor *Kang-hi*, having resolved, in 1719, to send an embassador to the king of *Lieou-kieou*, chose for this purpose one of the great doctors of the empire, named *Su-pao-koang*. This learned man departed from China in 1719, and returned to Pe-king in 1720, where, in the year following, he caused a relation of his voyage to be published in two volumes. It is in the first of these, that he gives an accurate and particular description of the isles of *Lieou-kieou*; and what he relates appears to be worthy of greater credit, because, being on the spot, he examined, as he himself says, according to the orders of the emperor, whatever he found curious or interesting, respecting the number, situation and productions of these isles; as also the history, religion, manners and customs of the people who inhabit them.

These isles, situated between Corea, Formosa and Japan, are in number thirty-six. The principal and largest is called *Lieou-kieou*; the rest

have

have each a particular name. The large island extends from north to south almost 440 *lys**, and 120 or 130 from east to west; but, on the south side, the extent from east to west is not 100 *lys*. The south-east part of the island, where the court resides, is called *Cheouli*, and it is there, that *Kint-ching*, the capital city, is situated. The king's palace, which is reckoned to be four leagues in circumference, is built on a neighbouring mountain. It has four gates, which correspond to the four cardinal points; and that which fronts the west, forms the grand entry. The view which this palace commands is most extensive and delightful; it reaches as far as the port of *Napa-kiang*, at the distance of ten *lys*, to the city of *Kint-ching*, and to a great number of other cities, towns, villages, palaces, temples, monasteries, gardens, and pleasure-houses. It stands in longitude $146^{\circ} 26'$ east, and in latitude $26^{\circ} 2'$ north.

If we believe these islanders, the origin of their empire is lost in the remotest antiquity. They reckon up twenty-five successive dynas-

* The *lys*, as we have already said, is a measure used by the Chinese in estimating distances. Two hundred *lys* make sixty geographical miles, which are equal to one degree.

ties, the duration of which forms a period of more than eighteen thousand years. It would be useless to employ a single moment in pointing out the absurdity of these pretensions. It is however certain, that the existence of the country called *Lieou-kieou* was not known in China before the year 605 of the Christian æra. It was in the course of that year, that one of the emperors of the dynasty of *Soui*, having heard of these isles, was desirous of knowing their situation. This prince at first sent some Chinese thither; but their expedition proved fruitless, as the want of interpreters prevented them from acquiring that knowledge which was the object of their voyage. They only brought some of the islanders with them to *Sigan-fou*, the capital of the province of *Cheu-fi*, which was the usual residence of the emperors of the dynasty of *Soui*. It fortunately happened, that an ambassador of the king of Japan was then at court. This ambassador and his attendants immediately knew the strangers to be natives of *Lieou-kieou*; but they spoke of these isles as of a miserable and wretched country, the inhabitants of which had never been civilized. The emperor of China afterwards learned, that the principal island lay to the east of a city called

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at present *Fou-tcheou-fou*, which is the capital of the province of *Fo-kien*; and that, in a passage of five days, one might reach the large island where the king kept his court.

On this information, the emperor *Tang-ti* sent skilful men, accompanied by interpreters, to summon the prince to do homage to the emperor of China, and to pay him tribute. This proposal was very ill received. The king of *Lieou-kieou* sent back the Chinese, telling them, sternly, that he acknowledged no prince to be his superior. This answer irritated the emperor, who, to obtain revenge, caused a fleet to be immediately equipped in *Fo-kien*, in which he embarked ten thousand men. This fleet set sail, and arrived in safety at the port of *Napa-kiang*. The army, spite of every effort made by the natives, landed on the island; and the king, who had put himself at the head of his troops to oppose the enemy, having fallen in battle, the Chinese pillaged, sacked and burnt the royal city, made more than five thousand slaves, and returned to China.

The emperors of the dynasty of *Tang*, those of the short dynasties that followed, and those of the dynasty of *Song*, although they were fully informed of every thing respecting the

Lieou-kieou isles, made no attempts to render them tributary. In 1291, *Chi-tsou*, emperor of the dynasty of *Yuen*, was desirous of reviving the pretensions of his predecessors. He fitted out a fleet to subdue these islands; but schemes of conquest had become disagreeable to the Chinese, since the disaster that befel their army in an expedition against Japan. The fleet of *Chi-tsou* went no farther than the isles of *Pong-hou*, and the western coast of Formosa, from whence, under divers pretences, they returned to the ports of *Fo-kien*.

It was only in 1372, under the reign of *Hong-vou*, founder of the dynasty of *Ming*, that these islands submitted voluntarily to the Chinese government. *Hong-vou* had sent one of the grandees of his court to *Tsay-tou*, who was then reigning at *Lieou-kieou*, to inform him of his accession to the throne. The Chinese nobleman had received particular instructions respecting this commission, and he acquitted himself of it with all the prudence and address of an able minister. In a private audience which he had with *Tsay-tou*, he exhorted this prince to declare himself a tributary of the empire, and laid before him the advantages he would derive from this step. His reasoning, supported
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by the power of his natural eloquence, made so much impression on the mind of *Tsay-tou*, that he embraced the proposal made him, and sent immediately to the emperor to demand the investiture of his states.

Hong-vou received his envoys in an magnificent manner, and loaded them with presents. He solemnly declared *Tsay-tou* a vassal of the empire; and, after having received his first tribute (which consisted in valuable horses, aromatic wood, sulphur, copper, tin, &c.) he sent to this prince a golden seal, and confirmed the choice he had made of one of his sons for successor. The emperor afterwards sent thirty-six families, almost all from the province of *Fo-kien*, to *Licou-kieou*. *Tsay-tou* received them, assigned them lands near the port of *Napa-kiang*, and appointed certain revenues for their use, at the same time that *Hong-vou* made them considerable remittances. These families first introduced into *Lieou-kieou* the learned language of the Chinese, the use of their characters, and the ceremonies practised in China in honour of *Confucius*. On the other hand, the sons of several of the grandees of the court of *Tsay-tou* were sent to *Nan-king*, to study Chinese in the imperial college, where they were treated with

distinction, and maintained at the emperor's expences.

The isles of *Lieou-kieou* had neither iron nor porcelain. *Hong-vou* supplied this want; he caused a great number of utensils of iron, and instruments to be made, which he sent thither, together with a quantity of porcelain vessels. Commerce, navigation and the arts soon began to flourish. These islanders learned to cast bells for their temples, to manufacture paper and the finest stuffs, and to make porcelain, with which they had been supplied before from Japan.

The celebrated revolution which placed the Tartars on the imperial throne of China, produced no change in the conduct of the kings of *Lieou-kieou*. *Chang-tché*, who was then reigning, sent embassadors to acknowledge *Chun-tchi*, and received a seal from him, on which were engraven some Tartar characters. It was then settled, that the king of *Lieou-kieou* should pay his tribute only every two years, and that the number of persons in the train of his envoys should not exceed one hundred and fifty.

The emperor *Kang-hi* seemed to pay more attention to these isles than any of his predecessors. He caused a superb palace to be erected
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in honour of *Confucius*, and a college, where he maintained masters to teach the sciences and the Chinese characters. He also instituted examinations for the different degrees of the literati. He ordained, that the king of *Lieou-kieou* should never send in tribute rose-wood, cloves, or any other production which was not really of the growth of the country; but, that he should send a fixed quantity of sulphur, copper, tin, shells, and mother of pearl, which is remarkably pretty in these islands. He permitted, that, besides the usual tribute, he might present him horse-furniture, pistol-cases, and other things of the same kind, which these islanders are said to manufacture with great taste and neatness.

We could here give some account of the lives of the different princes who have reigned in *Lieou-kieou*; but, as the history of the nations tributary to China, does not properly belong to this work, we shall content ourselves with presenting a chronological table of these kings, taken from the relation of the Chinese doctor *Supao-koang*.

CHRONOLOGICAL TABLE

OF THE
KINGS OF LIEOU-KIEOU,

FROM THE

YEAR 1187 after J. CHRIST, to the present CENTURY.

Names of the Kings,	Began to reign A. D.	Age.	Years they reigned.
Chun-tien	1187	Died aged 72 years	51
Chun-ma-chuni, son of Chun-tien	1238	Died aged 64 years	11
Y-pen, son of Chun-ma-chuni	1249		
Yn-tou	1260	Died aged 71 years	40
Ta-tching, son of Yn-tou	1301	. . . . .	9
Yn-tse, second son of Ta-tching	1309	. . . . .	5
Yu-tching, fourth son of Yn-tse	1314	. . . . .	23
Sy-oucy, son of Yu-tching	1337	Died aged 23 years	14
Tsay-tou	1350	. . . . .	46
Ou-ming, son of Tsay-tou	1396		
Ti-tchao, son of Ou-ming	1406	. . . . .	16
Chang-pa-tchi, son of Ti-tchao	1424	Died aged 68 years	18
Chang-tchong, second son of Chang-pa-tchi	1440	Died aged 54 years	5
Chang-tchi, son of Chang-tchong	1445	Died without children, aged 42 years	5
Chang-kin-fou, uncle, by the father's side, to Coung-ksia	1450	Died aged 52 years	4
Chang-tai-kiou, brother of Chang-kin-fou	1454	Died aged 46 years	7
Chang-ti, third son of Chang-tai-kiou	1461	Died aged 29 years	9
Chang-y-uen	1470	Died aged 62 years	7
Chang-tching, son of Chang-y-uen	1477	Died aged 62 years	50
Chang-tsing, third son of Chang-tching	1527	Died aged 59 years	29
Chang-y-ven, second son of Chang-tsing	1556	Died aged 45 years	17
Chang-yong, second son of Chang-y-ven	1573	Died aged 35 years	16
Chang-ning, grandson of Chang-tsing	1588	Died aged 57 years	32
Chang-fong, descended from a brother of Chang-yong	1621	Died aged 51 years	20
Chang-hien, third son of Chang-fong	1641	Died aged 23 years	7
Chang-tche, brother of Chang-hien	1648	Died aged 40 years	21
Chang-tching, son of Chang-hien	1669	Died aged 65 years	41
Chang-pen, grandson of Chang-tching	1710	Died aged 34 years	3
Chang-king, son of Chang-pen	1713		

IT is more than nine hundred years since the bonzes of China introduced at *Lieou-kieou* the worship of *Fo*, and the principal books belonging to their sect. This worship is at present the established religion both of the grandees and of the people. There is still to be seen in the royal city a magnificent temple, erected in honour of another idol borrowed from the Chinese, named *Tien-sey*, which signifies *celestial queen*, or *lady*. We shall speak of it when we come to the religion of the Chinese.

These islanders do not make promises or swear before their idols. When they have occasion to do this, they burn perfumes, present fruits, and stand respectfully before some stone, which they call to witness the solemnity of their engagements. Numbers of stones are to be seen in the courts of their temples, in most public places, and upon their mountains, which are entirely appropriated to this purpose. They have also among them women consecrated for the worship of spirits, who are supposed to have great influence over these beings. They visit the sick, distribute medicines, and recite prayers for their recovery.

They respect the dead as much as the Chinese, and they are no less ceremonious in wearing

ing mourning ; but their funerals are neither so pompous, nor attended with so much expence. Their coffins, which are of an hexagonal or octagonal figure, are three or four feet high. They burn the flesh of the bodies of their dead, and preserve only the bones. They never offer provisions to them ; they are contented with placing lamps round them, and burning perfumes.

Different families are distinguished in *Lieou-kiou* by surnames, as in China ; but a man and a woman of the same surname cannot be united in marriage. The king is not permitted to marry but in the three grand families, which always enjoy the highest offices. There is a fourth, of equal distinction to the three former ; but neither the king nor the princes contract any alliances with this family ; for it is doubtful, whether it be not sprung from the same stem as the royal line.

A plurality of wives is allowed in these isles. Young men and young women enjoy the liberty of seeing one another, and of conversing together ; and their union is always in consequence of their own choice. The women are very reserved ; they never use paint, and wear no pendants in their ears ; they collect their
hair

hair on the top of their heads, in the form of a curl, and fix it in that manner by means of long pins made of gold or silver.

Besides the vast domains which the king possesses, he receives the produce of all the sulphur, copper and tin-mines, and of the salt-pits, together with what arises from taxes. From these revenues he pays the salaries of the mandarins and officers of his court. These salaries are estimated at a certain number of sacks of rice; but under this name is comprehended whatever the king gives in grain, rice, silk, cloth, &c. The whole is valued according to the price of the sacks of rice.

There are here, as in China, nine orders of mandarins, who are distinguished by the colour of their caps, or by their girdles and cushions. The greater part of the titles of these mandarins are hereditary in their families; but there are some which are only bestowed upon merit. In the royal city there are tribunals established for managing the revenue and affairs of the principal island, and of all the others which are dependant on it. The latter have agents, who reside at court. There are also particular tribunals for civil and criminal matters; for whatever concerns the families of the *grandees* and

princes; for the affairs of religion; for inspecting the public granaries, king's revenues, duties; for commerce, manufactures, civil ceremonies, and for navigation, public edifices, literature, and war.

The vessels that are built in this country are greatly valued by the people of China and Japan. In these the natives go not only from one island to another, but also to China, Tong-king, Cochinchina, Corea, *Nanga-sa-pi*, *Satsuma*, the neighbouring isles, and to Formosa, where they dispose of their different commodities. Besides those articles of commerce, which their manufactories of silk, cotton, paper, arms, copper utensils, &c. furnish them, they also export mother of pearl, tortoise and other shells, coral and whet-stones, which are in great request both in China and Japan.

Three different languages are spoken in the isles of *Lieou-kieou*, none of which is either that of China or Japan. The language of the large island is the same as that of the neighbouring isles; but it differs from those of the isles which lie to the south-west and north-east. Letters, accounts, and all the king's orders, are written in Japanese characters, and in the language of the country; books of morality, history, medicine,

icine, astronomy and astrology, are written in Chinese characters. The distribution of the year, and the division of time, are the same in *Lieou-kieou* as in China. The people here follow the calendar of the empire; and the words they use to express hours, days, years and the signs of the zodiac, have exactly the same signification.

Their edifices, temples, and the palace of their kings, are built after the Japanese manner; but the houses of the Chinese, the hotel of their ambassador, the imperial college, and the temple of the goddesses *Tien-sey*, are built after the Chinese. In many of their temples and public buildings, there are tables of stone or marble, on which are engraven Chinese characters in honour of Chinese emperors, from *Hong-vou* to the present time. Chinese inscriptions are also to be seen on their triumphal arches and in the king's palace; several are even found in Japanese characters, and some, but the number is few, in those of India.

The natives of *Lieou-kieou* are, in general, mild, affable and temperate; they are active and laborious, enemies to slavery, and detest falsehood and dishonesty. Excepting the grandees, bonzes and Chinese established at *Lieou-kieou*,

few of the inhabitants of these islands can either write or read. If it happens, that any of the peasants, artists or soldiers can do either, they are obliged to shave their heads, as the bonzes. All others have a kind of tuft on the top of their heads, around which is a circle of very short hair. These people are fond of games and diversions. They celebrate, with great pomp and splendour, those festivals that are instituted in honour of their idols, and those which are appointed for the ending and commencement of the year.

Great harmony prevails among families and individuals, which they take care to preserve by frequent repasts, to which they invite one another. Suicide is unknown among these islanders; and they are free from those crimes that are common in the isles situated to the north-east of them, which, being nearer to Japan, have adopted the vices of its inhabitants, as well as their manners and customs.

B O O K IV.

NATURAL HISTORY OF CHINA.

C H A P. I.

CLIMATE OF CHINA; ITS MOUNTAINS,
LAKES AND RIVERS.

CHINA is so extensive, that all its provinces cannot enjoy the same temperature; their climate, and the nature of their soil, are therefore various, according as they are nearer or more remote from the south; severe cold is felt at Pe-king, while the southern provinces are exposed to excessive heat: the air however is in general wholesome, and the people commonly live to a great age.

The principal mountains of China are those in the northern and western parts of the empire. The latter are rendered fruitful by the labour

and industry of the Chinese husbandman ; but the former, which are barren and rocky, being incapable of improvement, remain without cultivation. Those of the provinces of Chen-si, Ho-nan, Quang-tong and Fo-kien, shew few signs of culture ; but they are covered with forests that abound with tall, straight trees of every species, which are fit for building, and particularly adapted for masts and ship-timber. The emperor uses them for his private edifices ; and he sometimes procures from these mountains enormous trunks, which he causes to be transported to the distance of three hundred leagues, both by land and water carriage, to be employed in his palace, or for public works. Other mountains are no less useful, on account of the quicksilver, iron, tin, copper, gold and silver mines which they contain. Wisdom and political foresight have long prevented the latter from being opened. The prudent chiefs of the early dynasties, well aware that artificial and ideal riches could not form a solid base for the happiness of states, were afraid of opening these sources of luxury, lest the people should be induced to neglect the natural riches of their soil, by applying to other labours than those of agriculture. About the commencement of the

fifteenth century, the emperor *Tching-tsou* caused a mine of precious stones to be shut, which had been opened by a private individual. *Useless labours*, said this prince, *produce sterility; a mine of precious stones does not furnish corn*. At present, the Chinese are not so scrupulous; and it is certain, that they carry on a great trade in gold.

The Chinese relate some singular and extraordinary phenomena of their mountains, which give us just reason to suspect them of credulity. *There are several*, say they, *which produce nothing but useful and salutary herbs, and where nothing else will grow*. They assure us, that others have the property of rendering those immortal who retire to them; that a mountain of Chen-si, which has the figure of a large cock, crows sometimes so loud, that it may be heard at the distance of three leagues; that another, in the province of Fo-kien, trembles when the heavens threaten a storm, and moves backwards and forwards, in the same manner as a tree agitated by the wind. Another is seen, in the province of Kiang-si, called *The Dragon Tyger*, because the bonzes pretend, that its summit, which has the figure of a dragon, darts upon the lower part, which resembles a tyger. But the Chinese admire, above all others, a moun-

tain of Fo-kien, the whole of which is an idol, or statue of the god *Fo*. This colossus is of so monstrous a size, that each of its eyes is several miles in circumference, and its nose, several leagues in extent. It is very extraordinary, that the Chinese, who consider a flat nose as a beauty, should have given their favourite idol a nose of so prodigious a length. It evidently appears, that the shape of this mountain is not the work of art. What they relate of a mountain of Chen-fi is no less wonderful: it vomits up flames, and excites rain, wind and storms, whenever any one beats a drum or plays on a musical instrument near it.

The principal lakes of China are the *Tong-ting-hou*, situated in the province of *Hou-quang*, which is more than eighty leagues in circumference; the *Tai-hou*, part of which extends into *Kiang-nan*; the *Hong-tse*, and the *Kao-yeou*, of the province of *Kiang-nan*; and the *Poyang-hou*, formed in *Kiang-si* by the confluence of four considerable rivers, which, like the sea, is subject to tempests and storms. This lake is near an hundred leagues in length.

Among an infinitude of great and small rivers that water this vast kingdom, there are two particularly celebrated. The first is the
Yang-

Yang-tse-kiang, or *Son of the Sea*. It has its source in the province of *Yun-nan*, traverses those of *Hou-quang* and *Kiang-nan*, and, after having watered four provinces, through an extent of four hundred leagues, it throws itself into the eastern sea, opposite the isle of *Tsong-ming*, which is formed by the sand accumulated at its mouth. The Chinese say, proverbially, *The sea has no shore, and the Kiang is without a bottom*. Before *Nan-king*, and at the distance of more than thirty leagues from its mouth, this river is half a league broad. The navigation of it is dangerous, and numbers of vessels are lost in it almost every day. It flows with great rapidity, and forms in its course several islands, which are beneficial to the province, on account of the multitude of reeds, from ten to twelve feet in height, which they produce, and which are used for fuel in all the neighbouring cities. But when the *Kiang* is swelled by torrents from the mountains, it becomes so impetuous, that it overflows and carries away the greater part of these islands, and forms others from their wrecks in those places of its bed where it leaves them.

The other great river of China is the *Hoang-ho*, or *Yellow River*. The Chinese give it this

name, because the clay and sand which it washes down, especially in time of rain, make its water appear of a yellow colour. It arises in the mountains which border the province of *T'e-tchuen* on the west, and, after a course of nearly 600 leagues across Tartary and China, discharges itself into the eastern sea, not far from the mouth of the Kiang. It is very broad and rapid; but it is so shallow, that it is scarcely navigable. It often happens, that it overflows its banks, and buries whole villages; and it has been found necessary, in order to confine it, to raise, in several places, long and strong dikes, which however do not entirely free the cities in its neighbourhood from the dread of its inundations. For the same reason, the people of the province of *Ho-nan*, the land of which is exceedingly low, have taken the precaution to surround most of their cities, at the distance of three furlongs, with strong ramparts of earth faced with turf.

The ingenuity which the Chinese display in turning the happy situation of their lakes and rivers to the greatest advantage, is worthy of admiration. One of their principal works for the convenience of commerce, is the celebrated canal which reaches from Canton as far as Peking, and which forms a communication be-

tween all the southern and northern provinces. This work, which is called *The Royal Canal*, is six hundred leagues in length; and its navigation is no where interrupted but by the mountain *Meiling*, where passengers are obliged to travel ten or twelve leagues over land. They however have no occasion to quit their barks when they direct their course through the provinces of Quang-si and Hou-quang. It may easily be perceived, what immense labour it must have cost, to form a communication between so many rivers, and how many obstacles must have occurred in the execution of a canal of so great extent; works of various kinds, locks, dikes, and moles of cut stone, have every where overcome the resistance of nature. In this principal canal, a number of others end, which stretch out into the country, and form a communication between the neighbouring cities, towns and villages. The greater part of those private canals have been executed by the industry of the inhabitants of these cities and towns, who have spared neither labour nor expences to procure themselves the valuable advantage of having an easy conveyance for their goods into all the provinces of the empire. The patience and perseverance of the Chinese in these useful enterprises,

prizes, have even surmounted obstacles that perhaps would have discouraged any other people. Such, for example, is part of a canal which conducts from *Chao-hing* to *Ning-po*. Near these cities, there are two canals, the waters of which do not communicate, and which differ ten or twelve feet in their level. To render this place passable for boats, the Chinese have constructed a double glacis of large stones, or rather, two inclined planes, which unite in an acute angle at their upper extremity, and extend on each side to the surface of the water. If the bark is in the lower canal, they push it up the plane of the first glacis, by means of several capstans, until it is raised to the angle, when, by its own weight, it glides down the second glacis, and precipitates itself into the water of the higher canal, with the velocity of an arrow. It is astonishing, that these barks, which are generally very long and heavily laden, never burst asunder when they are balanced in the air upon this acute angle. However, we never hear that any accident happens in this passage. It is true, they take the precaution of using for the keels of these barks a kind of wood which is exceedingly hard and proper for resisting the violence of such an effort.

We shall relate a remarkable phenomenon of a Chinese river, which was observed by Father *le Couteux*, a French missionary. This river flows towards *Che-pai*, a large village situated below *Ngan-lo* in the province of Hou-quang. ‘Some leagues above the village of *Che-pai*,’ says this missionary, ‘the river becomes considerably smaller although none of its waters flow into any other channel; and eight or nine leagues below, it resumes its former breadth, without receiving any additional supply but what it gets from a few small rivulets, which are almost dry during the greater part of the year; opposite *Che-pai*, it is so much diminished, that, excepting one channel, which is not very broad, I have passed and repassed it several times by the help of a common pole. I was always surprised to find this river so shallow and narrow in that place; but I never thought of inquiring into the cause of it, until the loss of a bark belonging to a Christian family afforded me an opportunity. In that place where the river diminishes almost of a sudden, it flows with great impetuosity; and where it resumes its former breadth, it is equally rapid. At the sixth moon, when the water was high and the wind strong, the bark I have mentioned,

' tioned, arriving above *Che-pai*, was driven on
 ' a sand-bank ; for, between these two places,
 ' the river is full of moveable sands, which are
 ' continually shifting their situation. The master
 ' of the boat dropt his anchor, until the wind
 ' should abate and permit him to continue his
 ' voyage ; but a violent vortex of moveable
 ' sand, which was cast up from the bottom of
 ' the river, laid the bark on its side ; a second
 ' vortex succeeded ; then a third ; and after-
 ' wards a fourth, which shattered the bark to
 ' pieces. When I arrived at the place where this
 ' bark had been lost, the weather was mild and
 ' serene ; I perceived eddies in the current every
 ' where around, which absorbed and carried to
 ' the bottom of the river whatever floated on its
 ' surface ; and I at the same time observed, that
 ' the sand was violently thrown up with a vor-
 ' tical motion. Above these eddies, the water
 ' was rapid, but without any fall. In the place
 ' below where the river resumes its usual
 ' breadth, there were no eddies to be seen ; but
 ' the sand was thrown up in the same violent
 ' manner, and in some places, there were water-
 ' falls, and a kind of small islands, scattered at
 ' some distance one from another. These islands,
 ' which appear above the surface of the wa-
 ter,

‘ ter, are not solid earth ; they consist only of
 ‘ branches of trees, roots, reeds and herbs that are
 ‘ collected and united together. A Christian of
 ‘ that place, who was in my bark, pointed them
 ‘ out to me, and told me, that these boughs rose
 ‘ up from the water, and that no one knew
 ‘ from what place they came. He informed me,
 ‘ that these masses, which were forty or fifty
 ‘ feet in extent on that side where we passed,
 ‘ were immovable, and fixed to the bottom of
 ‘ the river ; that it was dangerous to approach
 ‘ too near them, because the water formed
 ‘ whirlpools every where around them ; that,
 ‘ however, when the river was very low, the
 ‘ fishermen sometimes ventured to collect the
 ‘ bushes that floated on its surface, which they
 ‘ used for fuel.

‘ My conjecture concerning this phenome-
 ‘ non is as follows : I am of opinion, that, at
 ‘ the place of the river which is above *Chc-pai*,
 ‘ the water falls into deep pits, from which it
 ‘ forces up the sand with that vortical motion ;
 ‘ and that it flows under ground to the other
 ‘ place, eight or nine leagues below, where it
 ‘ carries with it all the boughs, weeds and roots
 ‘ which it washes down in its course, and thus
 ‘ forms those islands which appear above its
 ‘ surface.

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‘ surface. We know there are some rivers that
‘ lose themselves entirely, or in part, in the
‘ bowels of the earth, and which afterwards
‘ arise in some other place ; but I believe there
‘ never was one known to lose part of its water
‘ below its own channel, and again to recover
‘ it at the distance of some leagues.’

C H A P. II.

POPULATION OF CHINA.

THE ancient prejudices of Europe against China are not yet entirely obliterated. Although the relations which we have of this empire are numerous, and though the different accounts given by French, Italian, Spanish, Russian and German writers, seem perfectly to agree, we still suspect, that a good deal of exaggeration is mixed with truth in what travellers relate to us concerning this remote nation. One of those things which have been thought most incredible and contradictory by Europeans, is the prodigious population of China. Father Amiot has been at great pains to investigate this point, which hitherto has been examined with
too

too little attention. It is evident from his calculations, that China contains at present two hundred millions of inhabitants. This enormous population may appear astonishing; but, when we have weighed the proofs and followed the reasoning which this learned missionary makes use of, we shall find that his account is by no means exaggerated. The lists and documents on which this interesting discussion is founded, are taken from a Chinese book, entitled *Tai-fing-y-toung-tche—An Account of what is essential to be known respecting China*. This work was composed and arranged by order of the present emperor KIEN-LONG, and published in the eighth year of his reign, in more than an hundred volumes, enclosed in twenty-four *tao*, or covers. This Chinese book is one of those which are found in the king's library at Paris. The book entitled *Y-toung-tche* shews only the number of those taxable in every province of the empire; but, by knowing this number, we may nearly ascertain that of the individuals who compose the nation.

the Chinese make use of the word *mouths*, and say, for example, that such a city, village, or hamlet, contains so many mouths. If a family consists of ten or five mouths, or even of two, the name of the head is only enrolled, because it is the head alone whom they consider as taxable. They reckon neither women, children nor domestics, much less slaves. The Chinese think that they come pretty near the truth, when they allow the number of six mouths to each family. Besides, long experience has convinced the mandarins, to whom the care of numbering the people, whether in great or in small cities, is assigned, that they must keep to this calculation, which is the most accurate for China. But let us be contented with a lower calculation, and let us suppose that there are only five mouths in each Chinese family. If we multiply the number of *taxables*, or heads of families, which the *Tribunal of Subsidies* presented to the emperor in 1743, we shall have, for the total of the mouths that compose the families of the taxables, an hundred and forty-two millions, five hundred and eighty-two thousand, four hundred and forty.

Father Amiot assures us, that it would not be exaggeration to say, that this number is only
 one

one half of the people contained in China. That we may be able to judge of the truth of this assertion, it will be necessary to enter into details, and to make the following observations.

The mandarins are not included in the number of those taxable; and these mandarins, in a country of so great extent as China, must be (as they are indeed) very numerous. We shall only mention the principal; that is to say, those who hold some rank in the empire, and who have a great many others subordinate to them, who also enjoy several immunities and privileges. These principal mandarins are the governors-general of provinces, eleven of whom have the title of *tsong-tou*, and fifteen, that of *hiun-fou*. Next to them, are the treasurers-general, in number nineteen; after these, come the eighteen lieutenants-general of the Tribunal of Crimes; the seventeen inspecting judges, appointed for whatever concerns the *literati*; and one hundred and thirteen travelling commissaries, whose business is to watch over the conduct of the governors of cities. All these grand mandarins have others under them, distinguished by different titles, who act as their counsellors, and assist them in the administration of the affairs of their respective districts.

The

The treasurers-general have under them twenty-three mandarins. The lieutenants-general of the Tribunal of Crimes have forty assistants for general affairs, eighteen who visit prisons, and twenty-seven to make informations according to law. The travelling commissaries have under their command eleven mandarins, who are obliged to lay before them the state of the different public magazines which they visit.

After these officers, who have a general power of inspecting all the provinces of the empire, come the governors of cities of the first, second and third class. The number of the first is one hundred and seventy-nine; they have under them two hundred and four mandarins styled *toung-tche*; one hundred and seventy-six who have the title of *toung-pan*; two hundred and twenty, who have that of *king-ly*; seventy-three, called *see-you*, who inspect the prisons, and manage every thing that relates to prisoners; ten *choui-ta-che*, who have the care of the general custom-houses of the district; twelve *fou-choui-ta-che*, who have the charge of those in the city; five *tsang-ta-che*, who survey the public granaries; and an hundred and eighty-six, who have the inspection of schools.

The governors of cities of the second class are in number two hundred and eleven; they have under them sixty-four *tcheou-toung*; ninety *tcheou-pan*; two hundred and twenty-four *ly-mou*; four *kou-ta-che*, to visit the public magazines; four *choui-ta-che*, for the management of the custom-houses; four *tche-li-ting*, and two hundred and seventeen *lio-tching*, to inspect schools.

The governors of cities of the third class are in number twelve hundred and ninety-nine; they have under them four hundred and eighteen *bien-tcheng*; eleven hundred *kiao-yu*; one thousand five hundred and twenty *huin-tao*; an hundred and eight *tchou-pou* (these three last orders of mandarins have no concern with any thing but the literati and schools); nine hundred and sixty *hiun-kien*, to conduct the affairs of the villages; twelve hundred and ninety-seven *tien-che*; seven *choui-ta-che*, to inspect the custom-houses of the city; eight *ifang-ta-che*, to survey the public granaries; fifty-five *y-tchen*, who have the management of the post-offices; and forty-four *tcha-koan*, who have the care of the sluices.

If we add all these together, we shall find that the whole number of mandarins appointed by

by the emperor for the administration of the affairs of all the provinces, amounts to 8,965. But there is still a great number of inferior rank who are appointed by the great mandarins. Although the political almanack makes no mention of them, we must however include them in our reckoning, as well as other subaltern officers whom they employ, because they are not comprehended in the list we have given of those taxable. By supposing their number to be ten times greater than that of their superiors, we shall even then be below what it in reality is. We must therefore add 89,650 to the preceding number 8,965, and we shall have, for the total of the mandarins, both superior and subaltern, who are dispersed throughout the provinces of the empire, 98,615. But all these individuals are accounted heads of families; and, as we have allowed the number of five mouths to each family, if we make the same allowance for those of the mandarins, the result will be 493,075 mouths, which we must still add to the number 142,582,440, which we have already found, and the whole amount will be one hundred and forty-three millions, seventy-five thousand, five hundred and fifteen.

The literati form the most distinguished part of the Chinese nation. Since the dynasty of *Han*, that is to say, for two thousand years back, they have constantly held the chief rank in the empire ; and it is always from among them that *masters are chosen for the education of youth* ; ministers, for the administration of public affairs ; and magistrates, for judging the people ; in a word, the literati are, in some measure, the soul of the Chinese nation, since it is from them alone, that it receives its moral existence, and its civil and political being. The literati, then, must be very numerous in a state where they enjoy every distinction attached to pre-eminence, and where every thing favours their increase. The justness of this conclusion is demonstrated by facts. Since learning in China is the only means that conduct to honours, it is necessary, that those who aspire to them, should cultivate letters ; and they must make it appear, that they have cultivated them with success, before they can obtain any civil employment. To guard against imposition in this respect, government has fixed, for every city of the first, second and third class, the number of literati who can be legally promoted every year to the first degree of literature, which

is that of *fiou-tfai*, and which answers to bachelor of arts in our universities. Every *fiou-tfai* is accounted noble, and is never enrolled among the taxables. We must therefore endeavour to ascertain their number nearly, if we wish to know that of the inhabitants of China. Several pages, and even whole volumes, might be filled with the names of the cities alone which are obliged to furnish every year their fixed number of graduates. All this list of names is to be found in the political almanack which is printed at Pe-king four times a year. We shall content ourselves with adding the different numbers of *fiou-tfai*, which each of the cities of a province is obliged to furnish; and we shall place the sum total opposite their respective provinces.

Names of the Provinces.	Number of the Sicou t'ai
Pe-tcheli	2496
Kiang-fou	1410
Ngan-hoei	1285
Kiang-fi	1356
Tche-kiang	1877
Fou-kien	1166
Hou-pe	1102
Hou-nan	1184
Ho-nan	1669
Chang-tong	1867
Chan-fi	1559
Chen-fi	1127
Kan-fou	938
Se-tchueth	1446
Quang-tong (<i>Canton</i>)	1343
Quang-fi	273
Yun-nan	1199
Kouei-tcheou	704
TOTAL	24701

There are, then, in China twenty-four thousand seven hundred and one individuals who are every year introduced to the first degree of literati; and we may safely suppose the number of those admitted before, to be at least twenty times as great. According to this estimation, there are always in China 494,020 literati, who have taken degrees, and who, consequently, are

not

not included among the taxables. These literati are heads of families; and we have supposed each family, according to the Chinese expression, to contain *five mouths*. If we multiply the above number of literati by five, we shall have, for the number of mouths, 2,470,100. If these two millions, four hundred and seventy thousand, one hundred mouths, are added to our former number one hundred and forty-three millions, seventy-five thousand, five hundred and fifteen, the amount will be one hundred and forty-five millions, five hundred and forty-five thousand, six hundred and fifteen.

Next to the literati, are the military, who also enjoy immunity, and are not comprehended among the taxables. F. Amiot, for political reasons, which may be easily guessed, never ventured to make application to any of the tribunals who keep a register of the troops maintained in the empire: the inquiry of a stranger respecting so delicate a point, would, no doubt, have alarmed the weakness of the Chinese; but, by proceeding in the same manner as we have done to find the number of the literati, we may approach near enough the truth for our present purpose. The following details are extracted from the military almanack,

nack, which is also published four times a year at Pe-king. In this almanack are contained the names, titles, places of abode, and the number of all the officers of the Chinese militia. This number being known, we may thence partly ascertain that of the foldiers.

The officers who command all the troops of a province, are called *ty-tou*, and are in number 19

Other officers, subordinate to the *ty-tou*, who command troops in the different cities of each province, are distinguished by different titles.

Officers who have the title of	{	Tfoung-pung	65
		Fou-tfiang	118
		Tfan-tfiang	163
		Yeou-ki	374
		Cheou-pei	828
		Tou-fee	420
		Tfien-tfoung	1617
		Pa-tfoung	3457
TOTAL		7061	

Besides these officers, whose residence is fixed in cities of the first, second and third class, there are some who are also stationed in the cities called *ouei*, which are surrounded with walls, but not fortified. The officers stationed in these different cities, are,

Officers

Officers who have the title of . . .	{	Cheou-peï	50
		Tfien-tfoung	250
		Cheou-peï for guarding the gates	50
TOTAL			<u>350</u>

By adding all these sums, we shall have, for the total number of officers appointed by the emperor to command the Chinese militia 7411

It must be observed, that each of these officers, besides the soldiers who are immediately under his command, maintains also a number of other people, who belong to what is called his *ya-men*, or office; that in each of these *ya-men*, there are petty officers, to transmit his orders, and to see them executed; secretaries and clerks, to keep a journal of every transaction; and subalterns of different kinds, who are always in waiting, and ready in case of necessity. The number of these individuals is in proportion to that of the officers whose office they belong to, at least as ten to one. Let us therefore multiply the number of officers by ten; and we shall have 74,110.

It is necessary to observe farther, that no mention is made in the military almanack, of those inferior officers who in China are called *ouai-ouei*, and may be compared to our lieutenants:

tenants: they are not appointed by the emperor, and their number is not fixed. The *ty-tou* have power of raising to the highest military rank such of the soldiers as have distinguished themselves, either by their valour or a punctual discharge of their duty. As we neither know the number of these officers, nor that of those who are either in garrison in the different cities, or posted at certain distances on all the great roads, to protect travellers, and to make signals by fire in case of necessity, we shall suppose, according to our method of calculation, which is always below reality, that the number of these men is to that of the officers as an hundred to one. This estimation will give us the number 741,100, which, added to the preceding, will produce, for the total of the officers, soldiers and others who compose the Chinese militia *, 822,621.

The soldiers in China are heads of families, like all the other individuals of the nation; we must therefore multiply their number by five, and we shall have, for the sum total of *mouhs*,

* One of the Chinese literati laughed at the calculation of F. Amiot, and assured him, that, instead of 822,621, he ought to have reckoned the Chinese militia to be at least 2,000,000.

who, on account of their military privilege, are not included in the number of taxables, 4,113,105. Let us therefore add this number to that of the mouths already found, 145,545,615; and we shall have one hundred and forty-nine millions, six hundred and fifty-eight thousand, seven hundred and twenty.

‘ We still want,’ says F. Amiot, ‘ above
 ‘ fifty millions, to complete the two hundred
 ‘ millions and more that I have assigned as the
 ‘ number of the inhabitants of China.—But,
 ‘ where shall we find them? The author of
 ‘ *RÉCHERCHES PHILOSOPHIQUES SUR LES EGYP-*
 ‘ *TIENS ET LES CHINOIS* (Mr. Paw) will, no
 ‘ doubt, permit us to take them from among
 ‘ *those robbers who infest the public roads of the*
 ‘ *empire, even to the environs of Canton; from*
 ‘ *among those troglodytes who are found there in*
 ‘ *so great numbers; from among those wander-*
 ‘ *ing families who desert the interior part of the*
 ‘ *country, and go to live in the neighbourhood of*
 ‘ *commercial cities, whither they are led by a thirst*
 ‘ *of gain; and from among those mendicant monks,*
 ‘ *eunuchs and slaves; to whom we may also join*
 ‘ *the blind females and bonzesses, whom he igno-*
 ‘ *rantly confounds with those unhappy victims*
 ‘ *whom libertinism and poverty have consigned*

‘ to infamy and prostitution ; and, if all these
 ‘ are not sufficient, we shall add to them that
 ‘ multitude of people who are employed in the
 ‘ different custom-houses, and who, we know,
 ‘ amount to a very great number ; but, above
 ‘ all, the inhabitants of those floating cities, who
 ‘ live in barks, or on rafts, and seem to form a
 ‘ distinct nation in the middle of the empire.
 ‘ Among all those whom I have already num-
 ‘ bered, no mention has been made of the in-
 ‘ habitants of Pe-king, who certainly amount
 ‘ to two millions ; or of the Mantchews who
 ‘ live among the Chinese to restrain and govern
 ‘ them ; or of the various artists, and manufac-
 ‘ turers of silk, who in number must be propor-
 ‘ tionable not only to the inhabitants of the
 ‘ country for which they labour, but also to
 ‘ those of foreign nations who load their vessels
 ‘ every year with the fruits of their industry ;
 ‘ or of those petty traders who swarm in all the
 ‘ towns and villages of the empire ; or, lastly,
 ‘ of the lower classes of the people, who com-
 ‘ pose here (as is the case every where else)
 ‘ what is called the bulk of the nation.’

We must here observe, that there is a con-
 siderable deficiency in the calculations of F.
 Amiot, who, in reckoning up the number of
 those

those taxable in all the provinces of the empire; makes no mention of the province of *Fou-kien*. This singular omission is not intentional; it can only be the effect of haste or forgetfulness. The number of those taxable in *Fou-kien* in the year 1743, when the register before mentioned was taken, amounted to 1,528,607. If we multiply this number of heads of families by five, we shall have, for that of the *mouths* in *Fou-kien*, 7,643,035; and if we add this number to the total of *mouths* found already, 149,658,720, we shall have 157,301,755.

This was the state of the population of China in 1743, the year in which the book entitled *Y-toung-tche* was published; but this population must have been considerably increased since that epocha, because it is remarked, that it continues to make a sensible progress in China: this is even proved by the book *Y-toung-tche* itself, which compares the result of two numberings, and says, *At the last numbering which was made of those taxable in each province, they amounted to so many; and their number has increased by so many since.* We greatly wish, that the year in which this last numbering was made, had been mentioned; as it has not, and, as we know that it was formerly customary to
 announce

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announce to the emperor every year the state of the population of his empire, we may suppose that this last numbering was made in the seventh year of the reign of KIEN-LONG; that is to say, in 1743. But, that we may confine ourselves to the lowest estimation we can, let us suppose this last numbering to have been made as far back as possible; that is to say, in the first year of the reign of KIEN-LONG, or in 1736. Let us then see, after the comparison of the *Y-toung-che*, what was the population in 1736, and how much it had increased in 1743.

State of those taxable in 1736.		Increase of the Number of Taxables in 1743.
Pe-tcheli	3,292,643	47,910
Chang-tong	2,278,982	152,954
Kiang-fou	2,821,146	96,561
Ngan-hoei	1,407,285	28,281
Ho-nan	2,289,875	237,581
Chan-fi	1,758,635	35,259
Tche-kiang	2,937,899	186,899
Chen-fi	2,149,890	4,469
Kan-fou	304,249	7,723
Kiang-fi	1,308,724	19,775
Hou-nan	368,008	7,774
Hou-pe	454,417	22,771
Fou-kien	1,468,615	59,992
Koang-toung	1,179,630	21,690
Koang-fi	205,995	14,695
Yun-nan	185,865	52,100
Kouei-tcheou	37,536	13,553

This increase of population is still more sensible in Se-tchuen. In that province there were formerly one hundred and forty-four thousand, one hundred and fifty-four families enrolled as fit to pay taxes; but at present it contains three millions, thirty-six thousand, three hundred and forty-two. This enormous increase, no doubt, proceeds from the great number of families, who, upon the invasion by the Tartars, retired into the mountains of that province, and established themselves there. The increase in the provinces of *Chen-fi* and *Kan-sou* is, no doubt, owing to a similar cause—the number of families that took refuge there at the same epocha. These different augmentations, of which an accurate account was kept for several years, occasioned numberless difficulties in the collecting of the taxes. These difficulties, added to those resulting from the great number of exempts, poor, itinerant tradesmen, people employed on the rivers, &c. at length induced the emperor *Yong-tching* to abolish the *Jin-ting*, and to substitute in its room the *Ty-ting*; that is to say, to change the capitation into a land-tax, in order that the revenues of the state might be more fixed and certain, and that the collection
of

are vertical. It is also necessary to observe, that the *oman* of the Chinese is equal to ten thousand.

CHONG MIN CHOU

ALL THE PEOPLE NUMBERED.

I.			
FONG-TIEN †		Niu, <i>women</i>	Kong, <i>in all</i>
Ching, <i>province</i>		Kong, <i>in all</i>	Eul, <i>two</i>
Ta, <i>great</i>		Y, <i>one</i>	Then, <i>thousand</i>
Siao, <i>little</i>		Tfien, <i>thousand</i>	Eul, <i>two</i>
Nan, <i>men</i>		Ou, <i>five</i>	Pei, <i>hundred</i>
Niu, <i>women</i>		Pei, <i>hundred</i>	Tfi, } <i>seventy</i>
Kong, <i>in all</i>		Eul, } <i>twenty</i>	Che, }
I cou, } <i>sixty</i>		Che, }	Leou, <i>five</i>
Che, }		Eul, <i>two</i>	Ouan
Leou, <i>five</i>		Ouan	Y, <i>one</i>
Ouan, <i>ten thousand</i>		Eul, <i>two</i>	Tfien, <i>thousand</i>
Pa, <i>eight</i>		Tfien, <i>thousand</i>	San, } <i>thirty</i>
Tfien, <i>thousand</i>		Kieou, <i>nine</i>	Che, }
Pa, <i>eight</i>		Pei, <i>hundred</i>	[22,761,030.]
Pei, <i>hundred</i>		Se, } <i>forty</i>	
Ou, } <i>five</i>		Chi, }	IV.
Che, }		[15,222,940.]	KIANG-SOU.
Eul, <i>two</i>			Chin, <i>province</i>
[668,852.]	III.		Ta, <i>great</i>
II.	NGAN-HOET *.		Siao, <i>little</i>
TCHE-LY †.	Ching, <i>province</i>		Nan, <i>men</i>
Ching, <i>province</i>	Ta, <i>great</i>		Niu, <i>women</i>
Ta, <i>great</i>	Siao, <i>little</i>		Kong, <i>in all</i>
Siao, <i>little</i>	Nan, <i>men</i>		Eul, <i>two</i>
Nan, <i>men</i>	Niu, <i>women</i>		Tfien, <i>thousand</i>
			San, <i>three</i>
			Pei, <i>hundred</i>
			Y, <i>one</i>
			Che, <i>ten,</i> } <i>sixteen</i>
			Leou, <i>five,</i> }
			Ouan
* Leao-long.			
† Or Pe-tcheli.			
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* Kiang-nan is divided into two provinces; one of which is called Ngan-hoet; the other, Kiang-fou.

Pei, *hundred*
 San, } *thirty*
 Che, }
 Se, *four*
 [25,180,734.]

XI.

HO-NAN.

Ching, *province*

 Kong, *in all*
 Y, *one*
 Tlien, *thousand*
 Leou, *six*
 Pei, *hundred*
 San, } *thirty*
 Che, }
 San, *three*
 Ouan
 Eul, *two*
 Tlien, *thousand*
 Ou, *five*
 Pei, *hundred*
 Tfi, *seven*
 [16,332,507.]

XII.

CHAN-SI.

Ching, *province*
 Ta, *great*
 Siao, *little*
 Nan, *men*
 Niu, *women*
 Kong, *in all*
 Kieou, *nine*
 Pei, *hundred*
 Tfi, } *seventy*
 Che, }
 Leou, *six*
 Ouan
 Pa, *eight*

Tlien, *thousand*
 Y, *one*
 Pei, *hundred*
 Pa, } *eighty*
 Che, }
 Kieou, *nine*
 [9,768,189.]

XIII.

SI-NGAN *.

Ching, *province*
 Ta, *great*
 Siao, *little*
 Nan, *men*
 Niu, *women*
 Kong, *in all*
 Tfi, *seven*
 Pei, *hundred*
 Eul, } *twenty*
 Che, }
 Pa, *eight*
 Ouan
 Tfi, *seven*
 Tlien, *thousand*
 Se, *four*
 Pei, *hundred*
 Se, } *forty*
 Che, }
 San, *three*
 [7,287,443.]

XIV.

KAN-SOU. †

Ching, *province*
 Ta, *great*
 Siao, *little*
 Nan, *men*
 Niu, *women*
 Kong, *in all*

* Or Chen-si.
 † Kan-sou is a part taken from the province of Chen-si

Tfi, *seven*
 Pei, *hundred*
 Se, } *forty*
 Che, }
 Y, *one*
 Ouan
 Eul, *two*
 Tlien, *thousand*
 Y, } *fourteen*
 Che, }
 Se, }
 [7,412,014.]

XV.

SE-TCHOUEN.

Ching, *province*
 Ta, *great*
 Siao, *little*
 Nan, *men*
 Niu, *women*
 Kong, *in all*
 Eul, *two*
 Pei, *hundred*
 Tfi, } *seventy*
 Che, }
 Pa, *eight*
 Ouan
 Eul, *two*
 Then, *thousand*
 Kieou, *nine*
 Pei, *hundred*
 Tfi, } *seventy*
 Che, }
 Leou, *six*
 [2,782,976.]

XVI.

QUANG-TONG.

Ching, *province*

 Kong, *in all*
 Leou,

Leou, *six*
 Pei, *hundred*
 Tfi, } *seventy*
 Che, }
 Kieou, *nine*
 Ouan
 Tfi, *seven*
 Tfién, *thousand*
 Ou, *five*
 Pei, *hundred*
 Kieou, } *ninety*
 Che, }
 Tfi, *seven*
 [6,797,597]

XVII.

QUANG-SI.

Ching, *province*
 Ta, *great*
 Siao, *little*
 Nan, *men*
 Niu, *women*
 Kong, *in all*
 San, *three*
 Pei, *hundred*
 Kieou, } *ninety*
 Che, }
 Se, *four*

Ouan
 Tfi, *seven*
 Tfién, *thousand*
 Sc, *four*
 Pei, *hundred*
 Y, }
 Che, } *fourteen*
 Sc, }
 [3,947,414.]

XVIII.

YUN-NAN.

Ching, *province*
 Ta, *great*
 Siao, *little*
 Nan, *men*
 Niu, *women*
 Kong, *in all*
 Eul, *two*
 Pei, *hundred*
 Tfi, *seven*
 Ouan
 Pa, *eight*
 Then, *thousand*
 Pa, *eight*
 Pei, *hundred*
 Eul, *two*
 [2,078,802.]

XIX.

KOZI-TCHEOU.

Ching, *province*
 T1, *great*
 Siao, *little*
 Nan, *men*
 Niu, *women*
 Kong, *in all*
 San, *three*
 Pei, *hundred*
 Sc, } *forty*
 Che, }
 Ouan
 Eul, *two*
 Tfién, *thousand*
 Tfi, *seven*
 Pei, *hundred*
 Eul, } *twenty*
 Che, }
 Eul, *two*
 [3,402,722.]

KIEN-LONG.

Eul, } *twenty*
 Che, }
 Leou, *six*
 Nien, *year*

If we add all these quantities, we shall have, for the sum total of the inhabitants of China in 1761, which was the twenty-sixth year of the reign of Kien-long, one hundred and ninety-eight millions, two hundred and fourteen thousand, five hundred and fifty-three.

[198,214,553.]

THIS register was accompanied with a comparative state of the population in the twenty-fifth and twenty-sixth years of the reign of *Kien-long*, or in 1760 and 1761. In the former, there were found to be in China 196,837,977
mouths ;

mouhs; in the second, 198,214,553; there was therefore an increase of 1,376,576 in the course of one year only. But, twenty years have elapsed since the epocha of this numeration; and, as it can be proved by facts, that the population of China, for a long time past, has been progressively increasing, may we not thence presume, that this empire contains at present two hundred millions of inhabitants? It will, no doubt, be allowed, that there is no sovereign in the universe who commands so many people united in the same society, and governed by the same laws.

But it may be asked, whence proceeds this inexhaustible increase of people in that remote corner of Asia? *Is it entirely owing to physical causes, or are these only seconded and assisted by the influence of moral and political institutions?* It would be difficult to give a precise answer to this question; but we may say, in general, that the following are the most apparent causes of this extraordinary and enormous population. First, the strict observance of filial duty throughout this vast nation, and the prerogatives of paternity, which make a son the most valuable and safest property of a father. Secondly, the infamy attached to the memory of those who

die without posterity. Thirdly, universal custom, which makes the marriage of children the principal concern of fathers and mothers. Fourthly, the honours bestowed by government on those widows who do not enter a second time into the state of marriage. Fifthly, frequent adoptions, which prevent families from becoming extinct. Sixthly, the return of wealth to its original stock by the disinheriting of daughters. Seventhly, the retirement of wives, which renders them more complaisant towards their husbands, saves them from a number of accidents when big with child, and constrains them to employ themselves with the care of their children. Eighthly, the marriage of soldiers. Ninthly, the fixed state of taxes, which, being always laid upon lands, never fall but indirectly upon the trader and mechanic. Tenthly, the small number of sailors and travellers. To these may be added, the great number of people who reside in China only by intervals; the profound peace which the empire enjoys; the frugal and laborious manner in which the great live; the little attention that is paid to the vain and ridiculous prejudice of not marrying below one's rank; the ancient policy of giving distinction to men, and not to families; by

attaching nobility only to employments and talents, without suffering it to become hereditary; and, lastly, decency of public manners, and a total ignorance of scandalous intrigues and gallantry.

C H A P. III.

FERTILITY OF CHINA ; CAUSES OF THE FRE-
QUENT FAMINES EXPERIENCED THERE.

ALL travellers agree in their accounts of the fertility of China, and of the extent and beauty of its plains. Neither inclosures, hedges, nor ditches are seen in them; scarcely even is there found a single tree: so careful is the Chinese husbandman not to lose the smallest portion of his land. The plains of the northern provinces produce wheat; those of the south, rice, because the country is low and covered with water. The land in several provinces yields two crops in a year; and even in the interval between the harvests, the people sow several kinds of pulse, and other small grain.

But how can we reconcile this fertility of the earth with those cruel famines and general scarcities which so often desolate China? How happens it, that a sober, active and industrious people, who inhabit the most fertile country in the universe, governed by princes whose wisdom and foresight form the most striking features of their character, find themselves so often exposed to this destructive scourge, while countries in Europe, that are inhabited by people destitute of the greater part of these advantages, scarce ever feel the horrors of famine?

The solution of this paradox may appear difficult to those who have only a superficial knowledge of China; but, an attentive consideration of the local situation of the different parts of the empire, and of the manner in which its grain is consumed, will be sufficient to explain this seeming impossibility, and to dissipate every appearance of contradiction.

There are two causes which concur to produce dreadful famines in this empire. First, when natural events, such as drought, hail, inundations, or insects, destroy the rising crops; in whatever absolute scarcity China may be, it is not only impossible for it to receive any assistance from its neighbours, but it is even
under

under the necessity of supplying them. If we take a view of its frontiers, and of the bordering nations, beginning at the provinces of *Koei-tcheou*, *Se-tchuen* and *Chen-fi*, as far as the great wall, we shall find nothing but frightful mountains, the greater part of which have been hitherto peopled with the Miao-tse, of whom we have spoken.

To the north of China are the Mogul Tartars, a subjected people, it is true, but extremely lazy, who sow millet only for their own use, and whose principal food is the flesh of their flocks.

On the north-east lies the province of *Leao-tong*, which is extremely fertile, but too far distant from Pe-king, and from the centre of the empire, to send its provisions thither. Besides, all carriage is impracticable but during winter; it is in this season, that great quantities of game, and fish preserved, or *clothed in ice*, according to the Chinese expression, are carried from that country to the capital.

Corea does not supply China with corn. The provinces of *Kiang-nan* and *Tche-kiang* are bounded on the east by the sea of Japan; and, though these islands are only three or four days' sailing distant from the continent, no Chinese vessel

vessel ever yet attempted to go thither in quest of provisions, whether it be that Japan, already too populous, has nothing to spare, or that, since it has shut its ports, foreign merchants are exposed there to too many insults.

The sea washes the province of Fo-kien on the south, opposite to which lies Formosa. When a scarcity prevails in this island, China is obliged to supply it with corn.

The province of *Quang-tong* is also bounded by the sea, and has nothing on the south but islands and remote countries. One year, when rice was exceedingly scarce there, the emperor sent for F. Parrenin, a Jesuit missionary, and asked him, if the city of Macao could not furnish Canton with rice, until the supply which he had ordered from other provinces should arrive; but he seemed much surprised, when he was informed, that Macao had neither rice, corn, fruits, herbs nor flocks, and that it generally got from China whatever was necessary for its subsistence.

After having thus taken a view of all the frontiers of this vast empire, we perceive, that in times of scarcity, it can have no resource in its neighbours. What prevents famines in Europe, is freedom of commerce and the facility with

with which one country may be supplied from another: China is destitute of this advantage.— Placed by itself in the extremity of Asia, and surrounded by barbarous nations, it must nourish itself, and procure from its own soil whatever is necessary for the subsistence of that immense number of inhabitants which is contained in its provinces. This, therefore, at all times, has been the grand object of the care of the public ministers. China has always had granaries and magazines erected in every province, and in most of the principal cities, for the relief of the people in times of scarcity. We still read orders and edicts of the ancient emperors, which are full of the tenderest expressions towards their suffering subjects. *We can, say they, neither eat, drink, nor enjoy repose, until we have relieved the public misery.*

These fatherly expressions, if taken literally, must be understood as respecting the time when the Chinese were governed by emperors of their own nation, who considered their subjects as their children. At present, the theory is still the same; orders are issued in the like manner; and, in the provinces, they easily impose upon those who hear them published; but, at court, all these fine words, which practice belies, are reduced

reduced to their proper value. The emperor perhaps may still have the same affection for his subjects; but the officers who are entrusted with his orders, are far from executing them with equal zeal. The delays and impediments that keep back succour, for the most part prevent it from arriving seasonably. When the crop has failed in any of the provinces, before the mandarins who have the government of it, can send their memorials to court; before these memorials have passed through all the hands necessary to convey them to the emperor; before this prince has assembled the grandees and different tribunals; and, before commissaries are appointed and set out, the suffering people are reduced to the greatest extremities, and a thousand unhappy wretches perish before any assistance arrives.

Another cause of the scarcity of grain in China, is the prodigious consumption which is occasioned daily by the composition of wines, and of a kind of spirituous liquor called *rack*. This is one of the grand sources of the evil, both in the northern and southern provinces: government is not ignorant of it; but it employs too weak means to prevent it. Proclamations have often been published, forbidding the distil-

distillation of *rack*. The orders of the court are every where posted up, and announced in all the cities by the governors. Officers, appointed for the purpose, visit the still-houses, and destroy the furnaces if nothing is given them; but if the owner slips into their hand a few pieces of silver, they shut their eyes, and go somewhere else to act the same farce. The mandarin sometimes goes round himself; the workmen are then seized and thrown into prison; after which, they are condemned to be whipped, or to carry what is called the *cangue**; but they are never punished with death. The makers of wine then change their habitations, conceal themselves for a short while, and again begin their operations.

What will appear, no doubt, of little consequence, is, that the sale of *rack* and of made wines is no where forbidden. Numbers of carts loaded with these liquors enter Pe-king daily. The duty is paid at the gate, and they are sold publicly in more than a thousand shops that are dispersed throughout the city and suburbs.

If government meant to execute with effect the laws made against these liquors, ought they

* A kind of punishment, of which we shall speak hereafter.

not to shut up the shops in which they are re-tailed? would they not forbid their being sold, under severe punishment, such as banishment, or a heavy fine? But the grandees would then be obliged, in the first place, to deny themselves the use of these luxuries; and it would be too great a sacrifice, to give such an example to the people.

C H A P. IV.

MINES OF CHINA; METALS, STONES, EARTHS, CLAYS, &c.

THE mountains of China are so numerous, and situated under so various climates, that they must contain minerals of every species. There are indeed found there in great abundance, mines of gold, silver, iron, copper, tin, lead, mercury, marble, crystal, cinnabar, lapis lazuli, &c. Gold and silver would be much more common in this empire, did the Chinese policy permit the mines which contain these metals to be opened; but the emperors have always feared, that if the people should be exposed to the temptation of these artificial

artificial riches, they would be induced to forsake the more useful labours of agriculture. A great part of the gold which is to be found in China, is collected in the sand of the rivers and torrents which fall from the mountains that are situated on the western boundaries of the provinces of Se-tchuen and Yan-nan. This last province is, above all, exceedingly rich in silver-mines. The *Lo-los*, of whom we have already spoken, and who inhabit the nearest parts of the kingdoms of Ava and Pegu, must procure much gold from their mountains, since it is a custom among them, to inclose a great quantity of plates of gold in the coffins of those people whom they are desirous of honouring. Their gold does not appear beautiful, because it is not thoroughly purified. The *Lo-los* are little better acquainted with the art of melting silver, which is still blacker, and contains more refuse; but it becomes purer and brighter than that of any other country, when it has been refined by the Chinese workmen. The best and most valuable gold of China is that which is found in the districts of *Li-kiang-fou* and *Yang-tchang-fou*. As the Chinese gold is not coined, it is employed in commerce, and becomes merchandize. The consumption of this gold

is

is very small; it is never used but in gilding, or for slight ornaments. The emperor is the only person who possesses any quantity of gold plate.

Iron, lead and tin mines must be very common, since these metals are sold at a low rate throughout the whole empire. *M. Dortous de Mairan* having asked *Father Parrenin*, if there existed any monuments which could determine the epocha when iron was first introduced into China, that celebrated missionary replied, that the use of this metal was very ancient there, and that it appeared to have been known to the first leaders of the Chinese; for mention is made of it in the *Chou-king*, under the chapter *Yu-bong*, where it is related, that iron comes from the territories of *Leang-tcheou*. It is not, however, said, that the first knowledge of iron came from that place; but, as China has undoubtedly begun to be peopled to the west of *Pe-king*, it must have been in *Leang-tcheou*, that the Chinese chiefs first became acquainted with that earth which is proper for the fusion of iron. How could *Yu* the Great, had he wanted instruments of iron, have succeeded in cutting through mountains, or in executing those vast canals which he caused to
be

be dug to give a free course to the waters that had inundated the country? Besides, none of those sharp stones are to be found in China which were formed to supply the want of iron; at least, the present literati have never heard any mention made of them.

The copper-mines of the provinces of *Yunnan* and *Koei-tcheou* have furnished, for a great number of years, all the small coin that is struck in the empire. Besides common copper, the Chinese have another kind, which they call *pe-tong*, or *white copper*; it is so pure and fine, that it approaches near to silver. This copper is naturally white when taken from the mine; and when it is broken into grains, it is found still whiter in the interior part than on the surface. A number of experiments have been made, at *Pe-king*, which sufficiently prove, that this copper does not owe its whiteness to any mixture. Different kinds of works are made of it; but, to soften it and render it less brittle, the workmen are obliged to mix with it a little zinc, or some metal of the same kind. Those who are desirous of preserving its splendour and beautiful colour, add to it a fifth part of silver. This copper is found only in the province of *Yunnan*. The Japanese bring to China

another kind, which is yellow, and sold in ingots. It has a great resemblance to gold, and is used by the Chinese for making different toys. They pretend that this copper never produces verdigrease.

The Chinese still know another kind of copper, called *tse-lay-tong*, or copper which comes of itself. It appears to be nothing else but a red copper washed down from the tops of the mountains, which is afterwards found among the pebbles and sand left by the torrents when they become dry. The Chinese physicians attribute to bracelets made of *tse-lay-tong* the property of fortifying the arms against attacks of the palsy.

Quarries and coal-mines are so abundant in every province of the empire, that there is perhaps no country in the world where they are so common. Coals are found in great plenty in the mountains of the provinces of *Chen-si*, *Chan-si* and *Pe-tcheli*; they are used by workmen in their furnaces, in all kitchens, and in the stoves with which the Chinese warm their apartments during winter. Without this supply, fire-wood, which is scarce and very dear, would not be found sufficient for the consumption of the northern provinces.

Lapis lazuli is found in several cantons of the province of *Yun-nan*, which differs in nothing from that imported to Europe. It is also to be met with in the province of *Se-tchuen*, and in a district of the province of *Chan-si*, called *Tai-tong-fou*, which furnishes the most beautiful *yu-che* of China. This is a kind of white jasper much resembling agate; it is transparent when polished, and sometimes diversified with spots.

The most beautiful rock crystal of China is dug from the mountains of *Tchang-tcheou-fou*, and *Tchang-pou-hien* in the province of *Fo-kien*, situated in latitude $24^{\circ} 10'$. The artists of these two cities are very ingenious in cutting it, and form it into buttons, seals, figures of animals, and other trinkets.

Yun-nan furnishes real rubies; but they are exceedingly small. There is sold yearly in the capital of this province a great quantity of other precious stones; but they are said to be procured from other places, especially from the neighbouring kingdoms of Ava and Laos. It is certain, that there is, at the distance of two hundred *senes* or cords from the city of *Mohang-leng*, the capital of Laos, a mine of precious stones, from which rubies are dug that are sometimes as large as a walnut. Emeralds are

also found there ; and we are assured, that the king of Laos has one in his possession which is equal in size to an orange. A rivulet runs across this mine, and detaches several precious stones, which it washes down with its current. It often happens, that some of them are picked up which weigh a quarter or third part of an ounce.

Quarries of marble are very common in China, especially in the province of Fo-kien. The marble procured from them would not be inferior to that of Europe, were the Chinese artists as well acquainted as ours with the art of working it. Small pieces of it are sometimes found among the merchants, which are polished in a superior manner, such as those small tablets used as ornaments in their festivals, and named *tien-tsan*. They are exceedingly pretty, and variegated with different colours, which, though not lively, represent naturally mountains, rivers, trees, and animals. These tablets are made of marble procured from the quarries of *Tai-ly-fou* ; and the most beautiful pieces are always chosen for that purpose.

SONOROUS STONES.

AMONG the musical instruments of China, the oldest and most esteemed is composed of a kind

a kind of stone which has the property of being sonorous. It would be difficult to determine, whether the first colony that inhabited China carried thither the idea of a musical instrument made of stone, or whether the sonorous stones that are found there led to this happy invention. An old commentator of the *Chou-king* says, the ancients having remarked, that a current of water made some of the stones near its banks send forth a sound, they detached some of them, and, being charmed with the delightful sound they emitted, constructed *king* or musical instruments of them.

The various kinds of sonorous stones known in China differ considerably from one another in beauty and in the strength and duration of their tone, and what is very surprising, is, that this difference cannot be discovered either by the different degrees of their hardness, weight, or fineness of grain, or by any other qualities which might be supposed to determine it. Some stones are found remarkably hard, which are very sonorous; and others, exceedingly soft, which have an excellent tone; some, extremely heavy, emit a very sweet sound; and there are others, as light as pumice-stone, which have also an agreeable sound.

The stone called *yu* is the most celebrated, valuable and beautiful of the sonorous stones known in China. It appears to have existed there from the remotest antiquity. If we believe what the ancient Chinese authors relate of the stones called *yu* of their time, if they have not exaggerated their beauty and perfections, we cannot help acknowledging, that those found at present are far inferior; but what seems to assure us of the sincerity of these ancient writers, is, that this stone, which appears to have been known under the first *Tcheou*, whose dynasty began in the year 1122 before Christ, was very rare under the dynasty of *Han*, which commenced 206 years before our æra. At that period, these stones were the most valuable presents that could be made to the emperors. *Tching-ty*, of that dynasty, who mounted the throne 37 years before Christ, considered it as a glorious epocha of his reign, when an ancient *king*, composed of sixteen stones, all of *yu*, had been found on the banks of a river.

These sonorous stones are found at present in channels made by torrents, and in the rivers which flow at the bottoms of the mountains of *Yun-nan*, *Koei-tcheou*, *Cben-fi*, *Y-ly* and *Yoquen*.
The

The stone *yu* resembles externally those pebbles which are found in the streams and torrents that rush down through the clefts of the mountains. The large *yu* are very rare; the biggest that the missionaries ever saw in the imperial palace, were only two feet and a half or three feet in length, and one foot eight or ten inches in breadth; and these were considered as matchless pieces. The *yu* are also found in the earth, in valleys near mines, and in the fissures made by torrents in the sides of the mountains. These differ from others, because their surface is not so smooth, and because they are neither of so firm a texture, nor of so fine a grain.

Five different properties are remarked in the sonorous *yu*; hardness, weight, colour, grain and sound.

Beautiful *yu* are so hard when cut and polished like agate and precious stones, that the best tempered steel glides upon them without making any impression. The more careful nature has been in forming them, the more difficult it is to cut them; but they are capable of receiving a superior polish.

The weight of the *yu* is proportionable to its hardness. An unpolished block is preserved in the emperor's palace, which to all appearance

one man could lift ; but four are necessary only to move it : this piece, however, is no more than two feet and a half in length, and half a foot in breadth. It is of an irregular figure, and has a green colour, which is generally that of the commonest kind of *yu*.

The colour most esteemed at present in these stones, and which is indeed the prettiest, is that of whey ; those that are next, are bright blue, azure, indigo, citron yellow, orange, logwood-red, pale green, sea green, deep green, cinder gray, &c. The Chinese set more value upon *yu* which is of one colour only, without veins or shades, unless it be variegated in an agreeable manner with five colours.

With regard to the grain of the *yu*, the hardest and heaviest has always the finest. But what kind of *yu* is the most sonorous ? The missionary who transmitted us these details confesses that he cannot answer this question, because he never found an opportunity of making the necessary experiments : the emperor alone is in possession of all the various kinds which would be requisite for this purpose ; it is, besides, doubtful, whether there are different *king* made of the same size and dimensions, without which they could not be properly compared.

The

The *nieou-yeou-che*, or *ox fat stone*, is the second kind of sonorous stone known in China. It has neither the hardness, weight nor sweet tone of the *yu*, and it is more common, and much less esteemed: however, it is very rare to find large pieces of it proper for making *king*. That which is in greatest request, has really the colour of the fat of beef, and is of one shade, without clouds or veins. This stone is a production of the province of *Yun-nan*, and is found in the earth near mines, in valleys, or at the bottoms of the mountains. Its exterior coat is rough, and of a dirty colour, between chestnut and green; below this, there is a second, resembling curdled milk; after which comes another, tinged with yellow, that becomes deeper as it approaches the centre. It might be worth while to examine, why the centre of this stone is better formed, more compact, and of a finer texture and deeper colour than its other parts. The *yu* emits sparks when struck with steel: the *nieou-yeou-che* does not. This stone seems more to resemble agate; and it perhaps may be an agate peculiar to China. To be sonorous, the *nieou-yeou-che* must have a beautiful yellow colour, without trans-
parent

parent veins; but it is far from being so sonorous as the *yu*.

The third kind of sonorous stone, named *hiang-che*, emits so metallic a sound, that one would be almost induced to take it for a composition; but it is certain, that it is of the nature of stone. Some of them are found black, gray, green, and others variegated with white. The blackest are the most sonorous. This singular stone is brought from the lake of *Tche-kiang*, and appears to be a kind of alabaster, the colour and nature of which have been changed by the water that has penetrated it.

A fourth kind of sonorous stone resembles marble in its veins, which are gray, black and dirty white on a milk-white ground. The greater part of these stones have transparent spots, which shew that a vitrification has commenced. They appear to be something between talc and crystal. It is remarked, that their tone is often interrupted, and of very short duration.

The chemists and naturalists of Europe have never yet attempted to discover, whether some of our stones may not have the same properties as the sonorous stones of the extremities of Asia. It however appears, that the Romans were

were formerly acquainted with a sonorous stone of the class of *hiang-che*. ‘Pliny,’ says the abbé du Bos, ‘in his *REFLECTIONS ON POETRY AND PAINTING*, when speaking of curious stones, ‘observes, that the stone called *calcophonas*, or *brazen found*, is black; and that, according to the etymology of its name, it sends forth a found much resembling that of brass when it is struck. The passage of Pliny is as follows: *Calcophonas nigra est; sed illisa, æris tinnitum reddit*. Lib. 37. Sect. 56.’

Some sonorous stones sent into France, have at length roused the curiosity of the chemists; and they have thought proper to inquire, to what class of stones they may belong. The late duke de Chaulnes applied with particular attention to this research. The following is the result of the experiments which he made on a *king* in the cabinet of Mr. Bertin:

‘The Academy of Sciences, Mr. Romé de Lisle, and several other learned mineralogists, when asked, if they were acquainted with the black stone of which the Chinese *king* were made, for answer, cited the passage of Pliny mentioned by Boethius de Bott, Linnæus, and in the Dictionary of Bomare, and added, what Mr. Anderson says in his *Natural History*

‘of

‘ of Iceland, respecting a blueish kind of stone
 ‘ which is very sonorous. As the black stone
 ‘ of the Chinese becomes of a blueish colour
 ‘ when filed, it is probably of the same species.
 ‘ None of the rest who were consulted had
 ‘ ever seen it.

‘ The Chinese stone has a great resemblance
 ‘ at first sight to black marble, and, like it, is
 ‘ calcareous; but marble generally is not so-
 ‘ norous. It also externally resembles touch-
 ‘ stone, which is a kind of basalt, and the ba-
 ‘ salt found near volcanos; but these two
 ‘ stones are vitrifications.

‘ Its resemblance to black marble induced me
 ‘ to make some comparative experiments. It
 ‘ is not phosphoric; neither is black marble.
 ‘ It has no effect upon a suspended iron bar;
 ‘ and consequently contains no iron in its me-
 ‘ tallic state. When dissolved in acids, to try
 ‘ whether it contained any particles of that
 ‘ metal, it produced a strong effervescence,
 ‘ which seemed to indicate that it was not en-
 ‘ tirely free from them. As black marble did
 ‘ not present the same phenomenon, the so-
 ‘ norous stone was examined more attentively
 ‘ by a magnifying glass, when several small
 ‘ points,

‘ points, resembling pyrites, were discovered in
 ‘ it, to which this difference was attributed.
 ‘ When dissolved in nitrous, marine or vitriolic
 ‘ acids, it always presents the same phenomena
 ‘ as black marble; with vitriolic acid, it makes
 ‘ a grayish *magma* (which is only a kind of
 ‘ calx tintured with bitumen), and leaves be-
 ‘ hind it a black substance that is not soluble in
 ‘ nitrous or marine acids, and which, as in black
 ‘ marble, is a real inflammable bitumen.

‘ Black marble and sonorous stone, when
 ‘ calcined, become entirely white, and yield
 ‘ a very strong calx; but it loses its bitumen
 ‘ by the action of fire. Sonorous stone, how-
 ‘ ever, appears to contain less of the phlo-
 ‘ gistic and colouring matter; for, a precipita-
 ‘ tion of it, by means of fixed alkali, is some-
 ‘ what whiter (and has even more of a blueish
 ‘ cast) than that of black marble. When tried
 ‘ by volatile alkali, it contains no copper. Other
 ‘ precipitations of it, by different substances,
 ‘ exhibit the same appearances.’

The duke having proceeded thus far in his
 analysis, endeavoured to procure some farther
 information from the stone-cutters. They all
 replied, that blue-coloured marble was very
 sonorous,

sonorous, and that they had seen large blocks of it which emitted a very strong sound; but the duke having ordered a *king* to be constructed of this kind of stone, it was found, that it did not possess that property. By trying the black marble of Flanders, a piece was at length found which emitted an agreeable sound: it was cut into a *king*, that is almost as sonorous as those of China. All these observations give us reason to believe, that the stones of which the *king* are formed, are nothing else but a black kind of marble, the constituent parts of which are the same as those of the marble of Europe, but that some difference in their organization renders them more or less sonorous.

The duke farther observes, that the Chinese make *king* of crystal, and that one of this kind is to be seen at St. Brice in the cabinet of M. de la Tour, secretary to the king; that they also employ a kind of alabaster, some pieces of which M. Bertin received from China shaped like the *king*, made of black stone, that were said to be very sonorous; but they do not appear to have any sound at all; lastly, that the stone *yu*, of which the Chinese construct their most beautiful *king*, is nothing else but a kind of agate.

POTTER'S EARTH, EARTHEN-WARE,
PORCELAIN.

THE Chinese government, more attentive to useful and necessary arts, than to those which conduce only to luxury or pleasure, has always given great encouragement to earthen-ware and porcelain; this branch, therefore, employs more workmen, and contributes more to the good of commerce, than any other. As China abounds with potter's earth of various kinds and of all colours, some mixed with gravel, others with the finest sand, and some singularly formed by nature, there is consequently a great difference between the earthen-ware of one province and that which is made in another, both in the shape and size of the vases. In some places, vases are formed which are four or five feet in diameter (and sometimes more), and three feet in depth; in others, vessels are manufactured that are four or five feet in height, and have a proportionable circumference. These vases, which are called *kang*, are used by the rich as basons for holding their gold-fish, flowers, aquatic plants, &c. by the middling class of people, as reservoirs for their water, or for containing

taining seeds, pulse and fruits ; and by tradesmen and merchants, as tubs or kettles.

As this manufacture is principally carried on in favour of the people, two things have been chiefly consulted ; the first is, to supply their wants, by making lamps, spoons, cups, kitchen and table utensils of all shapes and sizes, and even children's toys ; the second, to proportion the price of these necessaries to their poverty, so that they may easily furnish themselves with whatever they want. It has also been an object of attention, to ornament different kinds of vessels, such as tea-pots, cups, saucers, &c. and to give them elegant shapes. The emperor, to whom works are presented of all the manufactories of the empire, has introduced the custom of painting in enamel, upon different pieces of porcelain, small coloured flowers ; and, to bring them into common use, he employs them in his palace, and they generally form a part of the presents which he gives to his friends.

People who have travelled in India, are acquainted with those vases made of a kind of potter's earth, which have the property of sweetening and cooling water. These vases, in this respect, are preferred to those of gold, crystal,

crystal, or the finest porcelain, and are used by the poor as well as rich. There are several other kinds of earthen-ware which are, in like manner, found to be particularly adapted for certain purposes; tea, for example, is much better when the water has been warmed in one kind of vessel, and when it is infused in another; rice neither has a delicate taste, nor can it be boiled properly, but when a coarse kind of earthen vessel is used that has no enamel; flowers, which languish in Dutch-ware or porcelain, seem to grow, if we may be allowed the expression, when put into other pots of a certain manufacture.

It is certain, that, for culinary and medicinal purposes, earthen-ware is more used in China than in France, and that it is found advantageous; that the workmen make more profit by it, and are better acquainted with the art of forming it for every requisite purpose; for example, the painters pound their colours in a *jou-po*, or vase, made of hard earth, with a mallet formed of the same substance; and that the beauty and fineness of some kinds of earth have enabled the Chinese industry to make several pieces of ware which are very valuable, not only on account of their exquisite workman-

ship, but also of their size, and the singular beauty of their form. F. Amiot relates, that he saw a cistern two feet in breadth, and more than three feet and a half in length, the finishing of which was so elegant, that, had a piece of marble been done in the same manner, it would have claimed the highest admiration.

The fine porcelain of China is so celebrated, that we cannot here omit giving some account of the manner of preparing the paste of which it is made. This substance is produced by the mixture of two sorts of earth; one of which is called *pe-tun-tse*, and the other, *kao-lin*; the latter is intermixed with small shining particles; the other is purely white, and very fine to the touch. These first materials are carried to the manufactories in the shape of bricks. The *pe-tun-tse*, which is so fine, is nothing else but fragments of rock taken from certain quarries, and reduced to powder. Every kind of stone is not fit for this purpose. *The colour of that which is good, say the Chinese, ought to incline a little towards green.* A large iron club is used for breaking these pieces of rock; they are afterwards put into mortars; and, by means of levers headed with stone bound round with iron, they are reduced to a very fine powder.

These levers are put in action either by the labour of men, or by water, in the same manner as the hammers of our paper-mills. The dust afterwards collected, is thrown into a large vessel full of water, which is strongly stirred with an iron shovel. When it has been left to settle for some time, a kind of cream rises on the top, about four inches in thickness, which is skimmed off and poured into another vessel filled with water; the water in the first vessel is stirred several times, and the cream which rises is still collected, until nothing remains but the coarse dregs, which, by their own weight, precipitate to the bottom: these dregs are carefully collected, and pounded anew.

With regard to what is taken from the first vessel, it is suffered to remain in the second until it is formed into a kind of crust at the bottom. When the water above it seems quite clear, it is poured off, by gently inclining the vessel, that the sediment may not be disturbed; and the paste is thrown into large moulds proper for drying it. Before it is entirely hard, it is divided into small square cakes, which are sold by the hundred. The colour of this paste, and its form, have occasioned it to receive the name of *pe-tun-tse*.

The *kao-lin* which is used in the composition of porcelain, requires less labour than the *pe-tun-tse*. Nature has a greater share in the preparation of it. There are large mines of it in the bosoms of certain mountains, the exterior strata of which consist of a kind of red earth. These mines are very deep, and the *kao-lin* is found in small lumps, that are formed into bricks, after having gone through the same process as the *pe-tun-tse*. Father d'Entrecolles thinks that the earth called *terre de Malte*, or *St. Paul's earth*, has much affinity to the *kao-lin*, although those small shining particles are not observed in it which are interspersed in the latter.

It is from the *kao-lin*, that fine porcelain derives all its strength; if we may be allowed the expression, it stands it in stead of nerves. It is very extraordinary, that a soft earth should give strength and consistency to the *pe-tun-tse*, which is procured from the hardest rocks. A rich Chinese merchant told F. d'Entrecolles, that the English and Dutch had purchased some of the *pe-tun-tse*, which they transported to Europe, with a design of making porcelain; but, having carried with them none of the *kao-lin*, their attempt proved abortive, as they have
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since acknowledged. *They wanted*, said this Chinese, laughing, *to form a body the flesh of which should support itself without bones.*

The Chinese have discovered, within these few years, a new substance proper to be employed in the composition of porcelain. It is a stone, or rather species of chalk, called *hoa-che*, from which the physicians prepare a kind of draught that is said to be detensive, aperient and cooling. The manufacturers of porcelain have thought proper to employ this stone instead of *kao-lin*. It is called *hoa* because it is glutinous, and has a great resemblance to soap. Porcelain made with *hoa-che* is very rare, and much dearer than any other. It has an exceeding fine grain, and, with regard to the painting, if it be compared with that of the common porcelain, it appears to surpass it as much as vellum does paper. This porcelain is, besides, so light, that it surprises those who are accustomed to handle other kinds; it is also much more brittle; and it is very difficult to hit upon the proper degree of tempering it.

Hoa-che is seldom used in forming the body of the work; the artist is contented sometimes with making it into a very fine size, in which the vessel is plunged when dry, in order that

it may receive a coat before it is painted and varnished : by these means, it acquires a superior degree of beauty.

When *boa-che* is taken from the mine, it is washed in rain or river water, to separate it from a kind of yellow earth which adheres to it. It is then pounded, put into a tub filled with water, to dissolve it, and afterwards formed into cakes like *kao-lin*. We are assured, that *boa-che*, when prepared in this manner, without the mixture of any other earth, is alone sufficient to make porcelain. It serves instead of *kao-lin* ; but it is much dearer. *Kao-lin* costs only tenpence sterling ; the price of *boa-che* is half-a-crown : this difference therefore greatly enhances the value of porcelain made with the latter.

C H A P. V.

FRUITS, LEGUMINOUS PLANTS, AND POT- HERBS OF CHINA.

CHINA produces the greater part of the fruits which we have in Europe, and several other kinds, that are peculiar to the country. Apples, pears, prunes, apricots, peaches, quinces,

quinces, figs, grapes, pomegranates, oranges, walnuts and chestnuts, are found every where in abundance ; but the Chinese have no good species of cherries. In general, excepting grapes and pomegranates, the fruits which they have in common with us, are much inferior to those of Europe. The Chinese have several kinds of olives, all different from ours ; but they do not extract oil from them, whether it be, that this fruit in China is not proper for that purpose, or that they are ignorant of the art of making it. Their manner of gathering their olives is very convenient : they bore a hole in the trunk of the tree, which they stop up, after having put some salt into it ; and, at the end of a few days, the fruit drops of itself.

Oranges were first brought us from China ; and we are indebted to the Portuguese for them. We are assured, that the tree from which all those of Europe have sprung, is still preserved at Lisbon, in the house of the count de St. Laurence. The Chinese have a great number of kinds. The most esteemed, which on account of their rarity are sent to India, are very small ; their skin is very fine, smooth and soft, and of a reddish-yellow colour. A larger kind is eaten at Canton, which are yellow,

have an agreeable taste, and are very wholesome. The Chinese generally give them to their sick; but they always use the precaution of softening them a little at the fire, or under hot ashes, and of mixing a good deal of sugar with them. They are firmer than the oranges of Provence; their skin does not peel off easily from the pulp; and the pulp is not separated into small divisions, as in those of Europe.

Lemons and citrons are very common in China. But the Chinese pay particular attention to the culture of a kind of lemon-tree, the fruit of which are of the size of a walnut; they are round, green and four, and are said to be excellent in ragouts. These trees are often planted in boxes, to ornament courts, halls and apartments.

The Chinese have a very small species of melons, which are yellow within, and exceedingly sweet, and which are eaten with the skin, as we sometimes eat apples in Europe. They have also another kind, still more esteemed, which are brought from a part of Tartary, called *Ha-mi*. These melons, as we have already said, may be kept fresh for five or six months. Great care is taken every year to
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make a proper provision of them for the emperor's table.

The *tse-tse*, which the Portuguese call figs, are a species of fruit peculiar to China, that grow in almost all the provinces. There are different kinds of them. Those of the southern parts of the empire are remarkably sweet; their seeds are black and flat, and the pulp is slimy and extremely juicy. In *Chan-si* and *Chen-si*, the *tse-tse* are larger, firmer and richer, and much fitter for being kept. The tree which produces this fruit is very beautiful; it is as tall and bushy as our middling-sized walnut-tree; its leaves are of a bright green; but they change their colour in autumn, and appear of a beautiful red. The fruit are of the size of a common apple; in proportion as they ripen, they assume an orange-colour; and when they are dried, they are as sweet and mealy as figs.

Two kinds of fruit with which we are not acquainted, are found in the provinces of *Fo-kien*, *Quang-tong* and *Quang-si*. The first, called *li-tchi*, is of the size of a date; its stone, which is long and very hard, is covered with a soft, juicy pulp, that has an exquisite taste. This pulp is inclosed with a rough, thin rind, shaped at one end like an egg. We are assured,
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that this fruit is delicious ; but it is dangerous when eat to excess ; for it is so hot, that it occasions an eruption over the whole body. The Chinese suffer it to dry in the rind, until it becomes black and shrivelled, like our prunes. By these means, it is preserved all the year ; and they generally use it in tea, to which it communicates a certain sourness, which they prefer to the sweetness of sugar. The following observation is made for those who wish to eat this fruit in perfection.—If it is entirely ripe, and left a day longer on the tree, it changes its colour ; if it be suffered to remain a second, it may be easily perceived by its taste, that it has begun to change ; but if it continues a third, the alteration becomes very sensible. In order that this fruit may lose none of its flavour or smell, it must be eat in the provinces where it grows. Had we the art of transporting it as fresh to Europe as it is brought when dried, we could judge but very imperfectly of its goodness. The *li-tchi* which are carried to Pe-king for the use of the emperor, inclosed in tin vessels, filled with spirits mixed with honey and other ingredients, preserve, indeed, an appearance of freshness ; but they lose much of their favour. That this prince might taste them in
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the highest perfection, the trees themselves have been sometimes transported to the capital in boxes; and they have been so well managed, that, when they arrived there, the fruit was near its maturity.

The other kind of fruit peculiar to the southern provinces, is the *long-yen*, or *dragon's eye*; it is of a round figure, has a yellowish skin, and its pulp is white, tart and juicy. It is said, that, if this fruit is not so agreeable to the taste as the *li-tchi*, it is, however, more wholesome, and may be eat with greater safety.

The Chinese distinguish three kinds of apricot-trees; the apricot-tree with double flowers; the apricot-tree that produces fruit, and the wild apricot-tree. The apricot-tree with double flowers, which Mr. Duhamel says he never saw, is cultivated in gardens; the Chinese divide this tree into four principal classes; which are, the *millefolia*, *pale yellow*, *milk white*, and the *common*, the buds of which at first appear red; but the flowers whiten as they blow. There are dwarf apricot-trees with double flowers, which are placed for ornament in apartments, where they flower during winter. The rest are planted on little mounts in gardens, and have a very beautiful effect in spring.

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The apricot-tree which bears fruit, almost resembles that of France. The Chinese gardeners distinguish it into several classes, which produce the following different kinds of fruit : the *ken-bing*, which is round, and has a yellow pulp ; it ripens soonest, and is very well tasted ; the *choui-bing*, which is exceedingly juicy, and has an exquisite flavour ; the *pe-bing*, the pulp of which is white, and has but an indifferent taste ; the *li-bing*, that always preserves a greenish tint, and a fourish taste ; the *kien-kouan-kinen*, which has a flesh-colour, is exceedingly juicy, and a little flatted ; the *mou-bing*, which is flat and greenish, and which always retains a fourish taste ; and lastly, the *pa-tan*, that originally came from beyond the desert of *Cha-mo*. This apricot is small, contains little pulp, and is only esteemed on account of its kernel, which is very large, and of a sweet and agreeable taste.

The wild apricot-tree, which is probably to be found in France, would, no doubt, engage the attention of our gardeners more, were its utility better known. The Chinese distinguish this tree into three kinds ; two of which have a great resemblance. Their kernels yield a very good oil, which may be substituted for that

used at table. It is, at least, much superior to the oil produced from walnuts, which is burnt in lamps. The Chinese peasants warm their stoves with what remains of the stones, and collect the cinders, which they use for manuring their land.

The wild apricot-tree requires no culture ; it will grow in the worst soil, and flowers so late, as not to be in any danger from the frost. It is even admitted into the emperor's garden, where it is planted in the poorest ground, and in the most unfavourable situation for receiving the benefit of the sun's rays. The barren mountains which lie to the west of *Pe-king*, are covered with these trees ; and, what perhaps will be hardly believed, is, that the crops produced by them, and the oil extracted from their kernels, render the peasants who inhabit these mountains, as rich as those who live in the low lands. Apricots in China, as in Europe, are generally the earliest fruit of summer. The Chinese, as we do, preserve them both dry and liquid ; but they always wait until the fruit is quite ripe. Besides this, they press out the juice, boil and clarify it, and form it into a kind of lozenges, that may be kept as long as they choose, and which, when dissolved in water, make

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make a cooling and refreshing beverage. They also dry, for the same purpose, the small mountain-apricots; they detach the pulp from the stone, and dip them several times in the juice of other apricots, that are very ripe, or even in that of cherries. These apricots, when dried in the sun, are kept until next spring, when they are eaten, after having been boiled in water, with honey and sugar. When boiled until they are entirely dissolved in a large quantity of water, with which honey and vinegar are afterwards mixed, they afford an excellent and refreshing drink to the common people. As this drink is very wholesome, those even in better circumstances use it, after having added to it a little fine sugar and some orange-peel.

China produces abundance of grapes; it is not, therefore, from a want of this fruit, that the Chinese make no use of wine. Those who believe that the vine was not known in this empire until very late, and that it was brought hither from the west, labour under a great mistake. All the literati assure us, that the vine has been known and cultivated in China from the remotest antiquity. What is said in the *Tcheou-ly*, respecting the duty of the mandarins entrusted with the care of the emperor's gardens,

dens, cannot be understood of any thing else but of the vine ; but the *Tcheou-ly* is considered as the work of the celebrated *Tcheou-kong*, brother of *Vou-vang*, who mounted the throne in the year 1122 before Christ. However this may be, it is certain, that there were vines in *Chan-fi* and *Chen-fi* several centuries before the Christian æra ; and that a sufficiency of them was cultivated to make abundance of wine. *See-ma-tfien* remarks, that a private individual had made ten thousand measures. There was a time when the inhabitants of the provinces of *Pe-tche-ly*, *Chan-tong*, *Ho-nan* and of *Hou-quang*, applied themselves equally to the culture of vines. The wine which they made had the property of keeping several years, when put into pitchers and buried in the earth ; and, ‘ This liquor,’ says the historian, ‘ was become ‘ so common, that it caused great disorders.’—The songs which remain of all the dynasties since that of *Yven* to *Han*, give us reason to believe, that the Chinese have always been fond of wine made from grapes. The emperor *Ouen-ti*, of the dynasty of *Ouei*, celebrates it with a lyric enthusiasm worthy of Horace or Anacreon ; and we find in the large Chinese Herbal, book 133, that wine made from grapes was the wine

wine of honour, which several cities presented to their governors and viceroys, and even to the emperor. In 1373, the emperor *Tai-tsou* accepted some of it, for the last time, from *Tai-yuen*, a city of *Chen-fi*, and forbade any more to be presented. *I drink little wine*, said the prince, *and I am unwilling, that what I do drink should occasion any burden to my people.*

It appears, that the vine has experienced many revolutions in China. It has never been excepted, when orders have been issued for rooting up all those trees that encumbered the fields destined for agriculture. The extirpation of the vine has been even carried so far in most of the provinces, under certain reigns, that the remembrance of it has been entirely forgotten. When it was afterwards allowed to be planted, it would appear, from the manner in which some historians express themselves, that grapes and the vine began then to be known for the first time. This probably has given rise to the opinion, that the vine has not been long introduced into China. It is however certain, without speaking of remote ages, that the vine and grapes are expressly mentioned in the Chinese annals, under the reign of the emperor *Vou-ty*, who came to the throne in the year 140 before the

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the Christian æra ; and that, since his time, the use of wine may be traced from dynasty to dynasty, and, as we may say, from reign to reign, even to the fifteenth century. With regard to the present state of the culture of vines in China, we know for certain, that the emperors *Kang-hi*, *Yong-tching* and *Kien-long*, now on the throne, caused a number of new plants to be brought from foreign countries ; that the three provinces of *Ho-nan*, *Ghang-tong* and *Ghan-si*, have repaired their former losses ; that the large cities of *Tai-yuen* and *Ping-yang* in *Ghan-si*, are famous throughout the whole empire, on account of the great quantity of dried grapes that are procured from their environs, both for the table and medicinal purposes ; and that the province of *Pe-tcheli*, at all times fruitful in vines, produces so many at present, that there are fourteen of its districts celebrated for their raisins, which are preserved long, and sold in Pe-king at a very moderate price. The raisins most in request in China, are those which, as we have said, come from the country of *Ha-mi*.

The Chinese surpass us in the art of managing kitchen-gardens. As roots and greens are the principal nourishment of the people, they

spare neither care nor labour to procure them good. Besides those kinds common in Europe, they have a great number of others, which are unknown to us. One of the most singular is a species of onions, which are not produced from seed, as ours. Towards the close of the season, some small filaments are seen springing from the ends of the leaves, in the middle of which a white onion is formed, like those that grow in the earth. This small onion by degrees shoots forth leaves similar to those which support it; and these new leaves, in their turn, bear another onion on their points, but in such manner, that the leaves and the onion become smaller as they are farther distant from the earth. One would almost believe this plant to be the work of art, so much proportion and regularity is there in the different stories into which it is divided.

Rue, sorrel, cabbage-plants and other greens, when transported from India to China, either die or degenerate before the end of two or three years. The Chinese, however, have real cabbages; but they never grow into a head. They have also had parsley for a long time; but it has neither the taste nor beauty of that of Europe.

Among the pot-herbs which we have not, and for which the Chinese are to be envied, is that called *pe-tsai*. This is an excellent plant, and much used. Its leaves give it some resemblance to the Roman beet; but it differs from it in its flower, seed, taste and size. The best *pe-tsai* grows in the northern provinces, where the inhabitants leave it to be softened by the first hoar-frosts. The quantity of it sown and consumed is almost incredible. During the months of October and November, the nine bridges of Pe-king are almost blocked up by waggons loaded with this plant, which continue passing from morning till night. The Chinese make provision of *pe-tsai* for winter; they salt or pickle it, and mix it with their rice, which it renders much better tasted.

THE PI-TSI, OR WATER-CHESTNUT.

SOME authors have confidently asserted in Europe, that the Chinese suffer part of their lands to lie waste. These people undoubtedly have been ignorant, that they cultivate even the bottom of their waters, and that the beds of their lakes, ponds and rivulets, produce crops that to us are unknown. Their active industry has found out resources in a great number of

aquatic plants, several of which, as the *pi-tsi* and the *lien-hoa*, are the greatest delicacies of a Chinese table. Government, in order to set an example before the people, has caused this plant to be cultivated in all the lakes, marshes and waste grounds covered with water, which belong to the state. The emperor himself has ordered all the canals which ornament his gardens, to be planted with it; and the greater part of the ditches round his palace are full of it. The flowers and verdure of this useful plant also cover almost entirely those two immense sheets of water that are found in the centre of Pe-king, and which are only separated by a bridge, where every body may pass, and from which there is an excellent view of the magnificent gardens belonging to the imperial palace. The *pi-tsi*, or *real water-chestnut*, grows only in the southern provinces of China; it soon dies at Pe-king; its leaves are as long as those of the bulrush, but hollow, and formed into a pipe like the top of an onion.

What is most extraordinary in this plant, is, that its fruit is found in a cover formed by its root, and in which it is inclosed, as a chestnut in its rough husk. When this husk is broken, the fruit may be extracted, without hurting
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the plant. This water-chestnut is exceedingly wholesome, and has a most delicate taste. It is given to sick people to chew, as it is very cooling for the mouth.

We have, yet neglect, in some provinces of France, a kind of water-chestnut, which the ancients called *tribulus*. The missionaries think that this plant is the same as that known to the Chinese by the name of *lin-kio*, from which they derive much benefit. Were this certain, the culture of it might be extended, as it would prove a new resource in times of scarcity. This other kind of water-chestnut, the *lin-kio*, is a cooling and agreeable fruit in summer. When green, it is sold in the markets at Pe-king, as our filberts in Europe. It is sometimes dried and reduced to powder, and the Chinese make excellent soup of it, especially when a little wheaten flour is added to it; a third part of it may be mixed also with the flour of which bread is made. When baked in an oven, or preserved with sugar or honey, it becomes wholesome and agreeable food; it is likewise very proper for feeding geese, ducks, and other kinds of poultry.

The culture of the *lin-kio* requires no care; for it propagates of itself in all those places where it grows. When it is necessary to sow it

in a pond or rivulet, the seed is thrown into the shallowest part of the water, about the end of autumn; but that place is always chosen where the water is clear and exposed to the south. The more heat the *lin-kio* receives, the more wholesome, savoury and fruitful it is.

C H A P. VI.

TREES, SHRUBS AND PLANTS OF CHINA,

CHINA, in its vast extent, contains almost every species of trees that are known to us; but we shall only describe those peculiar to the country, or, at least, such as are not to be found in our western climates.

THE TALLOW-TREE.

AMONG these extraordinary trees, we must distinguish that which produces tallow. This tree is of the size of our cherry-tree; its branches are crooked; its leaves, which are shaped like a heart, are of a bright red colour; it has a smooth bark, a short trunk, and its top is round and bushy. The fruit is contained in a husk divided into three spherical segments, which
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open when it is ripe, and discover three white grains, of the size of a small walnut. It is the pulp with which these stones are covered, that has all the properties of tallow; its colour, smell and consistence are exactly the same. The Chinese melt it, and make candles of it, mixing only a little linseed-oil with it, to render it softer and sweeter. Had they the art of purifying it as we purify tallow in Europe, their candles would not be inferior to ours; but, as they neglect to take this precaution, they have a more disagreeable smell, produce a thicker smoke, and afford a much fainter light.

WAX-TREE.

THE Chinese procure also from certain trees a kind of wax which is almost equal in quality to that made by bees. They call it *pe-la*, or *white-wax*, because it is so by nature. This wax is deposited by small insects, on two kinds of trees; for no others afford them proper nourishment. The first is short and bushy, and grows in a dry, sandy soil. The Chinese call it *kan-la-chu*, or *the dry tree that bears wax*. The other species is much larger and prettier, and thrives only in moist places; it is named *choui-la-chu*, or *the aquatic tree that produces wax*.

The *kan-la-chu*, being of a shrubby nature, easily propagates; walls may be covered with it to the height of ten or twelve feet, or hedges may be formed of it in the fields; it equally endures heat and cold, and thrives, without the least culture, in the barrenest soil.

The small insects that make the *pe-la*, do not naturally frequent these trees; they must be placed upon them: but this operation is not difficult; and, after a tree has been once stocked, it always retains them. Towards the beginning of winter, small tumours are perceived upon the *kan-la-chu* that have already produced wax, which continually increase, until they become of the size of a small walnut: these are so many nests filled with the eggs of those little insects, which in the country are called *pe-la-tchong*, or *la-tchong*. When the warmth of spring makes the tree shoot forth its blossom, it also gives life to the insects that cover it. Then is the proper time to deposit nests on those trees which have none. The Chinese make small packets or bundles of straw, on each of which they put seven or eight nests; they afterwards tie these packets to the branches, taking care to place the nests immediately on the bark. If the shrub is five feet in height, it is capable of sup-
porting

porting one or two packets on each of its boughs ; and thus of its branches, in proportion to their size and vigour. After these insects are hatched, they run upon the branches, disperse themselves over the leaves, and perforate the bark, under which they retire ; but they always come forth at the proper season for making their wax.

It is about the middle of June, that this wax begins to appear upon the *kan-la-chu*. At first, a few filaments, like those of fine soft wool, are perceived rising from the bark, around the body of the insect ; but, by degrees, these filaments form a kind of down, which continually becomes thicker, and increases more and more in size during the heats of summer. This crust entirely covers the insect, and defends it, not only from the heat, but also from the rain and ants. The Chinese assure us, that, if the wax were left too long on the tree, the insects would not make their nests. Care must be taken to gather it before the first hoar frosts in September.

This wax is white and bright, and preserves its transparency to the depth of an inch. It is carried to court, and reserved for the use of the emperor, princes and chief mandarins. If an ounce

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ounce of it be added to a pound of oil, this mixture acquires a consistency, and forms a wax little inferior to that made by bees. The physicians employ it in curing several diseases; when applied to wounds, it makes the flesh heal in a very short time. We are also assured, that many of the Chinese, when they are about to speak in public, or when any occasion is likely to occur on which it may be necessary to have assurance and resolution, eat an ounce of this wax, to prevent swoonings or palpitations of the heart.

THE TSI-CHU, OR VARNISH-TREE.

AN opinion long prevailed in Europe, that the celebrated varnish of the Chinese was only a particular composition, which these people had the art of making. It is now known, that they are indebted to nature and their climate only, for this precious liquor, which gives so much lustre and beauty to many of their manufactures. The Chinese varnish is indeed nothing else than a reddish gum which distils from certain trees called *tsi-chu*. These trees grow in the provinces of *Kiang-si* and *Se-tchuen*; but those which are found in the territories of
Kan-tcheou,

Kan-tcheou, one of the most southerly cities of *Kiang-fu*, produce the most valuable varnish.

We are assured, that the *tsi-chu*, the bark and leaves of which have great resemblance to those of the ash, bears neither fruit nor flowers. It seldom exceeds fifteen feet in height; and the circumference of its trunk, when largest, is about two feet, or two feet and a half. The Chinese take the following method of propagating this tree.—In spring, they choose a vigorous shoot, about a foot in length, which proceeds immediately from the trunk; and coat over the lower part, by which it adheres to the tree, with a kind of yellow earth, at least three inches in thickness. This coat is carefully covered with a mat, to defend it from rain and the injuries of the air. Towards the autumnal equinox, they detach a little of the earth, to observe in what condition the small roots are, which begin to spring forth from the shoot. If they find that the filaments which compose them, are of a reddish colour, they judge it is time to make an amputation; but they defer it, if the roots are white, because this colour shews that they are yet too tender. They then close up the coat again, and wait till the spring following. When the shoot is separated from
the

the trunk of the tree, it is put into the earth; but, in whatever season it is planted, whether in spring or autumn, great care must be taken, to put plenty of cinders into the hole prepared for it; without this precaution, the ants would destroy the yet tender roots, or, at least, deprive them of all their moisture, and cause them to decay.

The Chinese do not procure varnish from the *tsi-chu* until its trunk is nearly five inches in diameter, which size it seldom attains to before seven or eight years. Varnish extracted from a tree smaller, or of less age, would not have the same body and splendour. This liquor distils only in the night time, and during the summer season; it does not flow in winter; and the varnish produced by the tree in spring or autumn, is always mixed with a great deal of water.

To cause the gum to flow, they make several rows of incisions round the trunk, the number of which is proportioned to the vigour of the tree. The first row is seven inches from the earth, and the rest are at the same distance one from the other, and continue to the top of the trunk, and even sometimes on the boughs which are of a sufficient strength and size. The
Chinese

Chinese use a crooked iron for making these incisions, which must run a little obliquely, and be equal in depth to the thickness of the bark; they make them with one hand, and with the other hold a shell, the edges of which they insert into the opening, where it remains without any support. These incisions are made towards evening; and next morning, they collect the varnish that has fallen into the shells; the following evening, they are again inserted; and this operation is continued until the end of summer. A thousand trees yield almost, in one night, twenty pounds of varnish.

This varnish, for the most part, is not extracted by the proprietors of those trees, but by merchants, who purchase them for the season, at the rate of three-pence per foot. These merchants afterwards hire workmen, to whom they give an ounce of silver per month, both for their labour and maintenance. One workman is sufficient for fifty feet of timber.

While the varnish distils, it exhales a malignant vapour, the bad effects of which can only be prevented by preservatives and great precaution. The merchant who employs these workmen, is obliged to keep by him a large vase filled with rape-oil, in which a certain quantity

quantity of those fleshy filaments have been boiled that are found in hog's lard, and which do not melt. When the workmen are going to fix the shells to the trees, they carry some of this oil along with them, and rub their face and hands with it, which they do with greater care when they collect in the morning the varnish that has distilled during night. After eating, they wash their whole bodies with warm water in which the bark of the chestnut-tree, fir-wood, crystallized saltpetre, and some other drugs, have been boiled. When they are at work near the trees, they put upon their heads a small cloth bag in which there are two holes, and cover the fore-part of their bodies with a kind of apron made of doe-skin, which is suspended from their necks with strings, and tied round them with a girdle. They also wear boots, and have coverings on their arms, made of the same kind of skin. The labourer who should attempt to collect varnish without using this precaution, would soon be punished for his rashness; and the most dreadful effects would ensue. The disorder shews itself by tetter, which become of a bright red colour, and spread in a very short time; the body afterwards swells, and the skin bursts and appears covered with an universal

versal leprosy. The unhappy wretch could not long endure the excruciating pains which he feels, did he not find a speedy remedy in those preservatives which are used against the malignant and noxious exhalations of the varnish.

When the labourers go to collect this gum, they carry, suspended from their girdles, a kind of vessel, made of leather; with one hand they detach the shells, and scrape them with a small iron-instrument, which they hold in the other, in order that they may lose none of the varnish. It is then carried to the merchant's house, where it is purified, by straining it through a cloth; and the dregs are sold to the druggists, who employ them for certain purposes in medicine.

The season of collecting varnish being ended, the merchant puts it into small casks closely stopped. A pound of it newly made, costs him about one shilling and eight-pence sterling; but he gains cent. per cent. upon it, and sometimes more, according to the distance of the place to which he transports it.

Besides the lustre and beauty that varnish gives to many of the Chinese manufactures, it has also the property of preserving the wood upon which it is laid, especially if no other matter

matter be mixed with it. It prevents it from being hurt, either by dampness or worms.

Every workman has a particular art and method of using varnish. This work requires not only much skill and dexterity, but also great attention, to observe the proper degree of fluidity which the gum ought to have, as it must be neither too thick nor too liquid when it is laid on. Patience, above all, is necessary in those who wish to succeed. To be properly varnished, a work must be done at leisure; and a whole summer is scarcely sufficient to bring it to perfection. It is therefore rare to see any of those cabinets which are imported to us from Canton, so beautiful and durable as those manufactured in Japan, Tong-king, and Nang-king, the capital of the province of Kiangnan: not that the artists do not employ the same varnish; but, as they work for Europeans, who are more easily pleased, they do not take the trouble of giving the pieces which come from their hands, all the polish they are capable of receiving.

There are two methods of laying on varnish; the simplest, is when it is immediately laid on the wood. The work is first polished, and then daubed over with a kind of oil, which the Chinese

nese call *tong-yeou*. When this oil is dry, it receives two or three coats of varnish, which remain so transparent, that all the shades and veins of the wood may be seen through them. If the artist is desirous of entirely concealing the substance on which they are laid, nothing is necessary but to add a few more coats : these give the work a shining surface, the smoothness of which equals that of the most beautiful ice. When the work is dry, various figures are painted upon it, in gold and silver, such as flowers, birds, trees, temples, dragons, &c. A new coat of varnish is then sometimes laid over these figures, which preserves them, and adds much to their splendour.

The second method of using varnish requires more preparation. The Chinese workmen fix to the wood, by means of glue, a kind of pasteboard, composed of paper, hemp, lime and other ingredients, well beaten, that the varnish may incorporate with them. Of this they make a ground perfectly smooth and solid, over which the varnish is laid in thin coats, that are left to dry one after the other.

It often happens, that the lustre of varnished tables, and other pieces of furniture, is insensibly destroyed by tea and warm liquors. ‘ The fe-

‘cret of restoring to varnish its shining black colour,’ says a Chinese author, ‘is to expose it, for one night, to a white hoar frost, or to cover it some time with snow.’

TIE-LY-MOU, OR IRON-WOOD.

THIS tree rises to the height of our large oaks ; but it differs from them both in the size of its trunk and in the shape of its leaves. Its wood is exceedingly hard, and so heavy, that it sinks in water. The anchors of the Chinese ships of war are made of it.

THE NAN-MOU.

TRAVELLERS describe this tree as the Chinese cedar: however, its leaves are not shaped like those of the cedar of Lebanon. This tree is one of the tallest in China ; its branches, which shoot up vertically, grow from the trunk, only at a certain height, and terminate in a bush, or tufted top. The Chinese consider its wood as incorruptible.—*When we are desirous, say they, of erecting an edifice to last for ever, we must employ only the nan-mou.* Great use, therefore, is made of this wood in building the emperor’s palaces, where all the pillars, beams and doors, are made of it.

THE TSE-TAN, OR ROSE-WOOD.

THIS tree furnishes the most beautiful and valuable wood that is used by the Chinese artists. It is of a black colour inclining towards red, striped and variegated with delicate veins, which have the appearance of painting. It is employed for making tables, chairs, and other pieces of furniture, which are in greater request, and cost much dearer, than those that are varnished.

THE TCHANG, OR CAMPHIRE-TREE.

THE valuable tree from which camphire is procured, is also a production of China. We are assured, that some of them are found which are above an hundred cubits in height, and so thick, that twenty persons cannot enclose them. The trunks of these trees, when old, emit sparks of fire; but their flame is so subtle, that there is no danger to be apprehended from it; it does not even injure the hair of those who are near it. Common camphire costs only a penny the ounce at Pe-king; but it is inferior to that of *Borneo*, in the judgment even of the Chinese.

The manner in which some authors have spoken of Camphire, gives us reason to con-

clude, that they have been entirely ignorant of the process employed to obtain this salutary gum. The camphire does not drop to the earth, like the gums of certain resinous trees, which are preserved by discharging that part of their substance which is too oily; neither does it distil from the top to the bottom of the tree, through an incision made in it. The Chinese would practise this method, could it be employed with success; for it is very common in China, to make such kind of incisions in resinous trees. The method used by the Chinese for obtaining camphire, is as follows.—They take some branches fresh from the *tchang*, chop them very small, and lay them to steep in spring water for three days and three nights. After they have been soaked in this manner, they are put into a kettle, where they are boiled for a certain time, during which they keep continually stirring them with a stick made of willow. When they perceive that the sap of these small chips adheres sufficiently to the stick, in the form of white frost, they strain the whole, taking care to throw away the dregs and refuse. This juice is afterwards poured gently into a new earthen basin well varnished, in which it is suffered to remain one night.

Next

Next morning, it is found coagulated, and formed into a solid mass. To purify this first preparation, they procure some earth from an old earthen wall, which, when pounded and reduced to a very fine powder, they put into the bottom of a basin made of red copper; over this layer of earth, they spread a layer of camphire, and continue thus until they have laid four strata. The last, which is of very fine earth, they cover up with the leaves of the plant *po-ho*, or penny-royal, and over the whole, place another basin, which they join very closely to the former, by means of a kind of red earth, that cements their brims together. The basin, thus prepared, is put over a fire, which must be managed so as to keep up an equal heat: experience teaches them to observe the proper degree.—But, above all, they must be very attentive, lest the plaster of fat earth which keeps the basins together, should crack or fall off, otherwise the spirituous parts would evaporate, and ruin the whole process. When the basins have been exposed to the necessary heat, they are taken off and left to cool; after which, they are separated, and the sublimated camphire is found adhering to the cover. If this operation be repeated two or three times, the camphire is

found purer, and in larger pieces. Whenever it is necessary to use any quantity of this substance, it is put between two earthen vessels, the edges of which are surrounded with several bands of wet paper. These vessels are kept for about an hour over an equal and moderate fire; and when they are cool, the camphire is found in its utmost perfection, and ready for use.

This method of procuring camphire, even from the heart of the tree, may be practised in all seasons of the year, which would not be the case, were it extracted like other resinous substances, that only flow during a certain short space of time. Besides, by lopping the branches of the camphire-tree, less hurt is done to it, than by making incisions, which are always hazardous.

THE SIANG.

THE *siang* grows to the height of our chestnut-tree, and bears a fruit which serves the Chinese dyers as a substitute for the gall-nut. It is inclosed in a double husk, and is of the size of a chestnut, which it also resembles in colour. The exterior husk is that which is used properly for dying. Hogs feed upon this fruit, although it has a disagreeable taste. Even the
moun-

mountaineers of China assure us, that (after they have peeled off its interior rind by means of warm water, and boiled it in other water, to which vinegar is added) they can eat it with pleasure. The *fiang* grows, with little culture, to the north of *Pe-king*, and in the province of *Tche-kiang* : perhaps it would thrive equally in the barren and mountainous regions of Europe,

THE LO-YA-SONG.

THIS name is given to a kind of pine, which is found near *Keou-ouai*, beyond the great wall. Its trunk, branches, leaves and fruit, exactly resemble those of our common pines ; but it is distinguished by several singularities : all its leaves fall in autumn ; its wood is exceedingly hard, and fit for various purposes ; but the sap it contains is poisonous. Those who are employed in cutting this tree, must take great care, that no drops spurt out on the skin ; for it raises blisters and pimples which cannot easily be cured. If its root, which is of a reddish colour, be put into the earth, or in water, it soon petrifies ; it is then used for sharpening the finest and best-tempered tools. This petrification changes its figure so little, that it cannot

be perceived, unless one looks at it very closely; but its weight is considerably augmented.

THE LUNG-JU-SHU.

THE trunk of this tree is equal in thickness to those of our large plum-trees, and divides itself into two or three principal branches, which are subdivided into others, that are much smaller. Its bark is of a reddish gray colour, and spotted like that of hazel. The extremities of its branches are knotty, very unequal, and full of pith. The trunk of this tree furnishes planks, which are employed for making different pieces of furniture. The fruit, which resemble our cherries before they are ripe, grow from long, green and fibrous pedicles. The skin of this fruit is very hard; it is speckled in some places with small red spots, and contains a greenish substance, which, by maturity, is reduced to a kind of jelly. The Chinese rub their hands with it in winter, to prevent chilblains.

THE TCHA-KÉ.

THIS tree, which has no bark on its trunk or branches, grows on the northern coasts. If it be thrown into the fire, even when green, it burns as readily as the driest wood. If it be
made

made into charcoal, it kindles very easily, produces a strong heat, without smell or smoke, and lasts much longer than any other kind.

THE TCHU-KOU.

THIS tree is so much the more valuable to the Chinese, as its inner rind furnishes them with the greater part of the paper which they consume. When its branches are broken, the bark peels off in the form of long ribands. Were we to determine the species to which this tree belongs, by its leaves, we should class it with the wild mulberry-tree; but, by its fruit, it has more resemblance to the fig-tree. This fruit adheres to the branches, without any stalk, and when pulled before its maturity, appears, like the fig, to be full of milk. The great affinity it has, in many respects, to the fig and mulberry tree, induce us to believe it to be a kind of fycamore. This tree grows on the mountains, and in a rocky soil. The Chinese Herbal gives the following account of the manner in which it ought to be planted, in order to obtain most plants, and of the best quality.—
 ‘ At the vernal equinox, take the seeds of this
 ‘ tree, and, after having washed them, mix
 ‘ them with sesamum, and throw them into the
 ‘ earth

‘ earth at random. The sesamum will spring
 ‘ up with the first shoots of the *tchu-kou*; but
 ‘ great care must be taken, not to crop the plant
 ‘ either in winter or autumn: you must wait
 ‘ till the spring following. You must then
 ‘ set fire to the field; and the same year, you
 ‘ will see the plants of the *tchu-kou* shoot up
 ‘ with great vigour. At the end of three years,
 ‘ they will be fit to be cut, and their bark will
 ‘ be proper for making paper.’

THE KIN-KOUANG-TSÉF, OR SOUR
 JUJUBE.

THIS is a large tree, the leaves of which are long and sharp-pointed. Its flowers have a greenish tint; and the fruit it produces resemble large jujubes: on account of their beautiful yellow colour, they are called *golden jujubes*. These fruit, when dried, retain a fourish taste; and their golden colour changes to a delicate red. Their stone is hard, and shaped like a heart, as well as the kernel which they contain. These stones were formerly used by the superstitious votaries of idols, for making chaplets, on which several figures were engraven. It is said, that this tree was brought originally from Bengal, and that great difficulty was found at

first to rear it in China ; but it is so naturalized at present, that it rises to the height of the tallest fruit-trees. Its wood, which is hard and of a very fine grain, is much used for different kinds of works.

THE TSE-SONG-YUEN-PE, OR JUNIPER
CYPRESS.

THIS is one of the singularities of nature. It partakes of the properties both of the juniper and of the cypress-tree. Its trunk is about half a foot in diameter, and shoots out, almost where it springs from the earth, a great number of branches, which extend on all sides, and are divided into several others, that form a top extremely thick and bushy. All these branches are loaded with leaves ; some of which resemble those of the cypress ; others, those of the juniper : the latter are long, narrow and prickly, and are ranged along the branches in rows of four, five, and sometimes six each ; whence it happens, that, when the branches are viewed lengthwise, the leaves appear like stars, having four, five or six rays, the leaf nearest the eye exactly covering that which is next to it, and leaving the intervals between the rows perfectly open. The small branches, or twigs, which are covered
with

with these juniper leaves, are generally found below the principal boughs; and the branches that shoot out from the upper part of the same boughs, bear cypress leaves. There are found whole branches which resemble those of the cypress; and there are others, that, in like manner, have an affinity to the juniper alone; there are some, also, which partake of the nature of both; and, lastly, there are others, that bear only a few cypress leaves, grafted, as it were, on the end of a juniper branch, or a small juniper twig is sometimes seen springing from a cypress bough. When the tree is young, all its leaves resemble those of the juniper; but when it is old, they change into those of the cypress.

The bark of this tree is very rough and unequal, and of a grayish brown colour inclining to red. Its wood is of a reddish white, like the juniper; but it is of a resinous nature. The leaves smell like cypress, and have something of an aromatic flavour to the taste: they are sharp and bitter. This tree bears a small, round, green fruit, a little larger than that of the juniper; it contains two reddish grains, shaped like a heart, which are as hard as a grape-stone.

THE BAMBOO.

THE *bamboo* is a kind of reed, which grows to the height and size of large trees. Its leaves are long, and bend backwards towards the points. Although the trunk is hollow, and divided at certain spaces by knots, it is very strong, and capable of sustaining an enormous weight. Bamboo-reeds are employed for numberless purposes. They are used as natural pipes to convey and distribute water; when split lengthwise and divided into thin slips, they are woven into mats, trunks, and various other works; paper is also made of a certain paste procured from them after they have been bruised and steeped in water. Although the *bamboo* grows in all the provinces of China, it is, however, more abundant in the province of *Tche-kiang*, where whole forests are found of it.

THE ACACIA.

THE *acacia*, which was brought from America to France about the end of the last century, is common in China. The Chinese authors pretend, that the seeds extracted from its pods are employed with success in medicine. ‘The
‘ seeds

' seeds of this tree,' say they, ' must be put
 ' into ox-gall about the beginning of winter,
 ' in such manner, that they may be entirely
 ' covered; dry the whole for a hundred days
 ' in the shade; and swallow one of these grains
 ' daily, after meat.' From this remedy, they
 promise wonderful effects, and assure us, in
 particular, that the continual use of it amends
 the sight, cures the piles, and changes gray
 hairs into black. Another property of the *acacia*,
 is, that it furnishes flowers which tinge paper,
 or silk, with three different shades of yellow.
 They are much used by the Chinese dyers.
 The Chinese Herbal recommends the following
 method of cultivating this tree to those who
 wish it to thrive and grow speedily.—' When
 ' you have collected,' says the author, ' the
 ' seeds of *acacia*, dry them in the sun, and, a
 ' little before the summer solstice, throw them
 ' into water. When they begin to grow, sow
 ' them in rich earth, mixing with them a small
 ' quantity of hemp-feed. Each of these seeds
 ' will spring up; but the hemp must be cut at
 ' its proper season, and the young *acacias* tied
 ' to small props, to support them. Next year,
 ' sow hemp; and repeat the same operation
 ' the third, in order that the hemp may pre-
 ' serve

‘serve these delicate plants from the injuries
 ‘of the air and weather. When the young
 ‘plants appear to be strong and vigorous, let
 ‘them be transplanted, and they will become
 ‘beautiful trees.’

THE TEA-PLANT.

AMONG the aromatic shrubs of China, that which furnishes tea holds the first rank. It is not known by this name in the country; it is called *tcha*, and (by corruption, in some of the maritime provinces) *tba*, from which is derived our word *tea*.

Father le Comte, in his Memoirs, has given us a very accurate description of this shrub.—
 ‘Tea,’ says he, ‘grows in the valleys, and at
 ‘the bottoms of the mountains. Rocky ground
 ‘produces the best; and that which is planted
 ‘in a light soil is next in quality. The worst
 ‘is found in earth of a yellow colour; but, in
 ‘whatever place it is cultivated, care must be
 ‘taken to expose it to the south: it then ac-
 ‘quires more vigour, and bears three years
 ‘after it has been planted. The root of the
 ‘shrub is like that of the peach-tree; and its
 ‘flowers resemble the white wild rose. When
 ‘I entered the province of Fo-kien, I was
 ‘shewn

‘ shewn, for the first time, the tea-plant, upon
 ‘ the declivity of a little hill. It was only about
 ‘ five or six feet in height. Several branches
 ‘ joined together, and separated towards their
 ‘ upper extremities, formed a tufted top, almost
 ‘ like that of our myrtle in Europe. The trunk,
 ‘ though to appearance dry, bore branches that
 ‘ were covered with beautiful green leaves.
 ‘ These leaves were narrow and tapering to-
 ‘ wards the points, about an inch and a half
 ‘ in length, and indented round the edges.
 ‘ The oldest, which appeared of a whitish co-
 ‘ lour below, were brittle, hard and bitter. The
 ‘ young ones, on the contrary, were soft and
 ‘ pliable, of a reddish tint, smooth, transparent,
 ‘ and very agreeable to the taste, especially after
 ‘ they had been chewed for some time. As it
 ‘ was then in September, I found on them
 ‘ three kinds of fruit. On the young and tender
 ‘ branches, I observed small soft berries, of a
 ‘ green colour, and filled with very small yel-
 ‘ low grains. On the rest of the branches, the
 ‘ fruit were as large as beans, but of different
 ‘ shapes; some of them were round, and con-
 ‘ tained a pea; others were long, and inclosed
 ‘ two; and several were triangular, and con-
 ‘ tained three. The outer rind which incloses
 ‘ this

‘ this fruit, or rather seed, is green, smooth,
 ‘ and very thick. Under the second, which is
 ‘ white and thinner, is a third pellicle, exceed-
 ‘ ingly fine, that covers a kind of nut adhering
 ‘ to the rind by a small fibre, from which it
 ‘ derives its nourishment. When this fruit is
 ‘ young, its taste is somewhat bitterish ; but,
 ‘ two or three days after it has been gathered,
 ‘ it lengthens, changes to a yellow colour, ap-
 ‘ pears dry and shrivelled like an old filbert,
 ‘ and becomes very oily and bitter. I found
 ‘ also upon these trees a third kind of old and
 ‘ hard fruit, the black exterior rind of which,
 ‘ being half open, discovered within, a hard,
 ‘ brittle husk, exactly like that of a chestnut ;
 ‘ but it was so flatted and dried, that, after I
 ‘ had broken it, I could scarcely discover any
 ‘ vestige of fruit. In some of them, I found this
 ‘ fruit reduced to powder ; and in others, I ob-
 ‘ served a very small nut, perfectly dry, and
 ‘ half covered with its first pellicle. Among
 ‘ these fruits were a great number called female
 ‘ fruits, which had no germ. Those that have
 ‘ a germ, if they are sown, will produce trees ;
 ‘ but the Chinese generally make use of slips
 ‘ for raising plants. That I might be better ac-
 ‘ quainted with the nature of this tree, I had

‘ the curiosity to taste the bark of the trunk and
 ‘ branches ; I also chewed the wood and fibres,
 ‘ both of which appeared to have no bitterness,
 ‘ and even, after a considerable time, I only
 ‘ perceived a taste somewhat like liquorice, but
 ‘ very faint.’

The Chinese distinguish several kinds of tea, which may be reduced to the four following ; the *Song-lo tcha*, the *Vou-y tcha*, the *Lou-ngan tcha*, and the *Pou-eul tcha*.

The first takes its name from the mountain *Song-lo*, situated in the province of *Kiang-nan*, under thirty degrees of north latitude. This mountain is not very extensive ; but it is entirely covered with these shrubs, which are also cultivated at the bottoms of the neighbouring mountains. The *Song-lo* is the same which we call *green tea*. It is cultivated almost like vines, and is cropped at a certain height, to prevent it from growing. This shrub must be renewed every four or five years, because, after that period, its leaves harden and become four. The flower which it bears is white, and shaped like a small rose composed of five leaves. The *Song-lo tcha* may be kept for several years, and is used, with great success, as a remedy for various distempers.

The

The Chinese of the province of *Kiang-nan* are the only people who crop the tea-shrub; for every where else it is suffered to grow to its natural size, which sometimes extends to ten or twelve feet. When the tree is very young, they take care also to incline and bend down its branches, that they may collect its leaves afterwards with greater ease. This shrub grows often on the rugged backs of steep mountains, access to which is dangerous, and sometimes impracticable. The Chinese, in order to come at the leaves, make use of a singular stratagem. These steep places are generally frequented by great numbers of monkeys, which, being irritated and provoked, to revenge themselves, tear off the branches, and shower them down upon those who have insulted them. The Chinese immediately collect these branches, and strip them of their leaves.

The *Vou-y tcha*, which is known in Europe by the name of *bohea*, grows in the province of Fo-kien, and takes its name also from a mountain, called *Vou-y*, situated in the district of *Kien-ning-sou*. On this mountain, which is one of the most celebrated in the province, is seen a great number of pleasure-houses, temples and hermitages belonging to the bonzes of the

fect of *Tao-kia*, who draw hither a prodigious concourse of people. These cunning priests, to make the vulgar believe that this mountain is the residence of the immortals, have artfully placed, in clefts of the rocks, and on inaccessible eminences, barks, chariots, and other things of the same kind. These ornaments, as whimsical as extraordinary, strike the minds of the credulous people, who imagine that such decorations can only be the work of some supernatural power.

The *You-y tcha* is the tea most esteemed universally throughout the empire. It agrees better with the stomach, is lighter, sweeter, and more delicate to the taste than the *Song-lo*. It is even said to have the property of purifying the blood, and of recruiting the strength of those who are debilitated. It differs from the *Song-lo tcha* in the form and colour of its leaves, which are shorter, rounder and blacker, and which communicate a yellow colour to water, without any harshness. The leaves of the other are longer and sharper; an infusion of them renders water green; and experience plainly shews that they are of a corrosive nature.

From these two first kinds of tea, three others are composed, the difference of which results

from the choice of the leaves, and the time when they are gathered. That which contains only the fresh and tender leaves of young trees, is called *mao tcha*, or *imperial tea*. This is the most delicate, and is that which is transported to court for the use of the emperor. Although it is seldom ever distributed but in presents, it may sometimes be bought on the spot where it grows for twenty-pence or two shillings the pound.

The second sort is composed of older leaves. It is what is sold under the name of *good Vou-y tcha*. The rest of the leaves, that are suffered to remain on the tree until they grow larger, form the third kind, which is sold to the common people at a very cheap rate.

The flowers of this shrub also furnish another kind of tea; but those who are desirous of procuring it, must bespeak it, and pay an exorbitant price for it.

The *Lou-ngan tcha*, which is the third kind of tea we have mentioned, grows in the neighbourhood of the city of *Lou-ngan-tcheou*. It differs in nothing from the *Song-lo*, either in the configuration of its leaves, or the manner in which it is cultivated; but it has none of its noxious qualities; it is neither so heating, nor

is it so harsh and corrosive—properties which result, no doubt, from the difference of the soils in which they grow.

The fourth kind is procured from a village named *Pou-eul*, situated in the province of *Yunnan*, on the frontiers of the kingdoms of *Pegu*, *Ava*, *Laos* and *Tong-king*. This village is become considerable by its commerce : people resort to it from all parts ; but the entrance of it is forbidden to strangers, who are permitted to approach no nearer than the bottoms of the mountains, to receive the quantity of tea which they want. The trees that produce this tea are tall and bushy ; they are planted irregularly, and grow without any cultivation. Their leaves are longer and thicker than those of the *Song-lo tcha* and *Vou-y tcha* ; they are rolled up in the same manner as we roll up our tobacco, and formed into masses, which are sold at a dear rate. This kind of tea is much used in the provinces of *Yunnan* and *Koei-tcheou*. It has nothing harsh ; but it has not that agreeable taste and flavour which distinguish other kinds: when infused, it tinges water with a reddish colour.

The *kaiel tcha* is a kind of tea used by the Mogul Tartars. It is only the refuse of the leaves of all the different teas which have been
suffered

suffered to grow hard, and which are mixed indiscriminately. These people, who feed on raw flesh, are subject to continual indigestions whenever they give over the use of tea: on that account, they transport great quantities of it from China; and, in exchange, furnish the emperor with all the horses necessary for his cavalry.

We must not confound with real tea every thing that the Chinese call *tcha*. What is sold in the province of *Chang-tong* as a delicate tea, is properly but a kind of moss, which grows on the rocks in the neighbourhood of the small city of *Mang-ing-bien*. A like kind of tea is distributed in some of the other northern provinces, which is not composed of real leaves, although the merchants vend it under the name of *tcha-yé*, *tea-leaves*.

If this delicious commodity is adulterated even in China, can we flatter ourselves, that the tea we have in Europe is pure and without mixture? Perhaps we taste nothing else, like many of the Chinese, but moss from the rocks of *Mang-ing-bien*.

When the tea leaves have been collected, they are exposed to the steam of boiling water; after which, they are put upon plates of copper, and

held over the fire until they become dry and shrivelled, and appear such as we have them in Europe.

According to the testimony of Kœmpfer, tea is prepared in the same manner in the isles of Japan. ‘ There are to be seen there,’ says this traveller, ‘ public buildings erected for the purpose of preparing the fresh-gathered tea. Every private person who has not suitable conveniences, or who is unacquainted with the operation, may carry his leaves thither as they dry. These buildings contain a great number of small stoves raised about three feet high, each of which has a broad plate of iron fixed over its mouth. The workmen are seated round a large table covered with mats, and are employed in rolling the tea-leaves which are spread out upon them. When the iron plates are heated to a certain degree by the fire, they cover them with a few pounds of fresh-gathered leaves, which, being green and full of sap, crackle as soon as they touch the plate. It is then the business of the workman to stir them with his naked hands, as quickly as possible, until they become so warm, that he cannot easily endure the heat. He then takes off the leaves with a kind of shovel, and
 ‘ lays

‘ lays them upon mats. The people who are employed in mixing them, take a small quantity at a time, roll them in their hands always in the same direction, while others keep continually stirring them, in order that they may cool sooner, and preserve their shrivelled figure the longer. This process is repeated two or three times, and even oftener, before the tea is deposited in the warehouses. These precautions are necessary to extract all the moisture from the leaves.’

The people in the country bestow much less labour on the preparation of their tea. They are contented with drying the leaves in earthen vessels, which are held over the fire. This operation, being much simpler, is attended with less trouble and expence, and enables them to sell their tea at a much lower price.

Common tea is preserved in narrow-mouthed earthen vessels ; but that used by the emperor and grandees is inclosed in porcelain vases, or in leaden and tin canisters covered with fine mats made of bamboo.

The Chinese and people of Japan generally keep their tea a year before they use it, because, as they pretend, when quite new, it possesses a narcotic quality which hurts the brain.

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The Chinese pour warm water over their tea, and leave it to infuse, as we do in Europe; but they drink it without any mixture, and even without sugar. The people of Japan reduce theirs to a fine powder, which they dilute with warm water, until it has acquired the consistence of thin soup. Their manner of serving tea is as follows. They place before the company the tea equipage, and the box in which this powder is contained; they fill the cups with warm water; and, taking from the box as much powder as the point of a knife can contain, throw it into each of the cups, and stir it with a tooth-pick until the liquor begins to foam; it is then presented to the company, who sip it while it is warm. According to F. du Halde, this method is not peculiar to the Japanese; it is also used in some of the provinces of China.

Kien-long, the present emperor of China, in a little poem which he composed in praise of tea, thus describes the manner of preparing it.—‘Put,’ says he, ‘on a moderate fire, a three-legged vessel, the form and colour of which bespeak long services; fill it with limpid water procured from melted snow, boil it to that degree which is necessary to whiten fish or
 ‘redden

‘ redden crabs, and immediately pour it over
 ‘ the tender leaves of choice tea put into a cup
 ‘ made of the earth *yut*. Leave it at rest, until
 ‘ the vapours, which at first rise in abundance,
 ‘ form thick clouds, afterwards gradually dis-
 ‘ perse, at length vanish, and leave only some
 ‘ light exhalations floating on the surface ;
 ‘ then, at leisure, sip this delicious liquor. It
 ‘ will effectually dispel those five causes of in-
 ‘ quietude that generally assail us, and disturb
 ‘ our repose. We may taste, we may feel, but
 ‘ we cannot express, the soft tranquillity occa-
 ‘ sioned by a liquor prepared in this manner.’

The isles of Japan produce also abundance of tea. Kœmpfer, in his relation, gives an account of the different seasons in which the people of these islands collect tea. The first begins about the middle of the new moon which precedes the vernal equinox ; that is, the first month of the Japanese year, and falls about the end of our February, or commencement of March. The leaves gathered at this time are called *ficki-tsiaa*, or *tea in powder*, because it is pulverized. These young and tender leaves are only three or four days old when they are gathered ; and, as they are exceedingly dear, they are generally reserved for the great people and princes. This

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is the imperial tea of the Japanese. The labourers employed in collecting it, do not pull the leaves by handfuls, but pick them one by one, and take every precaution, that they may not break them. However long and tedious this labour may appear, they gather from four to ten or fifteen pounds a day.

The second crop is collected in the second Japanese month, about the end of March or beginning of April. At this season, some of the leaves are yet in their growth, and others have attained to perfection. This difference, however, does not prevent them from being all gathered indiscriminately. They are afterwards picked and assorted into different parcels, according to their age and size. The youngest, which are carefully separated from the rest, are often sold for leaves of the first crop, or for imperial tea. Tea gathered at this season is called *Too-tsiao*, or *Chinese tea*, because the people of Japan infuse it, and drink it after the Chinese manner.

The third and last crop of tea is gathered in the third Japanese month; that is to say, about our June. The leaves are then very numerous and thick, and have acquired their full growth. This kind of tea, which is called *Ben-tsiao*, is
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the coarsest of all, and is reserved for the common people. Some of the Japanese collect their tea only at two seasons of the year, which correspond to the second and third, already mentioned; others confine themselves to one general gathering of their crop, towards the month of June: however, they always form afterwards different assortments of their leaves.

The finest and most celebrated tea of Japan is that which grows near *Ud-si*, a small village situated close to the sea, and not far distant from *Meaco*. In the district of this village is a delightful mountain, having the same name, the climate of which is said to be extremely favourable to the culture of tea; it is therefore inclosed by a hedge, and surrounded with wide ditches, which prevent all access to it. The tea-shrubs that grow on this mountain are planted in regular order, and are divided by different avenues and alleys.

The care of this place is entrusted to people who are ordered to guard the leaves from dust, and to defend them from the inclemency of the weather. The labourers who are appointed to collect the tea, abstain from every kind of gross food for some weeks before they begin, that their breath and perspiration may not in the least

least injure the leaves. They gather them with the most scrupulous nicety, and never touch them but with very fine gloves. When this choice tea has undergone the process necessary for its preparation, it is escorted by the superintendant of the mountain, and a strong guard, to the emperor's court, and reserved for the use of the imperial family.

Several researches have been made in Europe, to discover the real tea-plant, or, at least, one which might be substituted for it. Simon Pauli, a physician and botanist, of Copenhagen, is the first who pretended to have made this discovery. On opening some tea-leaves, he found such a resemblance in them to the Dutch myrtle, that he obstinately maintained they were productions of the same kind; but some skilful botanists refuted this opinion. Father Labat afterwards imagined that he had discovered the real tea-plant in Martinico; he pretended also to have had some of the seeds of the Chinese tea-plant, and that he raised it in America. But it appears, after all he has said, that it was only a species of *lysimachia*, or what is called West-Indian tea. There have also been several other pretended discoveries of the oriental tea-plant; but the falsity of them has been

been perceived when they were closely examined. Many European plants have been used as tea, on account of some resemblance either in the shape of their leaves or in their taste and flavour. Among these plants, two or three species of fluellin have been highly extolled; without speaking of sage, myrtle, betony, agrimony, sweet briar, &c. but, whatever the virtues of these plants may be, the real Asiatic tea is at present generally preferred to every thing that has as yet been substituted for it.

Several attempts have been made also to introduce the tea-shrub into Europe; but the greater part of them have not succeeded, either on account of the bad state of the seed when procured, or because proper precautions were not used to preserve them long enough in their state of vegetation. If these miscarriages were owing to the former cause, any farther attempts that might be made to raise the tea-plant in Europe, would be lost labour. It is therefore absolutely necessary to procure seeds fresh and in good condition, and such as are ripe and white, and capable of being preserved by their interior moisture. There are two methods of preserving these seeds; the first is, to inclose them in wax, after they have been dried in the sun;

sun; the second is, to leave them in their husks, and shut them up closely in a box made of tin: but neither of these methods has been attended with general success, whatever care has been taken to obtain fresh seeds, or to preserve them. The best method would be, to sow fresh seeds in fine light earth, immediately on leaving Canton, and to cover them with wire, to secure them from rats and other animals that might attack them. The boxes ought not to be too much exposed to the air, nor to that kind of dew which rises from the sea. The earth in the boxes must be neither hard nor dry, and should from time to time be gently watered with fresh or rain water; and when the shoots begin to appear, they ought to be kept in a slight moisture, and sheltered from the sun. The tea-plants to be found in England have been procured by these means only, and, though several of the young rising shoots perished, the last method proposed is probably that which may be followed with greatest success, to transport rare and curious plants from China. The young tea-plants which are cultivated in the gardens round London, thrive well in the greenhouse during winter; and some of them stand that season in the open air. Several bear leaves from

from one to three inches in length, of a beautiful deep-green colour, and the young shoots are strong and vigorous. The finest plant known in England was raised in Kew gardens; it was carried thither by Sir J. Ellis, who brought it from seed: but the plant at Sion, belonging to the duke of Northumberland, is the first that ever flowered in Europe. An accurate drawing was taken of it when in flower; to which a botanical description was added. The engraver has perfectly succeeded in copying the original, which was in the possession of the late Doctor Fothergill—a gentleman no less distinguished for his knowledge in natural history, than for his zeal in promoting that science.

In 1766, the Abbé *Gallois* caused a shrub to be transplanted to *Trianon*, under the name of the tea-plant; but, on closer examination, it was found to belong to the class of the *camellia Japonica*. France, however, can at present boast of possessing this valuable shrub. Mr. Gordon, an eminent nurseryman of London, transmitted to the chevalier de *Janssen* a tea plant, which could not have been entrusted to one worthier of possessing, or abler to cultivate it. This shrub is only a foot and a half in height, and its stalk is equal in size to the barrel of a goose's

quill. It resembles a small eunomius, except that its leaves have the dark-green colour of the thyme-laurel, or of a young privet.

As the tea shrub is cultivated only in China and Japan, we may reasonably conclude, that it is indigenous to one of these countries, if not to both. It is not known what motive first induced the Chinese and people of Japan to make use of infused tea; but it is probable, that their intention was to correct the bad qualities of their water, which is said to be brackish, and ill-tasted in several provinces.

Doctor *Kalm*, in his Travels through North-America, attests the good effects of tea in like circumstances: ‘Tea,’ says he, ‘is held in different degrees of estimation among different nations; but I am of opinion that we should be much better, and find our purses heavier, if we had neither tea nor coffee. I must, however, be impartial; and I cannot help saying, in praise of tea, that, if it is useful, it must certainly be in winter, in journies like mine across a desert country, where travellers cannot carry with them wine or other liquors, and where, in general, the water is not fit to be drunk, on account of the insects with which it abounds. In like cases, it is very agreeable

‘ agreeable when boiled and drunk with an infusion of tea. I cannot sufficiently extol the taste it acquires by this preparation ; it reanimates, beyond all expression, the exhausted traveller. This I myself have experienced, as well as many others who have traversed the desert forests of America : in so fatiguing journeys, tea is as necessary as provisions.’

The Dutch East-India company first introduced tea into Europe in the beginning of the last century ; and the earls of Arlington and Ossory imported a considerable quantity of it from Holland to England, about the year 1666 : however, it is certain that, before this epocha, the use of tea was very common even in the coffee-houses ; for, in 1660, a duty of one half-penny per gallon was laid on this liquor when made and sold in public places.

In 1679, Cornelius Bontekoe, a Dutch physician, published a treatise, in the Dutch language, on tea, coffee and chocolate. He there appears a strenuous advocate for tea. He is of opinion, that it cannot hurt the stomach, though drunk to excess, even to the quantity of two hundred dishes a day. It is very probable that political interest influenced the doctor’s assertion ; for, as he was first physician to the

elector of Brandenburg, and perhaps enjoyed considerable distinction, the praises he lavished on tea must certainly have extended the use of it. As the Dutch carried on a considerable trade with Japan at the time tea was introduced into Europe, it is probable that this branch of commerce was first established by them: but, at present, China (and the province of Fo-kien in particular) is the general mart, where all nations go to furnish themselves with this commodity.

THE COTTON-TREE.

COTTON, which forms one of the most considerable branches of the commerce of China, is cultivated with success in the southern provinces. The very day even that the labourers have reaped their grain, they sow cotton in the same field, after having turned up the earth slightly with a rake. When the rain or dew has moistened the ground, a shrub is seen insensibly springing up, which rises to the height of two feet. The flowers appear about the beginning or towards the middle of August; they are generally yellow; but sometimes red. To the flower succeeds a button, which increases, in the form of a pod, till it acquires the size of a walnut.

walnut. The fortieth day after the flower has appeared, this pod bursts, dividès itself into three parts, and discovers three or four small cotton balls of a bright white colour, the figure of which is almost like that of those produced by silk-worms. These small downy balls adhere to the bottom of the pod, which is half open, and contains seeds for the following year. As all these small grains are strongly attached to the filaments of the cotton, the Chinese make use of a machine to separate them. This machine is composed of two cylinders highly polished, one of wood, and the other of iron, about a foot in length, and an inch in diameter, placed together in such a manner, that there is no vacuum between them. With one hand they put the first in motion, and do the same to the second by the foot; with the other hand they apply the cotton, which is drawn in between them by their motion, and passes to the other side, while the grains that are left behind, quite bare, fall to the ground. When the cotton has been thus freed from its seeds, it is carded and spun, and afterwards made into cloth.

THE KOU-CHU.

THE shrub called *kou-chu* bears a great resemblance to the fig-tree, both in the make of its branches, and the form of its leaves. From its root several twigs or shoots generally spring up, which form a kind of bush; but sometimes it consists of only one shoot. The wood of the branches of the *kou-chu* is soft and spongy, and covered with bark like that of the fig-tree. Its leaves are deeply indented, and their colour and the texture of their fibres are exactly the same as those of the fig-tree; but they are larger and thicker, and much rougher to the touch.

This tree yields a kind of milky juice, which the Chinese use for laying on gold-leaf in gilding. They make one or more incisions in the trunk, into which they insert the edges of a shell, or something else of the same kind, to receive the sap. When they have extracted a sufficiency, they use it with a small brush, and delineate whatever figures they intend for the decoration of their work. They then lay on the gold-leaf, which is so strongly attracted by this liquor, that it never comes off.

THE

THE TONG-TSAO.

STRANGERS who visit China are generally struck with the beauty of the artificial flowers made by the Chinese, and which at first sight appear to be natural: but if the Chinese surpass European artists in these kinds of small works, they are more indebted for their superiority to the materials they employ, than to their industry. Neither silk, cotton, nor any kind of paper or cloth, is employed in the composition of these flowers. The thin, transparent substance of which their leaves are formed, is the pith of a certain shrub, called by the Chinese *tong-tsao*. It is a kind of cane or bamboo, much resembling our elder-tree; but its pith is whiter, closer and less spongy.

The Chinese Herbal says, that the *tong-tsao* grows in dark, shady places. Another author adds, that this reed rises to the height of six feet; that its leaves resemble those of the nymphæa, or water-lily; but that they are thicker. Its trunk is divided, like the bamboo, by knots, between which are comprehended several pipes, each about a foot and a half long. These pipes are generally larger towards the root of the plant.

This shrub is cut every year ; and it shoots up a new stem the year following. When these pipes have been collected, they are transported in barks to *Kiang-nan*, where the pith is extracted, and prepared for the hands of the workman. When taken from the pipes it must be carefully preserved from moisture, by keeping it shut up in a dry place : without this precaution, it would be entirely useless.

The first operation consists in reducing this pith to thin, delicate leaves. The piece of pith, which is larger or smaller, according to the size required in the leaves, is laid on a plate of copper, between two other very thin plates ; and while the workman rolls it with one hand between these plates, with a knife like that used by shoe-makers for cutting their leather, which he holds in the other, he takes off a very fine paring, in the same manner as carpenters cut shavings from a smooth piece of wood with a plane. These thin leaves of pith are formed into packets, and transported to *Pe-king*, for the use of those who make artificial flowers. When the artists have occasion to paint them, or to give them different forms, to prevent them from tearing, they dip them very softly in water ; it would even be sufficient, before they are used.

used, to expose them for some time in a cold, moist place : by observing this precaution, there is no danger of their breaking or tearing.

There is another observation to be made, respecting the colours with which these delicate leaves are painted. The Chinese workmen for this purpose employ only very soft colours, which have neither gum, mercury, ceruse nor vitriol in their composition. These colours are mixed with water, and must be very light. The artist gives the leaves the various figures requisite, by pressing them on the palm of his hand with particular instruments made for that use. He then puts together, with a small pair of pincers, the different pieces of which the flower is to consist, and joins them with glue made of *nomi*, which is a kind of rice, very thick, and well boiled. The hearts of some of these flowers, such as roses, are made of filaments of hemp painted to resemble nature.

It is with the pith of this tree, that the Chinese so perfectly imitate fruits, and the small insects that adhere to them, especially butterflies. If, for example, they intend to imitate a peach, they begin by forming the skeleton of the fruit of small bits of cane split exceedingly thin. They then fill the hollow part with a
paste

paste composed of the saw-dust of an old peach-tree, which communicates the smell and flavour of a peach to the fruit. After this, they give it a natural shape, and cover it with two or three leaves of the *tong-tsao*, which are painted with proper colours. Nature is so exactly copied in these artificial fruits, that, at first sight, they deceive strangers, and even the avidity of birds. The thin pellicles of the *tong-tsao* give to the shades of the fruit a freshness and appearance of reality, that neither silk, nor the best-prepared wax, can ever be made to imitate.

The Chinese artists succeed equally in making artificial butterflies, which have so great a resemblance to nature, that they appear to be animated. They use only these thin leaves of pith, which they fashion almost in the same manner as those designed for flowers. The butterflies, which they are fondest of imitating, are of the species called in China *ye-fei*—*flying leaves*. There are few other kinds so beautiful and various in their colours.

BETEL AND TOBACCO.

THE Chinese, in imitation of almost all other eastern nations, use the betel-leaf as a sovereign remedy for those disorders which attack

tack the breast and stomach. The shrub which bears this leaf grows like ivy, and twists around other trees. Its leaves are long and sharp-pointed, but broad towards the stalk, and of a pale-green colour. The Chinese cover them with quicklime, and wrap them around the nut *areca*, which in shape greatly resembles a nutmeg. They chew these leaves continually; and they pretend that they strengthen the gums, comfort the brain, expel bile, nourish the glands of the throat, and serve as a preservative against the asthma—a disease which, from the heat of the climate, is very common in the southern provinces. They carry betel and *areca* in boxes, and present it when they meet one another, in the same manner as we offer tobacco.

Although the use of the latter plant is not so extensive in China as in Europe, this country produces it in great abundance. The Chinese do not reduce their tobacco to powder, because they only use it for smoking. They gather the leaves when they are very ripe, and card them almost in the same manner as wool. They afterwards put them below a press, where they squeeze them, as tanners squeeze those remains of their bark which are formed into lumps for burning.

THE BELVIDERE, OR CHENOPODIUM.

THE belvidere is a plant which seems to be much neglected in Europe, and to which our botanists have hitherto paid little attention : those of China, however, do not think that it ought to be banished from the tribe of useful plants. The following are the properties attributed to it in the Chinese Herbal.—After having said, that it is about the end of March, or beginning of April, that the belvidere springs up from the earth ; that its suckers or shoots rise to the height of eight or nine inches, in shape of a child's fist half shut ; that it afterwards extends itself, and sends forth a number of branches loaded with leaves like those of flax ; and that, as it grows, its branches arrange themselves naturally in the form of a beautiful pyramid ; it adds, that its leaves, yet tender, abound with juice, and have a very agreeable taste ; that it may be eaten as a salad with vinegar, to which a little ginger has been added ; that, being prepared like other leguminous plants, and baked with meat, it gives it an agreeable and pleasing flavour ; that, when in its full beauty, its leaves become hard and unfit for the table ; but that nourishment

is then found in its root, which serves as a resource in times of famine and scarcity. When the belvidere has attained to its natural size, the Chinese separate its principal stalk from the rest, and put it into a lye of ashes, which cleans and softens it, and frees it from all impurities of the bark. After this bath, it is exposed to the sun; and, when dry, it is baked and seasoned. With regard to the root, which has something of a violet-colour, they strip off the skin by filaments, which may be boiled and eaten: but what is particularly sought after is the root itself, of which, when reduced to powder, they collect only what remains in the bottom of the vessel, and form it into small loaves, that are baked by being held over the steam of boiling water. People of a delicate taste will scarcely be tempted to admit this dish at their tables; but is it not useful to point out to the poor peasants, that, in cases of necessity, they may always have recourse, without danger, to this rustic food? In such cases, they will be indebted to the Chinese for having made the first trial, which, for the most part, is dangerous.

The Chinese Herbal cites the example of four mountaineers, who, having lived on nothing but the leaves, roots and stalks of the belvidere,

videre, with which their country abounded, had nevertheless enjoyed perfect health to a very great age. It relates also the conversation of two philosophers, who, foreseeing the approaching fall of a dynasty, and, disgusted with the tumult, restraint and dangers of the court, where they had passed part of their lives, exhorted one another to seek for a safe retreat.—‘ Let us employ our knowledge,’ said one of them, ‘ in making reflections upon the present state of government ; and our prudence, to secure ourselves against the misfortunes which are ready to fall upon those in place.’—‘ I am entirely of your mind,’ said the other, squeezing his hand ; ‘ I intend to retire into my native country, where I shall live in repose, and have little intercourse with men : the *belvidere* will always supply me with food ; and the great river *Kiang* with excellent water to drink.’

The Chinese Herbal also says, that, to render the *belvidere* more fruitful and substantial, fire must be set to the mountains which are covered with it, because its own ashes are the best manure for the ground, and supply it with a nourishing moisture.

ARTEMISIA,

ARTEMISIA, OR MUGWORT.

MUGWORT, which has been long known in China, is called there *y-tsao*, or the *physician's herb*. The Chinese distinguish it into three kinds ; common, thorny, and wild mugwort. Some botanists speak of a fourth species, which is found on the highest mountains of the southern provinces, and which grows only to the height of a foot in several years. It appears, that the chief properties of this plant are, that it exhales an agreeable odour, and enjoys a kind of immortality. It is put into vases, to ornament cabinets ; and, when it has been well dried, it may be preserved as long as artificial flowers.

Common mugwort grows in every province of China, as well as in all those of France : but both ancient and modern authors agree in recommending, for medicinal purposes, only that of *Ki-tcheou* or *Ming-tcheou*. It is greatly to be wished that our writers on botany, in imitation of the Chinese, when they give us a list of plants, would also mention the places where the best are to be found. It is certain, that difference of soil and climate gives different degrees of strength and virtue to plants ; and this
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knowledge is considered by the Chinese as one of the most essential parts with which a physician ought to be acquainted. The leaves and seeds only of the mugwort are used in China; and the same virtues are attributed to the former, as in Europe, for female disorders. The juice of this plant, when green, is used to stop spitting of blood; and the seeds are employed for the same purpose. The dose of the latter is divided into two parts; one of which is reduced to ashes, and put into water in which the other has been boiled. These ashes, it is said, when taken as snuff, immediately stop bleedings of the nose. The Chinese prescribe this plant also with success for dysenteries which proceed from weakness, and for pleurifies, and disorders of the stomach. An infusion of the stalks and buttons of mugwort is recommended to old people, instead of tea.

Mugwort was formerly considered as a powerful preservative against witchcraft. The ancient books relate, that, in the third century of the Christian æra, it was customary for people to gather this plant before sun-rise, and to suspend it afterwards over their doors. The poets of the seventh century mention this custom, and describe the manner in which the streets

streets of the capital were ornamented with it on the fifth day of the fifth moon ; that is to say, about Midsummer.

Prickly mugwort really bears prickles on the edges of its leaves. It grows on the mountains ; but the softest and most esteemed is gathered on those which lie on both sides of the great wall. These leaves, when dried, are beaten with a wooden bat, until the soft part is entirely separated from the fibres ; and, after they have been dipped in water mixed with saltpetre, they are used for tinder : no other kind is known at Pe-king ; and it is equal to that of Europe. It appears that the ancient Chinese made use of the soft part of this plant for quilting, for making mattresses, and even for cloth. They also employed it for manufacturing a kind of paper.

Wild mugwort grows upon the mountains, and in the steepest places. Its leaves are more deeply indented than those of the common kind ; it is also softer, and of a more silky texture. The ancient Chinese made great use of it in medicine. In all the northern provinces, the principal remedy for most diseases consisted in making deep punctures in the body, upon which small balls of the down of this plant

were burnt. These punctures were made with needles of gold or steel, without drawing blood; and all the skill required in the physician, was to determine their number and depth, and where it was necessary to make them. They used this down, as we have said, by way of tinder; but, instead of saltpetre, they substituted a preparation of sulphur. It was necessary that the down of the mugwort should be very old; and, as every kind of fire was not proper for lighting these salutary balls, they employed mirrors made of ice or metal. ‘They caused the water to freeze,’ says the ancient text, ‘in a round convex vessel; and the ice, being presented to the sun, collected its rays, and set fire to the down of the plant.’ The literati are not at present agreed, whether the secret of curing diseases by punctures be preserved; but these downy balls are still used instead of cupping-glasses, in apoplectic and lethargic cases. Girdles made of this down are also recommended for the sciatica; and those afflicted with the rheumatism in their legs are advised to quilt their stockings with it. The mugwort destined for this purpose is gathered only in autumn; and care must be taken to pick that which has the shortest and softest down.

CHAP. VII.

FLOWERING-TREES.

THE OU-TONG-CHU.

AMONG the trees which nature seems to have destined for the ornamenting of gardens, we must distinguish that which the Chinese call *Ou-tong-chu*. It is of a great size, and resembles the sycamore. Its leaves are large, and proceed from a stalk about a foot in length. This tree is so bushy, and loaded with such bunches of flowers, that it entirely excludes the rays of the sun. Its fruit grows in a very extraordinary manner.—Towards the month of August, small clusters of leaves begin to shoot out from the extremities of the branches, which are entirely different from those that cover the rest of the tree; they are smaller, whiter and softer, and supply the place of flowers. On the edges of each of these leaves grow three or four small grains, of the size of a pea. These grains contain a white substance, the taste of which greatly resembles that of an unripe walnut.

THE MOLIEN.

THIS is another flowering tree, the branches of which are few in number, very slender, full of pith, and covered with red bark interspersed with small white spots. It bears few leaves; but they are large, and very broad at the lower extremity, and adhere to pedicles, which increase so much in size towards the bottom, that they seem to inclose the branch. This tree blows in the month of December, and produces large flowers, formed of seven or eight sharp-pointed oval leaves, from the extremities of which proceed long filaments. Some of the flowers of the molien are yellow, others red, and others white. All the leaves fall when the flowers appear, or when they are ready to blow.

THE LA-MOË.

THIS shrub pretty much resembles our laurel, both in its form and size; but its branches are more extensive, and its leaves are attached, two and two, to short pedicles. The size of these leaves decreases in proportion to their distance from the extremities of the branches. This tree produces its flowers in winter; they
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are yellow, and have an agreeable smell, resembling that of roses.

THE TCHA-HOA.

THE Chinese distinguish four kinds of the tree which they call *tcha-hoa*. Its wood and foliage give it some resemblance to the Spanish laurel. Its leaves, which grow in alternate rows along each side of its branches, do not drop in winter. They are of an oval figure, sharp pointed, indented on the edges, and of a dark-green colour above, and yellowish below. The buds of the *tcha-hoa* are covered with a soft, white down; they blow in December, and produce double flowers, supported by a calix, and of a rose colour. These flowers have no pedicle, and adhere immediately to the branch. The second kind of *tcha-hoa* is very lofty. Its leaves are round at the extremity; and its flowers are large and red. The flowers of the two other kinds are whitish, and smaller.

THE YU-LAN.

THIS tree, the most beautiful of those that ornament the Chinese gardens, rises to the height of thirty, and sometimes of forty feet. Its trunk, which is straight, and well-proportioned,

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has very few large branches, and scarcely any small. Its leaves are of a beautiful green colour, but few in number : they never begin to shoot forth until the flowers are half blown. All its branches are crowned with flowers, the scent of which perfumes the air to a great distance around : they blow almost all at the same time ; but they continue only a few days. The *yu-lan*, when in bloom, resembles a walnut-tree, cropt like a pine, and having its branches stuck full of beautiful lilies. The flower (which consists of five or six leaves, and even of eight, disposed like those of a rose) is supported by a calix of four leaves, bristly within, and terminating in a point. From the middle of the flower rises a green, spongy pistil, surrounded at its base by small fibres, the tops of which are loaded with stamina. This flower produces an oblong fruit of a green colour, which reddens towards the end of summer. Its whole substance is fibrous, and almost as hard as wood.

The *yu-lan* is divided into several species ; such as double and single ; the *yu-lan* with white flowers, and that which produces flowers of a peach colour. The flowers of this tree are much more beautiful and in greater abundance when it is young ; but it bears no fruit. When it is

twenty

twenty years old, its flowers are smaller and fewer; but almost all of them produce fruit. The *yu-lan* requires no other culture than to be planted in a place sheltered from the north winds, and to be watered in spring. It is raised in boxes, as orange-trees in France. When it has shed its leaves, the florists remove it to the green-house; and, by accelerating its vegetation by means of a stove, they procure flowers from it in the beginning of the year: it is then appropriated for ornamenting the interior apartments of the women. The governors of the southern provinces send some of them every year to be presented to the emperor.

THE AUTUMNAL HAI-TANG.

THIS beautiful shrub, originally brought from the bottom of the rocks which border the sea-coast, has been cultivated in China for more than fourteen centuries. It is celebrated as often in the works of the Chinese poets, as roses and lilies are in those of ours. Painters and embroiderers ornament almost all their works with its foliage and flowers. The stalk of the autumnal *hai-tang* is of a cylindric form, and shoots forth a number of branches of a purple tint towards their bases, and full of knots, which

are also of a purple colour round the edges. It produces a number of shoots, the tallest of which are about two feet and a half in height. Its leaves (which are much indented, of an oval form towards the stalk, pointed at their upper extremities, and full of small prickles) grow almost always opposite one another on the branches, and at the same distance as the knots. Their colour above is a deep-green; that below is much lighter, and almost effaced by their fibres, which are large, and of a delicate purple: all these leaves together have a beautiful effect to the eye. The flowers grow in bunches at the extremities of the branches. Each flower is composed of four petals, two great and two small, resembling in colour the bloom of a peach-tree, and which have almost the same figure as the blossom of our cherry-trees. The two large are cemented one upon the other, in the form of a purse; and when they blow, the two small blow also in their turn; and then the whole four represent a cross. The pistil is composed of very bright yellow grains, which separate gradually one from another by the lengthening of the filaments to which they adhere; they then open into little bells, and compose a small yellow tuft, supported by a slender stalk,

stalk, which rises above the petals. The calix, which sustains each of the flowers, is composed of two purple-coloured leaves, united in form of a purse. In proportion as the flowers grow and increase in size, the two leaves of the calix open, become pale and dry, and drop off. The flowers, supported by small stalks, separate one from the other, and produce of themselves other flowers, which rise up from a new calix.

The autumnal *hai-tang* is propagated from seed, but with difficulty. It thrives best in a sandy soil; dung or mould destroy it; and great care must be taken to refresh it only with the purest water. As it cannot endure the sun in any season, it is always planted below walls that are exposed to the north. It generally begins to flower about the end of August. After it has produced seed, all its branches are cut; and it commonly shoots forth new ones before the spring following; but it is necessary to heap up gravel and pieces of brick round its roots, to prevent them from rotting. Notwithstanding all the care that is taken to cultivate this tree at Pe-king, it does not thrive so well there as in the southern provinces. The smell of its leaves has an affinity both to that of the rose

and the violet ; but it is weaker, and never extends to any great distance.

THE MOU-TAN, OR PEONY-SHRUB.

THE mou-tan is a wild shrub improved by culture, and has been known in China for fourteen hundred years. It is called also *hoa-ouang*, or the *king of flowers*, and *peleang-kin* (*an hundred ounces of gold*), in allusion to the excessive price given formerly by some of the virtuosi for certain species of this plant. A traveller, as is said, having found a peony on a shrub in the mountains of *Ho-nan*, was so struck with the novelty, that he thought it worthy of ornamenting a parterre. He tore up some of the roots, with the earth adhering to them, carried them home, and planted them in his garden. A bonze, who was ignorant of the origin of this peony shrub, imagined he could procure one like it by grafting. His attempt was attended with success ; and the peonies he raised were more beautiful than those which had been brought from the mountains. This plant soon engaged the attention of all the florists ; and, by careful and continual culture, it was brought to perfection. The infatuation became general ; and even the provinces contended for superiority

periority of skill in raising it, that they might have the glory of sending the finest to the emperor.

The *mou-tan* seems to claim pre-eminence, not only on account of the splendour and number of its flowers, and of the sweet odour which they diffuse around, but also on account of the multitude of leaves which compose them, and of the beautiful golden spots with which they are interspersed. This plant, which is of a shrubby nature, shoots forth a number of branches, which form a top almost as large as those of the finest orange-trees that are planted in boxes. Some of the *mou-tan* have been seen eight or ten feet in height. The reason why few are raised at present to this size is, because their flowers are less beautiful, and their branches, being too weak, cannot sustain their weight. The root of the *mou-tan* is long and fibrous, of a pale-yellow colour, and covered with a grayish or reddish rind. Its leaves are deeply indented, and of a much darker green above than below. Its flowers, which are composed of numberless petals, blow like a rose, and are supported by a calix composed of four leaves. From the bottoms of the petals arise several stamina, without any order, which bear on their tops small antheræ,

antheræ, of a beautiful golden colour. The fruit bend downwards like those of common peony, burst when they become dry, and shed their seeds.

There are three kinds of *mou-tan*; common *mou-tan*, dwarf *mou-tan*, and the *mou-tan tree*. The last species seems at present to be lost: some of them were formerly seen which were twenty-five feet in height. Dwarf *mou-tan* is little esteemed: a few plants of this kind are only cultivated to preserve the species. Common *mou-tan*, which has always been highly prized by florists, is more generally dispersed. It is raised, like an espalier, in form of a fan, bush or orange-tree. Some of them flower in spring, others in summer, and some in autumn. These different species must each be cultivated in a different manner.

The vernal and summer *mou-tan* are those that are cultivated in greatest number; those of autumn require too slavish an attention during the great heat of the dog-days. The *mou-tan* of each season are divided into single and double; the former are subdivided into those of *an hundred leaves*, and *a thousand leaves*; the second have a large calix filled with stamina, that bear on their tops gold-coloured
antheræ,

antheræ. These are the only kind that produce seed. The flowers of both appear under the different forms of a bason, pomegranate, marigold, &c. Some of the *mou-tan* are red, others violet, purple, yellow, white, black and blue; and these colours, varied by as many shades, produce a prodigious number of different kinds. We are assured, that the Chinese florists have the secret of changing the colour of their *mou-tan*, and of giving them whatever tints they please; but they cannot effect this change but upon those plants which have never produced flowers.

A *mou-tan*, to please the eye of a Chinese florist, must have a rough, crooked stalk, full of knots, and of a blackish-green colour; its branches must cross one another, and be twisted in a thousand fantastical figures; the shoots that proceed from them must be of a delicate green shaded with red; the leaves must be large, of a beautiful green, very thick, and supported by reddish stalks; its flowers must blow at different times, in form of a tuft, be all of the same colour, and stand erect upon their stems; they must also be seven or eight inches in diameter, and exhale a sweet and agreeable odour.

THE PE-GE-HONG.

THIS shrub is remarkable for the beauty and singularity of its flowers, and above all for their duration, which has given rise to its name, *pé-gé-hong*, red of a hundred days. This beautiful plant, brought to perfection by culture, was originally found in the mountains of *Fou-kien*, and now holds a distinguished rank in the Chinese gardens. Its leaves, sometimes placed alternately, sometimes opposite one to another, are of an oval form, a little sharpened towards the points: they are not indented, and their thickness is somewhat between that of the leaves of the phillyrea and plum-tree.

The flowers of the *pé-gé-hong* blow at Peking about the beginning of July; they grow in bunches at the extremities of the branches, and succeed one another in such a manner, that they continue till the end of September, provided they are sheltered from the heat of the sun. The calix which supports them is spongy, shaped like a bell, and of a pale yellow within, and red on the outside. It bends over the rising fruit, and becomes dry when it ripens. From this calix arise six crimson-coloured petals, in the form of festoons, which are long, round at

top, and supported by as many slender, whitish stalks.

The trunk of the *pé-gé-hong* is very thick; it even appears that the Chinese florists have endeavoured to reduce it to a dwarfish size—a form for which they shew an uncommon fondness *. They give its boughs time neither to spread nor to grow bigger; they prune them in autumn, and leave only a few small branches, in order that they may be loaded with a greater abundance of flowers. The culture of this tree requires little care; nothing is necessary but to place it in a green-house during winter, to expose it to the south on the return of spring, to water it at proper seasons, and to shelter it from the sun and the excessive heats of summer.

THE YE-HIANG-HOA.

THE branches of this shrub are so weak, that they can neither grow upwards, nor support themselves; the florists therefore prop

* The Chinese gardeners have the secret of reducing the size of trees and shrubs of every kind, and even of flowers. The missionaries assure us, that they have seen cedars and pines which were only two feet in height, though more than forty years old; the trunks, branches and leaves were, however, very well proportioned.

them

them with bamboo-reeds, to which small hoops are attached. Its leaves are of a deep green above, and of a pale below; they are shaped like the head of a lance, and are supported by very long stalks; round which they form two ears. All the property of this tree consists in the exquisite odour exhaled by its flowers, which are of a yellowish-green colour.—*Their smell is so sweet and agreeable, say the missionaries, that there is no flower existing which can be compared with the delicious ye-hiang-hoa.* Owing to the delicacy of this plant, or to that of its perfume, it has scarcely any smell during the day-time: from this singularity it has its name, *ye-hiang-hoa*, or *the flower which smells in the night.* The weak constitution of the *ye-hiang-hoa*, originally from the southern provinces, hinders it from thriving at Pe-king. The nicest attention of the most careful florist is scarcely sufficient to make it endure the winter through in a green-house, and to preserve it for a few years: on this account, it is exceedingly dear. A fine plant of the *ye-hiang-hoa* costs twenty or thirty ounces of silver. The viceroy of the province of *Tche-kiang* sends several of them every year to Pe-king, to ornament the emperor's apartments.

THE LIEN-HOA, OR WATER-LILY OF
CHINA.

THIS aquatic plant has been known in China from the remotest antiquity. The poets of every dynasty have celebrated the splendour and beauty of its flowers; and its excellent virtues have made the Doctors *Tao-see* rank it among those plants which are employed in the composition of the *liquor of immortality*. Its flowers are formed of several leaves, disposed in such a manner, that they resemble large tulips when they are half open. These flowers blow like a rose. From the middle of the flower rises a conical pistil, that becomes round and spongy; it is divided into several cells, filled with oblong seeds, covered with a husk like the acorn, and composed of two white lobes, in the middle of which is the germ. The stamina of the *nenufar* are formed of very delicate filaments, the tops of which are of a violet-colour. The leaves of this plant are round, broad and large; they are thick and fibrous, and indented towards the middle; some of them float on the surface of the water, to which they seem to be cemented; others rise to different heights, and are supported by long

514 GENERAL DESCRIPTION

stems. Its root, which is of the size of a man's arm, is very hardy ; it is of a pale-yellow colour within, and milk-white on the outside, and is sometimes twelve or fifteen feet in length. It creeps at the bottom of the water, and attaches itself to the mud by filaments, which spring out from the contractions that divide it at intervals. The stalk which supports the flowers and leaves of this plant is full of round holes to its extremity, like those of the root.

There are four kinds of *nenufar* known in China ; the yellow, which is very rare, and supposed to be the same as that of Europe ; the red and white rose-coloured, with single flowers ; the red and white rose-coloured, with double flowers ; the pale red striped with white, which is seldom seen, especially with double flowers. This plant requires no culture ; it is propagated by seed, but sooner by the root. One of its singularities is, that it endures much drought, though it grows naturally in water ; and that, though a friend to warmth, it thrives and produces the finest flowers beyond the great wall, and in the northern provinces. The *nenufar* does not bud before the end of May ; but it shoots forth very rapidly ; and its leaves form a verdure on the surface of the water, which is
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very delightful to the eye, especially when the flowers, in full bloom, unite the variety of their colours.

The seeds of the *nenufar* are eaten in China as we eat filberds in Europe; they are more delicate when they are green, but harder of digestion; they are preserved in many different ways with sugar. The root of this plant is also admitted by the Chinese to their tables: in whatever manner it may be prepared, it is equally wholesome. Great quantities of it are pickled with salt and vinegar, which they reserve to eat with their rice. When reduced to powder, it makes excellent soup, with water and milk. The leaves of the *nenufar* are much used for wrapping up fruits, fish, salt provisions, &c. When dry, the Chinese mix them with their smoking tobacco, to render it softer and milder.

THE KIU-HOA, OR PARTHENIUM.

PARTHENIUM, so much neglected in Europe, and which, on account of its smell, has been banished from our parterres, is indebted only to its culture for the distinguished rank it holds among the Chinese flowers. The skill of the florists, and their continual care, have brought this plant to so great perfection,

that Europeans scarcely know it. The elegance and lightness of its branches, the beautiful indentation of its leaves, the splendour and duration of its flowers seem, indeed, to justify the *florimania* of the Chinese for this plant. They have, by their attention to its culture, procured more than three hundred species of it: every year produces a new one. A list of the names of all these kinds would be equally tedious and disgusting; we shall only say, in general, that, in its flowers are united all the possible combinations of shapes and colours. Its leaves are no less various: some of them are thin, others thick; some are very small, and some large and broad; some are indented like those of the oak, while others resemble those of the cherry-tree; some may be seen cut in the form of fins, and others are found serrated on the margin, and tapering towards the points.

Parthenium is propagated in China by seed, and by suckers, grafts and slips. When the florists have a fine plant, they suffer the seeds to ripen, and, about the end of autumn, sow them in well-prepared earth. Some keep them in this manner during winter, others sow them in spring. Provided they are watered after the winter, they shoot forth, and grow rapidly.

pidly. After the parthenium has flowered, all its branches are cut three inches from the root, the earth is hoed around, and a little dung is mixed with it; and when the cold becomes severe, the plant is covered with straw, or an inverted pot. Those that are in vases are transported to the green-house, where they are not watered. In spring, they are uncovered and watered, and they shoot forth a number of stems: of these some florists leave only two or three, others pull up the stalk, together with the whole root, and divide it into several portions, which they transplant elsewhere. There are some who join two slips, of different colours, in each of which, towards the bottom, they make a long notch, almost to the pith, and afterwards tie them together with packthread, that they may remain closely united: by these means they obtain beautiful flowers, variegated with whatever colours they choose.

Parthenium requires a good exposure, and fresh moist air that circulates freely: when shut up closely by four walls, it soon languishes. The earth in which it is planted ought to be rich, moist and loamy, and prepared with great care. For refreshing it, the Chinese use only rain or river water; and in spring-time, they

mix with this water the excrements of filk-worms, or the dung of their poultry; in summer, they leave the feathers of ducks or fowls to infuse in it for several days, after having thrown into it a little saltpetre; but in autumn, they mix with the water a greater or smaller quantity of dried excrement reduced to powder, according as the plant appears more or less vigorous. During the great heats of summer, they water it morning and evening; but they moisten the leaves only in the morning: they also place small fragments of brick round its root, to prevent the water from pressing down the earth too much. All this attention may appear trifling; but it is certain, that it is founded upon experience and observation; and it is only by the assistance of such minute care, that the patient and provident Chinese has been able to procure, from a wild and almost stinking plant, so beautiful and odoriferous flowers.

C H A P . VIII.

HERBS AND MEDICINAL PLANTS OF
CHINA.

THE simples, and medicinal plants of China, form one of the richest and most extensive branches of its natural history. As it is not our intention to give a Chinese herbal, we shall content ourselves with describing only the most useful.

R H U B A R B .

THE *tai-boang*, or *rhubarb*, grows in several provinces of the empire ; but the best is that of *Se-tchuen*, which is considered as much superior to that of *Chen-fi* or *Tibet*. The stem of rhubarb resembles a small bamboo, or Chinese cane; it is hollow, and exceedingly brittle ; it rises to the height of three or four feet, and is of a dusky violet-colour. In the second moon (that is to say, in the month of March), it shoots forth long, thick leaves, which are very rough to the touch : these leaves are ranged four by four on the same stalk, and form a calix. The flowers of this plant are yellow, and sometimes

violet. At the fifth moon, it produces a small black seed, of the size of a grain of millet, which is pulled in the eighth. The roots of rhubarb reckoned to be best, are those that are heaviest and most variegated with veins. It is very difficult to dry them, and to free them from all their moisture. The Chinese, after having cleaned them, cut them in slices an inch or two in thickness, and dry them on stone slabs, under which large fires are kindled. They keep continually turning these slices on the warm slabs ; but, as this operation is not sufficient to dry them thoroughly, they thread them like beads, and suspend them in a place exposed to the greatest heat of the sun, until they are in a condition to be preserved, without danger of spoiling.

The Chinese physicians agree perfectly with those of Europe, respecting the virtue and properties of rhubarb ; they, however, seldom use this plant without preparation : they are fonder of it in decoction, when some other simples have been added. Rhubarb is sold cheap in China : a pound of the best costs only two-pence.

THE HIA-TSAO-TONG-KONG *

THE shape of this plant is exactly like that of a worm. It has the head, eyes, body, feet on each side of the belly, and the different rings which the skin forms upon the back of that reptile. This resemblance is more particularly sensible when the plant is young and fresh; for if it be kept any time, especially when exposed to the air, it becomes blackish, and soon corrupts, on account of the softness of its substance. This plant is about nine-tenths of an inch in thickness, and of a yellowish colour; it is very rare in China, where it is accounted an exotic, and is seldom to be met with but in the emperor's gardens. The *hia-tsao-tong-kong* grows in Thibet; it is also found, though in small quantities, in the province of *Se-tchuen*, which borders on Thibet, and in *Hou-quang*. The properties of this root are almost the same as those attributed to *gin-feng*, except that the frequent use of it does not, like *gin-feng*, occasion bleedings and hemorrhages. It strengthens the stomach, and invigorates those who are ex-

* This Chinese name signifies, *a plant, which, from being an herb in summer, becomes a worm in winter.*

hausted, either by excessive labour or long sickness. F. Parennin assures us, that he himself experienced its happy effects: 'The *ifong-zou*, or viceroy of the two provinces of *Se-tchuen* and *Chen-fi*,' says this celebrated missionary, having come to Tartary to pay his respects to the emperor, brought with him, according to custom, a present of what he had found most singular in his own department, or in those around him, and, among other things, some roots of the *hia-isa-tong-kong*. As I had been formerly acquainted with him, he did me the honour of a visit. I was then extremely weak, by the frequent journies I was obliged to take during the severity of a cold and wet season. I had lost my appetite, could enjoy no rest, and continued in a lingering state, notwithstanding the different remedies which had been prescribed for me. Affected by my situation, he recommended the use of this root, with which I was then entirely unacquainted; and he taught me the method of preparing it: *Take five ounces, said he, of this root, together with its stalk, and stuff it into the belly of a tame duck, which must be roasted at a slow fire. When it is done, take out the root, as its virtue will have passed into the flesh of the duck,*

‘ duck, and eat this flesh, morning and evening, for eight or ten days. I made the experiment, and recovered both my appetite and strength. ’

‘ The emperor’s physicians, whom I consulted concerning the virtue of this root, explained it to me in the same manner as the *tsong-tou*; but they told me, they never prescribed it but in the palace, on account of its scarcity; and that, if any of it was found in China, it could only be in the province of *Hou-quang*. I wrote to one of my friends who resided there, and begged him to send me some of it; he did so; but the little I received was black, old and carious, and cost four times its weight in silver.’

THE SAN-TSI.

The *san-tsi* is found with much less difficulty. This plant grows without cultivation in the provinces of *Koei-tcheou*, *Tun-nan* and *Se-tchuen*. It shoots forth eight stems, which have no branches; that in the middle, which is highest, has three leaves at its extremity; but the other seven have only one each. From this determinate number of leaves the plant has its name, *san-tsi*, or *three and seven*. All these stalks proceed from a round root, four inches in diameter.

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From this root spring a great number of others; which are oblong and smaller, and covered with a rough, hard rind, the interior substance of which is softer, and of a yellowish colour. These little roots are what is generally used in medicine. The middle stem only bears flowers, which are white: they grow from its extremity, in form of grapes, and blow towards the end of the seventh moon; that is to say, in the month of July.

When the Chinese are desirous of propagating this plant, they cut the root in slices, which they put into the earth about the vernal equinox; in the space of a month, it shoots forth its stalks; and, at the end of three years, the plant has acquired its utmost size. The Chinese physicians use the *san-tsi* for wounds and spitting of blood: they consider it, above all, as a sovereign specific in the small-pox. Some of the missionaries tell us, that they have seen surprising effects from it, and that the blackest and most virulent pustules become bright and of a beautiful red, as soon as the patient has swallowed some of this root. A species of gray goats are very fond of browsing upon its leaves; and, as they feed upon them, *Their blood, say the Chinese, becomes impregnated with their medicinal*

dicinal qualities. The blood of these goats is used for the same purposes as the plant itself.

THE CASSIA-TREE.

THE cassia-tree is found in that part of the province of *Yun-nan* which borders on the kingdom of *Ava*. This tree is very high, and bears long pods : on that account, the Chinese have given it the name of *tchang-ko-tse-chu*, *the tree with oblong fruit*. These pods are indeed longer than those seen in Europe. They are not composed of two convex husks, like those of common leguminous plants, but of a kind of hollow pipe, divided into several cells, which contain a pulpy substance entirely like the cassia used in Europe.

GIN-SENG.

THE most esteemed and valuable of all the plants of China is *gin-seng*, which the Mantchew Tartars call *orbota*, *the queen of plants*. The Chinese physicians always speak of it with a kind of enthusiasm, and enumerate, without end, the wonderful properties which they ascribe to it. The root of *gin-seng* is white and rough ; its stem is smooth and very round, and of a deep-red colour. Its height is various, according

ing to the vigour and size of the plant. From the extremity of the stalk proceed a number of branches, which are equally distant one from the other, and, in their growth, never deviate from the same plan. Each branch bears five very small leaves full of fibres, the upper part of which is of a dark green, and the lower of a shining whitish green. All these leaves are finely indented on the margin. A particular stem of this flower produces a small cluster of very round red berries; but they are not fit for eating. Their stone, which resembles those of other fruits, is very hard, and contains the germ from which the plant is propagated. *Gin-seng* is easily distinguished by its form, and the colour of its fruit, when it has any; for it often happens that it bears none, though its root may be very old.

This plant decays and springs up every year; and its age may be known by the number of stems it has already shot forth, some remains of which always adhere to the upper extremity of the root. The Chinese never sow the seed, because it has never been known to grow: this probably has given rise to the fable which the Tartars relate concerning the reproduction of *gin-seng*. They assure us, that a bird eats the seed
when

when put into the earth, but, not being able to digest it, voids it with its dung, after it has been purified in its stomach, and that it springs up in the place where it is left. It is more probable that the germ of this plant is slow in opening, and that the husk which contains it remains long in the earth before it sends forth any root. This conjecture appears to be so much the more probable, as some *gin-seng* roots are found which are neither longer nor thicker than the little finger, although they have successively produced more than ten or twelve stems in as many years.

This plant, at all times, has been the principal riches of Eastern Tartary, where it grows. It is never found but between the 39th and 47th degrees of northern latitude, and between the 10th and 20th of eastern longitude, reckoning from the meridian of Pe-king. All that extent of country is occupied by a long chain of steep mountains, covered with almost impenetrable forests. It is upon the declivities of these frightful mountains, and in their forests, in the neighbourhood of fissures made by floods, below rocks, at the roots of trees, and in the middle of herbs of every species, that this valuable plant is found. It never grows in plains, valleys

valleys or marshy ground, or in the bottoms of the clefts made by torrents, or in places that are too open. If the forest happens to take fire, and to be consumed, this plant does not again appear there until three or four years after. It delights in the shade, and every where seems desirous of sheltering itself from the rays of the sun, which proves, that it is naturally an enemy to heat.

No private person is allowed to gather *gin-feng*: it belongs entirely to the emperor, who sends ten thousand soldiers into Tartary every year to collect it. The following order is observed by this army of herbalists—After having divided the ground, each troop, composed of an hundred men, range themselves in a line, with certain intervals between every ten. They then advance gradually in the same direction, searching for the plant *gin-feng* with great care; and in this manner they traverse, during a fixed number of days, the space assigned them. When the term prescribed is expired, mandarins appointed to preside over this business, and who lodge under tents in the neighbourhood, send people to the different troops, to convey their orders, and to see that their numbers are complete; for it often happens, that some of them
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lose themselves, or are devoured by savage beasts. As soon as they are missed by their companions, they make search after them for some time; but they afterwards resume their labour, observing always the same order.

These herbalists suffer many hardships during this expedition. They carry with them neither tents nor beds, as they are sufficiently loaded with their provision of millet, toasted in the oven, which is their only nourishment. During the whole time of their journey, they are exposed to all the inclemencies of the air, and pass the night, as chance directs, either in the forests or at the bottom of some rock. The mandarins send them, from time to time, pieces of beef, or other flesh, which they devour, bloody, and half raw. In this manner do these ten thousand men pass those six months of the year which are employed in collecting *gin-seng*.

‘The Chinese physicians,’ says F. Jartoux, ‘have written whole volumes on the virtues of this root. They introduce it into almost all the remedies which they prescribe to the great; but it is too expensive for ordinary people. They pretend that it is a sovereign remedy for weakness occasioned by excessive labour,’

‘ labour, either of body or mind ; that it dis-
 ‘ solves phlegm, cures the pleurisy and disorders
 ‘ of the lungs ; that it stops vomiting, strengthens
 ‘ the stomach, quickens the appetite, dissipates
 ‘ vapours, animates the vital spirits, and pro-
 ‘ duces lymph in the blood ; and, lastly, that it
 ‘ is good for giddiness, dimness of sight, and
 ‘ that it prolongs the life of old people. It can
 ‘ hardly be supposed, that the Chinese and Tar-
 ‘ tars would prize this root so highly, had it
 ‘ not always produced the happiest effects.
 ‘ Those even who are in perfect health make
 ‘ frequent use of it, to render them more vigor-
 ‘ ous and robust.’

Gin-seng, notwithstanding the great quantity
 of it procured from Tartary, is always very
 dear in China : an ounce of this root, even at
 Pe-king, costs seven or eight ounces of silver.

Chinese Tartary, however, is not, perhaps, the
 only country where this valuable plant grows.
 F. *Joseph-Francis Lafitau*, a Jesuit missionary,
 pretends to have had the glory of discovering
 it in Canada about the beginning of the present
 century. This missionary had never heard of
gin-seng when he resided in France ; but the af-
 fairs of his mission having called him to Que-
 bec about the month of October, 1715, he hap-
 pened

pened to meet with the tenth volume of *Lettres Edifiantes*, which contains a description of this plant, by F. *Jartoux*. As F. *Lafitau* had a particular attachment to the study of botany, which he had cultivated for a long time, he read with great avidity the detail given concerning this unknown plant, in the letter of the above-mentioned missionary. He was particularly struck with what F. *Jartoux* says, when speaking of the soil where the *gin-seng* grows, that, 'If it be found in any other country, it must be in Canada, the mountains and forests of which have so near an affinity to those of Tartary.' This remark awakened the curiosity of F. *Lafitau*, and made him conceive a design of searching for this plant in New France.

'My hopes of discovering it,' says he, 'were; however, very faint, and at first made little impression upon me. I had even formed from the letter of F. *Jartoux* but an imperfect and confused idea of the plant; and my occupations during winter had almost effaced it. I did not feel my desire revive for making this discovery until the spring, when, having often occasion to traverse the woods, my attention was particularly attracted by those prodigious numbers of simples and plants

‘ with which they are filled. I endeavoured
 ‘ therefore to recall the idea I had formed of
gin-feng ; I mentioned it to several of the In-
 ‘ dians ; I described it in the best manner I
 ‘ could ; and they gave me hopes that I should
 ‘ at length be able to discover it.

‘ Although necessity has made all people
 ‘ who live in a state of nature botanists and
 ‘ acquainted with simples, their researches were
 ‘ ineffectual ; and I was beginning to despair
 ‘ of finding *gin-feng*, after three months labour
 ‘ and fatigue, when I accidentally discovered it
 ‘ near a small house which I had erected. Being
 ‘ then in its maturity, the vermilion-colour of
 ‘ its fruit attracted my eye. I had not long
 ‘ considered it, when I suspected that this plant
 ‘ might be that which I had been in quest of. I
 ‘ immediately tore it up with great eagerness,
 ‘ and, overjoyed at my good fortune, carried it
 ‘ to an Indian woman, whom I had also em-
 ‘ ployed to search for it. As soon as she saw it,
 ‘ she knew it to be one of their common reme-
 ‘ dies, and explained to me the use which the
 ‘ Indians made of it. Whatever presumption I
 ‘ had of this plant’s being the real *gin-feng*, I
 ‘ durst not, however, assure myself of it, as I
 ‘ had left my books at Quebec, and had only a
 ‘ confused

‘ confused idea, of F. *Jartoux*’s letter : I there-
 ‘ fore wrote an exact description of the plant I
 ‘ had found, and sent it to one of my friends at
 ‘ Quebec, who was well acquainted with bo-
 ‘ tany, in order that it might be compared with
 ‘ the letter, and with the engraving which re-
 ‘ presents the *gin-feng* of China.

‘ My friend had no sooner received my letter,
 ‘ than he set out for Montreal, and came to
 ‘ meet me at the place where I then resided,
 ‘ which was only three leagues distant. We
 ‘ immediately began to traverse the woods; and
 ‘ I allowed my companion to have the plea-
 ‘ sure of discovering the *gin-feng*, without my
 ‘ assistance. We did not continue our search
 ‘ long. As soon as we had gathered a few slips,
 ‘ we retired to a neighbouring hut, to compare
 ‘ them with the book. On the first view of the
 ‘ plate, the Indians knew their Canadian plant,
 ‘ which they called *garent-oguen*; and we had
 ‘ the pleasure of finding the most perfect re-
 ‘ semblance in our plant to the engraven figure,
 ‘ in shape, colour, proportion, leaves, seeds,
 ‘ knots and filaments; in short, the whole de-
 ‘ scription which F. *Jartoux* gives of it, was
 ‘ fully verified before our eyes; but what was
 ‘ my surprise when, towards the end of this

‘ missionary’s letter, observing an explanation
 ‘ of the word *gin-feng*, which signifies, in Chi-
 ‘ nese, *resemblance of man*, or *man’s thigh*, I per-
 ‘ ceived that the Iroquoise word *garent-oguen*
 ‘ had the same signification! *Garent-oguen* is
 ‘ a word composed of *orenta*, which signifies
 ‘ the *legs and thighs*, and of *oguen*, which means
 ‘ *things separated*. Making, therefore, the same
 ‘ reflection as F. *Jartoux* on the oddity of this
 ‘ name, which has been given it on account of
 ‘ a very imperfect resemblance that is even not
 ‘ found in many plants of this species, while it
 ‘ is common in others of a very different na-
 ‘ ture, I could not help concluding, that the
 ‘ same signification could not have been affixed
 ‘ to the Chinese word and to that of the Iro-
 ‘ quoise, without a communication of ideas,
 ‘ and consequently of persons. This observa-
 ‘ tion served to confirm me in the opinion I
 ‘ had before entertained, that America and Asia
 ‘ formed only one continent, and that they
 ‘ were united either by Tartary, or to the north
 ‘ of China.’

Though F. *Jartoux* in his letter has given a
 very accurate description of *gin-feng*, we how-
 ever think proper to add that of F. *Lafitau*, as
 it will better enable the reader to form an idea
 of

of this celebrated plant, and to judgè how far the Chinese *gin-feng* resembles that of Canada, and what affinity there is between them.

There are two distinct parts in the root ; one of which is a kind of turnep, and forms the body ; the other is like the neck of the turnep. The body of the root differs very little from our common turneps ; it appears whitish within, and a little rough. When cut horizontally, a circle is perceived formed by the outer rind, which is very thick, and contains a white ligneous body, representing a sun, by several straight lines, that proceed from the centre. The root, as it dries, becomes yellowish on the outside ; but the interior substance always preserves its whiteness.

These roots are various in their shapes ; there are some which abound with fibres, and there are others that have scarcely any. Some are plain, long and smooth ; others, on the contrary, are divided into two or three roots, which represent, but badly, the body of a man, taken from the middle downwards. From this resemblance, the plant has got the name of *gin-feng*, and *garent-oguen*.

The neck of the root is a collection of knots twisted together, and placed obliquely and al-

ternately, sometimes on one side, and sometimes on another. These knots are the remains of different stems produced by the root; and they indicate the age of the plant, which sends forth only one stem every year. That may be seen forming in autumn, which is to grow up the spring following. F. *Lafitau* says, that he found roots which appeared, by the number of their knots, to be near an hundred years old.

Sometimes a new neck is seen springing forth from the former, which then becomes barren. The stem shoots out from the neck of the root about two or three inches before it appears above the earth. The difficulty it finds of making its way bends it a little; but after it has got beyond the surface, it rises to the height of a foot, and even more. It is generally very straight, and perfectly smooth.

While the stem is in the earth, the earth whitens it; but after it has got into the open air, it changes to a beautiful mixture of green and purple, which becomes fainter, and disappears towards the knot.

This knot is formed on the summit of the stem, and is the centre of three or four branches, which are named thus, in conformity with the description of F. *Jartoux*; but, properly, they are

are only the stalks of the leaves. These branches extend horizontally, and, being equi-distant, form with their leaves an inverted umbrella, very convex. The green and purple colours again appear at the knot, but they vanish insensibly as they approach the leaves.

Some of these stems have only two branches; others, according to F. *Jartoux*, have five, and sometimes seven. F. *Lafitau* never saw any so bushy in Canada. The commonest have three or four branches; but those which have four are the prettiest.

Each branch contains five unequal leaves, which all proceed from the same centre, and extend in form of the open hand. The leaf in the middle is larger than the two next to it; and these again are larger than the two succeeding. F. *Jartoux* says, that there are never fewer than five leaves on each branch: however, F. *Lafitau* relates, that he found some which had only four, and even three. It may be easily perceived, that these variations are the consequence of some derangement occasioned by an accidental cause, or by the weakness of the plant, which has not had sap sufficient to make it expand to its natural size, or which has
become

become deformed through want of nourishment.

The leaves of this plant are oblong, indented, and extremely delicate; they are sharp-pointed, and bent back towards the extremity. The upper part is of a deep-green colour; the lower is whitish, and much smoother. The fibres, which are dispersed over all their superficies, are more raised on the lower part; and they appear to be covered with small white bristles.

The colours of the stem and branches become brighter as the plant approaches maturity; the green changes to a tarnished white; the red is no longer so dark; and, in autumn, the leaves, as they dry, either assume the colour of those that are withered, or a colour something like that of the leaves of the creeping vine.

From the centre of the knot where the branches are formed, arises a pedicle about five or six inches high, which appears to be a continuation of the first stem, and supports a cluster of small flowers, to which, some time after, succeed very beautiful fruit. These fruit are grafted at the base, upon the same number of small fibres, or distinct pedicles, an inch in length, equi-distant, and disposed in a spherical form.

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When the cluster begins to blow, a flower is perceived, which is exceedingly small, but very open and distinct. It consists of five whitish petals, disposed in the form of a star, as the flowers of those plants generally are which have the shape of an umbrella. They are supported by a calix, in the centre of which is a pistil, composed of two filaments, bent backwards, and surrounded by five stamina, covered with a rough, mealy substance, extremely white. These stamina soon become dry, and the mealy dust disappears.

The pistil of the flower, uniting itself to the calix, changes to a fruit, the sides of which are flattened, and marked with thick lines, that, in their direction, have a great resemblance to the ribs of a melon. In proportion as the fruit fills, these lines are effaced, and at length appear very faint; the skin becomes thinner, and more delicate, and covers a spongy pulp, of a yellow colour, from which issues a vinous juice, that has almost the same taste as the root and leaves of the plant. This fruit is at first of a deep-green colour, which whitens as it approaches maturity; but, when ripe, it changes to a beautiful crimson, and turns black as it dries. When the fruit is perfect, it contains two cells: these
inclose

inclose as many stones, which are hard, and marked on the sides in the same manner as the fruit; their kernels are white, and bitter to the taste, like the rest of the plant. There are some of these fruits which have only one stone; and there are others, that contain three.

Besides the cluster we have mentioned, some fruit are often observed upon separate pedicles, which are attached to the common pedicle, two or three inches below the umbrella; and sometimes they spring forth from the same knot from which the branches proceed. F. *Lafitau* even assures us, that he has seen upon one of these plants a second cluster, well formed, and growing upon a second pedicle, that shot up by the side of the former.

F. *Jartoux* says, that these supernumerary fruit indicate that other *gin-seng* plants may be found by keeping always in the same point of the compass towards which they are placed. F. *Lafitau* did not find this observation hold good in Canada: he is even of opinion, that no general conclusion can be drawn from these variations, except that the plants have greater strength, or are supplied with more nourishment, or, perhaps, that they grow in a better soil, and enjoy an exposition more favourable to their increase.

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We may form the same judgment respecting those stems which have more, or fewer branches. It is natural to believe, that they produce them either higher, or in greater number, in proportion to the sap which they contain: there are, however, some very high stems which have only two branches; and others, much lower and smaller, which have four. It appears, also, that the roots should increase according to their age; yet some are found very old, that are exceedingly slender; and others, which are remarkable for their size, though only seven or eight years old. The same root perhaps may undergo variations, and be bulkier one year, and slenderer another: at any rate, it is certain that they are susceptible of change, according to the difference of the seasons. In spring, they are very spongy, and their sap has no consistence; in autumn, they are firmer and more solid, and seem to have reached the utmost point of perfection.

F. *Lafitau* lost no time in transmitting to France an account of his discovery of *garentoguen*; and he sent thither one of the plants, preserved in spirits of wine. It was first presented to the regent, and afterwards deposited in the cabinet of M. de *Jussieu*, who was then

professor royal of botany. Upon the report which this gentleman made to the Academy of Sciences, *M. Danti d'Isnard*, who had formerly held the same office, started some doubts, which appeared to several members of that illustrious body to be well founded.

All the difficulty seemed to be, what degree of credit was due to the relation of *F. Fartoux*, to whose account was opposed that of *Kæmpfer*, who, in 1712, had published a book *, in which, when speaking of *gin-seng*, he gives a figure of this plant, entirely different from that of the missionary. The authority, therefore, on each side being equally respectable, it is reasonable that we should suspend our judgment.

Kæmpfer is not, however, the only author whose testimony can be opposed to that of *F. Fartoux*. *John Philip Breynius* published at Leyden, in 1700, a dissertation on the *gin-seng* root, and caused a figure to be engraven, which has no resemblance either to the plant of *Kæmpfer*, or to that of *F. Fartoux*. The author, it is true, gives his ideas only as conjectures, not knowing what side to take, since travellers differ

* This work is entitled, *Amœnitatum Exoticarum Politico-Physico-Medicarum Fasciculi V., &c.*

so much in their descriptions of the plant *gin-seng*: he is even of opinion, that the variation of their accounts ought to be attributed only to the different names given to this root. It is probable that these names are those of different plants which have been improperly confounded with *gin-seng*.

We may, then, safely conclude, that all the authors who have given us different descriptions of this plant have taken them from the false relations of others, who have been deceived also by a resemblance of names. The greatest share of credit, however, seems due to the account of F. *Jartoux*, who not only examined the plant in Tartary, where the learned allow that it grows, but was actually present when the army of Tartars, sent thither by the emperor of China, was employed in collecting it. An eye-witness, whose veracity and knowledge can neither be called in question, is, without doubt, better able to give us a just idea of this plant than *Kæmpfer* or any other author who never was in Tartary.

The figure of the *gin-seng*, which F. *Jartoux* delineated himself, must appear so much the more correct, and to be depended on, as it perfectly corresponds with that found in Canada.

nada. We may even say, that F. *Lafitau's* discovery was made in consequence of that figure, and the conjectures of his brother missionary, who seemed to reason with much justness, when he judged, from the idea given him of Canada, that this part of America was likelier to produce *gin-seng* than any other country, as it had so great a resemblance, both in climate and soil, to the forests of Tartary.

These reasons induced the Academy of Sciences to believe, that the Canadian plant, and that described by F. *Jartoux*, were real *gin-seng*. Messrs. *de Jussieu* and *Vaillant* even wrote to F. *Lafitau*, that they were of opinion, it could no longer be doubted.

F. *Lafitau* made no secret in Canada of his discovery. *Garent-oguen* is known there to every body, especially at Montreal, where it is sold by the Indians at a dear rate. None of it is found at Quebec; and less of it grows on the north, than on the south side of the river; but it is to be met with in great abundance towards the south; round Montreal, in the neighbourhood of lake Huron, and in the country of the Iroquoise. This plant is not to be found in woods of every kind: it would be vain to search for it in thick forests encumbered with
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underwood. It is only in woods consisting of tall, straight trees, the trunks of which are bare, and free from bushes, that it is to be discovered, amidst a prodigious variety of medicinal herbs, that grow at the bottoms of these trees, and between roots and stones, from which it is torn with difficulty.

The *gin-seng* of Canada delights in the shade, as well as the other plants with which these forests are filled. The roots that are left behind in the earth when this plant is dug up will grow, but they never produce others. The season proper for gathering it is that of its maturity; that is to say, from the month of September till the first appearance of snow. Those who are desirous of drying the leaves to use as tea, must collect them about the end of August, before they grow yellow.

The root is much better when dried than when it is taken from the earth: it is then impregnated with a moisture, which destroys its virtue, but which evaporates as it dries. This difference may be perceived even by its taste, as it is much stronger when dried than when it is green.

When F. *Lafitau* had discovered the *garentoguen*, he imagined that this plant might be a

species of mandragora, or mandrake. He was confirmed in this opinion by a passage of *F. Martini*, who, speaking of *gin-seng*, assures us, that no better idea can be given of it than by saying, that it is almost like our mandrake, except in its size, which is somewhat smaller; and that he does not doubt of its having the same properties and virtue.

But, if this missionary was right in calling *gin-seng* a species of mandrake on account of its figure, he was deceived, if he thought this name equally applicable to it from a resemblance of properties. Our mandrakes are narcotic, cooling and stupefying; and these qualities do not belong to *gin-seng*: however, the idea of *F. Martini* induced *F. Lafitau* to carry his researches farther. As he knew that all modern botanists agree in opinion, that our mandrake is different from the mandragora of the ancients, he thought that by a little inquiry, and comparing *gin-seng* with what the ancients have said of their mandragora, he should perhaps find it to be the ἀνδρομορφος of Pythagoras, and the mandragora described by Theophrastus. He does not, however, give his conjectures as facts: he submits them with modesty

defty to the judgment and decision of the learned.

His reasoning is as follows: Theophrastus is the first of the ancients who has written of plants. This author describes a mandragora that is unknown to us. It is certain, that he was unacquainted with ours, at least, under the name of mandragora; whence we may conclude, that the species mentioned by Theophrastus is lost, and that another has been substituted in its stead. It is easy to explain how the mandragora of the ancients might have been lost. First, it must undoubtedly have been in great request formerly, on account of its singular properties, of which all the ancient books speak; secondly, the difficulty attending the propagation of this plant must have rendered it scarce; and it is probable that it was found only in forests. The country being afterwards cleared from wood, and the roots of the mandragora having been torn up before its seeds came to maturity, the plant in a little time might have been gradually lost. We may conjecture that this will be the case with *gin-seng*, as it is very valuable, propagates slowly, and grows only in shady forests.

The mandragora of the ancients having been thus lost, another plant may have been substi-

tuted for it, on account of some properties common to both. Our mandrake has a root in some respects resembling the body of a man from the middle downwards; its seeds are white, and shaped like a small kidney; and this perhaps is all that it has in common with the mandragora of the ancients; but all these external properties are to be found in *gin-feng*. The ancient mandragora, however, had certain peculiar properties, which distinguished it from every other plant. To judge whether they have any affinity to those of the *gin-feng*, we must collect together what Theophrastus says of it.

First, Theophrastus says, that the mandragora has a stem; and he establishes some resemblance between it and the *ferula*, on which he bestows these two qualities: *It produces only one stem; and this stem springs up, and decays every year.* But what Theophrastus says of the mandragora and *ferula* is applicable also to *gin-feng*, which has only one stem, that grows and decays in the same year. This property does not agree with the two species of *solanum furiosum*, or *lethale*, which produce ten or twelve stems from one root. Thus the opinion of almost all botanists who believe these species of *solanum*, and particularly that to which the Ita-

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lians have given the name of *bella donna*, to be the mandragora of Theophrastus, is here confuted by Theophrastus himself.

Secondly, Theophrastus says, that, *The fruit of the mandragora have these properties—they are black, grow like grapes, and have a vinous taste.*

It is true, that the fruit of the *gin-feng* have a beautiful red colour when ripe: but when they dry on the plant, they become so black, that one can scarcely perceive that they have ever been red. This is the case with other plants the fruit of which assume different colours in succession.

If we consider the fruit of *gin-feng*, or the umbrella that bears them, we shall find that comparing them to a cluster of grapes is perfectly just, and that the same comparison is equally applicable to the fruit of both species of *solanum*, one of which, *the garden nightshade*, produces an umbrella, or cluster, like that of ivy; and the other produces only one grain, which is called *faba inversa*.

A vinous taste is peculiar to several plants that bear berries; the *gin-feng* is one of them; the juice which flows from its fruit, when pressed in the mouth, has great affinity in taste to that of its roots and flowers.

Thirdly, Theophrastus relates the superstitious ceremonies practised by the ancients when they gathered mandragora. F. Lafitau says, the Indians also make speeches to their medicinal herbs, and that they use a great many ceremonies when they set out to collect them.

Fourthly, Theophrastus ascribes to his mandragora the following virtues: 'Its leaves,' says he, 'when kneaded with meal, heal ulcers; its root, scraped and soaked in vinegar, is good for the erysipelas, for all fluxions of the gout, and to procure sleep. It is administered either in vinegar or wine.' He adds, that the manner of preserving it is to cut it into slices, which must be strung like beads, and suspended in the smoke.

All these effects of the mandragora will be found to have great affinity to those of *gin-seng*, if they be compared with what we have said respecting the qualities of that plant.

When Theophrastus assures us that the mandragora is good for procuring sleep, he says nothing but what is known by many experiments to be a property of *gin-seng*; but *gin-seng* does not produce this effect by a cold, stupefying, narcotic quality, but by removing the causes which prevent sleep.

THE FOU-LIN.

WE must not confound this plant with the *tou-fou-lin*, or what is commonly called in Europe *China root*. The latter is very common in China, and is sold at a moderate price; whereas *fou-lin* is exceedingly dear, and holds a distinguished rank among the medicinal plants which grow in that country.

The Chinese Herbal, describing the *fou-lin*, gives it neither stem, leaves nor flowers; from which we are inclined to think that it is a kind of mushroom. The best roots of the *fou-lin* were found in the province of Chen-si; but some superior have been since discovered in the province of Yun-nan, which are the only kind sent to court, where they are sold at a *taël* the pound. This root grows also in the province of Tche-kiang, and is used in the southern provinces. This *fou-lin* is much cheaper; but it is nowise to be compared to that of the province of Yun-nan. A physician, one of the literati, has remarked, that the *fou-lin* of Tche-kiang, being soft and spongy, and having less strength and substance than that of Yun-nan, cannot stand the sharp, nitrous air of Pe-king: on the contrary, the *fou-lin* of the provinces of Yun-

nan and Chen-si has few pores, and is very solid and weighty.

The *fou-lin* grows always in the neighbourhood of pines, at the distance of about two yards from the largest trees; but, in order to find it, the earth sometimes must be dug up to the depth of six or seven feet. The Chinese pretend that a delicate vapour exhales from the spot where this root is inclosed, which does not escape the eye of the experienced botanist. Good *fou-lin* remains in the earth without rotting, and without being hurt by worms; and the longer it has continued there, its substance is so much the more perfect. F. d'Entrecolles speaks thus of this root in one of his letters: 'The Chinese Herbal,' says he, 'assures us, that a good *fou-lin* is found in the earth, on the mountains, or in valleys near which old pines have been cut down; that it is from the subtle and spirituous substance which flies off from these pines, and which is dispersed throughout the soil, that it is formed, and receives its nourishment: whence I apprehend that the *fou-lin* may spring up in the same manner as some kinds of mushrooms, which do not adhere to the earth by any visible root. Perhaps the *fou-lin* is a species of *fungus* from the large roots

‘ roots of pines that have been cut down ; the
 ‘ nutritive juices of which, being kept back,
 ‘ are collected together, and produce this sub-
 ‘ stance, which is at first soft, and more or less
 ‘ spongy in proportion to the resinous quality
 ‘ of the pine. The *fou-lin* which I have had in
 ‘ my hands appeared to me never to have had
 ‘ any roots by which it adhered to those of
 ‘ the pine ; and no mention is made of them in
 ‘ any book : but if it attaches itself strongly to
 ‘ the roots of the pine, we may consider it as
 ‘ a mistletoe peculiar to these roots, especially as
 ‘ the pine often has on its trunk a kind of moss,
 ‘ united to it by no fibre, although it derives
 ‘ its nourishment from it. A physician,’ adds
 this missionary, ‘ having assured me that *fou-lin*
 ‘ was planted and raised by culture, I at first
 ‘ thought that I had been deceived in my con-
 ‘ jectures, when I classed it with the *fungi* ; but
 ‘ when he added, that he believed it had neither
 ‘ stem nor leaves when planted, I recurred to
 ‘ my former opinion ; for, having read in the
 ‘ dictionary of our academy, that there are
 ‘ places where small mushrooms are trans-
 ‘ planted, in order that they may grow larger,
 ‘ and that, when transplanted, they shoot forth
 ‘ neither stem, branches nor leaves, it appeared
 ‘ to

‘to me, that this might be the case with the
‘*fou-lin* which is transplanted and cultivated.’

When the *fou-lin* is to be used, it is prepared by stripping off its rind, which has no virtue, and by boiling the remaining substance for a few seconds. The properties attributed to this root by the Chinese physicians are very numerous: it is mild and temperate in its operation, it contains nothing hurtful, and has no need of any corrective. They recommend it as of great service in diseases of the liver and breast, for the asthma, dropsy, suppression of urine, for flatulencies, and for dissolving phlegm. They assure us also, that it stops vomitings, prevents convulsions in children, and that, by strengthening the reins, it procures women a safe and easy delivery. Those who take this medicine are advised to abstain from vinegar, and every thing acid, during the time they use it. As we know that the *fou-lin* grows always in the neighbourhood of pines, it might probably be found in Europe, were proper search made for it.

THE TI-HOANG.

THE Chinese give this name to the root of the large comfrey: the best is found in the province of *Ho-nan*, in the neighbourhood of the
city

city *Hoai-king*. The roots of this plant, when dried, are of the size of one's finger, but much longer. The Chinese physicians ascribe to these roots a great number of salutary properties; and the use of them has become very common in all the provinces. Rich people who are careful of their health take pills of *ti-boang* every morning, as people in Europe drink tea, coffee and chocolate. Some cut it into thin slices, and use it in decoction, or when baked in the steam of boiling water: others pound it, and form it into boluses, which they swallow with warm water. Five other kinds of plants, or ingredients, are commonly added to it, which are aromatic, cordial, diuretic, acid and a little soporific; but the *ti-boang* is always the basis of these pills.

PLANTS WANTING IN CHINA.

IF the vast empire of China contains a multitude of simples and medicinal plants unknown in Europe, there are also several common in Europe which are not to be found in China. The emperor *Kang-hi*, who knew the good effects of the theriaca of Andromache, was desirous one day to have this composition made in his palace: on that account, it was necessary

to search for vipers, and some plants which were not to be had in the shops and store-houses in Pe-king, and, among others, for master-wort and gentian. The emperor appointed for this purpose several European missionaries, all of different nations; to these he added the most skilful of the Chinese botanists, and ordered some mandarins to conduct them to the neighbouring mountains, to the banks of rivers, and other places where it was probable they would find the plants they wanted; but all their researches were fruitless: they did not even find vipers. The same *Kang-hi* was extremely desirous that a confection of kermes might be made in China, like that used in Europe, as it had given him frequent relief in palpitations of the heart, to which he was subject. He ordered kermes to be sought for throughout every province of the empire, and even in Tartary; but none of the botanists were able to discover them. Shrubs with red fruit were brought from all quarters; but none of them was that which produces kermes. ‘I have attended,’ says F. Parnin, ‘the emperor of China, for eighteen years, in all his journies into Tartary; I have had successively for my companions M. Bourghese, physician to the
‘deceased

‘ deceased Cardinal de Tournon, Fathers Frap-
‘ pere, Rhodes, Parmenio, Costa, Rouffet, all
‘ Jesuits of different nations, some of them sur-
‘ geons, and others apothecaries; and, last of
‘ all, the Sieur Gagliardi, surgeon to the hospital
‘ of Saint Esprit at Rome. In all these jour-
‘ nies, we never found any thing but what is
‘ to be met with in other places; such as very
‘ beautiful angelica, although it was not culti-
‘ vated; the brows of the mountains were co-
‘ vered with white dittany, parsneps, asparagus,
‘ wild fennel, celadine, cinque-foil, agrimony,
‘ pennyroyal, house-leeks and plantains, both
‘ large and small. In the small valleys between
‘ the hills there are whole forests of beautiful
‘ artemisium, and wormwood different from
‘ that of Europe; but fern is never seen, except
‘ on the high mountains. In vain did we seek
‘ for gentian, master-wort, juniper and the
‘ ash-tree: we found nothing that had the least
‘ resemblance to them. I have written to our
‘ missionaries in the provinces, to send me
‘ some; but they have not been able to find them:
‘ all this, however, does not prove that such
‘ plants do not exist in China, or in Tartary.
‘ These countries are a world which we have
‘ not yet travelled over: but those are mis-
‘ taken

‘ taken who think that, if there be any of these
 ‘ plants there, they must be very rare and un-
 ‘ common.’

NGO-KIA.

WE cannot here omit a celebrated drug called in China *Ngo-kia*, the composition of which will no doubt appear as singular as the numerous properties ascribed to it. In the province of *Chan-tong*, near *Ngo-bien*, a city of the third class, is a well, formed by nature, which is reckoned to be seventy feet in depth, and which has a communication, as the Chinese say, with some subterranean lake, or other large reservoir. The water drawn from it is exceedingly clear, and much heavier than common; and if it be mixed with muddy water, it purifies it, and renders it limpid, by precipitating all its impurities to the bottom of the vessel. This water is employed in making the *ngo-kia*, which is nothing else but a kind of glue procured from the skin of a black ass.

The animal is killed and flayed, and the skin is steeped for five days in water drawn from this well. At the end of that time, it is taken out to be scraped and cleaned; it is afterwards cut into small pieces, which are boiled over a
 flow

slow fire, in the same kind of water, until it is reduced to a jelly, which is strained, while warm, through a cloth, to free it from all the gross matter which could not be melted. When this glue is cool, and has acquired a consistence, it is formed into square cakes, upon which the Chinese imprint characters and coats of arms, or the signs of their shops.

This well is the only one of the kind in China; it is always shut, and sealed by the governor of the place with his own seal, until the customary day of making the emperor's glue. This operation generally lasts from the autumnal harvest till the month of March. During that time, the neighbouring people and merchants treat for the purchase of the glue with those who guard the well, and with the people who make it. The latter manufacture as much of it as they can, on their own account, with this difference, that it is not so pure, and that they are less scrupulous in examining whether the ass be fat, or of a very black colour: however, all the glue made here is as much esteemed at Peking as that which the mandarins who are on the spot transmit to court and to their friends.

As

As this drug is in the greatest request, and as the quantity of it made at *Ngo-bien* is not sufficient to supply the whole empire, there are not wanting people who counterfeit it elsewhere, and who manufacture a spurious kind from the skins of mules, horses and camels, and sometimes even from old boots: it is, however, very easy to distinguish that which is genuine; it has neither a bad smell nor a disagreeable taste when applied to the mouth; it is brittle and friable, and always of a deep-black colour, sometimes inclining to red. The qualities of the counterfeit kind are entirely different; both its taste and smell are disagreeable; and it is viscous and flabby, even when made of the skin of a hog, which is that which imitates it best.

The Chinese attribute a great number of virtues to this drug. They assure us that it dissolves phlegm, facilitates the play and elasticity of the lungs, gives a free respiration to those who breathe with difficulty; that it comforts the breast, increases the blood, stops dysenteries, provokes urine, and strengthens children in the womb. Without warranting the truth of all these properties, it appears, at least, certain, by
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the testimony of the missionaries, that this drug is serviceable in all diseases of the lungs. It is taken with a decoction of simples, and sometimes in powder, but very seldom.

C H A P. IX.

QUADRUPEDS, BIRDS, BUTTERFLIES AND
FISHES OF CHINA.

THE mountains and vast forests of China abound with wild animals of every species; such as the rhinoceros, elephants, leopards, tygers, bears, wolves, foxes, buffaloes, camels, horses, wild mules, &c. Some beavers, fables and ermines are found in the northern provinces; but the skins which they furnish are much inferior to those procured from Siberia.

Game is very common in China. The squares of Pe-king, during winter, are filled with different heaps of various kinds of volatile, terrestrial and aquatic animals, hardened by cold, and perfectly secure against all corruption. Prodigious quantities of stags, deer, wild boars, goats, elks, hares, rabbits, cats, squirrels and

wild rats, geese, ducks, partridges, pheasants and quails are seen there, together with several other kinds of game, that are not to be found in Europe.

The Chinese horses have neither the strength, beauty, nor swiftness of ours; and the inhabitants of the country have not the art of breaking them: they are obliged to castrate them; and this operation renders them mild and tractable. Those intended for military service are so timid, that they betake themselves to flight as soon as they hear the neighing of the Tartar horses: besides, as they are not shod, their hoofs are soon destroyed; so that, in six years, the best horse becomes unfit for service.

A kind of tyger is seen in China which has a body like a dog, but no tail. 'He is remarkably swift and ferocious. If any one meets this animal, and, to escape' from his fury, climbs up a tree, he immediately sends forth a loud yell, and several others arrive, which, all together, dig up the earth round the roots of the tree, and overturn it: but the Chinese have lately found out a method of destroying them.— A certain number of people assemble towards evening, and raise a circle of strong pales, in which they shut themselves up; they afterwards

wards imitate the cry of the animal, which attracts all those in the neighbourhood; and while these ferocious beasts are digging up the earth in order to overturn the palisade, the Chinese despatch them with their bows and arrows, without being exposed to danger.

Camels, both wild and domestic, are found in the north-east parts of China. ‘The camel,’ says a Chinese writer, ‘in his body, resembles
 ‘ a horse; he has a head like that of a sheep;
 ‘ his neck is long, and his ears hang down; he
 ‘ has three joints in his legs, and two bunches
 ‘ of flesh on his back, which form a kind of
 ‘ saddle; he chews the cud, endures cold without
 ‘ pain, and is naturally afraid of excessive
 ‘ heat: hence it happens, that, at the summer
 ‘ solstice, he sheds his hair, and his skin be-
 ‘ comes entirely naked. He can bear a burden
 ‘ of three thousand Chinese pounds in weight,
 ‘ and travel two or three hundred *lys* in a day;
 ‘ by natural instinct, he foresees an approach-
 ‘ ing storm of wind, and discovers springs hid
 ‘ in the earth: by digging in the place where
 ‘ the camel beats with his foot, one is certain
 ‘ of finding water below. Scorching winds fre-
 ‘ quently arise during summer, which suffocate
 ‘ the traveller in an instant: when the camels

‘ flock together with loud cries, and bury their
 ‘ muzzles in the sand, it is a sure sign that this
 ‘ wind is about to blow. He sleeps without
 ‘ touching the earth with his belly. Camels
 ‘ which, when laid down to rest on their
 ‘ bended legs, leave space between their bodies
 ‘ and the ground for the light to pass through,
 ‘ are called *min-to*, or *transparent camels*; and
 ‘ these are the kind which can perform long
 ‘ journies. There are others, named *fong-kio-*
 ‘ *to*, or *wind-footed*, on account of their great
 ‘ swiftness: they can travel a thousand *lys* in
 ‘ a day.’

The fat found in the bunches of the wild camels, which is named *bunch-oil*, is much used in the Chinese medicine.

There are several species of apes in China. Those named *sin-sin*, differ from the rest in their size, which is equal to that of an ordinary man. They walk with facility on their hind legs; and all their actions have a singular conformity to ours.

The most beautiful quadruped of China is a stag, which is never larger or smaller than one of our middle-sized dogs. The princes and mandarins buy them at an excessive price, and keep them as curiosities in their gardens. They have
 also

also another species, of an enormous size, which they call the *horse-stag*.

China possesses a valuable animal, which is not to be found any where else : it is the *hiang-tchang-tse*, or *musk-deer*. This animal is very common, and is met with, not only in the southern provinces, but also in those which are to the west of Pe-king : it has no horns ; and the colour of its hair approaches near to black, The bag which contains its musk is formed of a very thin membrane covered with a kind of hair exceedingly fine and soft. The flesh of this deer is well-tasted, and is served up at the most delicate tables. The following extract of a letter, written from Pe-king, by a Jesuit missionary, will convey a better idea of this singular animal ;

‘ To the west of the city of Pe-king,’ says this missionary, ‘ rises a chain of mountains, in the midst of which we have a Christian settlement, and a small church. Among these mountains are found a kind of musk-deer. While I was engaged in the duties of my mission, some poor inhabitants of the village went out to hunt, in hopes that I would purchase their game to carry to Pe-king. They killed two of these animals, a male and a female,

' which they presented to me, yet warm and
 ' bloody. Before we agreed on the price, they
 ' asked me if I would take the musk also ;
 ' because there are some who, satisfied with
 ' the flesh of the animal, leave the musk to the
 ' hunters, who afterwards sell it. As it was the
 ' musk that I wanted chiefly, I told them I
 ' would purchase the whole animal. They im-
 ' mediately took the male, cut off its bag, and
 ' tied it at the extremity with a packthread,
 ' that the musk might not evaporate. The
 ' animal and musk cost me only a crown.
 ' The musk is formed in the interior part of
 ' the bag, and adheres to it like a kind of salt.
 ' Of this musk there are two kinds ; that com-
 ' posed of grains, which is called *teu-pan-hiang*,
 ' is the most valuable : the other, named *mi-*
 ' *hiang*, which is very fine and delicate, is less
 ' esteemed. The female produces no musk ; at
 ' least, the substance which has any appearance
 ' of it is entirely void of smell.

' The flesh of serpents is the usual nourish-
 ' ment of this animal. Although these reptiles
 ' are generally of an enormous size, the musk-
 ' deer finds no difficulty in killing them ; be-
 ' cause, when a serpent is at a certain distance,
 ' it is immediately overcome by the effluvia of
 ' its

‘ its musk : it is deprived of sensation, and re-
 ‘ mains without moving. This fact is so cer-
 ‘ tain, that the peasants who go in quest of
 ‘ wood, or to dig coals in the mountains, find
 ‘ no better method of guarding themselves
 ‘ against serpents, than to carry about them
 ‘ some grains of musk : they may then, after
 ‘ dinner, enjoy a sleep in perfect security. If a
 ‘ serpent approaches them, it is suddenly stun-
 ‘ ned by the odour of the musk, and becomes
 ‘ incapable of advancing any farther.

‘ What happened when I was returning to
 ‘ Pe-king is, in some manner, a new proof,
 ‘ that the flesh of serpents is the principal food
 ‘ of the musk-deer. A part of the animal I had
 ‘ bought was served up for supper. One of the
 ‘ guests had always shewn great horror at the
 ‘ sight of a serpent ; and his aversion to this
 ‘ reptile was so strong, that he could not hear
 ‘ its name pronounced without the most violent
 ‘ agitation. He knew nothing of the manner
 ‘ in which the musk-deer fed ; and I was care-
 ‘ ful not to give him the least hint of it ; but
 ‘ I watched his looks with great attention. He
 ‘ took some of the flesh of the animal, with
 ‘ intention of eating ; but he had scarcely put
 ‘ a bit to his mouth, when he was seized with

‘ an extraordinary nausea, and refused to touch
 ‘ it again. The rest of the company eat heartily,
 ‘ and he was the only person who shewed any
 ‘ dislike to this kind of food.’

In the thick forests of Tartary, to the north of the great wall, there is found a species of *flying fox*. His wings are only thin membranes, which extend from one foot to another, and reach to his tail. This animal never flies but by darting himself from the top of one tree to another, which is lower : he has not the power of raising himself, and of flying as he mounts. A kind of *flying rat* is also seen near *Keou-cuai* : it is larger than a common rat, and has wings like those of the fox already mentioned.

A much more extraordinary rat, called the *fen-chou*, is found beyond *Tai-tong-kiang*, upon the coasts of the northern sea, which is almost always frozen. This animal is shaped like a rat; but it is as large as an elephant. It inhabits obscure caverns, and carefully shuns the light. The ivory it furnishes is as white as that procured from the elephant ; but it is much easier to be worked, and never splits. An ancient Chinese book, called *Chin-y-king*, speaks of this animal in the following words : ‘ There is, in
 ‘ the northern extremities, amidst the snow and
 ‘ ice

‘ice which cover the country, a *chou* (a rat) which weighs a thousand pounds : its flesh is very good for those who are over-heated.’— Another kind, of a less size, is also mentioned, which is only as large as a buffalo : it burrows in the earth, like the mole, flies from the light, and remains almost always shut up in its subterranean retreats. What we have here related is extracted from a printed collection of observations by the celebrated emperor *Kang-hi*.

China has birds of every species : eagles, falcons, pelicans, birds of paradise, swans, stoiks and paroquets, which are inferior to those of the West-Indies neither in the variety nor beauty of their plumage, nor in the facility with which they learn to speak. But the most beautiful bird of China, and perhaps of the whole world, is the *kin-ki*, or *golden fowl*. The body of this bird is proportioned with wonderful elegance ; and the brilliancy of its plumage seems to be the utmost effort of the pencil of Nature. Nothing can be richer, or more variegated than its colours. The shades of its wings and tail are a mixture of bright red and yellow, and a beautiful plume waves over its head. The flesh of this bird is more delicate than

than that of a pheasant. It is found in the provinces of *Se-tchuen*, *Yun-nan* and *Chen-si*.

The most lively, courageous and spirited bird of this country, and that which the Chinese consider as the king of their birds of prey, is the *hai-tsing*. It is very rare, and never appears but in the province of *Chen-si*, and in some cantons of Tartary. When any person catches one of these birds, he is obliged to carry it to court, and present it to the emperor's falconers.

The butterflies found on the mountain *Le-feou-chan*, situated in the province of *Quang-tong*, are so much prized, that they are sent to court. They are of greater size than those of Europe, and their wings are much broader. Their colours are variegated in an extraordinary manner, and have a surprising brightness. These butterflies remain motionless on the trees in the day-time, and they suffer themselves to be taken without difficulty. In the evening, they begin to flutter about, almost in the same manner as bats, which some of them seem to equal in size, on account of the extent of their wings. The Chinese also boast much of the butterflies found on the mountains called *Sichan*,

chan, in the province of *Pe-tcheli*; but they are small, and not so much valued as those of the mountain *Lo-feou-chan*.

It would be difficult to give an exact list of the names of all the different kinds of fish to be found in the lakes, rivers and seas of China. The missionaries to whom we are indebted for the greater part of the knowledge we have concerning this empire, have not yet thrown sufficient light upon that branch of natural history. They, however, assure us, that they observed in China the greater part of the fishes seen in Europe; such as lampreys, carp, pike, foals, salmon, trout, herrings, sturgeon, &c. The Chinese highly esteem a fish which they call *tcho-kia-yu*, or the *fish in armour*. They give it this name, because its body is defended by sharp scales, ranged in straight lines, and laid one over the other, like tiles on a roof. The flesh of this fish is very white, and it tastes almost like veal. It generally weighs forty pounds. When the weather is fine, they catch another kind of fish, which is so extremely white, that it is called the *flour-fish*. It is, above all, remarkable for its black eye-balls, which appear as if set in two sockets of the most brilliant silver. This fish is found in such abundance

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on the coast of the province of *Kiang-nan*, that four hundred pounds weight of them are sometimes taken at one haul with a net.

The coasts of the province of *Tche-kiang* swarm with a species of fish which have a great resemblance to the Newfoundland cod. An incredible quantity of them is consumed on the sea-coast of Fo-kien, besides what are salted on the spot, to be transported to the interior parts of the country. What proves that this fish must be remarkably plenty, is, that they are sold at a low rate, although the merchants are subjected to great expence, in going to the places where they purchase them. They must first give money to the mandarin, for permission to carry on this trade; they must afterwards hire barks, buy the fish as they are taken from the nets, and stow them in the holds of their vessels, between layers of salt, in the same manner as herrings are packed into casks at Dieppe. It is by using such precaution, that this fish keeps. Notwithstanding the excessive heats, it is transported to the remotest provinces of the empire. The missionaries speak of another kind of fish, the figure of which is as singular as it is frightful and disgusting. The Chinese call it *bai-seng*; it makes one of their commonest dishes;

dishes ; and there is scarcely any entertainment given at which it is not served up. It is generally seen floating near the sea-coasts of *Chang-tong* and *Fo-kien*. The missionaries at first took it for a lump of inanimate matter ; but, having made some of the boys belonging to their vessel catch it, they perceived that this shapeless mass was a living and organized being. It swam about in the tub into which they first threw it, and lived for a long time. The Chinese sailors told the missionaries, that this fish has four eyes and six feet, and that its shape is like that of a man's liver ; but, notwithstanding all the attention with which they examined it, they could only discover two places where it appeared to have sight ; for it seemed afraid, when any one's hand approached them. If every thing that enables the *hai-feng* to move is to be considered as feet, all those small excrescences, like buttons, which are dispersed over its body may be accounted as such. It has neither mouth nor bones ; and it dies on being pressed. This fish is easily preserved, when put into salt ; it is transported in that manner, and sold as a delicacy throughout the whole empire : it was not, however, much relished by the missionaries.

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The most singular of the Chinese fishes is that which the emperor *Kien-long* mentions in his poem in praise of *Moukden*. The Mantchew Tartars call it *calfini*, and the Chinese *pimou-yu*. This animal appears to be only half a fish; it is flat, and has a great resemblance to the sole of a shoe; its scales are very fine; its colour is blackish; it has only one eye, and one of its sides is without either scales or fins. This fish cannot swim but when it unites itself to a companion; and these two fishes joined together seem to form only one.

The Chinese have a salt-water fish which they call *ming-fou-you*, that is literally the *fish with a bright belly*. It has a round head, and its mouth is like the beak of a falcon. It has eight legs round its head; but it has neither scales, tail, nor bones. *The Geography of Moukden* adds, that it has two tufts of a beard, which resemble two bunches of cord. During a storm, or when the waves are too strong, or too much agitated, it extends its beard, and uses it as cords, to attach itself to the bottom of the sea, or to the rocks. The name *nigmeré*, which the Mantchew Tartars give it, signifies *a moored bark*.

The *choui-ting*, or *sea-nail*, is a round fish, shaped like a nail, and its mouth is in the form
of

of a ship's anchor. When it hears a noise, or perceives any one approaching, it hooks itself to the bottom of the water, and remains there motionless, like a bark at anchor. It is only three inches in length.

The small domestic fish which the Chinese call *kin-yu*, or *gold-fish*, are generally kept for ornament by great people, in their courts and gardens. They breed them in small ponds made for the purpose, in basons, and even in porcelain vessels. This fish is no larger than our pilchard. The male is of a bright-red colour from the top of the head to the middle of the body; the rest is of a gold-colour; but it is so bright and splendid, that the finest gilding, according to *F. le Comte*, cannot approach it. The female is white; but its tail and half of its body resemble the lustre of silver*. — Gold-fish are light and lively; they love to sport on the surface of the water, soon become familiarized, and may even be accustomed to

* *F. Du Halde* observes, that a red and white colour are not always the distinguishing marks of the male and female; but that the females are known by several white spots which are seen round the orifices that serve them as organs of hearing, and the males, by having these spots much brighter.

In warm countries, these fish multiply fast, provided care be taken to collect their spawn, which floats on the water, and which they almost entirely devour. This spawn is put into a particular vessel exposed to the sun, and preserved there until vivified by the heat: gold-fish, however, seldom multiply when they are kept in close vases, because they are then too much confined. In order to render them fruitful, they must be put into reservoirs of considerable depth, in some places at least, and which are constantly supplied with fresh water.

At a certain time of the year, a prodigious number of barks may be seen in the great river *Yang-tse-kiang*, which go thither to purchase the spawn of these fish. Towards the month of May, the neighbouring inhabitants shut up the river in several places with mats and hurdles, which occupy an extent of almost nine or ten leagues; and they leave only a space in the middle sufficient for the passage of barks. The spawn of the fish, which the Chinese can distinguish at first sight, although a stranger could perceive no traces of it in the water, is stopped by these hurdles. The water mixed with spawn is then drawn up, and after it has been put into large vessels, it is sold to merchants,

VOL. I. chants,

In warm countries, these fish multiply fast, provided care be taken to collect their spawn, which floats on the water, and which they almost entirely devour. This spawn is put into a particular vessel exposed to the sun, and preserved there until vivified by the heat: gold-fish, however, seldom multiply when they are kept in close vases, because they are then too much confined. In order to render them fruitful, they must be put into reservoirs of considerable depth, in some places at least, and which are constantly supplied with fresh water.

At a certain time of the year, a prodigious number of barks may be seen in the great river *Fang-tse-kiang*, which go thither to purchase the spawn of these fish. Towards the month of May, the neighbouring inhabitants shut up the river in several places with mats and hurdles, which occupy an extent of almost nine or ten leagues; and they leave only a space in the middle sufficient for the passage of barks. The spawn of the fish, which the Chinese can distinguish at first sight, although a stranger could perceive no traces of it in the water, is stopped by these hurdles. The water mixed with spawn is then drawn up, and after it has been put into large vessels, it is sold to merchants,

chants, who transport it afterwards to every part of the empire. This water is sold by measure, and purchased by those who are desirous of stocking their ponds and reservoirs with fish.

SILK-INSECTS.

THESE insects, which are different from silk-worms, resemble caterpillars, and are found in great numbers on the trees and in the fields of the province of *Chang-tong*. They propagate without any care, and feed indiscriminately on the leaves of the mulberry, and on those of other trees. They do not spin their silk circularly and in the same manner as common silk-worms, which form theirs into balls: they produce it in filaments and long threads, which, being carried away by the wind, are caught by the trees and bushes that grow in the fields. The Chinese collect these threads, and make a kind of stuff of them, called *kien-tcheou*, which is much inferior in lustre to those manufactured of common silk; one would take it, at first sight, for coarse woollen stuff or drugget: it is, however, much esteemed in China, and sold there sometimes for more than the richest satin. This stuff is closely woven, it never cuts, lasts very long, washes like linen, and, when manufactured

nufactured with care, is not susceptible of being spotted, even with oil. The insects which produce this singular silk are of two kinds; one are larger and blacker than our silk-worms, and are called *tsouen-kien*; the other are smaller, and known by the name of *tiao-kien*. The silk of the first species of these worms is of a reddish gray; that of the second is blacker, and the cloth made of them partakes of both these colours.

THE OU-POEY-TSE.

THE Chinese give this name to a kind of nests made by certain insects upon the leaves and branches of the tree called *yen-fou-tse*. These nests are much used in 'dying, and the physicians employ them for curing many distempers. Some of these nests were brought to Europe, and put into the hands of the celebrated Mr. Geoffroy. After having examined them with the utmost attention, this learned academician thought he perceived some conformity in them to those excrescences which grow on the leaves of the elm, and which the vulgar call *elm-bladders*: he found these nests so sharp and astringent to the taste, that he considered them as far superior to every other species of

galls used by the dyers. According to him, they are the strongest astringents existing in the vegetable kingdom.

It is certain that there is a great affinity between the *ou-poey-tse* and the *elm-bladders*. The form of both is unequal and irregular; they are covered on the outside with a short down, which renders them soft to the touch; within they are full of a whitish-gray dust, in which may be observed the dried remains of small insects, without discovering any aperture through which they might have passed. These nests, or bladders, harden as they grow old; and their substance, which appears resinous, becomes brittle and transparent: however, the Chinese do not consider the *ou-poey-tse*, notwithstanding their resemblance to *elm-bladders*, as excrescences of the tree *yen-fou-tse*, upon which they are found. They are persuaded, that insects produce a kind of wax, and construct for themselves on the branches and leaves of this tree (the sap of which is proper for their nourishment) little retreats, where they may wait for the time of their metamorphosis, or, at least, deposit in safety their eggs, which compose that fine dust with which the *ou-poey-tse* are filled. Some of the *ou-poey-tse* are as large as one's fist; but

but these are rare, and are generally produced by a worm of extraordinary strength, or which has associated with another, as two silk-worms are sometimes seen shut up in the same ball. The smallest *ou-poey-tse* are of the size of a chestnut; the greater part of them are round and oblong; but they seldom resemble one another entirely in their exterior configuration. At first, they are of a dark green colour, which afterwards changes to yellow; and the husk, though pretty firm, becomes then very brittle.

The Chinese peasants collect these *ou-poey-tse* before the first hoar-frosts. They take care to kill the worm inclosed in the husks, and to expose them, for some time, to the steam of boiling water. Without this precaution, the worm might soon break through its weak prison, which would immediately burst and be useless. The *ou-poey-tse* are used at Pe-king, for giving paper a durable and deep-black colour; in the provinces of Kiang-nan and Tche-kiang, where a great deal of beautiful satin is made, they are employed for dying the silk before it is put on the loom. The Chinese literati also blacken their beards with them when they become white.

The

The medicinal properties of the *ou-poey-tje* are very numerous. The Chinese physicians introduce them into the composition of many of their remedies. They recommend them for stopping bleedings of every kind; they consider them as an excellent specific for curing inflammations and ulcers, and for counteracting the effects of poison; and they employ them with success in the dropsy, phthisis, epilepsy, catarrhs, sickness, fluxions of the eyes and ears, and in many other disorders.

END OF THE FIRST VOLUME.