# GEOGRAPHIC HISTORY
OF
# QUEENSLAND.

A. MESTON.

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*DEDICATED TO THE QUEENSLAND PEOPLE.*

BY ARCHIBALD MESTON.

"In all other offices of life I praise a lover of his friends, and of his native country, but in writing history I am obliged to divest myself of all other obligations, and sacrifice them all to truth."—*Polybius.*

"Polybius weighed the authors from whom he was forced to borrow the history of the times preceding his own, and frequently corrected them, either by comparing them with each other, or by the light which he had received from ancient men of known integrity among the Romans, who had been conversant with those affairs which were then managed, and were yet living to instruct him. He who neglected none of the laws of history was so careful of truth that he made it his whole business to deliver nothing to posterity which might deceive them."—*Dryden's "Character of Polybius."*

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# AUTHOR'S PREFACE.

Geography and history being two of the most important branches of human knowledge, and two of the most essential in the education of the present age, it seems peculiarly desirable that a book devoted to both subjects should be made interesting, and appear something more than a monotonous list of names and cold bare facts, standing in dreary groups, or dismal isolation, like anthills on a treeless plain, destitute of colouring, life, and animation.

In accordance with that belief, I have left the hard and somewhat dusty orthodox roadway, and cut a "bridle track" in a new direction, gladly believing that the novelty and variety will in no way interfere with the instruction, which is the primary guiding principle of the work.

Information concerning the early history of the colony is widely scattered, like gold on an alluvial field, and important facts, like large nuggets, are found as frequently by mere accident as laborious research.

All is from original sources, and in no case has any intermediate authority been accepted.

The author's acquired qualification for the work is represented by twenty-two years' residence, an intimate personal knowledge of all parts of Queensland, and complete acquaintance with the historic and geographic literature of Australia from the earliest period to the present time. He is animated by a patriotic desire to assist in convincing all Queenslanders, young and old, that their own country is one of the most attractive and interesting in the world, and will leave *them* to discover if the book possesses any merit beyond the accuracy which he guarantees.

A. MESTON.

Brisbane, February, 1895.

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# HISTORICAL GEOGRAPHY OF QUEENSLAND.

## AUSTRALIA.

The name "Australia" was suggested in 1814 by Flinders, who derived it from the "Australia del Espiritu Santo" of Torres and de Quiros, who, in 1606, gave that title to one of the New Hebrides Islands, in the belief that it was the great "Tierra Austral," the "Southern Continent" mentioned by earlier navigators.

The French claim the first discovery of Australia for their countryman De Gonneville, in 1503, but the evidence is not clear enough to show whether he really saw the continent itself, or only Java or New Guinea.

The first mariners who saw this mighty Southern Continent are lost for ever in oblivion. As the Norsemen found America centuries before Columbus, there may have been venturous sea captains along the coast of Australia long before even the time of De Gonneville.

Possibly the first civilised men were wrecked mariners who never returned. Spaniards, Portuguese, and Dutch navigators, back in the dim forgotten past, searched far seas for the "Great Southern Land," the "Magellanica," the "Terra Australis Incognita," which the poets of that age described as the "wild weird clime, lying sublime, out of space and out of time." Chinese in their search for another Java, yielding edible nests of *Hirundo esculenta* (edible swallow), or in their eager hope of unlimited trepang, or impelled by thirst of discovery, may have visited the north coast of Australia long before any European navigators.

Alvaro de Mendana, in 1567, started from Peru to look for a southern continent, probably seen and mentioned previously by the captain of some ship driven far out of the ocean tracks of that period. He found only the Solomon Islands, which he named the "Isles of Solomon."

In 1595 he returned with people to start a settlement on the Solomons, discovered the Marquesas and Santa Cruz Islands, where he died, and the expedition went home.

Cornelius Houtman, the Dutchman, once an East Indian pilot in Portuguese service, undertook to lead a Dutch expedition to the Indies, and the result was the formation of the Dutch East India Company, and the establishment of settlements at Java. In one voyage, accompanied by his brother Frederick, Houtman reached the west coast of Australia, and gave the name of "Houtman's Abrolhos" to some small rocky islands forty miles north-west of Champion Bay.

In 1605 the yacht "Duyfhen" (Dove) was sent to explore New Guinea, and the captain landed on the east side of Cape York Peninsula, where he went south to Cape Keer-weer (turn again) and returned to Java.

In 1606 Louis Vaz de Torres, after losing sight of Quiros at the New Hebrides, sailed westward until, on the 31st August, he passed through Torres Strait, unconscious that the land seen to the southward was the north point of the great continent he was searching for.

In 1616 the famous Dirk Hartog, with the ship "Endracht" (Harmony), of 360 tons, from Holland to the Indies, reached Shark Bay, and gave his name to Dirk Hartog's Island, where, on the 25th October, 1616, he fixed a metal plate recording his visit. Doore Island he named after his pilot, Peter Doore.

In July, 1619, Jean Van Edel accidentally reached the west coast, and named Edel's Land, between Shark and Champion Bays.

In 1622 the Dutch ship "Leeuwin" (Lioness) rounded Cape Leeuwin and went south to King George's Sound.

In 1623 Jan Carstens, with the yachts "Pera" and "Arnheim," sent out by Governor Esen of Batavia, discovered and named Arnheim Land, the present northern portion of South Australia. The "Pera" crossed the Gulf of Carpentaria; the captain landed on the Cape York Peninsula at the Staaten, the first river named in Australia.

In January, 1627, Peter Nuyts, in the "Gulde Zeepart" (Gold Seahorse), sighted Cape Leeuwin, and sailed south along the coast, his name being commemorated by Nuyts' Land, on the great Australian Bight.

In the following year, 1628, Commodore Frances Pelsart left Holland for the East Indies with a colonising expedition of eleven vessels. Ten of these ships were lost with all on board, and Pelsart's ship, the "Batavia," was finally wrecked on the 4th June, 1629, on one of Houtman's Abrolhos. Pelsart, with seven others, reached Batavia in one of the ship's boats, and returned in the frigate "Lardarn" for the people he left at Shark Bay. Some of these people, under Cornelis the supercargo, had mutinied and killed most of the others, intending to seize any unsuspecting vessel and become pirates. Pelsart received timely warning from those who had escaped to another island, and he captured and promptly executed the leaders of the mutineers. Two were "marooned," or left ashore on the mainland.

In 1628 Captain de Witt, of the "Vianen" (a small town in Holland), discovered and named the De Witt's Land, which includes the present Kimberly district of West Australia.

In 1644, two years after he discovered Tasmania, Abel Jansen Tasman returned to ascertain if New Guinea and Australia were one continent. He landed in Roebuck Bay, in Dampier's Archipelago, and gave the name of Tasman Land to the territory previously named De Witt's and Endracht Land.

In 1665 he surveyed and prepared imperfect charts of the west coast, and gave the name of New Holland to the whole continent.

In 1688 came the first Englishman, William Dampier, with a band of mutineers who had put the captain and forty of his faithful followers ashore on the Philippine Islands, and started on a buccaneering cruise on their own account. They steered for the coast of New Holland to overhaul and repair their vessel, the "Cygnet" (Young Swan), and they ran into Cygnet Bay, in King Sound, where they stayed from 4th January to 12th March, 1688. Dampier afterwards left the vessel at the Nicobar Islands, and reached Sumatra in a canoe, finally arriving in England, from whence he came out again to New Holland in 1699 in charge of the "Roebuck," commissioned by the Admiralty.

In 1696 William de Vlaming was ordered to look for a vessel called the "Ridderschap" (Knighthood), lost twelve years before on her way from Holland to Java. Vlaming's vessel was called the "Geelvink" (Goldfinch), and on Christmas Day, 1696, he sighted the West Coast, landing on the 29th, and naming Rottnest Island (rat nest) from the number of grass nests made by the small wallabies. Vlaming landed nearly 100 men on the mainland, and marched inland until he found a river. After anchoring the ships off the mouth, Vlaming ascended for about forty miles, discovering the first black swans, some of which were captured, and two taken alive to Batavia. He named the river Black Swan River, the present Swan River of West Australia.

In 1699 Dampier returned in the "Roebuck" and named Shark Bay, collected some information concerning the flora, fauna, and aboriginals, and left with a poor opinion of the country and the natives. He was the first man to mention the Australian marsupials. His adverse report discouraged the English from taking any further immediate interest in the country.

In 1727 the "Zeewyck," a Dutch vessel, was wrecked on Houtman's Rocks, and Captain Wiekham, in 1840, found one of her guns on an island which he called Gun Island, where many relics have since been discovered, such as wine glasses, gin bottles, cannon balls, cannons, and silver coins of 1720 and 1722.

In 1772 Captain de St. Alouarn, of the "Le Gros Ventre," passed Cape Leeuwin, and gave his name to the Alouarn Islands.

## EAST COAST.

On the 18th April, 1770, Lieutenant Zachary Hicks, of Captain Cook's ship, the "Endeavour," sighted land at Point Hicks—now Cape Everard—on the east coast of Australia. Captain Cook landed at Botany Bay on the 28th, and called it Sting Ray Bay, from two huge ray fishes caught there, and weighing 336 lb. each. The name was afterwards changed to Botany Bay by Sir Joseph Banks. The rest of Cook's voyage along the east coast is related elsewhere.

Next to Cook came Governor Arthur Phillip, R.N., who, on 20th January, 1788, sailed into Botany Bay with the people and material for the first convict settlement. He left Botany Bay, ran into Port Jackson, and hoisted the British ensign in Sydney Cove on the 26th January, 1788. Port Jackson was named by Cook in honour of Sir George Jackson, Secretary to the Admiralty. He died on the 15th December, 1822.

## FIRST AUSTRALIAN SETTLEMENT.

The following account of the early settlement in Australia is taken from the authentic history of Governor Phillip's voyage and first two years' residence, compiled from the official papers, and published in 1790. Some of the information is from the journals of Lieutenants Shortland, Watts, Ball, and Captain Marshall.

This remarkable volume contains the complete history of the first year, and also the names of the whole of the male and female convicts sent out with the first ships. It appears Captain Arthur Phillip's father was a German named Jacob Phillip, of Frankfort, and his mother a Miss Elizabeth Breach, whose first husband was a Captain Herbert, kinsman of Lord Pembroke. Her son, Arthur Phillip, by

her second husband, was born at All Hallows, Bread street, London, on 11th October, 1738. He was sent to the Greenwich Naval School at sixteen years of age, and at twenty-three was a lieutenant on the "Stirling Castle." He fought with the Portugnese against the Spaniards, with the English against the French, and became post captain on the "Ariadne" in November, 1781, and the "Europe," of sixty-four guns, in the same year. In 1782 he distinguished himself in the East Indies, and held a very high reputation when appointed to the command of the first fleet for Australia in 1788.

Previous to this period England sent her criminals to the colonies in America. The practice of transporting to America began in 1619, in the reign of James I., being first ordered for "rogues and vagrants" by statnte of Elizabeth 39 ch. 4. The transport traffic was first regnlated by statnte 4 of George I., which gave as a reason in the preamble, the "failure of those who undertook to transport themselves, and the great want of servants in His Majesty's plantations." Hnndreds of people from Britain sold themselves to the plantations, and worked to redeem their freedom. The English law courts transported for trivial offences that now would be punished by a fine of 5s., and the convicts were sent out in charge of "contractors," responsible for their safe delivery; and finally the prisoners acqnired a market valne, and the historian relates that "the mercantile returns on this accounnt alone are reported to have arisen in later times to £40,000 per annum, or 2,000 convicts at £20 each."

The loss of the American colonies by the War of Independence compelled Britain to look elsewhere for a place of banishment, and the coast of Africa was tried and found to be fatal to a majority of the prisoners and those in charge.

Many expedients were tried, and many proposals submitted, for reforming the criminals, but without success, and they increased to snch numbers nnder the indiscriminately severe laws of that period that transportation was regarded as a stern necessity. Australia was finally chosen as the scene of experiment, and at daylight on the 13th May, 1787, the first fleet started from the Downs with 212 officers and marines, 28 wives of marines, and 17 children, 556 convict men, and 272 convict women. There were six transports, three storeships, and the "Sirius" with her armed tender the "Supply." The transport "Alexander" carried 210 men convicts. The "Scarborough" 210, the "Friendship" 80 men and 24 women, the "Charlotte" 100 men and 24 women, the "Prince of Wales" 100 women, the "Penrhyn" 102 women. The storeships "Golden Grove," "Fishburn," and "Borrowdale" carried provisions, implements, and clothing. On the "Sirins" were Captains Arthur Phillip and John Hunter. The tender "Snpply" was in charge of Lientenant H. L. Ball.

The officials were:—

Major Robert Ross, Lieutenant Governor;
Richard Johnson, Chaplain;
Andrew Millar, Commissary;
David Collins, Judge Advocate;
John Long, Adjutant;
James Furzer, Quartermaster;
George Alexander, Provost Marshall;
John White, Snrgeon;
Thomas Arndell, Assistant Surgeon;
William Balmain, Assistant Surgeon.

These are the men memorable in Australian history as the pioneers of a new nation of people who, in the first 100 years, have occupied this vast continent from the sea shore inland to the red sand-hills and the salt lakes of the Central Desert.

Soon after leaving the Channel the convicts on the "Scarborough" attempted a mutiny, but were discovered in time and the leaders punished. No other attempt was made during the voyage.

The fleet anchored at Teneriffe, in the Canary Islands, on the 3rd June to obtain fresh water and vegetables. The marines got 1 lb. of beef, 1 lb. of bread, and a pint of wine each daily. The convicts got $\frac{3}{4}$ lb. of bread and beef, but no wine. After a week at the Canaries the fleet sailed on the 10th, the medical report showing 21 convicts and 3 children dead since the first embarkation at the Isle of Wight, or 15 and 1 child since leaving Spithead, while 9 marines and 82 convicts were under medical treatment.

Failing in an attempt to land at the Cape Verde Islands, the fleet went on, crossing the Equator on 5th July, and on 6th August entering the harbour of Rio Janeiro (so named by Dias de Solis, who found it on the feast of St. Januarius, 19th September, 1525), and remaining there to the 4th September, arriving at Table Bay, Cape of Good Hope, on the 13th October. Here the fleet remained for a month, taking on board a lot of live stock, cattle, sheep, and poultry, wines and provisions. On the 3rd January, 1788, the "Supply" sighted the coast of New South Wales, Captain King having changed to her from the "Sirius" and gone ahead to examine the coast and select a good place to land. Adverse winds delayed the "Supply," and not until 18th January did Governor Phillip land on the shore of Botany Bay, where he met a large number of natives, with whom he had a friendly interview. Careful examination proved the bay to be unsuitable for both shipping and settlement. The day after King's arrival, the "Alexander," "Scarborough," and "Friendship" arrived, and the "Sirius," with the remainder of the vessels, on the 20th.

On the 22nd Captain Phillip and Captain Hunter went away with three boats to have a look at Port Jackson, where they arrived in the afternoon, and were delighted to find "one of the finest harbours in the world."

Examining the shores, they at last selected a spot where a small freshwater creek ran into the harbour, and Phillip named it Sydney Cove, in honour of Lord Sydney.

They landed on the site of the present Circular Quay, and the freshwater creek ran out at the end of the present Pitt street. Here also Phillip had a friendly interview with a number of natives, all armed and very noisy. .

At one of the points of land about twenty unarmed blacks waded out to the boats and examined them with great interest.

Phillip was so pleased with their manly behaviour that he called the place Manly Cove. Some of the natives were armed with shields and "small wooden swords" (boomerangs), others with spears only.

On the 24th Phillip returned to Botany Bay, highly delighted with Port Jackson, and gave orders for the whole fleet to prepare for removal to Sydney Cove.

"On the morning of the 24th the greatest astonishment was spread throughout the fleet by the appearance of two ships under French colours." The wind drove them out of sight, but the next day they worked their way back, and the "Sirius" sent off a boat to offer them any possible assistance. "Those two French ships were the 'Boussole' and 'Astrolabe,' under the conduct of Monsieur de la Perouse." King had left for Port Jackson in the "Supply" before La Perouse arrived at Botany Bay.

On the 26th January the "Sirius," with the transport and store-ships, sailed round to Port Jackson and joined the "Supply" in Sydney Cove. Captain King sent an officer to La Perouse to gratify that unfortunate navigator's earnestly expressed wish to send some letters to Europe. La Perouse had left France in June, 1785, and gone by Brazil into the Pacific Ocean, skirting the coast of Chili and California, calling at Easter Island, Nootka Sound, Cook's River, Kamschatka, Manilla, Navigators, Sandwich, and Friendly Islands, to Norfolk Island, where the surf prevented a landing, and thence to Botany Bay. At Masuna, in the Navigator Islands, Captain L'Angle, of the "Astrolabe," and twelve officers and men were killed by natives armed only with stones, and the two longboats destroyed. From Botany Bay, after six weeks' stay, La Perouse, on 10th March, sailed away on that voyage from whence no one ever returned, hidden behind a veil of mystery, until Captain Dillon, of the "Research," guided by information from Tucopia, found the mournful relics on Mallicolo in 1826.

Returning to Sydney Cove. Soon after landing dysentery became prevalent, frequently fatal, "and scurvy began to rage with great virulence."

For dysentery they used a gum from one of the eucalypts, probably bloodwood, and the gum of the grass-tree. In February the lightning shattered a tree and killed five sheep.

On the 7th February the Governor's commission was solemnly read by Judge Collins, proclaiming the colony of New South Wales and extending jurisdiction from South Cape to Cape York. The Governor delivered an address, first to the private soldiers and then to the convicts, by whom it was "received with great applause." That was the first day of civilised government in Australia.

Straggling convicts were frequently killed or dangerously wounded by the blacks. La Perouse had a quarrel with the Botany Bay natives and shot three or four, producing strained relationship. On the 14th February the Governor sent Philip Gidley King, second lieutenant of the "Sirius," away to form a settlement on Norfolk Island. Lieutenant King sailed in the "Supply" with one officer, six marines, nine men, and six women convicts, a surgeon named Jamieson, a midshipman, and two men "who knew how to grow and treat flax," one species of which was indigenous on the island. The party were also to grow corn and cotton. On 2nd March Phillip went with a longboat and cutter to examine Captain Cook's Broken Bay, a few miles north of Port Jackson, and there they first saw the native women with the two first joints of the left-hand little finger cut off, and the men with a right front tooth knocked out.

On the 10th March La Perouse left Botany Bay, after staying there six weeks and building two longboats, of which the frames were brought from France. On the way to Norfolk Island Lieutenant Ball discovered and named Lord Howe Island.

On the rocks at Port Jackson and Botany, Phillip saw figures of animals, fishes, men, and weapons cut out by the natives, and a figure of a man outlined on a rock on top of a hill. In May the live stock represented 7 horses, 7 cattle, 29 sheep, 19 goats, 74 pigs, 5 rabbits, 18 turkeys, 29 geese, 35 ducks, 122 fowls, and 87 chickens. In that month two convicts were killed and one badly wounded at Rushcutter's Bay by the blacks. The two bulls and four cows strayed away, and they and their progeny of about sixty were only recovered seven years after on the Cowpasture River. On 22nd June there was a slight shock of earthquake.

In a report on 30th June, 1788, it appears that 20 male convicts, 8 females, and 8 children had died since landing, a total of 81 since leaving England, exclusive of 4 marines, 1 woman, and 2 children, or a grand total of 88 deaths from May, 1787, to June, 1788.

At Sydney Cove Governor Phillip laid out the main streets 200 feet wide, and divided the land in allotments with 60 feet frontage and 165 feet deep, only one house to be built on each. The first huts were made of "wattle and daub," the Governor's house of stone, with oyster-shell lime. On Dawes Point Lieutenant Dawes erected his observatory for the expected comet. The present sites of the Botanic Gardens and the Domain were sown with wheat and barley. The climate was considered equal to the finest in Europe, and fruit trees, vegetables, and grain grew luxuriantly.

Among the natural history specimens collected the first year were the dingo, native cat, kangaroo, common opossum, flying squirrel (Phalangers), kangaroo rat, Blue Mountain parrot, Pennant's parrokeet, Bank's cockatoo, red-shouldered parrot, hornbill cuckoo, laughing jackass, superb warbler, bronze-wing pigeon, emu (first called "New Holland cassowary"), Port Jackson and Watt's sharks, and sundry other animals and birds.

On the 30th of September, 1788, the settlement contained a total of 698 men, 193 women, and 42 children. At Norfolk Island there were 44 men and 16 women. Ten convicts, 6 men and 4 women, had died since June.

## EARLY QUEENSLAND.

Settlement in the territory now called Queensland began in September, 1824. Morton Bay became the third penal station on the east coast of Australia. Port Macquarie was occupied by the first party of convicts sent there in 1821, in charge of Captain Allman. At that time the penal stations at Sydney and Tasmania were overcrowded. After Port Macquarie was occupied for a couple of years, Governor Brisbane decided to form a third station far to the northward, chiefly to relieve the overcrowding at the new settlement. Port Macquarie was the first place in Australia where cane was grown and sugar and rum manufactured. In 1825 there were 100 acres under cane. The Governor believed that large plantations could be formed nearer to the tropics; so he asked Commissioner Bigge, who had been sent out in 1819 by the home Government to

report on the state of the Australian penal settlements, to prepare an estimate of the probable cost of a new penal station anywhere north of the 28th parallel. Bigge considered £27,492 as the likely cost of 1,000 convicts for the first year. Then Governor Brisbane sent Surveyor-General Oxley northwards to discover the best available situation. Oxley went north to Port Curtis, discovered and named the Boyne River, saw no place which he regarded with favour, and returned to Morton Bay.

On the south end of Bribie Island he found a white man named Pamphlet living with the natives, one of four men who had been blown north from the coast of Illawarra in a cutter, and wrecked on the coast of Morton Island in April of that year—1823.

One of the four, Thompson, had died before the wreck, and the other two, Parsons and Finnegan, were away south along the shore of the mainland, presumably on the way to Port Macquarie. It appears, however, these two men had turned back, and next morning Finnegan appeared on the sandspit at Toorbul Point, and was taken on board Oxley's vessel, the "Mermaid." Parsons had gone north towards Wide Bay, and was not recovered until early in the following year. Finnegan, on his way south, had crossed a large river "opposite a small volcanic island," the present St. Helena, and next day, 2nd December, he accompanied Oxley in the whaleboat and piloted him direct into the Brisbane River. After ascending the river, Oxley returned to the "Mermaid," which was anchored off the south end of Bribie, and carefully examined the western shores of the Bay, the result being that he went back to Sydney and recommended Redcliffe Point as the best place to start the penal settlement. In accordance with this advice Lieutenant Murray, of the 40th Regiment, Lieutenant Oxley, and thirty prisoners, arrived on 24th September, 1824, and started the new station at Redcliffe Point. They came in the brig "Amity," which entered the Bay by Cape Morton, and returned through the South Passage, where her name is perpetuated by Amity Point. Murray began at once to clear and build, but the locality was soon condemned. Three weeks after landing they excited the hostility of the natives by a cause which has been the most prolific source of trouble with the savage races of Australia, from the first settlement at Sydney Cove to the present time.

Two convicts and a soldier were speared to death just outside the enclosure. Murray reported the place unsuitable, and gave the prevalence of fever as the principal reason. Oxley himself advised removal to a site on the left bank of the Brisbane River about fourteen miles from the mouth. This suggestion was adopted, and the removal began in December. Three weeks after the first party arrived on the present site of Brisbane, the new station was visited by Governor Brisbane, who was accompanied by Chief Justice Forbes, the first Chief Justice in Australia. In an old botanical journal of 1838, there appears a letter written by Governor Brisbane, after his return to England, describing his visit to Morton Bay. His letter is dated "Mackerstane Castle," 3rd November, 1829, and says—"I visited Morton Bay in 1824. It is situated about 600 miles north of Sydney, and forms one of three penal settlements: Port Macquarie 165 miles north of Sydney, Morton Bay 600, and Norfolk Island nearly 1,000 miles E.N.E. of Sydney.

"The penal settlements are for the purpose of receiving and trying to reclaim convicts who have committed crimes after transportation. According to the nature of the offence are they punished. Those guilty of the least are sent to Port Macquarie, those of a graver nature to Morton Bay, and those of the deepest dye to Norfolk Island, which is occupied by the most desperate characters, who are either 'capital respites' or under sentence of death. These unfortunate individuals are engaged in clearing the country, in the first place, for the immediate wants of the settlement, and when that is accomplished they go in order to prepare it for free settlers, as in the case of Newcastle, sixty-five miles north of Sydney, which was cleared by convicts, but which in 1823 I gave up to free settlers from England, and it is now one of the richest and best districts in the country. To escape from these penal places is almost hopeless, as they are surrounded by ferocious races of people who would murder a European for any part of his clothing or possessions.

"In the same manner, and at no remote period from the colonising of New South Wales, that of Port Macquarie will be made over to the settlers, and also Morton Bay, which will require the local Government to grant settlements still further north on the coast."

He considered "the establishment of penal depôts the best way of paving the way for free populations." He sent to England some specimen logs of the Morton Bay cypress pine (*Callitris*), which the Admiralty pronounced unsuitable for shipbuilding.

Governor Darling came up in 1827, and condemned the situation of the settlement. He advised a removal to the place now called Dunwich, on Stradbroke Island, and Captain Logan formed a branch station there, started a cotton plantation, and employed parties of convicts to cut cedar on the Logan and Albert Rivers, and cypress pine on Morton Island.

At the time of Macquarie's visit there were 300 convicts at the Brisbane station, employed in growing maize in the localities now known as New Farm and Bulimba. All work was done by spades, hoes, and mattocks. The convicts were marched out in the morning in gangs, under the overseers and soldiers, and marched home and locked up in the barracks at night.

The female convicts were kept for some years at a factory on the locality still known as Eagle Farm, about six miles from Brisbane, where they were employed in clearing and cultivation. Several escaped, and either perished of starvation or were adopted by the blacks.

Captain Logan, the third commandant, started a branch station at Limestone, now Ipswich, on the Bremer River, in 1827, and placed the land, now occupied by the Ipswich racecourse, under cultivation with oats, maize, and potatoes. Quantities of limestone were burned and sent down to Brisbane for constructing the stone buildings.

In June, 1828, Charles Fraser, then Colonial Botanist, came up to lay off the site of the present Brisbane Botanic Gardens. He was accompanied by the famous botanist, Allan Cunningham. Fraser's narrative states that he was "sent to establish a public garden, to collect the vegetable product of the country, to make observations on their uses and importance, especially the forest trees; to report on

the nature of the soil, and to what extent it is fitted for grazing or agriculture." He arrived in the "Lucy Ann," after a passage of twenty-three days from Sydney.

From Fraser's visit in 1828 to that of the Quakers, Backhouse and Walker, in 1836, we are entirely dependent on very meagre official reports for information concerning the penal settlements at Brisbane, Ipswich, and Dunwich. The numbers varied nearly every month, as some were returned to Port Macquarie, or hanged, or escaped to the bush. They rose from a minimum of 30 in 1824 to 1,128 men and 30 women in 1833, and wavered thence downward to 95 at the final abandonment in 1839.

Numbers of male convicts escaped. Some were adopted by the blacks, some were killed, some died of starvation, and a few actually found their way down the coast to the settlement at the "Coal River," now the Hunter River. Among those adopted by the blacks were two named Davis and Bracefell, one escaping in 1828, the other in 1830. They were both brought to the free settlement by Andrew Petrie and party in 1842.

The site chosen on the Brisbane River was a constant source of official complaint. Captain Logan wrote to Sir George Murray even on 24th June, 1829, asking them "not to send more convicts to Morton Bay, as the water was bad and sickness common, and the convicts would have to be removed nearer the sea. There are good sites for farms six miles lower down."

On 28th February, 1832, Governor Bourke wrote to Lord Goderich to say he intended advising the abandonment of Morton Bay. In January, 1834, Lord Goderich wrote approving of the recommendation, and only short-sentence prisoners were sent there afterwards.

In 1836 the settlement was visited by Backhouse and Walker, the Quaker missionaries. They left Sydney on 22nd March, in the schooner "Isabella," with forty-four prisoners, fifteen soldiers, a sergeant, two corporals, a soldier's wife, master and mate, and thirteen of a crew, entering at Amity Point on the 28th, and arriving at Brisbane next day. Theirs is the last account of the settlement in the penal days. "We set out to inspect 'Brisbane Town,' which consists of the houses of the commandant and other officers, the barracks for the military and those of the male prisoners, a penitentiary for the female prisoners, a treadmill, and stores. There is some fine cleared and cultivated land on the south bank opposite the town. Near the commandant's house is the garden for sweet potatoes, pumpkins, cabbage, and other vegetables for the prisoners; grapes, guavas, pineapples, citrons, lemons, bananas, and shaddocks, all thriving luxuriantly, the climate being nearly tropical.

"Sugar-cane is grown for fencing, and there are a few strong coffee plants, not strong enough to bear fruit. The bamboo and Spanish reed have been introduced. The treadmill is generally worked by twenty-five prisoners at a time; but when it is used as a special punishment, sixteen are kept upon it for fourteen hours, with only the interval of releases afforded by four being off at a time in succession. They feel this extremely irksome at first, but become so accustomed as to leave it with little disgust after a considerable number of days.

"Many of the prisoners were occupied in landing cargoes of maize or Indian corn from a field down the river, and others in removing the husk. We visited the prisoners' barracks, a large stone building calculated to hold 1,000 men, but now occupied by 311. We also visited the female penitentiary, in which were 71 females, most of whom, as well as the men, have been retransported for crimes matured by strong drink. The women were employed in washing, needlework, picking oakum, and nursing. A few were very young, and seemed far from being insensible of their miserable condition. At Eagle Farm, six miles from town, we found a superintendent and his wife in a small cottage near to some huts, formerly occupied by the male prisoners, by whom 70 acres of land were cultivated, chiefly in maize. Here were 40 females employed in field labour, kept in close confinement during the night, and strictly guarded during the day. Yet it is found very difficult to keep them in order, and some wear chains to prevent absconding, which they have frequently done under cover of the long grass. Though those women are twice convicted, and among them, no doubt, are some of the most depraved of their sex, they received a religious visit with gladness. On the way back to Brisbane town our guide was a prisoner constable who gave us an account of his sufferings on one occasion when he absconded, and was in the bush for three months. His companions died from the hardships.

"In one place they found the remains of two men, and three in another, supposed escapees from Port Macquarie. Some men had run away, lived for years with the blacks, then returned and gave themselves up.

"In general the blacks bring back runaways, and a few are still out amongst them to the northward. Absconding is not now common among the prisoners, as good conduct is encouraged by relaxation of sentence, and the time spent in the bush has to be made up before any indulgence or freedom is allowed."

In 1837 the surplus maize crop of the settlement sold in Sydney for £1,046. The annual cost of each convict was estimated at £13.

So far as any permanent results were concerned the settlement accomplished next to nothing. The dreary period from September, 1824, to May, 1839, is a record of hand-to-mouth agriculture with the most primitive implements, and many hundreds of able-bodied men wasting their lives and energies in a vast amount of labour of which much was entirely useless. It is the history of all the early penal settlements—a dismal record of degrading servitude, of merciless punishment, and all the nameless horrors of an iron system which tended to the demoralisation alike of those who bestowed the punishment and the unfortunate mortals by whom it was received.

Commandant followed commandant; Miller, 1824, Captain Bishop 1825, Captain Logan to 1830, Captain Clunie to 1835, Captain Fyans to 1837, Major Cotton to 1839, Lieutenant Gravatt, May to July, 1839; and Lieutenant Gorman to 1840.

Captain Logan appears to have been the only man who attempted to extend his sphere of usefulness beyond the dull, daily routine of the settlement. He went out on various exploring expeditions, discovered the Logan River, which he called the Darling; visited and named Mount Lindesay, Mount Barney, and various other localities; and on the 18th October, 1830, was killed by his own men at a

place still known as Logan's Creek, on the Mount Esk railway line. He was found by the search party buried face downwards in a grave two feet deep. His death was erroneously credited to the blacks. His widow, after many petitions, was finally awarded a pension of £70 per annum. Captain Fyans, after leaving Morton Bay, became a Crown Lands Commissioner in the Port Phillip district.

In May, 1839, the steamer "Sophia Jane" came from Sydney to remove the officials and the last of the convicts, except those necessary for the survey parties and care of the Government stock. This steamer was the first that came from England to Australia. She was a vessel of 256 tons, 50 horse-power, and came out in charge of Lieutenant Biddulph, one of the owners, arriving in Sydney in May, 1831.

During the whole penal period, and even up to 1842, no free settler was allowed within fifty miles of Brisbane or Ipswich, though Governor Gipps had decided in 1839 to throw the district open to free settlement, and sent up three surveyors to survey a township and some country lands. One of these surveyors was named Stapylton. He had been second in command with Sir Thomas Mitchell in 1836.

On the 30th May, 1840, he and an assistant named Tuck were killed by the blacks on the head of the Logan, and a third man named Dunlop severely wounded and left as dead until the relief party arrived. Two blacks named Merridio and Noogamill were taken to Sydney and tried, brought back to Brisbane and hanged in July, 1841, from a beam on the windmill tower on the present Spring Hill.

The period from May, 1839, to May, 1842, was occupied with surveys and preliminary preparations for free settlement, and when the free settlers came they found the only useful legacy from over fourteen years of convict labour consisted of two or three stone buildings which had been used as barracks and residences. The cultivated land was again overgrown by rank undergrowth, and the Botanic Garden was a paddock for horses and cattle. Two small hills near Brisbane, Mount Cotton and Mount Gravatt, and the Logan River, bore the names of three of the commandants, and Cowper's Plains commemorates the surgeon-superintendent of 1830.

In Governor Gipps' despatch of 1st February, 1841, he said the land at the bay was good, that he was waiting orders to sell, and many were waiting to buy. In March of 1842 he came up to have a look at the settlement, and on the 15th July the first Brisbane land was sold in Sydney and realised £4,637 10s. In December the first police magistrate was appointed. He was Captain Wickham, who had been in command of the "Beagle." Dr. Simpson was appointed Crown Land Commissioner for Morton Bay, and Christopher Rolleston for the Darling Downs.

In May, 1846, R. Duncan and Wm. Thornton arrived as first Collector of Customs and tidewaiter. On the 20th June of that year the *Morton Bay Courier* issued the first number. The new settlement was now clear of the convict element, and fairly started on a progressive and satisfactory career.

In the same year the Gladstone Ministry decided to establish a settlement somewhere north of Morton Bay, and Governor Fitzroy sent Colonel Barney to make a survey by sea, and Captain Perry a survey by land, to discover a suitable locality. Colonel Barney reported against Port Curtis, as the land was poor, the water bad, and

the mangrove thickets unhealthy, but Fitzroy ignored this adverse verdict, and in January, 1847, despatched the first vessel, the steamer "Lord Auckland," 600 tons, with the officials and settlers. Colonel Barney was to be superintendent; Mr. Billyard, judge; Merewether, first clerk; G. Barney, second clerk; J. Dowling, clerk of the peace; W. A. Brown, sheriff; with Captain Creagh and Colonel Gray as magistrates. The steamer stuck on a rock at the entrance to Port Curtis, and her passengers landed under very undignified circumstances on Facing Island, from whence they removed to the mainland. This settlement had been proposed in 1845 as a place for pardoned convicts, and Gladstone intended sending a lot of women from the prisons and poorhouses of Britain, presumably as wives for the convicts. Exiles were also to be sent, but only such as could support wives. Exiles were transported persons who received liberty on landing, and absolute pardon if of good behaviour for a certain period afterwards. Gladstone advised Colonel Barney to "promote by all possible means a healthy moral tone in the community whose foundations you are about to lay."

The official correspondence reveals that Gladstone intended the settlement as an experiment, and that he was very undecided concerning the class of people he would send. After issuing instructions to start the settlement, the Gladstone Ministry went out of office, and their successors cancelled the instructions in September, 1846, but this recall only reached Colonel Barney on 15th April, 1847.

Earl Grey wrote to Fitzroy on 15th November, 1846, to say the new colony must be abandoned, as it "had become a needless and impolitic measure," and he and his Ministers differed from the views of their predecessors, "even in reference to the state of facts under which they acted, and the considerations by which they were guided." After receipt of Earl Grey's instructions in April, Colonel Barney removed the whole of the people to Sydney, the officers arriving in May and July, the remainder in August. This experiment cost £13,387, and served no useful purpose whatever. There was no sickness during the five months of occupation. When H.M.S. "Rattlesnake" called there in the following November the people saw two of Colonel Barney's horses on Facing Island, and McGillivray, referring to the site of Gladstone, wrote—"It is difficult to conceive a more dreary spot. A few piles of bricks, the sites of the tents, some posts of the provisional 'Government House,' wheel ruts in the hard clay, stumps of felled trees, and many empty bottles told the first stage of Australian colonisation." So Port Curtis resumed its primeval solitude until a new and free settlement was formed, and Captain Maurice O'Connell sent as Government Resident in 1854. Before a committee of the Legislative Council in 1855 he expressed a belief that "Gladstone will be one of the most important cities on the east coast of Australia."

Settlement advanced rapidly after 1842. In March, 1840, Patrick Leslie, the pioneer squatter, came over on Cunningham's track through New England and took up Toolburra Station on the Darling Downs. His report of the beautiful country and rich pastures brought over many other squatters from New South Wales. In 1842 the squatters crossed the range and took up stations on the Lockyer, the Brisbane, and the Logan. In 1843 the first stations were formed

on the Burnett and the Mary. The exasperating delays in transacting business with Sydney originated the theory of a new colony, and the first meeting in favour of separation was held at Drayton in 1847.

Dr. Lang made earnest and persistent efforts to have the southern boundary on the south side of the Clarence River. The people of the Clarence and New England even petitioned to be included in the proposed new colony, which Dr. Lang proposed to call "Cooksland."

In 1846 the population in March included 1,544 free and 260 bond, representing 1,233 Protestants and 592 Catholics. The report says, "there is no lawyer, doctor, or clergyman on the Darling Downs."

Leichardt had returned to Sydney on the 29th March from his successful journey to Port Essington, having "added a new and splendid province to the British Empire."

In the same year Sir Thomas Mitchell discovered the beautiful country on the Warrego, Maranoa, Nogoa, and Belyando. Governor Fitzroy, in May, 1849, advocated continued emigration to Morton Bay, and said that three shiploads could be absorbed in 1850. In England in 1848 Dr. Lang had organised a Cooksland Colonisation Society, which selected and superintended the departure of the first emigrants, a band of 241 who arrived in Brisbane by the "Artemisia" in December, 1848. The "Fortitude," with 256, arrived on 20th January, 1849.

The Colonisation Society first met in July, 1848. The members wanted the Government to sell Morton Bay land at £1 per acre, and give twenty acres for each immigrant landed. This being refused, they asked for a fourteen years' lease with the right of purchase, undertaking to send 2,000 people every year. Many wild proposals came from those who wanted to send out emigrants on terms, or obtain large areas of land. A Major Sullivan said he had an Eastern Australia company, with a capital of £11,000,000, and wanted all the territory from Cape Capricorn to Cleveland Bay. A gentleman named A. J. N. Mayo had a company to grow sugar, cotton, and coffee, for which he required 50,000 acres, and the use of the convict women to plant his first sugar-cane. Colonel Dumaresq negotiated on behalf of a tobacco company, and Dr. Lang submitted numerous proposals, all of which the Colonial Office rejected. An English cotton company had a similar reception.

Population increased slowly, and the squatters gradually extended the area of occupation northwards across all the basin of the Fitzroy, and westward to the Maranoa and the Thompson.

The agitation in favour of separation continued. In 1856 the Brisbane committee sent the Rev. Wm. Ridley overland to the Clarence and Richmond for signatures to a petition, assuming that those districts would be included in the new colony. Separation was finally granted, and on the 10th December, 1859, Governor Denison of New South Wales proclaimed the new colony of Queensland, and announced the first political division into sixteen electorates returning twenty-six representatives.

The southern boundary was fixed, not south of the Clarence, but along the McPherson Range, precisely where it had been located by proclamation in the Sydney *Gazette* on 10th May, 1842, in a definition of the boundaries of Morton Bay.

Queensland was born with a population of 28,056 people The statistical record of 1860 shews 1,236 births, 478 deaths, and 278 marriages.

The inward shipping represented 214 ships of 45,736 tons, the outward 183 of 40,000 tons. The wool amounted to 5,007,000 lb., and tallow 640 tons. The export of timber was worth £2,250. There were 23,500 horses, 432,900 cattle, 3,167,000 sheep, and 7,150 pigs. There were 1,300 squatting stations, and 41,027,200 acres under lease. The post office passed 280,000 letters, 250,365 papers, and 4,456 packets. Six charitable institutions relieved 400 people. There were no mechanics' institutes and no public libraries. The banks' total liabilities were £332,000, the note circulation £42,800, the deposits £287,000, the assets £575,000, the coin £64,000, and the advances £491,000.

## GOVERNMENT AND CONSTITUTION.

Previous to the year 1824 all legislative and executive authority in New South Wales was vested in the Governor. In that year, by the authority of an Act of Parliament, the Supreme Court of New South Wales was established, having equity, common law, ecclesiastical and admiralty jurisdiction, trial by jury authorised in civil actions, and a Legislative Council was created. This first Council was composed of the Governor, who acted as President, and four civil officers of the colony.

On the accession of Sir Ralph Darling, in 1825, three unofficial gentlemen of the colony were added to the original five. This was the first step towards Constitutional Government in Australia.

By an Act passed in July, 1828, the Legislative Council was to "consist of such persons resident in the colony, not exceeding fifteen nor less than ten, as His Majesty, his heirs and successors, shall be pleased to nominate." An Executive Council, exercising powers similar to those of the English Privy Council, was appointed by a warrant under the sign manual. The Legislative Council was authorised to pass any laws not in conflict with the laws of England. The first Legislative Council, instituted by proclamation on 11th August, 1824, consisted of William Stewart, Lieutenant-Governor; Francis Forbes, Chief Justice; Frederick Goulburn, Colonial Secretary; James Bowman, Principal Surgeon; James Oxley, Surveyor-General; and John Macarthur, Esquire, of Camden. In July, 1829, the Council, then consisting of eight members, received the Royal Charter of Justice appointing Executive and Legislative Councils under the Act of 9th George IV., and added six new members—Colonel Lindesay, Alex. Berry, Richard Jones, John Blaxland, Captain King, and E. C. Close.

In 1833, on Anniversary Day, a public meeting, to arrange a petition to the King and Parliament, was held in the Sydney Court House, presided over by Sheriff McQuoid. A resolution in favour of the petition was moved by Wentworth and seconded by Lawson. It asked for a Parliament of fifty members, with the right to levy and expend their own taxes.

On the 2nd June, 1838, the Legislative Council meetings were thrown open to the public and the Press.

In September, 1841, there was another public meeting in Sydney to petition the Queen for a representative Parliament, and similar meetings were held in all the small towns. The largest meeting ever

assembled met in February, 1842, and adjourned, after a stormy scene, to a future day at the Sydney College, to adopt a petition to the Queen and Imperial Parliament, the petitioners stating that they were 10,000 "free subjects" possessing "movable and immovable property worth thirty millions," but had no control over taxation, no voice in their affairs, and no representation in the legislature.

Finally, on the 1st January, 1843, the new Constitution Act was received in Sydney. It had passed the Imperial Parliament on 29th July, 1842, and received the Royal assent on the following day. It provided for a Legislative Council of fifty-four members, thirty-six to be elected by the people (not less than four from Port Phillip), and eighteen to be nominated by the Crown.

Of the eighteen, six were to hold office as Colonial Secretary, Treasurer, Auditor, and Attorney-General, Commander of the Forces, and the Collector of Customs. An elector had to possess a freehold worth £20 per annum. Members of the Council had to possess an estate worth £2,000, or a land income of £100.

The duration of the Council was limited to five years.

There was no time lost in arranging the elections. On the 13th June five candidates were nominated for Sydney, and Wentworth and Bland were returned by a considerable majority. There was a shameful election riot, one man killed and much property destroyed. The House met on the 1st August, 1843, and Macleay, though seventy-seven years of age, was elected first Speaker by 17 to 13 over Hamilton.

In 1844 the Hon. Francis Scott, M.P. for Roxborough, was the first and only House of Commons "Parliamentary agent" for the colony of New South Wales, at a salary of £500.

In the beginning of 1850 the people prepared a memorial to the Secretary of State praying for government by the "Three Estates," a Crown Governor, a Legislative Council appointed for life by the Crown, and a House of Assembly to be elected by the people.

In December of that year there came the "Act for the Better Government of Her Majesty's Australian Colonies," creating a separate colony to be called Victoria, and introducing the elective principle to Van Diemen's Land, and Southern and Western Australia. The qualification of electors was reduced to £100 freehold, or £10 leasehold or freehold. By this Act power was given to detach other colonies from New South Wales on the petition of inhabitant householders north of the 30th degree of latitude.

In 1853 the Legislative Council received a despatch from the Secretary of State, Sir John Pakington, conveying Her Majesty's wish for a new Legislature, with an elective Assembly and a nominee Council. Then the Council appointed a committee to prepare a Constitution. The committee included Wentworth, Deas Thompson, Macarthur, Plunkett, Cowper, Martin, Donaldson, Macleay, Thurlow, and Murray.

Their Constitution excited violent opposition from the public, especially the clauses providing for a hereditary aristocracy and a nominee Council, and emphatic hostile resolutions were passed by enthusiastic public meetings, at which all classes and creeds were represented. But the Constitution Bill passed the Council after a seven days' debate on the second reading, and division on the third reading of 27 to 6, the two Legislative Chambers being thereby

established for the first time. The Council was to consist of not less than twenty-one naturalised or native born subjects, four-fifths of whom were to hold no office under the Crown. The members were to hold their seats for five years, and all retaining their seats at the end of that period to continue holding them for life. The President was to be nominated by the Crown.

The Assembly was to be elected for five years, and consist of fifty-four members.

The old Council was dissolved on the 29th February, 1856, and the new Parliament met on the 22nd May. Sir Alfred Stephen was the first President of the Council and Daniel Cooper the first Speaker of the Assembly.

Such is an outline of the evolution of representative government in Australia.

The constitution of Queensland is nearly exactly the same as that of Great Britain, providing for a Governor representing Her Majesty, an Executive Council, a nominee Legislative Council corresponding to the House of Lords, and a Legislative Assembly equivalent to the House of Commons. The Council in 1860 had fifteen members, and in 1894 numbers forty-one members appointed for life by the various Ministries since 1860. The President is elected by the members. The Assembly has increased in the ratio of population, from twenty-six in 1860 to seventy-two in 1894, and the electorates from sixteen to sixty. The House is presided over by a Speaker, with a salary of £1,000, and in committee by a Chairman of Committees with £500. Both these officers are elected by every new Parliament and retain office until that Parliament is dissolved. The private members receive a salary of £150 per annum. The first principle of payment provided £2 2s. per day for every day the member was present. That was changed to £300 per annum in 1889, and this sum was again reduced to £150 in 1893, liable to be increased or abolished at the discretion of a majority. Two ancient officers ceased to exist in 1893 by the abolition of the Sergeant-at-Arms in the Assembly and the Usher of the Black Rod in the Council. The present Clerk of the Assembly, Lewis Adolphus Bernays, has held that position since the first day of the first Parliament in 1860.

All Bills passed by the Assembly have to be discussed and passed by the Council and approved by the Governor before becoming law. The rules of procedure and debate in both Houses are identical with those of the Lords and Commons in Britain.

The electoral qualification is liberal enough to grant a vote to every natural born or naturalised subject who has been six months resident in any part of the colony. He can vote for the electorate in which he fulfils his residence. The elector must be twenty-one years of age, possess a freehold worth £100, or pay £10 rent for house or land, or receive £100 per annum as salary, or pay £40 for board and lodging, or £10 for lodging only, or reside continuously for six months in one electorate. Under the property qualification it would be possible for an elector to have a vote in all the sixty electorates.

Previous to 1893 the duration of Parliaments was five years, unless dissolved prematurely by reason of a dissolution being requested by a defeated Ministry, or a new one unable to command a working majority without an appeal to the country. A Ministry continue in

office until defeated by a majority opposed to some measure made a "party question," which the Ministry stand or fall by. Then the Governor sends for some member, usually the leader of the Opposition, and asks him to form a new Ministry. The Governor can send for anyone who pleases him, from either side of the House. If the new Premier commands a satisfactory working majority the Parliament will go on to the end of its appointed time. Defeated Ministers could ask the Governor for a dissolution on the plea that they command the confidence of a majority of the electors. The Governor can grant or refuse the request.

The Government, Ministry, or Executive Council, for all three terms are synonymous, include the Premier (who is also Vice-President of the Executive Council), Colonial Secretary, Colonial Treasurer, Minister for Lands, Minister for Education, Postmaster-General, Solicitor-General, Minister for Railways, and Minister for Works and Mines. These represent nine offices divided among seven Ministers. The Premier holds any one of the other positions he may choose, and the Postmaster-General's and Education Departments have usually been controlled by one Minister. There may be also an additional Minister without portfolio. He has a seat in the Cabinet and a voice in the Council, but no salary or official control.

## FIRST PARLIAMENT.

The first Parliament assembled on the 22nd May, 1860, in a stone building used in the penal days as a barracks, and as a Supreme Court after the completion of the first Parliament House. The Governor's residence at that time was a private house rented from Dr. Hobbs.

The Assembly occupied the second floor, and the Council sat on the ground floor. The Council Chamber was so elaborately fitted with furniture and wood ornamentation, that Sir Charles Nicholson said the members would be "sitting in a forest of cedar." The first to arrive were Sir Charles Nicholson, Capt. M. C. O'Connell, and J. F. McDougall, the Commissioners appointed to open Parliament.

The galleries were crowded, and Lady Bowen was among the audience. The members of the Assembly were outside the bar. The first Councillors to enter were Fullarton and Bigge, followed by Galloway, Yaldwyn, and Compigné. Those absent were Balfour, Laidley, and Massie. In the Assembly Eliott was unanimously elected Speaker, on the motion of St. George R. Gore, seconded by A. Macalister. Blakeney was proposed for Chairman of Committees by Herbert, seconded by Pring; but Macalister was chosen on a vote of 15 to 7, when proposed by Broughton, seconded by Ferrett. The first Governor's Speech was long and elaborate. It contemplated a Bill to "establish a Public Grammar or High School, with a fixed number of exhibitions to the universities of the mother country, to be competed for by the more advanced students."

Brisbane was to be connected with the capitals of the other colonies by wire.

The Dutch, having finished the cable from Singapore to Batavia, expressed a desire to connect with Australia, so the Speech suggested a cable from Java to the Gulf of Carpentaria and a telegraph line thence to Brisbane. It advocated a direct trade with the old countries *viâ* Torres Strait.

It foretold Bills on lands, immigration, repeal of the gold duty, removal of the bars of the navigable rivers, and to provide regular steam communication from Brisbane to Maryborough, Gladstone, and Rockhampton. A bonded warehouse was to be established at Ipswich. The financial calculation was based on an expected revenue of £160,000, and a probable expenditure of £149,319.

The latter included £10,500 for a steam dredge for the harbours, £10,000 for a telegraph line from Brisbane to the frontier near Warwick; £10,000 towards building a Government House; £3,000 towards a Legislative Council Chamber, and £14,000 to complete the Brisbane gaol.

FIRST EXECUTIVE COUNCIL.

Sir George Ferguson Bowen, G.C.M.G., President, October, 1859.
Robert George Wyndham Herbert, 10th December.
Ratcliffe Pring, 10th December.
Robert Ramsay Mackenzie, 15th December.
Maurice O'Connell, 21st May.
John James Galloway, 28th August.

Maurice O'Connell resigned on 28th August, and was elected President of the Legislative Council.

J. J. Galloway resigned on 10th November.

FIRST LEGISLATIVE COUNCIL.

Sir Charles Nicholson, President.
M. C. O'Connell.
John Balfour.
Francis Edward Bigge.
Alfred William Compigné.
George Fullarton.
John James Galloway.
James Laidley.
John Frederick McDougall.
Robert George Massie.
William Henry Yaldwyn.
Henry Bates Fitz.
George Harris.
Daniel Foley Roberts.
Stephen Simpson.

The last four were appointed on 23rd May for life by Sir George Bowen. The others were appointed for five years by Sir Wm. Denison.

On 28th August Maurice O'Connell became President in place of Sir Charles Nicholson.

FIRST ASSEMBLY.

Frederick Augustus Forbes.
Charles William Blakeney.
A. D. Broughton.
Henry Buckley.
Charles Coxen.
George Edmondstone.
John Ferrett.
Charles Fitzsimmons.
St. George Richard Gore.
Charles Robert Haly.
Robert George Wyndham Herbert.
Henry Jordan.
Charles Lilley.
Arthur Macalister.
Robert Ramsay Mackenzie.
Thomas De Lacy Moffatt.
Patrick O'Sullivan.
Ratcliffe Pring.
George Raff.
Henry Richards.
Charles James Royds.
James Taylor.
George Thorn, senr.
William Lambie Nelson.
John Watts.
Gilbert Eliott.

Nelson was thrown out on petition in June, and succeeded by Joseph Fleming.

Buckley resigned on 29th September, and was succeeded by R. S. Warry.

FIRST ELECTORATES.

| | Members. | | Members. |
|---|---|---|---|
| Town of Brisbane ... ... | 3 | District of Western Downs | 2 |
| Town of South Brisbane ... | 1 | District of Northern Downs | 1 |
| Hamlet of Fortitude Valley | 1 | District of Maranoa ... | 1 |
| Town of Ipswich ... ... | 3 | District of Burnett ... | 2 |
| Town of Drayton and Toowoomba | 1 | District of Wide Bay ... | 1 |
| | | District of Port Curtis ... | 1 |
| Town of Warwick ... ... | 1 | District of Leichardt ... | 2 |
| District of East Morton ... | 2 | | — |
| District of West Morton ... | 3 | 16 Electorates ... ... | 26 |
| District of Eastern Downs ... | 1 | | |

FIRST MEMBERS RETURNED.

| | |
|---|---|
| Brisbane ... ... ... | Raff, Jordan, and Blakeney. |
| Fortitude Valley ... ... | Charles Lilley. |
| South Brisbane ... ... | Richards. |
| Ipswich ... ... ... ... | Forbes, P. O'Sullivan, and Macalister. |
| Drayton and Toowoomba ... | Watts. |
| Warwick ... ... ... | Gore. |
| East Morton ... ... ... | Edmondstone and Buckley. |
| West Morton ... ... ... | Thorn, Broughton, and Nelson. |
| Western Downs ... ... | Moffatt and Taylor. |
| Eastern Downs ... ... | Pring. |
| Northern Downs ... ... | Coxen. |
| Maranoa ... ... ... | Ferrett. |
| Burnett ... ... ... ... | Mackenzie and Haly. |
| Wide Bay ... ... ... | Eliott. |
| Port Curtis ... ... ... | Fitzsimmons. |
| Leichardt ... ... ... | Herbert and Royds. |

FIRST POLLS

Brisbane.—Raff, 263; Jordan, 187; Blakeney, 174; Warry, 165; Stuart Russel, 136; Lang, 125; Cribb, 119.

South Brisbane.—Richards, 72; Hockings, 18.

Fortitude Valley.—Lilley, 108; Roberts, 105.

Ipswich—Forbes, 269; O'Sullivan, 263; Macalister, 259; Challinor, 228; Panton, 156.

West Morton—Thorn, 207; Broughton, 198; Nelson, 171; Cardew, 165; Kent, 92.

Burnett—Mackenzie, 67; Haly, 43; Strathdee, 41; Sadlow, 22.

Maranoa—Ferrett, 27; Kennedy, 20.

Warwick—Gore, 71; Wienholt, 58.

Northern Downs—Coxen, 82; Bell, 75.

Leichardt—Herbert and Royds unopposed.

Wide Bay—Eliott, 55; Alexander, 50.

Drayton and Toowoomba —Watts, 119; Stephens, 37.

NEW SOUTH WALES GOVERNORS.

| | | | |
|---|---|---|---|
| Captain Phillip ... | 1788 to 1792 | Sir George Gipps | 1838 to 1846 |
| Captain Grose ... | 1792 to 1794 | Sir Charles Fitzroy | 1846 to 1855 |
| Captain Paterson | 1794 to 1795 | Sir William Denison | 1855 to 1861 |
| Captain Hunter ... | 1795 to 1800 | Sir John Young ... | 1861 to 1867 |
| Captain P. G. King | 1800 to 1806 | Sir Trevor Chute | 1867 to 1868 |
| Captain W. Bligh | 1806 to 1808 | Earl of Belmore ... | 1868 to 1872 |
| Major-General Macquarie ... ... | 1810 to 1821 | Sir Hercules Robinson ... ... | 1872 to 1879 |
| Major-General Brisbane ... ... | 1821 to 1825 | Lord Loftus ... | 1879 to 1885 |
| Sir R. Darling ... | 1825 to 1831 | Lord Carrington ... | 1885 to 1890 |
| Sir R. Bourke ... | 1831 to 1837 | Earl of Jersey ... | 1890 to 1893 |
| Colonel Snodgrass | 1837 to 1838 | Sir R. Grant Duff | 1893 to |

QUEENSLAND GOVERNORS.

Sir George Ferguson Bowen, 10th December, 1859, to 4th January, 1868.

Sir Maurice C. O'Connell (administrator), 4th January, 1868, to 14th August, 1868.

Colonel Blackall, 14th Aug., 1868, to his death on 2nd Jan., 1871.

Sir M. C. O'Connell (administrator), 2nd January to 12th August, 1871.

Marquis of Normanby, 12th August, 1871, to 12th November, 1874.

Sir M. C. O'Connell (administrator), 12th November, 1874, to 23rd January, 1875.

Sir W. W. Cairns, 23rd January, 1875, to 14th March, 1877.

Sir M. C. O'Connell (administrator), 14th Mar. to 10th April, 1877.

Sir A. E. Kennedy, 10th April, 1877, to 2nd May, 1883.

Hon. J. P. Bell (administrator), 19th March to 22nd Nov., 1880.

Sir A. H. Palmer, K.C.M.G. (administrator), 2nd May to 6th November, 1883.

Sir Anthony Musgrave, 6th Nov., 1883, to his death, 9th Oct., 1888.

Sir A. H. Palmer (administrator), 9th October, 1888, to 1st May, 1889.

Sir Henry Wylie Norman, G.C.M.G., from 1st May, 1889.

QUEENSLAND MINISTRIES.

Herbert, from 10th December, 1859, to 1st February, 1866.

Macalister, from 1st February, 1866, to 20th July, 1866.

Herbert, from 20th July to 7th August, 1866.

Macalister, from 7th August, 1866, to 15th August, 1867.

Mackenzie, from 15th August, 1867, to 25th November, 1868.

Lilley, from 25th November, 1868, to 3rd May, 1870.

Palmer, from 3rd May, 1870, to 8th January, 1874.

Macalister, from 8th January, 1874, to 5th June, 1876.

Thorn, from 5th June, 1876, to 8th March, 1877.

Douglas, from 8th March, 1877, to 21st January, 1879.

McIlwraith, from 21st January, 1879, to 13th November, 1883.

Griffith, from 13th November, 1883, to 13th June, 1888.

McIlwraith, from 13th June to 30th November, 1888.

Morehead, from 30th November, 1888, to 12th August, 1890.

Griffith, from 12th August, 1890 to 27th March, 1893.

McIlwraith, from 25th, May 1893; succeeded as Premier by Nelson on 27th October.

## EDUCATION.

It is well to remember that the Australian people from the earliest period, from the dawn of self-government, have been honourably distinguished by unity and earnestness in the cause of education. The question of religious instruction was the central problem in voluminous correspondence between the Sydney authorities and the British statesmen in the early years of New South Wales.

In a despatch to Lord Stanley, dated 30th September, 1833, Governor Sir Richard Bourke said—"In no part of the world is the general education of the people a more sacred and necessary duty of the Government than in New South Wales."

In 1836 Australia was created an Episcopal See, and Archdeacon Broughton, replying to an address from the people of Maitland, said—"I am every day more confirmed in the persuasion that to the operation and influence of a religious education alone we must look for any confirmed and satisfactory improvement of morals in the community." It is rather remarkable that this first Australian bishop, the Right Rev. William Grant Broughton, D.D., on 22nd July, 1836, presented a petition to the Sydney Legislative Council, praying to be heard before Council against the proposed introduction of the Irish National School system. He was informed that the rules would not allow him to be heard. The vote of £3,000 towards the establishment of National schools was carried in the Council by 8 votes to 4.

The advocates of the Irish system argued that it tended to secure a union of all classes, without which no general system could be effective or economical; that it encouraged a liberal and unrestricted separate religious instruction, according to the faith of the various parents, giving all the advantages of separate religious education.

In 1832-3 a corporate body called the "Church and School Corporation" was dissolved. It started in 1825, and was endowed with one-seventh of all the lands in the territory, but proved a complete failure, and ended a useless career after an existence of eight years.

In 1824 the first Australian infant school was started by the instigation of Banister, the Attorney-General. Lady Darling started the first female school of industry in 1828. By Commissioner Bigge's report for 1821 it appears there were then 17 schools established and provided by the Government, educating 291 boys and 243 girls. These 17 schools included the orphan school created in 1801 by Governor King, and the boys' orphan school created in 1819 by Governor Macquarie. The system was that of the National schools of England, and the annual cost of each orphan pupil was £22 9s. 7d. There were also 990 children attending schools not supported by the Government.

In 1824 the Rev. T. H. Scott became first Archdeacon of Australia and "King's visitor" at the schools. He was an enthusiast in the cause of education, and in five years decreased the annual cost from £10,000 to £5,600, increased the average attendance from 450 to 1,807 scholars, regularly attended 36 parochial schools, and greatly improved the general efficiency.

In 1833 there were 5,256 boys and 4,931 girls under the age of twelve years in New South Wales. In a despatch dated 30th November, 1835, Lord Glenelg wrote to Governor Bourke, suggesting "that some plan should be adopted for the establishment of schools

for general education in the colony, unconnected with any particular church or denomination of Christians, in which children of every religious persuasion may receive instruction. This plan will require a Board of Education, composed of members of every religious denomination." He was in favour of the whole of the New Testament being placed in the hands of the children. Two petitions against the Irish system—one with 80 and one with 1,300 signatures—were presented to the Council; but the Bill passed and became law, the only Council members protesting being Robert Campbell, Richard Jones, E. C. Close, and H. H. McArthur. The friends of the Bill held that "to proceed to any length among the scattered population of New South Wales with a separation of sects would render any system of popular education a farce, either of ridiculous insufficiency or equally ridiculous and boundless extravagance; and that, therefore, the Irish system is the only one likely to provide an effectual education of any kind for the general population of the colony." The opponents argued that "it is perfectly impossible to provide sufficient means of religious instruction exclusive of that to be derived from schoolmasters." The Protestant opponents held out the following olive branch:—"If there is anything in the present system of education offensive to conscientious Roman Catholics, upon religious grounds, we are perfectly willing to afford whatever aid may be necessary for the separate maintenance of Roman Catholic schools." The Catholics were then one-fourth of the population, or one-third according to Bishop Polding.

In 1836 Sydney possessed two proprietary colleges—the Australian College, of which Dr. Lang was principal, and the Sydney College.

A Sydney newspaper, of 15th December, 1836, gives the following account of the first college examination:—

"The business began at 10 o'clock with the younger scholars, who exhibited a very respectable knowledge of the English and Latin grammars, geography, arithmetic, and the principles of geometry. At 1 o'clock the senior scholars commenced their mathematical problems, which comprehended the first six books and the eleventh of Euclid. The classic authors were Euripides and Homer, Juvenal, Horace, Virgil, and Ovid. In French, parts of Voltaire, Racine, and Gil Blas were translated with considerable facility. There was also an abundant collection of Greek, Latin, and English themes and exercises of varied character.

"Some creditable specimens of drawing, penmanship, and mapping were justly admired by the company. Some English and French recitations, with a Greek chorus from the Hecuba, were successfully introduced near the close, when the usual rewards as testimonies of progress during the year were distributed."

When the Church and School Corporation was dissolved, the lands vested in it for religious and educational purposes became again the property of the Crown, "to be disposed of in such manner as shall appear most conducive to the maintenance and promotion of religion and education." The petitioners of 1836 advised that part of this fund be used for the endowment of a college "upon a scale suited to the increasing wants of the colony, where persons might be educated for the church and other liberal professions, not omitting the training and preparation of schoolmasters for the discharge of their important duties."

To-day in New South Wales the schools are under a Department of Public Instruction established by the Act of 1st May, 1880. There are high schools for boys and girls, public schools, superior public schools, and evening schools. Children pay weekly fees to the teacher, 3d. each up to four, and 1s. maximum for any one family. Fees may be remitted to those unable to pay, and free railway passes are granted to all children a considerable distance from school. State aid to the denomination schools ceased in 1882. An hour of each day is devoted to religious instruction by any clergyman or religious teacher authorised by the church to which he belongs. His teaching is restricted to those children whose parents consent.

In Victoria education is free, secular, and compulsory, such being the principle of the Act of 1st January, 1873. Attendance of the ages from seven to thirteen is enforced for at least forty days in each quarter.

In South Australia the children pay fees to the teachers—4d. per week under and 6d. over seven years of age. Teachers receive salaries from £70 to £200 from the State, and all schools and requisites are supplied by the Minister for Education. The Bible may be read, out of school hours, by clergymen, approved laymen, or the teachers.

The Adelaide University was created by a gift of £20,000 given in 1872 by Sir W. W. Hughes. In 1874 Sir Thomas Elder gave a similar amount, and also £10,000 to found a medical school, and £1,000 for evening classes. The Hon. J. H. Angas gave £6,000 to found a Chair of Chemistry.

In Tasmania, previous to 31st December, 1884, schools were under a Board of Education, which was abolished, and all authority vested in the Chief Secretary, who is also Minister for Education. The system is non-sectarian, but religious instruction may be given by clergymen. Teachers' salaries are partly raised from fees paid by the scholars, those fees averaging about 20s. per annum for each pupil in the average attendance.

In New Zealand education is free and secular, according to the Act of 1st January, 1878. Religious instruction can only be given after school hours, under certain conditions.

In Western Australia the Act of 1871 provided for elementary and assisted schools. The former are subsidised by the State and the latter receive a capitation grant. Both are under Government inspection. Half an hour daily is allowed for Bible reading without comment. School fees vary from 2d. to 1s., according to the parents' ability to pay, and poor children are admitted without fees.

### QUEENSLAND.

The first Government of Queensland in the first session of Parliament, 1860, introduced and passed Acts to provide for primary education and establishment of grammar schools. Both Acts were assented to on the 7th September, 1860. In a speech on the Grammar School Act the Colonial Secretary said the Sydney Grammar School had been a failure. The building had cost £29,000 with an annual endowment of £1,500. Each pupil was to pay £18 per annum. These were regarded as the chief causes of failure. The preamble of the Queensland Act considered it "expedient for the

encouragement of learning that public grammar schools be established in the colony, for conferring on all classes and denominations of Her Majesty's subjects, without any distinction whatever, the advantages of a regular and liberal course of education."

The Act provided for the erection of a Grammar School in any locality where the people raised £1,000 by local subscription. The Government would give £2,000, or twice any amount subscribed, and the school would be under the control of a Board of seven trustees, of whom four were nominated by the Government, and three appointed by a majority of those subscribing £5 each. When the school fees represented £250 per annum the Government would grant £500 for salaries and current expenditure. Ten per cent. of the endowment could be retained for scholarships at the discretion of the Government. The Act also provided for an endowment by grant of land in the school district, the grant not to exceed the value of £2,000. If this land became valuable and yielded a return of £500 per annum then the money endowment would cease. It was a short simple Act of only eight clauses remarkable alike for brevity and lucidity.

The preamble of the primary Education Act considered it expedient to make provision for the establishment and maintenance of schools, and for the promotion of primary education in the colony of Queensland, and for the administration by one Board of the funds provided by Parliament or otherwise for that purpose.

The first clause repealed the Acts of Council 11 Vic. No. 48, 16 Vic. No. 16, and 22 Vic. No. 11, and dissolved the Board of National Education.

All lands held by or in trust for the Board were vested in a Board of General Education, subject to the same conditions and used for the same purposes. Clause 2 provided for a Board of General Education, to consist of five persons, appointed for five years, anyone to be disqualified by absence from six consecutive meetings. A Crown Minister, representing the Government in either Assembly or Council, was *ex officio* chairman of the Board, in addition to the five members. This Board was a "body politic and corporate" and could sue and be sued in law or equity. The Board had power to make all necessary rules and by-laws, to be approved by the Executive Council and published in the *Gazette*.

Sums not exceeding 5 per cent. on the annual amount could be used for "granting exhibitions at some one or other of the grammar schools of the colony to such scholar in any primary school as shall have been proved by competitive examination to be entitled thereto."

The Board had power to assist the establishment of normal or training schools, or industrial schools in connection with public primary schools or otherwise. A report on the schools and a general statement of account was to be prepared annually. Though this Act possessed distinctive qualities, it was based on the National Education system which Lord Stanley originated in Ireland in 1831, and which was introduced to New South Wales in 1836. In 1844 a committee of New South Wales Legislative Councillors conducted an inquiry to ascertain the best system of education for the colony. The Councillors included the Hon. Robert Lowe, chairman, Sir Charles Nicholson, Dr. Lang, E. D. Thompson, Plunkett, and Windeyer.

Four years afterwards, in 1848, the system the committee recommended was adopted. In 1852 there were twenty-five national schools in New South Wales with 1,584 scholars.

The first Queensland School Inspector was Randal Macdonnell, a gentleman who appears to have been both by education and natural abilities well qualified for the position. In a lecture given by him on the 14th January, 1861, he paid the following graceful tribute to the new Government:—"When it is borne in mind that the English House of Commons has in recent years repeatedly but unsuccessfully attempted to decide the vexed question of education on a national basis; that Bills introduced session after session by such men as Lord John Russell, Sir John Packington, Fox, and Milner Gibson, have proved entirely abortive; when we recollect that a short time ago a popular Government of New South Wales was ignominously turned out of office because it was even suspected of a desire to perpetuate denominational rivalry in a scheme representing the English Privy Council system, we cannot help yielding to the members of our first Parliament the praise of having achieved what the veteran legislators of older countries have vainly tried to accomplish."

Under the Act no teacher was to be appointed, as a general rule, until after a course of training at the Normal School, when erected, or in the meantime at the Central School in Brisbane, and whose competence was thoroughly tested by a written examination. The first prizes given by the Board of General Education were presented by Governor Bowen on 14th January, 1861. The pupils present represented 112 boys and 107 girls and infants, from the Brisbane Central School.

The Estimates for 1860 provided a sum of £2,500 for national and £800 for denominational schools. The young colony, in thus providing for the education of all State children, was guarding against so deplorable a record as that displayed by England and Wales, where out of 4,908,693 children between the ages of three and thirteen, only 2,046,848 were attending school in 1858.

The first School Board included A. Macalister (chairman), R. G. W. Herbert, R. Pring, R. R. Mackenzie, A. W. Manning, and J. Panton, with E. Butterfield as secretary.

The progress of Queensland is fairly indicated by the advance of education. The first school at Brisbane dates back to 1826, in the penal days. The children on the roll and in attendance numbered 16, increasing in 1829 to 33, and 36 in 1839, the last year of the penal period in Queensland.

In the year 1859 there were 6 Church of England schools with 387 scholars, 4 Church of Rome with 354, one National school at Drayton with 78, and 30 private schools with 700 pupils, a total of 1,520 children and 41 schools.

The colony began 1894 with 691 schools, of which 360 are Provisional and 391 State schools, attended by 78,330 scholars, of whom 41,037 are boys and 37,293 girls, taught by 1,484 teachers, divided into 477 head masters, 208 mistresses, 185 male and 441 female assistants, with 60 male and 113 female pupil-teachers. The teachers' salaries and allowances alone represented, for 1893, a sum of £175,478. The cost of buildings, furnishing, and repairs, amounted to £11,608.

QUEENSLAND SCHOOL SYSTEM.

Buildings.—School buildings are chiefly of wood, the best material for the climate, special attention being paid to lighting and ventilation, and the equipment in furniture and apparatus is complete. A few of the oldest schools are of brick or stone. The school verandas shade the long walls of the buildings north and south, the gables all pointing east and west. The enclosed corners of the verandas form classrooms and lavatories. Ample playgrounds are provided for town and suburban schools, and country schools have paddocks of various sizes, seldom less than five acres.

Classes of Schools—State schools and Provisional schools.—The former are established in localities supplying a regular attendance of thirty pupils, the latter requiring an average attendance of not less than twelve children. Special provision for thinly populated districts is provided by the "Half-time Provisional School." Two settlements, each able to supply six pupils in average attendance, combine under one teacher, who works at each place on alternate days or weeks according to distance and opportunity. Special Provisional schools are established in isolated spots, such as lighthouses, pilot stations, and aboriginal settlements. State schools are divided into eight classes. A first-class school requires an average of 800 pupils, while the eighth and lowest class includes all schools having a daily average of thirty to forty. To establish a State school in any neighbourhood a public meeting must be held after fourteen days' notice, at which a building committee and secretary are appointed. The secretary obtains from the department a printed paper of questions, the answers to which give particulars as to the site selected, the distance of the proposed school from all neighbouring schools, the amount of subscriptions proposed to be collected. At least one-fifth of the total cost of school, residence, land, and outbuildings must be provided by local subscription. This printed form is sent to the office, together with a list of children over six and under fourteen living within two miles of the site, when an inquiry by the district inspector is ordered, and should he report favourably and the necessary funds be collected, the school is erected and equipped.

The promoters of a Provisional school may either build on their own plan, at their own cost, or according to plans supplied by the department, when aid to the extent of not more than half the cost may be granted by the Minister, the maximum vote for one school being £50.

Teachers.—Teachers divide into head teachers, principal assistants, assistant teachers, and pupil-teachers. Pupil-teachers are first appointed on probation, when, if deemed eligible by the visiting inspector, and having passed an entrance examination, they are appointed for a term of four years. The salary for males commences with £30 the first year, and ends with £65 the fourth year; for females it ranges from £20 to £50.

At the close of the pupil-teachers' course their services may or may not be retained in a State school; those most highly qualified are retained, the remainder are drafted into Provisional school vacancies. Adult teachers are divided into three classes of three divisions each, the highest grade being Class I., Division I. Entrance to a class can only be won by success in a written, or written and oral, examination.

The intermediate steps or divisions are gained by successful work in school teaching. The class rank determines the salary of assistant teachers, and partly that of principal assistant and head teachers. In addition to the class or fixed salary, principal assistant and head teachers receive additional emoluments determined by the class of school in which they are employed. The highest salary paid to a teacher of Class I., Division I, working in a school of the first class, is £388; the lowest paid to a teacher of Class III., Division III., working in a school of the eighth class, is £80 if principal assistant, and £72 if assistant only.

Teachers of Provisional schools are not civil servants, they are nominated by the local committee and appointed by the Minister. Their salary depends partly on qualifications, and partly on the average attendance. Salaries for teachers of this grade vary from £65 to £120.

Male head teachers of State schools are provided with residences free of cost. Some few Provisional schools have dwelling houses; but this is not the rule, nor is it enforced by regulation.

Attendance.—Pupils enter school at six years of age, and, by the compulsory clause of the Act of 1875, must attend school until twelve years of age, or until they reach the standard of education determined by Part I., clause 2 of the Act. The compulsory clauses, forming Part III. of the Act of 1875, have never been enforced. Children of school age are over six and under fifteen years. Subject to an appeal to the Minister, pupils who have reached the age of fifteen years may be retained or excluded at the discretion of the head teacher. Race and colour are not considered in the admission of pupils to any school. As State schools may be opened for infants only, for boys only, for girls only, or for boys and girls together, the period of attendance has been determined at six to seven years of age in infant schools, and seven to fifteen years in boys', girls', and mixed schools.

Inspection.—The colony is divided into ten school districts, under district inspectors. Each school is examined once in detail, a report of examination being sent to the office by the visiting inspector, and a copy to the teacher.

State schools of the seventh class and upwards usually receive a second inspection, when the teaching ability of each member of the staff is tested, methods are observed, and advice is given as to school management and organisation. A second detailed inspection may be ordered where the first report is unsatisfactory.

In the week following the close of the school year an examination is held annually. This examination is compulsory for all pupil-teachers, pupil-teachers on probation, and for adult teachers seeking entrance to a higher class. The examination is mainly in writing, but for admission to the rank of teacher of the first class an oral test may also be added. Marks gained at the school inspection for reading, knowledge of practical drill, and skill in teaching, are added to the results for the written examination; and a pass is obtained if the result is 50 per cent. of the total marks allotted.

Grammar School Scholarships.—At the same time as the teachers' examination there is one for grammar school scholarships, for which any pupil under fourteen years of age is eligible, upon

nomination by the head teacher, after attendance at a school under Government inspection of not less than eighteen months. A certificate of birth is in all cases required. Success in this examination gains a free scholarship at any Queensland grammar school for a period of three years, if not forfeited for irregular attendance or misconduct.

One hundred and twenty-eight scholarships in all are granted, sixty-four at the expense of the Department of Public Instruction and sixty-four at the cost of the grammar school authorities. Ninety-six of these scholarships are open to boys and thirty-two to girls. The examination is limited to the three subjects—geography, grammar, and arithmetic, 100 marks being allotted to geography, and 150 each to grammar and arithmetic. A pass is secured by each candidate who scores 50 per cent. of the total number of possible marks. The test is a very severe one, and the full number of scholarships is seldom won.

Successful candidates may select the grammar school most convenient for them to attend.

There are ten grammar schools, one each for boys and girls at Brisbane, Ipswich, Maryborough, and Rockhampton, and one for boys at Toowoomba and Townsville.

The present Under Secretary for Education, John Gerard Anderson, M.A., has been connected with the department since 1st September, 1863, and held his present position since 1st November, 1878.

## RELIGION.

In one of Governor Bourke's despatches, dated 30th September, 1833, is the following brief account of the position of the various churches in that year. The clergymen of the Church of England, the Catholic, and Presbyterian churches were then paid by the Government:—"There are, of the Church of England, an archdeacon, fifteen chaplains, and four catechists; of the Church of Scotland, four paid ministers; and of the Church of Rome a vicar-general and two priests at present receiving stipends from the Government; but further sums have been voted by the Council for the support of four additional Roman Catholic chaplains in the next year. The clergy of the English Church are supported chiefly by payments from the Treasury, and to a small amount by the rent and sale of lands formerly granted to the Church and School Corporation. The charge for the Church of England for next year, including that for minor church officers and contingencies of all sorts, is estimated at £11,542 10s. The whole charge for the Church of Scotland for the same period, £600; and for the Roman Catholic chaplains and chapels, £1,500. The Protestant dissenters receive no support from Government beyond some small grants of land to some of them as sites on which to erect places of worship."

The principle whereby the Government gave £1 for every £1 subscribed for building churches and chapels, and an equitable amount towards the stipends, was embodied in an "Act to Promote the Building of Churches and Chapels, and to Provide for the Maintenance of Ministers of Religion in New South Wales," passed in July, 1836.

The foundation stone of St. Mary's Roman Catholic Cathedral in Sydney was laid on 20th October, 1821, and from the tower of that Cathedral the first peal of bells in Australia ushered in the first day of 1844.

On 7th May, 1825, the Rev. Thomas Hobbs Scott arrived in Sydney, the first Archdeacon of Australia. On 13th September, 1835, the Right Reverend John Bede Polding, Bishop of Hiero-Cæsarea, and Vicar Apostolic of the Australian Colonies, arrived in Sydney, the first Australian Catholic Bishop, and was installed at St. Mary's on the 20th September.

The Rev. John McEncroe, afterwards Dean, had arrived as Roman Catholic Chaplain in 1833.

The Rev. William Ullathorne was the first Australian Vicar-General of the Catholic Church.

The Right Reverend William Grant Broughton, who succeeded Scott as Archdeacon on 13th September, 1829, went to England and returned as first Anglican Bishop of Australia, being installed in St. James Church on the 2nd June, 1836.

In his petition against the introduction of the Irish National school system, dated at Sydney on 25th July, 1836, he described himself as "Doctor in Divinity, Bishop and Ordinary Pastor of the Diocese of Australia."

The State payments to the various Churches represent, in the Estimates of 1837, £14,827 10s. for the Church of England, including a salary of £2,000 to the Bishop, one chaplain at £560, two at £460, one at £350, ten at £250, three at £200, and one at £182 10s.; besides £900 for six chaplains to arrive from England at £150 each.

The balance represented forage allowances, rents of chapels, travelling expenses, etc., besides £150 to the Rev. L. E. Threlkeld, missionary to the aboriginals, and £5,000 for erecting churches and residences.

The Presbyterian Church received £1,300, or eight ministers at £300, seven at £100, and £300 for subsidy to church and dwelling.

The Catholic Church received £3,040, or £500 for the Bishop, £200 for the Vicar-General, five chaplains at £150, and £900 for six chaplains to arrive. The balance of £600 was for travelling expenses and subsidies to chapels and residences. Early writers bear honourable testimony to the clergymen of that period. Catholic writers praise the Protestants, and the Protestant petitioners of 1836 speak of "great amelioration in the character and condition of the Irish Roman Catholic population in consequence of the zealous labours of their clergy." The first Sisters of Charity (five) arrived at Sydney in the "Francis Speight" with Vicar-General Dr. Ullathorne and three priests, on 31st December, 1838.

In 1840, the year after the Morton Bay penal settlement was abolished, the one school (Church of England) had eight boy and four girl pupils.

In 1837 the Rev. J. Handt had arrived as chaplain to the penal settlement, and started a mission among the aboriginals. That mission ended in March, 1843, and Handt went to Sydney.

In March, 1838, Dr. Lang's German Lutheran Missionaries, representing twelve men, eight women, and eleven children arrived at Brisbane. The men included two ministers, Schmidt and Eipper, and ten laymen or catechists. They settled six miles from Brisbane at a place still known as German Station.

In 1842 the Rev. John Gregor arrived with the first police magistrate, Captain Wickham. Gregor was drowned in a waterhole at German Station, and his brother, William Gregor, was killed by the Pine River blacks. In 1844 the Rev. J. Kavanagh was the only Catholic clergyman. In 1846 the population included 1,233 Protestants and 592 Catholics.

Morton Bay was at that time included in the diocese of Bishop Tyrell, of Newcastle.

When Queensland became a separate colony there were three clergymen to whom salaries were secured by Colonial Act, while they resided and officiated in Queensland. Those were the Rev. J. Mosely and Rev. Benjamin Glennie, of the Church of England, and the Rev. Wm. L. Nelson, D.D., of the Presbyterian Church. Dr. Nelson received a salary of £150, the other two £100 each. Glennie, now Archdeacon, still survives (1894).

There is now no State aid to any denomination, and all religious sects have absolute freedom to worship in their own fashion in any part of the colony.

## THE EARLY SQUATTERS.

The word "squatter," now used all over Australia as a name for the pastoral tenants, or those who live by flocks and herds, had originally an entirely different meaning. From 1833 to the year 1842 it was used to describe a dishonest class of people who lived chiefly by stealing and branding the cattle of the station owners. In 1839 there was actually an "Act to Suppress Squatters" introduced in the Legislative Council of New South Wales.

Flanagan, referring to the "squatter" in his history of New South Wales, asks—"Is it not possible that a good deal of the obloquy which during some years was sought to be thrown upon the stock-owners of the colony was due to the fact that the possessors of stock and the growers of wool had come to receive an appellation originally belonging to a class deservedly obnoxious to all honest men?"

The word "squatter" has now no offensive meaning whatever. It came from Jamaica, where it was used by the sugar-planters as a contemptuous term for the negroes, who, after the emancipation of the slaves, went to "squat" on vacant Crown lands, or small patches leased from the Government, preferring that independent life to working for wages on the plantations. For that reason they were hated by the planters, who called them "squatters," as a term of contempt. The petition of 427 Sydney people to the English Parliament in 1836, in describing the state of New South Wales, and the abuses of the land-grant system, stated that "the Crown lands are occupied by persons called 'squatters,' mostly convicts holding tickets of leave, or become free by servitude. They carry on an extensive system of depredation upon the flocks and herds and other property of the established settlers. By the temptation of liquor, gaming, and other means, they entice the servants of neighbouring proprietors to aid in plundering their masters, and by such means become possessed of numerous flocks and herds in a very short time."

The word "squatter" acquired its present meaning in 1842, and thenceforth was applied to the pastoral tenants of the Crown.

Another word used throughout Australia is "jackeroo," the term for a "newchum," or recent arrival, who is acquiring his first colonial experience on a sheep or cattle station. It has a good-natured, somewhat sarcastic meaning, free from all offensive significance. It is generally used for young fellows during their first year or two of station life. The origin of the word is now given for the first time. It dates backs to 1838, the year the German missionaries arrived on the Brisbane River, and was the name bestowed upon them by the aboriginals. The Brisbane blacks spoke a dialect called "Churrabool," in which the word "jackeroo" or "tchaceroo" was the name of the pied crow shrike, *Stripera graculina*, one of the noisiest and most garrulous birds in Australia. The blacks said the white men (the missionaries) were always talking, a gabbling race, and so they called them "jackeroo," equivalent to our word "gabblers."

The blacks of the Russell and Mulgrave Rivers in North Queensland call this bird "jowa jowa," from "jowa," the mouth, literally "all mouth," and they too use the term for any loud-voiced talkative person, black or white.

The first squatter on the Darling Downs, and therefore the first in Queensland territory, was Patrick Leslie, who, accompanied only by a servant named Peter Murphy, arrived on the site of Toolburra Station, on 20th March, 1840. Walter Leslie followed his brother with 5,600 sheep, 10 saddle horses, 2 bullock teams and drays, and a team of horses and dray. Their assistants were twenty-two ticket-of-leave convicts, said by Leslie in a letter of 1878 to be "good and game as ever existed, and equal to any forty I have ever seen since." The solitary faithful servant who came with Patrick Leslie on the pioneer trip was a life-sentence prisoner sent out by the ship "Countess of Harcourt" from Dublin in 1827. His brave and gallant conduct with Leslie was represented to Governor Gipps, who awarded him an unconditional freedom. This historical old pioneer died at Charters Towers, North Queensland, on 6th April, 1878. His name is commemorated by Murphy's Creek, on the line from Helidon to Toowoomba. It is but just to remember that in the penal days many a good man was sent out for crimes that to-day would be punished by a small fine or a caution in the police court, and many were sent out for crimes of which they were entirely innocent.

Leslie's first crossing of the Condamine River is between Talgai and Tummaville stations.

The first squatters to descend the Main Range were George Mocatta and Rogers, who took up Grantham and Helidon stations, followed by Somerville at Tenthill; then Graham, Scott, Ivory, the brothers Bigge, Mackenzie, Archer, McConnel, and Balfour. Leslie established his head station at Toolburra on 2nd July, 1840, but afterwards sold to Gordon, and went to Canning Downs. John Campbell took up Westbrook. This Campbell started to boil down sheep at Kangaroo Point in Brisbane in 1843, the same year as O'Brien at Yass in New South Wales. He was also the first man to take up a station on the Logan River, where he and Walter Smith marked off Tamrookum and Bromelton early in 1842, and those stations were stocked soon after Morton Bay was thrown open to free settlement within fifty miles of Brisbane in May, 1842. After the Leslies, on

the Darling Downs, came Sibley and King on Clifton, Hodgson and Elliot on Eaton Vale, Hughes and Isaacs on Gowrie, John Campbell on Westbrook, Scougall on Jimbour, Charles Coxen on Myall Creek (now Dalby), Irving on Warra, and Dennis on Jondaryan.

John Campbell, of Westbrook, wrote thus in after years—"The first time I visited the district there was but one wood and bark humpy on the whole Downs, the hut at Toolburra. Mr. Sibley was camped under a tarpaulin, and Hodgson and Elliot had a small cloth tent, where we found Elliot, the son of a British admiral, mixing up a damper, with his sleeves rolled up and in flour to his elbows." The first supplies for the Downs, from Brisbane in October, 1840, went through Cunningham's Gap, which was the route used for years across the Main Range. In 1844 there were thirty stations occupied.

Christopher Rolleston, first Crown Lands Commissioner, from 1842, was stationed at Cambooya, the site of the Border Police Station.

In 1843 Russell and Glover took up Burrandowan, the first station on the Burnett, and following them came Captain Levinge, Jolliffe, Furber, McTaggart, Hawkins, Lawless, Jones, Corfield, Perrier, Forster, Herbert, Dr. Ramsay, and others.

Then came the occupation of the Fitzroy and its tributary streams.

## PASTORAL OCCUPATION.

From March, 1840, when Patrick Leslie took the first Queensland station (Toolburra, on the Darling Downs), up to the present time, the squatters have gone out to the West and North until nearly the whole pastoral country of Queensland is occupied from the sea coast to the spinifex desert. The squatters were the pioneers of our Western civilisation; without them the present settlement would occupy a narrow band along the coast, and the "boundless West" be still in the undisturbed possession of the aboriginal.

They are the men who followed the tracks of the explorers from the Darling Downs to the Gulf of Carpentaria, from the sea shore to the red sandhills, and salt lakes, and the subterranean rivers of the "great lone land" of Sturt in Central Australia. The present generation knows but little of the dreary hardships and dangers to which the pioneer squatters were exposed; and people in the coast districts of to-day know just as little of the cheerless lives of many of the present squatters of the far West, far from all comforts of civilisation, all advantages of society, extended over that vast belt of country from Cooper's Creek to the head of the Georgina River, a distance of 700 or 800 miles. Everywhere in that wild West, so long peopled by the imagination with "gorgons and hydras and chimeras dire," are the lonely homesteads of the squatter and the tracks of his sheep and cattle—from the tropical jungles of the north coast range, and the farm-studded Darling Downs, far west through the brigalow and myall and mulga scrubs, and over the rolling downs to the red sandhills covered with savage spinifex; and in all parts of the colony has flood, or fire, or thirst, claimed victims from the pastoral pioneers, and the spear of the savage still continues in the far North the revenge begun with the death of John Mannel on Eaton Vale Station, on the Darling Downs, in 1842.

## FIRST QUEENSLAND STATIONS.

The following interesting report on the early Darling Downs stations was sent to the New South Wales Colonial Treasurer by Christopher Rolleston, C.C.L. It is dated from Cambooya, the Border Police Station, on the 25th May, 1844:—

"Sir,—I have the honour to transmit the information required in your circular of 31st April regarding the size of runs and the amount of stock kept by different proprietors in this district. The length and breadth of each station is taken from their own estimates in their half-yearly returns, and is calculated with as much precision as the rough measurement of the lands beyond the boundaries will allow.

"The largest occupiers of land are—

| | |
|---|---|
| W. and G. Leslie ... ... | 22 miles by 12 miles. |
| M. H. Marsh ... ... | 18 miles by 20 miles. |
| J. F. Beattie ... ... | 25 miles by 10 miles. |
| J. F. Beattie ... ... | 18 miles by 8 miles. |
| John Potts ... ... ... | 25 miles by 10 miles. |
| Thomas Bell ... ... | 22 miles by 15 miles. |

"Smallest occupiers—

| | |
|---|---|
| Neil Ross ... ... ... | 4 miles by 5 miles. |
| J. C. Wickham ... ... | 12 miles by 2 miles. |
| A. F. Farquharson ... | 12 miles by 4 miles. |
| John Cameron... ... ... | 12 miles by 5 miles. |
| Hugh Ross... ... ... | 10 miles by 8 miles. |

"With the exception of Mr. Beattie, all these parties pay only one license fee of £10 each. You will see that a considerable disproportion exists between the amount paid and the land occupied, and I cannot show you more strongly the inequality of payments made by the occupiers of Crown lands in this district. One instance may be quoted, that of M. A. Marsh, who holds two stations on New England, one capable of carrying ten and the other thirty thousand sheep, and these stations, before the new regulations, were covered by one license. I must say, however, the value of a run is not to be determined by its size, as the quality of the soil and herbage, the position, and, above all, command of water, give a greater value than mere extent. Some of the smaller stations in this district will therefore carry more stock than some of the large ones, and it is only fair to say the runs in this district are very ill watered in dry seasons, a great portion of many stations being unavailable for that reason.

"The following are the numbers of stock held by certain occupiers:—

| | Horses. | Cattle. | Sheep. |
|---|---|---|---|
| W. and G. Leslie ... | 150 | 1,500 | 12,000 |
| J. F. Beattie ... | ... | ... | 20,000 |
| Richard Jones ... | ... | 700 | 13,000 |
| Thomas Bell ... | ... | ... | 12,000 |
| Hodgson and Elliot ... | ... | 600 | 13,000 |
| A. F. Farquharson ... | ... | ... | 2,700 |
| Henry Dennis ... | ... | 500 | ... |
| J. C. Wickham ... | ... | 85 | ... |
| Hugh Ross ... | ... | 360 | 800 |
| Charles Coxen ... | ... | 500 | 1,000 |

"These returns may be given as nearly correct.

"CHRISTOPHER ROLLESTON,

"Crown Lands Commissioner."

## EARLY SQUATTERS

The following is a list of the stations and their owners on the Darling Downs in May, 1845, from the Commissioner's report:—

Rosenthal, Aberdeen Company
Goomburra, Aberdeen Company
St. Ruth, Aberdeen Company
Jimbour, Thomas Bell
Glengallan, Colin Campbell
Jondaryan, Tertius R. Campbell
McIntyre Brook, Thomas Collins
Eaton Vale, Crawford and Hodgson
Lower Condamine, Henry Dennis
Strathmillan, A. Farquharson
Tarrajarra, George Gammie
Yandilla, St. George Gore
Toolburra, Wm. Gordon
Peel's Plains, Henry Hicks
Stanbrook, Hughes and Isaacs
Westbrook, Hughes and Isaacs
Haldon, Joseph King
Canning Downs, W. and G. Leslie
Maryland, M. Marsh
Pikedale, John Pike
Ellangowan, Phillip Pinnock
Clifton, Joseph Robinson
Canal Creek, Joseph Robinson
Tummaville, Bolland and Taylor
Lower Condamine, Hugh Ross
Gladfield, Neil Ross
Cecil Plains, Russell and Brooks
Haldon, James Sibley
Peel's Plains, Joshua Whitting.

The names of Pitt and Bonifant, David Forbes, John Thane, Charles Coxen, S. Coxen, Dalrymple, F. Bracker, Leith Hay, Henry Wilks, Domville Taylor, Gordon Sandeman, Hicks, Wyndham, Fairholme, Matthew Goggs, W. T. Gordon, Crawford and Hodgson, Major A. C. Innes, J. P. Robinson, J. P. Wilkie, Ewen Cameron, Allan McPherson, Captain R. G. Moffatt, A. Trevethan, C. J. Mackenzie, John Dangar, John Gammie, James Laidley, John Stevens, John McGeachie, T. S. Hall, Joseph Fleming, H. Eckford, Hon. Louis Hope, Robert Ramsay, H Hill, David Perrin, John Balfour, Francis Forbes, J. and A. Crowder, were among the list of Darling Downs squatters from 1843 to 1848.

## WOOL.

The first Australian wool manufactured in England was taken there in 1808 by the Rev. Samuel Marsden. Marsden was a native of Farsley, a village about five miles from Bradford, in Yorkshire. In his youth he was apprenticed to a blacksmith, but by natural talent and ambition he reached the Oxford University, was ordained as a clergyman in January, 1793, and in 1794 arrived at Sydney as chaplain to the penal settlement, being appointed to that position by Royal Commission. Marsden was an active advocate of sheep-farming and general agriculture, and appears to have been rather a remarkable man, with strong individualism and considerable force of character. His flock of sheep on 11th August, 1804, numbered 1,200.

In 1808, after fourteen years' residence, Marsden went to England and took about 150 lb. of Sydney wool packed in barrels. At Sydney, wool itself had little value, was used for mattresses for the convicts, and even thrown on the floors of stables for cattle and horses to lie on. Marsden showed his wool to John Thompson, of Park Hill, Bradford, and offered him the lot if he would pay the carriage from London to Bradford. The wool was washed and sorted and made into cloths, out of which a suit of black was presented to Marsden, who was so proud of his Australian-grown costume that he appeared in it before George the Third, who was also so pleased that he ordered a coat of the same material, and took so much interest in Marsden's wool-growing experiments that he selected six merino rams

as a present for him to take back to Sydney, and Marsden took them back in 1810. Australian wool became famous for its quality, and "Botany wool" and "Botany yarns" have been familiar terms in the Bradford trade since 1820.

Marsden died at Sydney in 1838, and in his native village of Farsley his memory is commemorated by stained glass windows in the parish church.

The following will show the progress of the Australian wool trade with England since 1807, the year of the first shipment.

The records show 300 yards of blanketing made in Sydney from coarse wool in 1801.

NEW SOUTH WALES WOOL EXPORTS.

| | lb. | | lb. |
|---|---|---|---|
| 1807 ... | 245 | 1825 ... | 411,600 |
| 1808 ... | 562 | 1826 ... | 552,960 |
| 1811 ... | 167 | 1827 ... | 407,116 |
| 1815 ... | 32,971 | 1828 ... | 834,343 |
| 1816 ... | 73,171 | 1829 ... | 1,005,333 |
| 1817 ... | 13,616 | 1830 ... | 899,750 |
| 1818 ... | 86,525 | 1831 ... | 1,401,284 |
| 1819 ... | 74,284 | 1832 ... | 1,515,156 |
| 1820 ... | 99,415 | 1833 ... | 1,734,203 |
| 1821 ... | 175,433 | 1834 ... | 2,246,933 |
| 1822 ... | 172,880 | 1835 ... | 3,776,191 |
| 1823 ... | 198,240 | 1847 ... | 18,464,640 |
| 1824 ... | 275,560 | | |

COMPARATIVE WOOL EXPORTS.

| | lb. |
|---|---|
| From New South Wales for 1893 ... ... | 344,982,876 |
| From Victoria for 1892 ... ... ... | 165,590,377 |
| From South Australia for 1893 ... ... | 68,902,969 |
| From Tasmania for 1893 ... ... ... | 8,728,524 |
| From New Zealand for 1892 ... ... ... | 21,429,398 |

The questions who took the first Australian wool to London, and who introduced the first fine-wool sheep to New South Wales, have been a frequent source of dispute.

On the 26th July, 1803, a letter written by Captain John MacArthur, ex-lieutenant and paymaster of the New South Wales corps, was delivered at the office of the Right Hon. Lord Hobart, in London. In that letter Captain MacArthur gave an account of the New South Wales sheep and the wool samples he brought from Sydney. He said—"The sheep producing this fine wool are of Spanish kind, sent originally from Holland to the Cape of Good Hope, and taken from thence to Port Jackson." He had purchased three rams and five ewes in 1797, and the wool rapidly improved. The heaviest fleece in 1801, when MacArthur went to London, was only 3½ lb. In 1802 the weight rose to 5 lb., and each year the wool was becoming finer and softer. His letter says—"The fleece of one of the sheep originally imported from the Cape of Good Hope has been valued here (London) at 4s. 8d. per lb., and a fleece of the same kind bred in New South Wales is valued at 6s. per lb. The fleece of a coarse-wool ewe has been valued at 9d. per lb., and that of her lamb, by a Spanish sire, at 3s. per lb."

MacArthur's flock at Sydney in 1803 represented 4,000 sheep, the rams being all Spanish. He said that half his flock were raised from thirty ewes, purchased in 1793 out of a ship from India, and from eight or ten Spanish and Irish sheep purchased since. He hoped that in twenty years the New South Wales sheep would be able to supply the wool then imported from Spain and elsewhere by Britain at an annual cost of £1,800,000. All he asked from the Government was a tract of unoccupied country for sheep stations, and whatever convicts he required for shepherds. The Government gave him 5,000 acres on the Cowpasture River, thirty miles from Sydney, and he named this grant "Camden Park," after Lord Camden, one of the Lords of the Privy Council. When returning to Sydney, in 1806, MacArthur brought some merino ewes and rams from the flock of George the Third.

His first merinos of 1797 were bought from Captain Kent, R.N., who brought them from the Cape of Good Hope, where merinos were introduced by the Dutch.

Spanish rams were imported to the Cape of Good Hope by Colonel Gordon in 1790. In England, George the Third, "Farmer George," received a present of 500 merino sheep from the Spanish Government, and Sir Joseph Banks was requested to take charge of the flock. Banks sold all his own sheep on the Oaklands Estate in Lincolnshire, and gave his whole attention to the merinos. The new fine wool had much prejudice to encounter from the manufacturers. In 1804 a lot of the Royal sheep were sold, and among the buyers was Captain MacArthur, who bought some ewes and rams for his herd in New South Wales, paying from 11 to 27 guineas each. Lord Western's flock was started with forty ewes presented by George the Third, who wished him to try and prove if the merino could be made a mutton sheep as well as a wool producer.

In the year 1788 Captain Henry Waterhouse, a brother-in-law of Bass, came out with the "Sirius." He took an active interest in stock and agriculture. In 1794 he was sent with the "Reliance" to purchase cattle and sheep at the Cape of Good Hope.

He left the Cape on the 20th August with forty black cattle, three mares, and 107 sheep. Two-thirds of the cattle and five-sixths of the sheep died on the journey.

Mrs. Gordon, the widow of Colonel Gordon, gave three sheep as a present for Governor King and three for Colonel Patterson. The balance were purchased by Waterhouse and Captain Kent for 4 guineas each, but many died on their way to Sydney. Sheep were imported to Sydney from the Cape and India to the number of 364 in the first ten years of New South Wales.

According to the *Sydney Gazette* of December, 1812, ten merino rams from John MacArthur's flocks realised 200 guineas at auction, and the paper reports that "several coats made entirely from New South Wales wool are now in this country and are of most excellent quality."

In 1894 Queensland possesses 3,720 squatting runs, representing a leased area of 281,320,000 acres. The live stock include about 20,000,000 of sheep, 6,700,000 cattle, 430,000 horses, and 70,000 pigs.

Runs in unsettled districts, 3,536; area, 426,210 square miles; rent, £311,712. Runs in settled districts, 179; area, 13,337 square miles; rent, £21,060.

## GOLD DISCOVERY.

On Monday, 20th January, 1848, a man named James W. Marshall, while walking along the tail-race of a sawmill in California, picked up some grains of yellow metal about the size of wheat lying on the granite bedrock. He took them to the mill, and told the men he had found a gold-mine. One of the men, Henry W. Bigler, kept a diary, and the entry for that day was—"Some kind of mettle was found to-day in the tail-race by James Martial, the boss of the mill." The entry for next Sunday, the 30th, was—"Our mettle has been tride, and proves to be goald. It is thought to be rich, we have pict up more'n a hundred dollars worth last week"! That was the first discovery of gold in California.

In the year 1851 a man named William Hammond Hargreaves, then recently returned from a visit to the Californian diggings, was prospecting on Summerhill Creek, thirty miles from Bathurst, in New South Wales. He had been a resident of New South Wales before going to the California rush. In April of 1851 Hargreaves announced the discovery of gold and an extensive gold-bearing area. A Bathurst correspondent of the Sydney *Herald*, writing on the 24th May, 1851, mentions a man who came in with 9 lb. of gold, and that there was great excitement in the district. The first gold commissioner was named Hardy.

In the end of October the mining licenses included 8,637 on the Turon, 2,094 on the Ophir, 1,020 on Meroo and Louisa Creek, 400 at Araluen, and 50 at Abercrombie. The first Goldfields Regulation Act became law in January, 1853. The license fee was 30s. per month, with a double fee on foreigners, and the Act gave magistrates and commissioners a summary jurisdiction. The miners strongly protested against the fees and the summary jurisdiction. Hargreaves received a grant of £10,000 for his discovery, and the Rev. W. B. Clarke £1,000 for a previous prophecy. Hargreaves was therefore the first discoverer of payable gold in Australia. In the *Gentleman's Magazine* of 1798 there was an account of a reported discovery of gold by a convict, James Daly, at Sydney, in August, 1797, but the specimen was said to be made out of a guinea and a gilt button hammered together, and the enterprising "prospector" was rewarded at the time with 150 lashes, and afterwards hanged in December for stealing. In 1815 the convict gangs found genuine gold when cutting a road over the Blue Mountains.

In 1830, a nugget was brought in by a man employed by a James Lowe near the Fish River.

In 1839, Count Strzelecki, the Polish traveller, told Governor Gipps that an extensive goldfield existed in the Bathurst district; and Gipps asked him to keep it secret, as the penal days were not over, and he dreaded the effect on the convicts. The Rev. W. B. Clarke also discovered gold in 1841, and was persuaded by Gipps to keep the secret for the same reason.

In 1844, Sir Roger Murchison, after comparing mineral specimens from Australia with some from the auriferous country on the Ural River in Russia, declared that there must be extensive gold deposits in New South Wales. He repeated that prophecy with greater emphasis in 1846 in a letter to Earl Grey.

In Victoria the first gold was brought into Melbourne by some man whose name is not recorded. His reported discovery was regarded as a hoax. Small quantities were afterwards brought in and sold by shepherds.

A committee of the Victorian Legislative Council recommended a grant of £5,000 to Hargreaves, and £1,000 to the Rev. W. B. Clarke. The committee also advised £1,000 to Michel and party for the discovery of gold on Anderson's Creek, in the Yarra Ranges; £1,000 to Hiscock for discovering the Ballarat field; £1,000 to Esmonds for finding the first payable gold; £1,000 to Campbell, a squatter of Strath Lodden, for discovering the Clunes diggings. These were liberal proposals, calculated to please everybody, but nobody received a shilling.

Gold was found in Victoria, 18th July, 1851, and at Ballarat on 6th September, the same year. Gold was first discovered in South Australia in 1846 by a miner named Tyrrell, while sinking for copper.

The first Queensland gold was brought to Ipswich by J. G. Rossiter, of Glenelg Station, Darling Downs, in 1856. It consisted of 3 dwt. of scaly gold found twelve miles from Warwick, near Lord John's Swamp, on the road to Maryland. Gold had been found there even in 1852.

The first Queensland Government prospecting expedition left Brisbane in October, 1860, in charge of Captain Mechosk, who had acquired some knowledge of gold while a State prisoner in the Ural Mountains.

The Queensland Estimates for 1861 show a sum of £500 for prospecting.

## CANOONA.

The first Queensland goldfield was found in June, 1858, four miles from Ramsay and Gaden's head station Canoona, on the Fitzroy River, about thirty miles from Rockhampton. Two miners, named Chappel and Hardy, had been prospecting the Calliope and were driven off by the blacks, but meeting on their way back with a party of twenty men from Wide Bay, they returned and resumed prospecting northwards until payable gold was discovered at Canoona.

At a meeting held at Gladstone on 9th July, 1858, John Murray, J.P., in the chair, A. C. Robertson exhibited gold specimens obtained partly by washing with a dish and partly with a common pint pot. Chappel showed a nugget weighing 12 dwt. 7 gr. and some coarse gold as the result of two days' prospecting at Canoona. He said he had found equally good indications at Calliope and on the ranges between the Boyne and the Dawson. Writing from the present site of Rockhampton on 13th August, 1858, James Atherton said—"I have ridden over to the new goldfield on the north-west side of the Fitzroy. I saw 10 oz. of the gold, and a nugget weighing 2¼ oz. I believe it will turn out a very rich field. There are about 100 men on the diggings."

On 28th August R. Hetherington sent 27 oz. 11 dwt. 12 gr. away by the "Jenny Lind," and a nugget weighing 2 oz. 8 dwt. 16 gr. was found 5 inches below the surface by Charles Day and Henry Lavis. We find that on 25th August "Gladstone is deserted, and nothing left but women and cradles." From Port Curtis on the same date R. E. Palmer wrote to say—"A friend of mine has 2½ lb. of gold, and another has 40 oz."

Captain Parkins, of the "Coquette," reported on 24th August seeing fine gold specimens at Captain O'Connell's residence and 4 lb. in possession of a Chinaman. In a leading article of the Brisbane *Free Press*, 28th September, the editor said—"We had 100 oz. of Canoona gold on our office table last night, pure, good nuggety gold." In one week of that month 1,500 diggers landed on the Fitzroy River and met many returning. Flour was £40 per ton, sugar 8d. per lb., beef, 4d.

Constable Woods, writing to his superior officer, Ware, on 22nd September, said—"Ramsay is taking 96 oz., the 'Jenny Lind' has 50 oz., and I am bringing 40 oz. Port Curtis is in a miserable dilapidated state, and all the women are going to the diggings. Several Jews are opening stores on the field. The Chinese took up arms in revolt, but were disarmed and had to submit. The diggers are a poor lot; not like those of Victoria." The gold was said to be 3 grains better than standard gold.

Canoona was a calamitous field. The only gold found was lying on the Devonian rock, where it had been deposited by some ancient river. This was soon exhausted, and thousands of diggers from New South Wales and Victoria arrived only to meet others returning bitterly disappointed. The Government of Victoria expended about £10,000 in return fares for destitute diggers, and the people of New South Wales collected £1,700.

## ROCKHAMPTON GOLD FIELDS.

Next to the discovery of Canoona in 1858, came Calliope in 1862 and the Crocodile Creek field in 1865. Gold was found in Gabriel's Gully, on the head of the creek, and in 1866 there were 2,000 people in the locality. This was the first Queensland goldfield where the European diggers drove off the Chinese. The Hector Reef, on the Crocodile, was the first reef worked in the colony, the first crushing being in March, 1867.

Gold was found on the Morinish Range, thirty-five miles from Rockhampton, in the end of 1866, and a rush started in January, 1867.

At the same time there was a rush to Ridgelands, twenty-eight miles from Rockhampton, and the prospectors got £14,000 worth of gold in a few months.

Rosewood was the site of the next rush. In a claim called the Golden Bar, at a depth of 30 feet, the lode changed into stuff like soot, but a few tons of this gave gold worth £7,000, and one bucket alone washed out 48 lb., but the "soot" ran out, and no more was ever seen.

## MOUNT MORGAN,

Picturesquely situated 700 feet above sea level, on forest ridges converging from all sides into the Dee, which is here a small insignificant serpentine rivulet rippling over gravel beds and rock. This township is only seven years old, and possesses excellent hotels, good stores, a commodious and pleasantly-situated hospital, a public reading room, many neat and comfortable residences, and a weekly newspaper.

The "Gold Mountain" rises within a mile of the township to a height of 500 feet, or 1,200 feet above the sea, a dome-shaped hill differing in no way in external appearance from hills of similar height

and shape on both sides along the same range. The following is a reliable account of the origin of this celebrated gold mine:—

William McKinlay was stockman to Messrs. Wood and Robinson, of Calliungal Station, situated some thirteen miles down the Dee River, in the year 1862; the run comprised the whole valley of the Dee from its source to its mouth, or about sixty miles of open country. At that time the blacks were very bad, and a revolver an indispensable companion when in the bush. In 1864 a family of Scotch people, Gordon by name, arrived from the Brisbane district and settled down at the top of the Razor Back. In 1873 the two sons, Donald and Sandy, took up two selections for grazing purposes on the run, comprising 640 acres and 220 acres respectively, and adjoining each other. Here they met with but indifferent luck, partly owing to the cattle dying from eating a poisonous weed known as the peach leaf, and which was very common here then, and following on this came the disastrous and well-remembered drought of 1877. Everyone suffered enormous losses then, and the Gordons at length found it necessary to obtain employment outside their pastoral pursuits. Later on we find Sandy Gordon working for the Morgans at Mount Wheeler. Now, Sandy had married McKinlay's daughter, who one day showed her husband a piece of gold-bearing stone given her by her father, picked up from Mundic Creek by him. He made inquiries as to the locality, and showed the stone in turn to the brothers Morgan, who agreed to give Sandy £20 if he would point out to them the place where the stone was found. The bargain was made, and he guided Ned and Tom Morgan to a hill covered in places with a dark-looking stone, and part of which was in the 640-acre selection before mentioned. When they arrived at the base they separated, each striking off in a different direction. Ned Morgan had not proceeded far when he picked up a quartz stone with gold in it, saying at the same time, "The reef is mine." The Morgans then, it appears, on ascertaining that the discovery was no ordinary one, bought the selection from the Gordons at the rate of £1 per acre, which they considered a good price. Thus they parted with almost unlimited wealth for a paltry few hundreds. The Gordons now fade away from our field of observation, and the Morgans, their fortunate successors, reign in their stead. The original shareholders in the Mount were Fred, Edward, and Thomas Morgan, and a nephew, who, reserving one-half in the family, sold the other half to Messrs. T. S. Hall, W. Hall, W. K. D'Arcy, and W. Pattison. Afterwards the Morgans subdivided their half into five shares, and T. S. Hall became possessor of one-fifth of their half. Edward Morgan sold his share to his brother, Fred Morgan, for the sum of £10,000. Thus Fred Morgan with his original share, that of his son, and that purchased from his brother Ned, possessed three-tenths of the whole mine. This interest he eventually sold to the original shareholders of the second half for the sum of £62,000. On the same day as this sale the purchasers sold one-tenth interest in the mine for £26,000, to John Ferguson, and he has since split up portion of that interest among a number of Rockhampton people, who have invested various sums from £500 to £1,000 and upwards. Finally the original shareholders of the second half bought out Thomas Morgan's one-tenth for £31,000. A limited company was then formed with a capital of 1,000,000 shares of £1 each. The total area of ground held by the company, including the Freehold, the Leasehold, and the Consolidated Claim, which embraces thirty men's ground, is about 730 acres, the last-mentioned leasehold and consolidated areas having been subsequently taken up, adjoining the freehold to the west, and thus including the whole of the mountain, as the original selection had its boundary line running almost through the summit of the mountain, which is the most valuable part of the property.

Such is the brief history of a gold mine which once rose in the share market to a value of over *seventeen millions!* In describing this wonderful gold deposit, Geologist R. L. Jack says—

The origin of this unique auriferous deposit has given rise to many speculations. My belief is that it is due to a geyser or hot spring which burst out in Tertiary times after the valley of the Dee had been carved out of the cake of "Desert Sandstone," which once covered the site of the mountain, and whose escarpments now look down on the valley. Mr. J. Macdonald Cameron, M.P., who reported on the mine in 1887, considered the deposit to be "one mass of tufaceous material, from which some of the alkaline constituents of its felspar were washed out by aqueous percolations."

## MOUNT WHEELER

Was a rush of 1868, a field famous for a nugget worth nearly £1,000, found by a boy who stuck his father's pick into it in the first attempt to use the implement. The nugget weighed 247 oz., bright yellow underneath and dark on top, where it was covered by the volcanic soil.

EIDSVOLD,

On the Burnett River, is a field where gold was first found by a shepherd called "Loddon Bill," in 1858, but work only began in 1862, when John Falconer started five men digging on a point opposite Eidsvold head station. A ton and a-half of stone sent to Sydney gave 8 oz. 7 dwt. 4 gr. per ton. For years the place was neglected until the 9th December, 1886, when Fred. Achilles applied for a protection area, and on 26th April, 1887, he came in with 2½ oz. of gold and some rich specimens. The field was proclaimed on 25th July, 1887.

NEW ZEALAND GULLY,

Found in 1868, the gold being mixed with silver and only worth £2 15s. per oz.

GYMPIE.

In September, 1867, a prospector named James Nash called at the camp of R. J. Denman, a timber-getter, on Umahma Creek. Denman had seen a likely spot for gold and told Nash to go there and try it, on the understanding that any success would be shared between them. Nash went to the spot indicated, the afterwards famous Nash's Gully in the centre of Gympie, and is said to have washed out 10 dwt. from the first dish. His own statement mentions only a few grains. By the next evening he had an ounce and a-half, with which he went to Maryborough. On his return he got 62 oz. in six days, went down to Brisbane and sold it as Cape River gold.

On the 16th October he reported his discovery, and people rushed to Gympie from all points of the compass. The first reef was found in Sailor's Gully, by Pollock and Lawrence, on the 8th November, 1867, and was named the "Lady Mary."

The R. J. Denman mentioned here afterwards became Crown Lands Ranger at Maryborough, where he died. He complained bitterly to the present writer of the breach of faith by Nash in not sharing his discovery, according to solemn promise at Umahma Creek.

The Gympie diggings were first called the "Mary River," or the Currie Diggings, as the locality was between Eaton's station, called Currie, and H. Holt's station—Traveston.

A correspondent, writing from Maryborough on 19th October, 1867, said—"The reported gold discovery on Currie Station may be accepted as a fact. The discoverer is an old miner named Nash. Three gullies have been tried and found payable. The place is fifty or sixty miles from Maryborough. Three men in a month got 200 oz."

Then came a rush from all quarters, and people deserted Maryborough and district until the Yengarie Meat Works and sugar mills had to stop for want of labour; and the Sydney and Brisbane steamers were unloaded at the wharves by blacks from Fraser's Island and the Mary River.

The steamers picked up the blacks at the White Cliffs, and landed them there again on the return journey.

An Irishman named "Mike the Reefer" brought gold into Maryborough in 1865, saying that he found it about fifty miles up the river, but his statement was disregarded.

THE PALMER.

Named by William Hann in 1872, after the Hon. A. H. Palmer, then Premier of the colony. In August, 1873, a party of diggers were prospecting on the Palmer River, where Surveyor Warner had found prospects of gold when out with Hann's expedition in the previous year. The party consisted of J. V. Mulligan, Peter Brown, Alex. Watson, James Dowdell, Daniel Robertson, and Albert Brandt. On the 5th September, Mulligan came into Georgetown, on the Etheridge, with 102 oz. of "shotty, water-worn gold." From Junction Creek, on 21st November, 1873, Sub-Inspector Dyas wired to say that "payable gold was struck forty miles up the river; one nugget of 9½ oz. was found; a great quantity had been obtained during the month; provisions were very dear and scarce, the blacks numerous and troublesome, and about 500 diggers on the field." When G. E. Dalrymple was leaving the mouth of the Endeavour on 31st October, 1873, he saw the "Leichardt" steamer, Captain Saunders, steaming away south, "leaving a lovely little white seaport gleaming with tents and noisily busy with workmen, where a week before we found a silent wilderness." These were the first diggers, from the sea coast, for the Palmer Gold Field.

On 4th December, 1873, Sub-Inspector Knott and the escort left the Palmer with 5,058 oz. of gold for Cardwell, leaving a balance of 3,000 oz. in the bank On that date flour was 2s. per lb.; tea, 7s.; beef, 9d.; tobacco, 16s.; boots, 30s. per pair.

Hann's letters, dated Junction Creek, 13th November, 1872, report that—"We found traces of gold, and followed them for fifty miles along the Palmer River, in latitude 15 degrees 49 minutes and 14 seconds, and a large area of auriferous country on the Tate and Walsh Rivers."

The first officials, including Howard St. George (the first warden), McMillan (the inspector of roads), and a party of eighty-six diggers, arrived at Junction Creek on 24th November, 1873, to find 500 men on the field, and 2,000 oz. of gold in possession of the diggers and storekeepers. Two men and three horses had been speared by the blacks.

ENOGGERA.

Gold was found on the Enoggera Ranges, near Brisbane, in 1868, and the Mountain Rise Mine was opened by James Perry in that year, and abandoned. It was taken up again by Parish and party in 1870.

In 1872, Parker and mate, backed by Witty and Buchanan, sank a shaft to a depth of 90 feet, four miles from the present reservoir.

COPPER.

Copper has been found in many parts of Queensland, from Enoggera in the South to Cloncurry in the North.

Copper was first discovered at the Peak Downs in 1861 by a one-eyed shepherd named Jack Mollard; and the great Peak Downs Copper-Mining Company in one year, 1867, expended £97,000, and raised copper worth £125,000. Five drays with the first refined Peak Downs copper left in December, 1864, for Broadsound. By the end of 1870 it had paid £60,000 on the subscribed capital of £33,334, and in fifteen years sold 17,000 tons of refined copper, realising about £1,280,000. But injudicious management, and a fall of copper to £50 per ton, brought ruin, and a forced sale of the whole property in 1887 only realised £3,000. Population fell from 2,300, until the township of Copperfield, four miles from Clermont, was deserted and reduced to ruins.

Copper was discovered at Mackay, at Mount Flora, and in 1872 the Mount Flora Copper-Mining Company was floated in Sydney.

In 1872 copper was found at Eskdale, on the Upper Brisbane River. In the same year two copper selections of 320 and 120 acres were taken up by the Messrs. Campbell and others on Morton Island, and 3 cwt. of supposed ore was sent to Sydney to be tested.

Copper was found on the Enoggera Range in 1868, and a lease of 200 acres on the watershed of the reservoir was granted to Cowlishaw, Reardon, and party, in 1871.

In the year 1869 a man named Henry Dingle, squatting on the Burnett River, found traces of copper in the Mount Perry district. While riding home one evening at dusk, his horse shied at some gleaming objects on the ground. Returning there with daylight, he found these objects were boulders of blue and green carbonates of copper lying on a ridge in Yenda Station, once the property of Gilbert Eliott, the first Speaker in the Queensland Assembly. Specimens were sent to Sydney, and finally a Sydney syndicate sent up a Captain Osborne to report on the property. Active work began on the 21st May, 1871, and Mount Perry became a prosperous copper-mining centre, creating a small township, and exporting large quantities of copper. In August, 1872, the people gave a banquet to Dingle in honour of his discovery of the first ore.

## TIN.

### STANTHORPE.

Where the town now stands, on the granite rocks, 2,656 feet above the sea level, there was in 1872 only an old bark hut of a shepherd on Folkestone Station. The hut stood on Quart Pot Creek, so named from a quart pot lost at the crossing by the manager of Maryland Station. In the month of April, 1872, came a big rush to the newly discovered tinfield. The first Commissioner was F. T. Gregory. From 1872 to May, 1875, the Stanthorpe mines produced 14,000 tons of tin ore, worth £716,000.

In the next five years the net result gave 16,000 tons, worth £820,000. In 1891, 1892, and 1893 the yield had fallen to 244, 246, and 240 tons.

## MINERAL DISCOVERIES.

Gold discovered in California, 20th January, 1848. Coal found on the Burrum, 21st January, 1865. Gold found at Gympie, 16th October, 1867. McMillan found coal near Endeavour River, October, 1873. First copper specimens from Mount Perry, 12th September, 1869. Gold found by Hargreaves, 12th February, 1851. Sydney Mint established, 14th May, 1855. Burra Burra copper found, 19th May, 1844. Palmer Gold Field discovered, August, 1873. Stanthorpe tin mines started, 1872. Gold discovered in South Australia, 1846. Gold found in Victoria, 18th July, 1851. Kimberley Gold Field discovered by Hardman, 1882. Gold found at Ballarat, 6th September, 1851 Gold found in Western Australia, 1868. Gold found at Canoona, June, 1858. Copper found at Peak Downs, 1861. Calliope proclaimed a goldfield, 1863. Gold found at Charters Towers, 1872. Gold found at Ravenswood, 1868. Coal first reported in West Australia, 1846, by Roe and Gregory. First drayload of copper ore from Ban Ban, 16th October, 1869. Hann's party found gold prospects on Palmer, 1872.

Antimony found on Neardie run, 1872. Western opal shown in Brisbane, September, 1872. Gold found at Enoggera, 1868. Gold found at Talgai, 1865. First escort from Gympie arrived Maryborough, 15th November, 1867. Harker got 1 oz. nugget at Enoggera, August, 1872. 2,000 diggers on Charters Towers, September, 1872.

RETURNS FOR SIXTEEN YEARS ON PRINCIPAL FIELDS.

| Year. | Palmer. | Gympie. | Towers. | Rockhampton. |
|---|---|---|---|---|
| | oz. | oz. | oz. | oz. |
| 1877 | 839,000 | 625,000 | 600,000 | |
| 1878 | 120,233 | 41,564 | 72,189 | |
| 1879 | 90,000 | 38,453 | 83,275 | |
| 1880 | 65,433 | 43,072 | 85,298 | |
| 1881 | 52,000 | 67,861 | 82,324 | |
| 1882 | 37,340 | 50,312 | 79,595 | |
| 1883 | 24,089 | 64,818 | 69,555 | 4,194 |
| 1884 | 15,637 | 112,051 | 109,335 | 22,158 |
| 1885 | 12,913 | 89,600 | 135,650 | 14,396 |
| 1886 | 8,587 | 88,600 | 144.379 | 49,086 |
| 1887 | 6,981 | 102,149 | 151,377 | 85,305 |
| 1888 | 16,424 | 107,119 | 137,522 | 117,800 |
| 1889 | 16,861 | 115,590 | 165,552 | 325,683 |
| 1890 | 10,689 | 78,366 | 164,022 | 226,240 |
| 1891 | 12,781 | 60,714 | 223,403 | 147,691 |
| 1892 | 8,082 | 82,940 | 262,970 | 125,510 |

The returns for 1877 represent the total up to that date.

For the same period the Etheridge and Woolgar fields gave 449,110 oz.; the Cloncurry, Calliope, Clermont, Paradise and Normanby, 386,860 oz.

The grand total of the period from 1887 to 1894 is as follows, the year 1877 representing all previous to that date:—

| Year. | Oz. | Year. | Oz. |
|---|---|---|---|
| 1877 | 2,646,916 | 1886 | 340,998 |
| 1878 | 310,247 | 1887 | 425,923 |
| 1879 | 288,256 | 1888 | 481,643 |
| 1880 | 267,136 | 1889 | 739,103 |
| 1881 | 270,945 | 1890 | 610,587 |
| 1882 | 224,893 | 1891 | 576,439 |
| 1883 | 212,783 | 1892 | 615,558 |
| 1884 | 307,804 | 1893 | 616,940 |
| 1885 | 310,941 | 1894 | 674,330 |

## QUEENSLAND RAILWAYS.

In the first year of responsible government, in 1860, it was apparent to Queensland legislators that the Brisbane River and a dray road to Dalby were not sufficient traffic facilities to encourage the trade of the West and settle the interior. The newspaper of that date contains an announcement from the Morton Bay Tramway Company, Limited, formed with 30,000 shares of £5 each, and a provisional committee who never advanced beyond the prospectus stage. It served at least the useful purpose of directing public attention to the necessity for public railways.

On the 23rd April, 1863, Arthur Macalister, then Minister for Lands and Works, presented the first Queensland Railway Bill. The second reading was moved on the 19th May, and during his speech

Macalister announced that he had received an offer from R. and F. Tooth, of Sydney, to construct a light passenger and goods line, to run ten to fifteen miles per hour, between Ipswich, Toowoomba, Dalby, and Warwick, at a cost not exceeding £4,000 per mile, exclusive of rolling-stock and land, and to accept payment in land scrip, bearing 6 per cent. interest, for half the cost, and Government debentures at the same interest for the balance. R. R. Mackenzie attempted to shelve the Bill by moving the adjournment of the debate for six months. He was seconded by Blakeney, and there arose a long and interesting discussion characteristic of the period. F. A. Forbes, afterwards Speaker, objected to so serious an undertaking without reliable estimates. B. Cribb favoured railway construction by private enterprise. The Colonial Secretary, R. G. W. Herbert, was satisfied a 6 per cent. loan could be floated at 108, and that it would be a serious mistake to alienate large areas of land when they could raise that land to a high value by constructing their own lines. G. Raff was strongly in favour of railways, but first demanded a clear exposition of the public finances. J. P. Bell supported the railway proposals. Blakeney ridiculed the idea of a line over the Main Range for £4,000 per mile, and said the scheme was being rushed through without due consideration.

Finally the amendment was lost, on the casting vote of the Speaker, the Hon. Gilbert Eliott, in a division with twelve on each side.

From various parliamentary papers of that time it appears that a letter was written in 1863 to Macalister by a Bombay engineer, explaining that the main lines in India were on a 5½-feet gauge, with branch lines on 3½-feet gauge. The narrow gauge had not been tested, but the engineer believed it would be a success in both India and Queensland. The Byhore and Theelghaut railway, in the Bombay Presidency, ran on gradients of 1 in 37 with 30-chain curves, and cost £6,000 per mile. The Festiniog railway, in Wales, first started in 1863, ran on a 2-feet gauge, with 2-chain curves, and carried 5-ton engines, drawing 30 tons at thirteen miles per hour.

E. J. Fitzgibbon was examined at the bar of the Queensland Assembly in 1863, and expressed himself strongly in favour of a 3½-feet gauge railway, to run twenty miles per hour. He said it would do for the next hundred years. In 1864 Sir Charles Fox wrote to Macalister to say that Norway and Sweden were getting satisfactory results from lines on 3½ feet and 4 feet gauge.

All the negotiations and inquiries ended in calling for tenders for a line from Ipswich to the Little Liverpool Range, and Fitzgibbon had surveys, plans, and specifications of the twenty-one miles ready in the end of 1863. He had at first estimated the cost of rails at £7, but they subsequently rose to £9 per ton. The first locomotives cost £1,250 each.

The third reading of the Railway Bill was carried two days after by the casting vote of the Speaker, the House dissolved, and railways became the chief subject with candidates at the general election. The new Assembly met on the 21st July, 1863; and on the following day John Douglas, member for Port Curtis, presented a petition from his electors, praying the House not to entertain any project for railway construction until the North received additional representation; but if railways were to be started, that a line from Rockhampton

to Peak Downs should proceed simultaneously, mile for mile, with the line from Ipswich to Dalby. On the 4th August, Macalister, still Minister for Lands and Works, moved the second reading of the Railway Bill, and gave Fitzgibbon's estimates for the following sections:—

Ipswich to Toowoomba, 69 miles, £617,349, including £150,000 for the 15 miles over the Main Range, and £80,000 for crossing the Little Liverpool, an average of £8,950 per mile.

Toowoomba to Dalby, 50 miles, for £279,349.

Toowoomba to Warwick, 55 miles, for £329,167.

These estimates were to cover a 15-feet formation, with iron bridges and culverts where necessary, anticipating a permanent way for a 4 feet 8½ inch or 5½-feet gauge, and the use of heavy engines. The second reading of the Bill was carried by 14 to 11, and on the 26th August came up for discussion in the Legislative Council, where it was subjected to a severely critical ordeal. The second reading was postponed, on the motion of the Hon. B. Fitz, to enable evidence to be taken. On the motion of Dr. Hobbs, the Council examined D. McConnel (of Cressbrook), W. Pettigrew, E. J. Fitzgibbon, H. T. Plews, W. Coote, and A. C. Gregory, Surveyor-General. There was no evidence to shake the Government confidence in the narrow gauge, and a sum of £250,000 was voted to construct a line from Ipswich to the Little Liverpool Range. The following were the tenders received:—

| | |
|---|---|
| Higgins and Co. ... ... ... ... | £113,731 |
| Broomfield ... ... ... ... | 103,633 |
| Bourne ... ... ... ... ... | 90,015 |
| Martindale ... ... ... ... | 87,707 |
| Peto, Brassey, and Betts ... ... | 86,900 |

The lowest tender was accepted.

After a long debate the House divided, the division showing 17 for and 7 against. Ayes: Challinor, R. Cribb, Lilley, Moffat, Macalister, Pring, Herbert, Wienholt, Sandeman, Bell, Coxen, Taylor, Groom, Royds, B. Cribb, Kennedy, and McLean.

Noes: Mackenzie, Brookes, Douglas, Blakeney, Pugh, Stephens, and Edwards.

The division in the Council gave 11 for and 3 against. Ayes: North, Roberts, Harris, White, Bigge, Gore, R. J. Smith, Laidley, Fitz, Bramston, and Watts. Noes: W. Wood, E. I. C. Browne, and L. Hope.

This ended the first "battle of the gauges," and the rivalry of roads and railways.

The Imperial statutes of 1846 fixed the railway gauge for England at 4 feet 8 inches and 5 feet 3 inches for Ireland.

Queensland started on her career of railway construction wedded to the narrow 3 feet 6 inch gauge, and so far it has given highly satisfactory results; and we have a right to award grateful remembrance to our early engineers for conscientious and able discharge of their duties. The first Queensland railway was not only by far the cheapest, but it was also the most substantial of the first Australian lines.

The first Victorian railway cost £38,000, the first in South Australia £28,000, and the first in New South Wales £40,000 per mile.

Our first railway, from Ipswich to Dalby, crossing the Little Liverpool Range and the Main Range, over the most difficult route traversed by any Queensland railway up to the present time, except the line from Cairns, only cost £10,600 per mile.

The following list will show the cost of various lines, including resumed land, too often a costly item :—

| Lines. | Length, in Miles, Constructed. | Total Cost. | Cost per Mile. |
|---|---|---|---|
| SOUTHERN DIVISION— | Miles. | £ | £ |
| Brisbane to Charleville ... ... | 485 | 3,798,112 | 7,831 |
| Gowrie Junction to Wallangarra ... | 125 | 1,016,470 | 8,132 |
| Ipswich to Dugandan ... ... ... | 35 | 143,434 | 4,098 |
| Brisbane Valley Junction to Esk ... | 41 | 161,040 | 3,928 |
| Pengarry Junction to Crow's Nest ... | 29 | 115,149 | 3,971 |
| Beauaraba Junction to Pittsworth ... | 16 | 55,912 | 3,494 |
| Warwick to Killarney ... ... ... | 27 | 118,935 | 4,405 |
| South Brisbane to Southport ... ... | 55 | 661,014 | 12,018 |
| Bethania Junction to Beaudesert ... | 27 | 119,500 | 4,426 |
| Ernest Junction to Nerang ... ... | 3 | 31,613 | 10,538 |
| South Brisbane to Cleveland ... ... | 21 | 239,336 | 11,397 |
| Brisbane to Cooroy (including Sandgate and Racecourse Lines) | 88 | 983,878 | 11,180 |
| Cooroy to Maryborough ... ... | 86 | 634,763 | 7,381 |
| Kilkivan Junction to Kilkivan ... | 26 | 166,797 | 6,415 |
| Mungar Junction to Degilbo ... ... | 45 | 189,462 | 4,210 |
| Croydon Junction to Bundaberg ... | 52 | 257,714 | 4,956 |
| Isis Junction to Childers ... ... | 12 | 33,498 | 2,792 |
| Bundaberg to Rosedale ... ... | 34 | 159,438 | 4,689 |
| North Bundaberg to Mount Perry ... | 66 | 345,615 | 5,237 |
| CENTRAL DIVISION— | | | |
| Rockhampton to Longreach ... ... | 427 | 2,112,721 | 4,948 |
| Emerald to Springsure ... ... ... | 41 | 109,937 | 2,681 |
| Emerald to Clermont ... ... ... | 62 | 170,711 | 2,753 |
| North Rockhampton to Emu Park ... | 29 | 149,877 | 5,168 |
| NORTHERN DIVISION— | | | |
| Mackay Railway ... ... ... | 31 | 152,219 | 4,910 |
| Bowen Railway ... ... ... ... | 48 | 158,196 | 3,296 |
| Townsville to Hughenden ... ... | 236 | 919,749 | 3,897 |
| Ravenswood Junction to Ravenswood | 24 | 81,608 | 3,400 |
| Cairns Railway ... ... ... ... | 41 | 1,145,244 | 27,933 |
| Cooktown Railway ... ... ... | 67 | 338,077 | 5,046 |
| Normanton Railway ... ... ... | 94 | 252,900 | 2,690 |
| Average Cost of Construction ... | 2,373 | 14,822,919 | 6,246 |
| Rolling-Stock ... ... ... | ... | 1,407,571 | ... |
| Total ... ... ... | 2,373 | £16,230,490 | 6,840 |

The railway from Charters Towers to Hughenden, a distance of 153 miles, was completed for £3,557 per mile. The railway to Sandgate, and the Oxley to South Brisbane branch, were made expensive by the cost of resumed land.

Queensland has apparently arrived at the minimum of economic construction compatible with solidity, durability, and safety. Travellers will be surprised to find that the oscillation of narrow-gauge carriages is very little more than on the wide gauge, and in rounding sharp curves the centrifugal movement is certainly not more unpleasant on the narrow gauge.

The safety of Queensland railways requires no stronger or more satisfactory proof than that embodied in the fact that there have been fewer accidents than over the same distance of any other Australian railways, and probably few as on a similar length in any part of the world.

Queensland railways have been managed since 1888 by a Board of three Commissiouers: John Mathieson (chairman), Andrew Johnston, and Robert Gray. The chairman receives a salary of £3,000, the other two £1,500 each. On 13th December, 1894, Commissioner Johnston retired under a Special Act, leaving only two Commissioners.

## DIVISIONS.

Queensland is divided into twelve great divisions, represented by East and West Morton, Darling Downs, Burnett, Port Curtis, Maranoa, Leichardt, Kennedy, Mitchell, Warrego, Gregory, Burke, and Cook.

The Morton districts include the basins and watersheds of the Brisbane and Logan Rivers and tributaries, a total of 8,832 square miles.

The Darling Downs district is watered by the Weir, Moonie, and Condamine rivers, and covers 6,067 square miles.

The Burnett and Wide Bay district is drained by the Mary, Kolan, Burrum, and Burnett rivers, and covers, including Fraser's Island, an area of 8,243 square miles.

Port Curtis includes the Calliope, Boyne, and Fitzroy, and covers 14,103 square miles.

The Leichardt includes the Comet, Dawson, Isaac, and Nogoa rivers, the towns of Clermont, Springsure, and Taroom, and covers 48,323 square miles.

The Maranoa represents 38,900 square miles, includes the rivers Maranoa, Culgoa, and Balonne, and the townships of Roma, Surat, and St. George.

The Kennedy has an area of 11,290 square miles, includes the towns of Mackay, Bowen, and Charters Towers, and the Burdekin River.

The Warrego has an area of 59,341 square miles, includes the rivers Warrego, Bulloo, Ward, and Paroo, and the towns of Charleville, Thargominda, and Cunnamulla.

The Burke covers 8,192 square miles, includes the Gulf rivers, Flinders, Albert, Norman, Leichardt, Nicholson, and Cloncurry, and the towns of Burketown, Normanton, and Croydon.

The Mitchell covers 37,220 square miles, is drained by the Barcoo and Thompson, and takes in the towns of Barcaldine, Blackall, Tambo, and Aramac.

The Gregory (North and South) is drained by the Diamintina, Georgina, and Mulligan rivers, Eyre's and Cooper's Creek, and includes the town of Birdsville.

The Cook includes nearly all the Cape York Peninsula; covers an area of 35,225 square miles; is drained by the Mitchell, Barron, Normanby, Coen, Batavia, Jardine, Palmer, Laura, and several other rivers, and takes in the towns of Cairns, Herberton, Cooktown, Port Douglas, Thoruborough, Georgetown, Maytown, and Somerset.

## BOUNDARIES.

Queensland is bounded on the east coast by the Pacific Ocean, so named on 28th November, 1520, by Magellan, after sailing through the Straits which still retain his name, off the coast of Patagonia.

On the northern point, off Cape York, is Torres Strait, named in 1762 by Dalrymple, the English hydrographer, after receiving the manuscript report of the discovery in 1606 by Torres. It appears Torres left a copy of his report at Manilla on his way home, and when that place was taken by the British in 1762 this report was found and taken to London. The northern shores of the colony are washed by the Gulf of Carpentaria. The origin of this name and the time it was first bestowed are alike involved in some obscurity. It first appears on Thevenot's chart in 1663. In the service of the Dutch East India Company was a General Peter Carpenter, who visited the Gulf about the year 1628; and it was either named in honour of himself or his cousin, Governor Carpenter, of Batavia.

Queensland includes the whole of the islands between Cape York and New Guinea, as the boundary line, following the Barrier Reef northwards, takes in the Murray Islands, East Cay, and Bramble Cay, shoots thence across to the New Guinea coast, passes midway between Sibai Island and the mainland, takes in Talbot and the other islands off the Moicussar River, and diverges thence past the west side of Deliverance Island, onwards west by south to 138 degrees east longitude. This boundary line became law on 1st August, 1879.

The western boundary is from the Gulf of Carpentaria to the 138th meridian of longitude, south to the 26th parallel of latitude, thence east to the 141st meridian, thence south to the 29th parallel, and west along that line back to the 138th meridian. This peculiar adjustment of boundaries cuts a square section out of the south-west corner of the colony, and leaves it in South Australia. This square includes the whole of Cooper's Creek, west of Innamincka, and the Everard River, south from Birdsville.

On Innamincka Station, 400 yards from the house, is the spreading boxtree where Burke died, and at Marpoo, twelve miles away, is the grave of Wills. Thirty miles north-west is the last resting-place of Grey. Queensland lost about 42,000 square miles of territory in that north-west corner. The southern boundary is a line from Point Danger on the sea coast westward along the Macpherson and Dividing Ranges, the Dumaresq and MacIntyre rivers, to the 29th parallel, and thence along that parallel to the 141st meridian. This southern line separates Queensland from New South Wales.

### AUSTRALIAN COLONIES—COMPARATIVE.

| | Square miles. | Acres. |
|---|---|---|
| Australia ... ... | 3,470,893 | |
| West Australia ... | 978,300 ... | 626,112,000 |
| South Australia ... | 903,690 ... | 578,361,600 |
| Queensland ... ... | 668,224 ... | 428,663,360 |
| Northern Territory... | 523,620 ... | 335,116,800 |
| New South Wales ... | 309,175 ... | 199,000,320 |
| New Zealand ... | 105,302 ... | 67,420,000 |
| Victoria ... ... | 87,884 ... | 56,245,760 |
| Tasmania ... ... | 24,330 ... | 15,571,500 |

## COAST TOWNS, SOUTH TO NORTH.

### BRISBANE.

The capital of Queensland stands on low ridges of slate and quartzites, Permo-Carboniferous rocks, in S-shaped curves of the Brisbane River, the centre of the city at the Custom House being fourteen miles from the mouth.

When Oxley pulled up the river in his whaleboat on the 2nd December, 1823, the site of Brisbane was covered by thick forests of gums, bloodwood, and ironbark on the ridges, and patches of thick pine and figtree scrubs on the flats. He said—"The scenery is peculiarly beautiful; timber of great magnitude, especially a magnificent species of pine." This was *Araucaria Cunninghami*.

In December, 1824, the first party of convicts from Redcliffe Point arrived on the spot now known as Petrie's Bight, and started to clear on the site of the present Government Printing Office. From thence to 20th May, 1839, the locality was occupied as a penal settlement. The present Observatory is the old treadmill of that unhappy period. Up till May, 1839, no free settlers were allowed within fifty miles of Brisbane. That law was then slightly relaxed, but not until May, 1842, was the district officially thrown open to free settlement.

Then Brisbane began to slowly advance, and continued progressing up to the year of incorporation, 1859. On the 12th October the young city elected the first Municipal Council, composed of John Petrie, Patrick Mayne, T. B. Stephens, Joshua Jeays, A. J. Hockings, G. Edmondstone, R. Cribb, George Warren, and J. W. Sutton. Petrie was unanimously elected first mayor.

Brisbane has undergone a wondrous transformation since that year—1859. Those were days when the aboriginals held corrobborees on the site of the present Roma street markets, and sportsmen shot waterfowl on the lagoons in Adelaide street.

When Governor Brisbane visited Morton Bay in December, 1824, he was accompanied by the first Australian Chief Justice (Forbes), who advised that the new settlement on the Brisbane River be called Edenglassie, after his own birthplace. Governor Brisbane went to England in December, 1825, and the suggestion of Forbes was not adopted. The town received the same name as the river, and was gazetted in 1834. It stands in latitude 27 degrees 28 minutes 3 seconds south, and longitude 153 degrees 1 minute 54·93 seconds east, about 500 miles north from Sydney, and 70 miles from the Point Danger boundary of New South Wales. The area of the city is $2\frac{1}{2}$ square miles, with 53 miles of streets. South Brisbane covers an area of $4\frac{1}{2}$ square miles, with 65 miles of streets. North and South are connected by the Victoria Bridge, opened on 15th June, 1874. Brisbane is supplied by water that comes by gravitation from a reservoir seven miles away on the head of Enoggera Creek, at a height of 240 feet above the sea. This occupies about 200 acres, drains a watershed of 8,300 acres, holds 1,000,000,000 gallons, was started on 18th August, 1864, and cost £300,000. A second reservoir at Gold Creek occupies 68 acres, drains 2,500 acres, and holds about 400,000,000 gallons. The mains are pipes of 8, 12, and 16 inches in diameter.

The city is lighted by gas, and the electric light is used by many private firms. Horse tramways, 'busses, and three kinds of cabs supply public travelling facilities.

Chief of the public buildings is the Treasury block, at the head of Queen street. The Parliament Houses stand beside the Botanic Gardens and Government House. They have cost about £130,000. The Parliamentary Library contains 25,000 volumes. There are many large and imposing warehouses and handsome bank buildings. At South Brisbane is the Government Graving Dock, 431½ feet long, 50⅓ feet wide, with a depth of 32 feet, and 16 to 19 feet of water. It cost £90,409. The Museum stands at the top of Elizabeth street, overlooking the river. It was opened in January, 1878, and cost £14,362.

Among the scholastic institutions is the Boys' Grammar School, erected in 1880, at a cost of £24,324. The Girls' Grammar School, built in 1884, cost £14,707. Brisbane is specially fortunate in commanding an unlimited area of high, dry, healthy, suburban country in all directions.

In 1851 Dr. Lang wrote—"There is no place I have ever seen in all our Australian colonies, with the single exception of Sydney, in which there is so great a number of beautiful and interesting villa sites."

The native name of Brisbane was "Mee-an-jin," or "Meeginnchin."

The city has railway lines to three watering places—Sandgate, 13 miles; Cleveland, 21 miles; and Southport, 50 miles. The railway to the interior, starting from both North and South Brisbane, runs west to Charleville, 483 miles, and a coast line runs north to Gympie, Maryborough, and Bundaberg.

### BRISBANE IN THE PENAL DAYS.

All the land now occupied by the Botanic Gardens and Government House, and thence along the river to Creek street, was all under maize. Through this crop ran a muddy mangrove creek into Frog's Hollow, now covered by Albert street. A second creek ran up to the present corner of Albert and Adelaide streets, with mangroves to Edward street.

Andrew Petrie's garden fronted the river at Eagle street. Near there stood a pinetree to which convicts were tied and flogged. There, too, was a gumtree with a sentinel-box in the fork, 40 feet from the ground, where a sentry watched the blacks swimming over from Kangaroo Point to steal corn. The Point was all under wheat.

The soldier's barracks stood on the site of the present Treasury Buildings; the women's factory on the site of the present Post Office. The lumber, or working yard, surrounded by a high wall, stood where a hotel now stands close to Victoria Bridge, at the head of Queen street. The commandant's house stood next to the site of the present Government Printing Office, and his garden faced the river in front. The convict hospital stood on the site of the Supreme Court, and the land from there to Roma street railway station was all under maize. Spring Hill was covered by gums, ironbark, bloodwood, and stringy bark. Water was carted from the spring at the quarries near the Grammar School. The present Observatory is the old treadmill, where the convicts, twenty-four at a time, ground the corn and wheat.

The burial ground fronted the river along the North Quay, west from Turbot street. The commissary stores stood in front of the commandant's house The Government stockyard was erected on the corner of George and Charlotte streets; the yard for yoking bullocks stood on the north-east corner of Albert and Queen streets. The

first racecourse, for steeplechases, began where the kiosk stands in the Botanic Gardens, crossed fences and ditches in Frog's Hollow, and ended at the winning post near the present Post Office. The men's gaol was a two-storied walled building, afterwards occupied as first Parliament House and Supreme Court, in Queen street. All the river frontage of South Brisbane was under maize and wheat.

The chain-gang convicts wore grey caps, grey jackets, and canvas trousers buttoned down the side, so as to be put on and taken off without removing the irons, which were riveted.

The loose chain between the feet was held up, when walking, by a string fastened to the waistbelt.

The chained prisoners were fed three times daily on porridge only, receiving no tea, sugar, or tobacco. The prisoners tanned leather from local cattle hides and made their own boots.

They also made all their own wooden implements. Men were punished by flogging, and the women had their heads shaved and were chained to the floor from a ring round the neck.

## IPSWICH.

In a manuscript report by Allan Cunningham, the botanist, to Governor Darling, in 1828, there is the following passage:—"In the year 1827, Captain Logan, of the 57th Regiment, then Commandant of Morton Bay, in tracing the Bremer from its junction with the Brisbane, discovered at ten miles from that point the calcareous hummocks now named Limestone Hills. Landing, he was much struck with the singular appearance of the lofty *Xanthorrhœa*, or grasstree, which abounds on the open flats, low hills, and forest grounds at this particular spot, and which the Commandant had not inaptly compared to beehives on stools. Some months after this discovery a limekiln was built, and a party of convicts, consisting of an overseer (acquainted with sapping and mining) and five men, were stationed at these hills to commence lime burning."

A corporal, three soldiers, and five convicts formed the first party to start lime-burning. One soldier and a convict were killed by the natives on the way down the river at a place now known as the Rocks, at the Figtree Pocket. While the boat was close to the right bank a spear was driven through the soldier's breast, and the forearm of the man in front. The convict's head was smashed like an eggshell by a heavy nulla thrown with tremendous force. Such was the fate of soldier Thomas Callan, and convict Sam Bates (ex "Eudora"), on the 16th March, 1828.

In the penal period the present Ipswich racecourse was known as the Ploughed Station, and was under crops of wheat, maize, and potatoes.

Ipswich of the present day is a large town of over 10,000 people, the centre of an extensive and important agricultural district and the chief coal-mine industry of the colony. It is situated on the Bremer River, a tributary of the Brisbane, twenty-four miles by rail from Brisbane, and fifty by water. At one time it competed with the present metropolis for premier position. In 1846 the population of Brisbane was 829; Ipswich, 103. In 1856 Brisbane rose to 2,395, and Ipswich to 2,459. Ipswich was the depôt for all the squatters of the West. The Ipswich Club was one of the best in Australia. The Press began with the *North Australian* on 2nd October, 1855, and the

*Herald* on 4th July, 1859. The town was incorporated on 3rd March, 1860, and the Supreme Court opened the same year on 6th February. The first land was sold at Brisbane on 11th October, 1843. The years 1841 and 1845 were distinguished by big floods. The railway from there to Grandchester was opened on 31st July, 1865—the first railway in Queensland. The first sod was turned on 28th February, 1864. The first river steamer, the "Experiment," Captain Pearce, ran from Brisbane to Ipswich on 29th June, 1846. The first land sale in Ipswich itself was held on 31st July, 1850. The Grammar School was opened on 25th September, 1863. At the separation of the colony in 1859, Ipswich was one of the sixteen electorates into which Queensland was divided, and returned three members for 806 electors. The town is lighted by gas, and supplied with excellent water from the Brisbane River at Kholo. The waterworks were completed on the 25th June, 1878, at a total cost of about £40,000. The water is pumped from the river by pumps, with a capacity of 90,000 gallons in the twenty-four hours, into a reservoir holding 89,642 gallons, and gravitates thence to Ipswich. The town is situated on a series of low limestone hills, Denmark Hill, the highest, overlooking the whole municipality. The mean shade temperature of January is about 81 degrees, the mean maximum 93 degrees; the highest 102 degrees, the lowest 62 degrees. In June the mean shade is 58 degrees, the highest 74 degrees, the lowest 37 degrees. These are the temperatures of average years. To Ipswich belongs the honour of starting the first woollen mill in Queensland. The tweeds and flannels from this excellent manufactory are worn by all classes in all parts of the colony. The mill stands in a bend of the Bremer in North Ipswich. Ipswich has also the credit of starting the first cotton mill, which opened in 1894.

## MARYBOROUGH.

An important township on the Mary River, twenty-six miles from the entrance in Sandy Island Strait. Vessels from Brisbane enter this strait over the Wide Bay Bar, twenty-eight miles from the mouth of the Mary, which was first called the Morrobocoóla, Monoboola, Numabulla, and Wide Bay River. The first white men to enter were the whaleboat party led by Andrew Petrie, when he went there in 1842 to bring away James Davis, "Durramboi," who had lived for fifteen years and three months with the blacks. They ascended the river to Mount Bopple (the name of the frilled lizard), and on 14th May found Davis with a tribe called Jinjinburra. This man was a convict who escaped when a youth in March, 1827, from the penal settlement on the Brisbane River. In 1843 the schooner "Edward," the first vessel in the river, went up to Tinana Creek with supplies for Eales' sheep stations, the first in that district.

In 1847 Surveyor Burnett visited the river and named it the "Mary" in honour of Lady Mary Fitzroy. The town takes its name from the river. It stands on a peninsula formed by a long narrow bend. The base is but a mile across, the distance round by river seven miles. The Mary is navigable for 10-feet vessels up to Yengarie, nine miles above Maryborough, and for 7-feet vessels to twenty miles above Yengarie.

For many years the Mary River district was known as the Wide Bay country, notorious for murders by the blacks, who drove some of the pioneers off their stations and killed many stockmen and

shepherds and two or three squatters. In 1848 a cutter called the "Aurora," whose master, Charles Gray, was killed by the Bribie Island blacks on 10th July, 1849, brought up a boiling-down plant to boil down catarrh sheep from Baramba Station.

In 1854, the first steamer, "William Misken," ascended the river. The *Burnett Times* (now the *News*) started on 6th March, 1860, the *Chronicle* on 21st November. In 1859, the town became a port of entry, and Captain Cottier, of the "Tamar," started regular trade with Brisbane. Messrs. W. H. Walsh and G. Eliott represented the district in the Sydney Parliament before separation. Eliott was afterwards first Queensland Speaker.

The Maryborough Sugar Company started work on a thousand acres on Tinana Creek in 1865. In October, 1867, Gympie Gold Field was discovered, and the whole of the trade passed through Maryborough.

Sugar growing extended over a large area, and Yengarie became the site of an extensive boiling-down and meat-extract industry. Vast quantities of pine, red cedar, and hardwood were drawn in or rafted down and shipped to southern markets. Excellent cotton was grown in 1860. Coal was found on the Burrum on 21st January, 1865.

The marine watering place of Maryborough is Pialba, a lovely spot on the shore of Hervey's Bay, twenty-three miles away. There is a beautiful hard sandy beach nine miles in length, ending at Urangan Point.

Maryborough is a clean, healthy town of about 12,000 people, the natural and permanent centre for all the trade of a large and important district. One railway runs south to Gympie and thence to Brisbane, one west to Biggenden, while another goes north to Bundaberg, Mount Perry, and Rosedale.

Maryborough started in 1851. The first timber shipment to Sydney left in February, 1861. The first eight bales of cotton were shipped on 8th May, 1862. The town was lighted by gas on 3rd August, 1879.

## GYMPIE.

The Mary River blacks' name for the stinging tree. Gympie stands in latitude 26 degrees 12 minutes south, and longitude 152 degrees 38 minutes east, and is one of the healthiest towns in the colony. Geologically the formation belongs to the Lower Carboniferous, with Devonian on the east and Serpentine on the west, merging into granite and slates. The town is picturesquely situated on a series of low hills divided by sharp ravines, with charming views of isolated hills and ranges in all directions. Gympie sprang suddenly into existence after the discovery of rich alluvial gold by Nash in October, 1867. In the first eight years this goldfield produced 545,000 oz., and 1,324,000 oz. up to 1887. The alluvial was worked out in 1868, but there were then about 100 reefs opened. The first reef was the Lady Mary, discovered by Pollock and Lawrence on the 8th November, 1867. The Gympie municipality, proclaimed 25th April, 1880, has an area of 2,560 acres. The town was visited by Governor Blackall in 1869 and Normanby in 1873.

## BUNDABERG

Bundaberg, fifty-four miles north by rail from Maryborough, stands on the Burnett River, chiefly on the south bank, the site being originally open forest of blue gum, wattle, bloodwood, turpentine, and ironbark. The word Bundaberg comes from "bunda," a class name among the local blacks, and the Saxon "berg," a town. This eccentric combination is credited to the first surveyor whom the blacks called "bunda." He died in 1889 on the Barron River, five miles from Cairns. The town was only proclaimed a municipality on 22nd April, 1881, and in 1893 had acquired a population of 5,000 people. This astonishing progress is due to the splendid agricultural country in the district. Between Bundaberg and the sea lies the famous Woongarra Scrub, about 20,000 acres of rich basalt country, all under cane and occupied by sugar plantations. The town is also the depôt for the Isis Scrub, a similar area of basalt, to which a twelve-mile branch railway diverges from the line to Maryborough.

From North Bundaberg, a railway was opened on the 20th May, 1884, to Mount Perry, once famous for its copper mines. Sugar plantations extend far up the Burnett on both sides. This river previous to 1847 was called the Boyne, as the head waters were supposed to flow into the Boyne. The first station on Burnett waters was Burrandowan, taken up by Stuart Russell and Brooks in 1843. Among the other early squatters were Ferriter, Uhr, Hawkins, Lawless, Humphries, Herbert, Mort, McTaggart, Scott, and Ross. There were several stations on the upper waters before the mouth was discovered. The first selectors at Bundaberg were John and Gavin Steuart, who went there in search of timber in 1866, and selected 320 acres under the coffee and sugar regulations. The first vessel to enter was the "Elizabeth," Captain J. Miller, for a load of cedar to Maryborough. Now the district is one of the most important sugar-growing centres in the colony. In 1882 the Messrs. Cran erected the great Millaquin Refinery, with pipes running out into the Woongarra Scrub for the green juice of cane crushed by small mills. There are over thirty sugar mills in the district.

A railway, not yet completed, 106½ miles, will connect Bundaberg with the town of Gladstone on Port Curtis.

## GLADSTONE.

A town built on Flinders' Port Curtis, in latitude 23 degrees 52 minutes south. This is the spot where the Gladstone Government attempted to found a North Australian settlement in January, 1847, and sent Colonel Barney with the colonising party in the "Lord Auckland," to be recalled in three months, and leave the locality to the aboriginals until 1854, when Captain Maurice O'Connell was sent up as Government Resident of a new settlement.

It was the first port from which Queensland horses were shipped to India. O'Connell, in 1858, acted as the first Queensland gold commissioner at the Canoona diggings. The harbour of Port Curtis and Trinity Inlet, at Cairns, are the two best harbours on the Queensland coast. O'Connell, in 1855, predicted a great future for Gladstone. The town is 350 miles north of Brisbane, and became a municipality on 1st February, 1863. It was the town and seaport for the old Calliope Gold Field, proclaimed in 1863, and ever since for an extensive area of rich pastoral country. The climate is healthy,

and the heat is moderate. There was no sickness whatever during the sojourn of Barney's party in 1847, and very little since attributable to the atmosphere.

The town contains about 1,000 people and the district 3,500. A railway to Bundaberg is partly constructed from both ends, and when completed will connect Gladstone with Brisbane by rail.

ROCKHAMPTON.

A town on the Fitzroy River, twenty-five miles from the mouth, in latitude 23 degrees 24 minutes, longitude 150 degrees 30 minutes. This river was named after Governor Fitzroy, and drains an enormous area, receiving as tributaries the Isaacs, Mackenzie, and Dawson. First navigated in 1855. There were many stations occupied on the tributaries before anyone dreamed of a town on the Fitzroy. Rockhampton originated with the gold rush to Canoona in 1858. The site of the town was at the head of navigation. Thousands of men rushed there from the southern colonies. Some remained and started a settlement which was incorporated on 22nd December, 1860.

Rockhampton became the seaport depôt for all the western trade of the pastoral country on the Dawson and Mackenzie, the Belyando, the Barcoo, and the Thompson. On the 17th September, 1867, the first railway section of thirty miles was opened to Westwood. Now the line runs westward 408 miles to Longreach, on the Thompson. From North Rockhampton a line was opened on 22nd December, 1888, twenty-nine miles to Emu Park, a beautiful marine watering place on the shore of Keppel Bay. Emu Park was known to the blacks as "Oopal," the Fitzroy was "Goanba" and "Toonoóba," the site of Rockhampton "Wooranannie" ("woora," kangaroo; "nannie," ground), and the Berserker Range "Warrooin."

Though credited with being very hot in summer, the climate is decidedly healthy. The temperature shows a mean shade of 61 degrees in June, and 80 in January. The heat in summer is greater on account of the flat situation, an extensive area in the neighbourhood being covered by swamps. The average rainfall is about 52 inches. Six miles from town, and near the railway, is Gracemere Station, Archer Brothers, the house built on a splendid lagoon full of fish and wild fowl. This lagoon was dry in the drought of 1856, but has been full ever since. The blacks called it "Padthool." Rockhampton of 1894 is a town of 15,000 people. Three miles down the river are the famous Lake's Creek Meat Preserving Works. The Botanic Gardens are situated on the side of a ridge sloping to the Murray Lagoon, two miles from the Post Office. Rockhampton has two daily and two weekly newspapers.

MACKAY.

Named after Captain John Mackay, the discoverer of the Pioneer River on which the town is built, in latitude 21 degrees 9 minutes, longitude 149 degrees 13 minutes, 625 miles from Brisbane. A township in the midst of a large and important sugar-growing district.

On the 24th May, 1860, Captain Mackay stood on the sand beach at the mouth of the river after an overland journey from Rockhampton, returning next year with stock to form Greenmount Station. He left it again not to return for twenty years, when he found a town and district with 20,000 people, and plantations producing 10,000 tons of sugar.

The railway of twenty-two miles to Eton was opened on 10th August, 1885. Mackay was the district chosen for erecting the first two central mills, subsidised from a sum of £50,000 voted by the Government as an experiment to encourage the separation of grower and manufacturer.

The town is four miles from the bar, by the river, but only a mile from the beach in a straight line. The tide rises 10 to 12 feet at the town, and 12 to 16 feet on the bar.

The first cane was planted by J. Spiller in 1865, and in September, 1868, the Alexandra mill started the first crushing. On 25th September, 1869, the town was incorporated. The situation is healthy, being really a seaside town; and the temperature in summer is seldom over 90 degrees, falling in winter to 32 degrees. The average for twelve years was 72 degrees. The rainfall is irregular. In January of 1884 there was a fall of 21½ inches in three days, and the Pioneer rose 52 feet, the highest flood on record.

BOWEN.

Named after Sir George Bowen. A town on the west shore of Port Denison, named after Sir William Denison. The inner bay was discovered in 1859 by Captain Sinclair, of the schooner "Santa Barbara," which left the Fitzroy River on the 1st September, 1859, with W. H. Thomas, James Jordon, Ben. Poole, and the captain. At Curtis Island they took two aboriginals on board, and sailed into Port Denison on the 15th. Poole Island is named after Ben. Poole, of Sinclair's party.

At Bowen on 19th July, 1862, Captain Reilly, of H.M.S. "Pioneer," was thrown against a tree and killed while out kangaroo hunting. On the 8th August, 1862, MacKinlay and Hodgkinson arrived at Bowen from the Gulf after crossing Australia. In 1860 the port was visited by Lieutenant Smith and G. E. Dalrymple in the "Spitfire." They reported it a suitable site for a settlement.

In July, 1864, the Jardine Brothers' two parties met here to start on their overland journey to Cape York. On the 11th August, 1864, J. G. MacDonald left Bowen on his flying trip across to the junction of Beame's Brook and the Albert River, on the Gulf of Carpentaria, returning to Bowen on 24th November, after an absence of fifteen weeks. Frederick Walker, who went out from the Dawson in September, 1861, to look for Burke and Wills, arrived at Bowen from the Gulf in March, 1862.

Bowen was incorporated on 7th August, 1863, and a newspaper started on 5th March, 1864.

The water along the shore being shallow, a wooden jetty was extended for nearly 3,000 feet, the first pile being driven on 12th April, 1865.

The first section of the railway from Bowen was opened in the presence of Governor Norman on 1st May, 1890.

Bowen is one of the healthiest coast towns in Australia, beautifully situated, and commanding splendid land and marine scenery.

The town has been visited more than once by severe hurricanes which did considerable damage, especially that of 30th January, 1884. The harbour protects shipping on all sides.

Bowen is the port for a large area of pastoral and agricultural country, and gives a name to a vast extent of coal country, and a system known as the Upper and Middle Bowen Beds in the Permo-Carboniferous of the Palæozoic.

Bowen land was first sold at Brisbane on 5th April, 1865.

## TOWNSVILLE.

In latitude 19 degrees 15 minutes, longitude 146 degrees 48 minutes. A town on Ross Creek, a small stream running into Cleveland Bay. The site of Townsville was first visited by J. M. Black, who rode over from the Burdekin when looking for a suitable place for a boiling-down. In the Burdekin Station property he was partner with Robert Towns, a well-known sea captain and prominent colonist, who died at Cranbrook, Rose Bay, Sydney, on the 4th April, 1873.

Andrew Ball claimed to have been over to Ross Creek before Black. He was then manager of Woodstock Station. Townsville was named after Robert Towns, who started a boiling-down on Ross River, on the advice of Dalrymple in 1864. Castle Hill, the "Cootharinga" of the blacks, was named by Ball as a fancied resemblance to Castletown, capital of the Isle of Wight. The first house was erected on Melton Hill with timber sawn from tea-tree logs from beside the big lagoon near the Botanic Gardens. The town is built on the slopes of Castle Hill, which dips to Ross Creek and the sea beach, and rises to a height of 950 feet. Townsville was incorporated on 15th February, 1866, and rose in 1893 to a population of nearly 10,000 people. The railway first sod was turned in February, 1879, and the first section of thirty-four miles to the Reid River opened on 20th December, 1880. This line runs west past Charters Towers to Hughenden, a town on the Flinders River, 236 miles from Townsville. Townsville is therefore the seaport for an immense area of mineral and pastoral country, the former including Charters Towers and Ravenswood, the latter the splendid rolling downs on the heads of the Flinders, Thompson, and Diamintina. The situation makes it one of the hottest towns on the coast, hotter even than Cooktown, but the climate is healthy, and the fever of the early days is now comparatively unknown. A splendid beach extends from Ross Creek to Kissing Point, and forms a favourite drive and promenade, a mile and a-half in length.

A stone jetty runs into the bay for 4,085 feet from Magazine Island, and a breakwater 5,150 feet extends from the north side of the mouth of Ross Creek towards the outer end of the jetty, the two thus forming two sides of a basin, about forty acres, which is to be dredged to a depth of 15 feet at low water. The top of the jetty is 15 feet wide, the base 110 feet, and the cost, including 900 feet of a stone causeway next to the island, was £125,000.

Townsville became a port of entry on 23rd September, 1865.

## CAIRNS.

Named after Governor Cairns. A town in latitude 16 degrees 55 minutes, longitude 145 degrees 49 minutes. It stands on the head of Trinity Inlet, the most sheltered part of Cook's Trinity Bay, which extended from Cape Grafton to Cape Tribulation. Trinity Inlet and Port Curtis are the two finest harbours on the Queensland coast, and second only to Port Jackson on the east coast of Australia. Trinity

Bay was named by Cook, on Trinity Sunday, 1770. Trinity Inlet is about six miles deep, from the coastline to Cairns, and forms a splendid harbour, sheltered from all winds.

From Cairns a second inlet, narrow but deep, carries navigable water inland for eight miles.

The town stands on a sea-sand foundation only 3 or 4 feet above high tides, but the dead level is hidden by the beautiful trees left standing from the primeval vegetation, and southward and westward is a magnificent amphitheatre background of jungle-clad mountains rising in the Bellenden-Ker Range (Wooroonooran) and Bartle Frere (Choorichillum) to 5,200 and 5,000 feet. Previous to 1876 the site of Cairns was visited by bêche-de-mer fishermen from Green Island, cutting mangrove firewood for the smoking station. Cairns was first settled in 1876, the site being discovered from the land side by Bill Smith, who came over the range in quest of a port for the Hodgkinson Gold Field. He came down the spur now cut through by No. 9 tunnel on the railway line. This same Bill Smith afterwards started a small township called Smithfield, on the north bank of the Barron, ten miles by road from Cairns, and thirteen by water. It absorbed nearly the whole trade of Cairns, having the advantage of good grazing country for the packers' horses. But Port Douglas was discovered, and secured the trade of the Hodgkinson. Smithfield was rapidly deserted, and a gale and a flood completed the destruction of the town. In 1881 the site was again covered by thick scrub, the turkey building her nest on the spot once occupied by a store or a bank. In 1879 the Herberton tin fields started, and being only fifty-two miles from Cairns, that town divided the trade with Port Douglas.

In 1879 a Chinese syndicate started a cotton and sugar plantation called the "Hap Wah," or "Good Luck," estate. In 1881, 1882, and 1883, there was a rush for sugar land in the district, and an immense area selected, from Double Island on one side to the Mulgrave and Russell on the other.

On 8th October, 1887, the first section of a railway from Cairns towards Herberton was opened, a length of eight miles, to the valley of Freshwater Creek.

Now Cairns is an important town, the seaport of an extensive trade in sugar, bananas, rice, timber, gold, and tin. The annual rainfall varies from 80 inches to 180 inches; the wet season in December, January, February, and March. In winter the temperature ranges from 84 degrees at noon to 60 degrees at night, the lowest being 48 degrees. In summer the day shade varies from 90 degrees to 100 degrees; the night, 70 degrees to 80 degrees. The climate is remarkable for its beneficial effect on throat and lung complaints, asthma, and consumption. Gold was discovered on the Mulgrave in March, 1879; and there were heavy rains and landslips in the same month.

PORT DOUGLAS.

A small town forty miles north of Cairns, in latitude 16 degrees 30 minutes, named after the Hon. John Douglas. At first it was called Island Point, Salisbury, Port Orsen, and Port Terrigal. On the land side it was discovered by Christie Palmerston in 1878.

This town was started as a rival of Cairns for the trade of the Hodgkinson in 1878, being considerably nearer that goldfield. It is a very healthy town, built on a seashore peninsula nearly 200 feet

high, with a grand and picturesque background of lofty jungle-covered ranges, and a magnificent sand beach, curving away northwards towards the Mosman and Daintree Rivers. The first steamer to call there was the "Corea," Captain Owens, followed by Captain Lake and the "Victoria," towing the "Maggie Logan" from Cooktown.

## COOKTOWN.

A town 1,079 miles north of Brisbane, and the last before arriving at Thursday Island. This town must be for ever memorable as the landing place of the immortal Captain Cook, who ran his damaged vessel, the "Endeavour," into Cooktown harbour (Charco), 13th June, 1770, and remained there to the 4th August. There he found the first specimen of what he says the natives called a "kangaroo," the word by which that animal has ever since been known to the civilised world. Flinders anchored there in 1802, and the blacks called the kangaroo "minya," the name used by that tribe at the present time. The Grassy Hill of to-day was named by Cook, a granite eminence 570 feet high.

Cooktown is built on the slopes of that hill, known to the natives as Janellganell (accent on each "ell"), and in front of the town is the harbour, into the opposite side of which runs the Endeavour River, the only Australian river named by Captain Cook after his voyage along the east coast. Remarkable is the fact that the first river named on the east coast is nearly opposite the first named in Australia—the Staaten, on the west side of the Cape York Peninsula. The Staaten and Endeavour, one named in 1623, the other in 1770, are only 150 miles apart.

The first mention of settlement at Cooktown appears in Dalrymple's account of his north coast expedition in October, 1873—"At 6 a.m. on the 31st October, the 'Leichardt,' Captain Saunders, steamed out of the Endeavour, leaving a lovely little white seaport gleaming with white tents and noisily busy with workmen, where a week before we found a silent wilderness." In the next three years about 15,000 white men and 20,000 Chinese landed at the foot of Grassy Hill, on the way to the Palmer River Gold Field. And so Cooktown continued to progress, and the first section of a railway towards the Palmer was opened on 30th November, 1885, a distance of thirty-one miles, and on the 8th October, 1888, to the Laura River, sixty-seven miles from Cooktown.

South of Cooktown, about a mile distant, is a jungle-clad mountain called Mount Cook (Coongoon), rising to 1,500 feet. Allan Cunningham ascended this mount on 2nd August, 1820. North of the town, distant about forty miles, is a large area of rich basalt country on the Morgan and McIvor Rivers.

Cooktown is not likely to ever lose the advantage of being the last Northern port on the route to Thursday Island and the first port to call on the way South.

In the journal of Lieutenant Hicks, one of Captain Cook's officers, we find an entry under date of Monday, 18th June, 1770—"Moored in Charco Harbour;" the word "Charco" being frequently used by the natives and regarded by Cook's people as the name of Cooktown Harbour. It is also called "Charco" harbour in the journals of Pickersgill, master's mate on the "Endeavour."

## THURSDAY ISLAND.

A small island in Torres Strait, lying in the centre between Horn, Hammond, and Prince of Wales Islands.

This island is 1,552 miles north-west from Brisbane, in latitude 10 degrees 33 minutes south, and longitude 142 degrees 10 minutes east, and is specially important by virtue of its position, which practically commands the navigation of Torres Strait. The shore of British New Guinea is distant ninety miles. Being the head centre of all the pearl-shell and bêche-de-mer fisheries, Thursday Island contains a curious and miscellaneous population of about 1,000 people, men and women being as three to one. Among this remarkable collection are Europeans, Negroes from America and the Soudan, Malays, Chinese, South Sea and Philippine Islanders, Ceylonese, Japanese, Indians, Arabians, West Indians, Maltese, Chilians, Javanese, Aboriginals, and other races. The port of the island is named after Kennedy, the unfortunate explorer of 1848. The town is named after the island. The majority of men engaged in the fisheries are Malays, Manilese, Japanese, and South Sea Islanders.

About 300 vessels pass each way through the port every year. The annual return of bêche-de-mer is about 100 tons, of pearl-shell between 700 and 800 tons.

## CHIEF WESTERN TOWNS.

In new countries like Queensland, small towns occasionally arise suddenly in a few weeks; stores, hotels, banks, and private houses springing into existence like Jonah's gourd, becoming for a year or two the centre of considerable trade and activity, and then gradually or summarily vanishing like the baseless fabric of a vision, leaving only a dreary wreck behind. Such was the fate of Smithfield on the Barron River, where the tropical scrub grows over the site of a township once occupied by 600 people, and the scrub turkey builds her nest in the main street. Such was the fate of Copperfield, four miles from Clermont, when the Peak Downs copper mines collapsed, and such was the fate of Mount Perry under similar circumstances. Springsure is but a dismal shadow of its early days, and on the Palmer are several graves of townships that flourished for the first four or five years of that famous field. Many of the places called towns consist of a blacksmith's shop, a couple of hotels, half-a-dozen houses, and a police station. One of Longfellow's poems refers to a town where "two women and a goose made a market," and by the same liberal interpretation two public-houses and a blacksmith's shop make a township in Western Queensland.

The remotest townships are Birdsville and Urandangie. Birdsville is on the Everard River, one of the channels of the Diamintina, seven miles from the Queensland border, and 300 miles from the Hergott Springs, in South Australia.

Urandangie is on the Georgina River, 200 miles west from Cloncurry. From Brisbane, in a direct line, Birdsville would be 840 and Urandangie 1,280 miles.

All towns west of the Main Range were created by the pastoral industry, and all except Toowoomba, Drayton, Allora, Warwick, and Roma are still dependent on that industry.

The largest towns west of the Main Range are Toowoomba, Warwick, Allora, Dalby, Roma, Charleville, Hughenden, Barcaldine, Blackall, Goondiwindi, Cunnamulla, St. George, Tambo, Winton, and Thargominda; population varying from 300 up to 7,000.

TOOWOOMBA.

This is one of the very few towns retaining the original aboriginal name of the locality.

"Toowoom," or "Choowoom," was the local blacks' name for a small native melon (*Cucumus pubescens*) which grew plentifully on the site of the township. The terminal "ba" is equal to the adverb "there," so the whole word means "melons there," and to an aboriginal it meant "the place where we get toowoom."

Originally the bottom of the valley now occupied by Toowoomba was a swamp with long reeds and rank aquatic vegetation. It was known as "The Swamp" in the early years. Having abundance of good water and grass, it became a favourite camping ground for the teams and travellers passing to and from Brisbane. Then came a blacksmith's shop and hotel, and a new town arose and eclipsed its rival Drayton, which had been established for about ten years before Toowoomba made serious pretensions for the trade of the district. The name Toowoomba was finally fixed in 1860. The two other alternative names were Queensborough and Bowensvale. In May, 1860, the Toowoomba people wanted the two towns united under one name, Drayton to be called West Toowoomba. To this proposal the Draytonites strongly objected. In the first election, 1860, they were united in one constituency as the "Town of Drayton and Toowoomba," returning one member.

Toowoomba, 100 miles by rail from Brisbane, is now the largest, most important, and one of the most beautifully situated towns west of the Main Range. It stands partly in a valley and partly on the slopes of the ridges. The surface is a red volcanic soil formed from decomposed basalt, remarkable for its fertility, and all the suburbs of the town are beautified by orchards, vineyards, and flower gardens. The elevation of 1,900 to 2,000 feet above the sea gives Toowoomba a healthy and delightful climate. Politically, this town is remarkable for having returned the same member for thirty-one consecutive years (1863 to 1894)—a fact only twice paralleled in the history of representative government. W. H. Groom was first sworn in on the 21st April, 1863, being elected successor to John Watts, who had resigned.

The population in 1894 is 7,400 for the town alone. A large number of German selectors are settled in the district.

WARWICK.

A town proclaimed on 25th May, 1861, situated on the Condamine River, where Patrick Leslie took up Canning Downs Station in 1841. Warwick is 169 miles by rail from Brisbane, and 1,500 feet above sea level. It enjoys a salubrious climate, and is admirably laid out, with two squares of ten acres each in the centre, planted and arranged as ornamental parks. It is the centre of a magnificent agricultural district, including the famous valley of Killarney, on the head of the Condamine. The town itself in 1894 contains about 3,500 people. The first land was sold on 31st

July, 1850, and Sir George Bowen visited in March, 1860, and was charmed with the scenery and situation. The formation is carboniferous sandstone, strewn with fossil wood turned to iron ore. Seventeen miles from Warwick is the town of Allora, from "Gnallora," native name of a lagoon on Goomburra Station. It dates back to 24th July, 1869, and contains about 1,200 people. The formation is volcanic black soil, remarkably fertile. Within ten miles are Glengallan, Headington Hill, East Talgai, Clifton, and Goomburra stations.

### DALBY.

A small town, dating from 21st August, 1863, and distant from Brisbane 150 miles west by rail. Dalby stands on black volcanic soil, on the banks of Myall Creek, the site being part of old Myall Creek Station, taken up by Coxen in 1842. It was commonly called the City of the Plains. Twenty-five miles from Dalby are the famous Bunya Mountains, habitat of the nut-bearing *Araucaria Bidwilli*, a triennial favourite food of the aboriginals. On 12th November, 1864, it was visited by Governor and Lady Bowen, who "derived great pleasure from the performance of the local dramatic company, and much enjoyed their visit."

### ROMA.

Named after Lady Bowen, whose Greek name was Roma Diamintina (anglicised from Theamintina). A town 318 miles north-west from Brisbane, and 920 feet above sea level. It dates from 21st May, 1867, and is distant twenty-five miles from Sir Thomas Mitchell's Mount Abundance of 1846. The present Mount Abundance Station is only six miles from Roma. Leichardt passed over the site of the town in March, 1848, on his last and fatal journey to the West. Roma stands on level country, lightly timbered, the formation belonging to the Cretaceous Rolling Downs of the Mesozoic Period, the marine fossils proclaiming the bed of the ancient ocean which once divided the Australian continent. Roma is the centre of a splendid wheat, wine, and fruit district, and will always be one of the principal towns of the West.

The climate is delightful, with a light, dry, rare atmosphere, specially beneficial in throat and lung complaints. The summer heat is rather severe, rising occasionally over 100 degrees in the shade, but the winter months are perfect.

### CHARLEVILLE.

Named after the French Charleville. A town on the Warrego River, 483 miles west of Brisbane, 966 feet above the sea, on level country, timbered chiefly by mulga and Cypress pine (*Callitris robusta*). Being the terminus of the railway from Brisbane, Charleville is the depôt for a vast extent of pastoral country, West, South, and North.

The thermometer has a shade minimum of 27 degrees in June, and an extreme of 117 degrees in summer. Climate remarkably healthy.

Beside the town is an artesian bore, capable of discharging 3,000,000 gallons of water daily. Water was struck at 1,375 feet on 6th September, 1889.

CUNNAMULLA.

A far-west town of 600 people, on the bank of the Warrego River, 120 miles from Charleville.

TAMBO.

A town of 1,000 people, near the Warrego Range, at the head of a tributary of the Barcoo River.

DRAYTON (THE OLDEST INLAND TOWN).

The oldest town on the Darling Downs, and third oldest in Queensland. There was started the fourth oldest newspaper (the *Darling Downs Gazette*), on the 11th June, 1858. Originally Drayton was called the Springs, and the present name was bestowed when the town was laid out by Surveyor J. C. Burnett. After settlement by the whites, the locality was known to the natives as "Moyum-neura" (tomahawks many), from the number of tomahawks they saw in the shops. One record says the name originated in a present of a dozen tomahawks given by the local blacksmith.

On the 2nd September, 1844, Christopher Rolleston, the Crown Lands Commissioner for the Darling Downs, wrote to the Colonial Secretary asking if he was to charge for business licenses on vacant Crown lands? "A house for the sale of wine and beer has been licensed by the bench of magistrates at a place called the Springs, under the Main Range, on the high road to Morton Bay. A blacksmith is established, and a shoemaker is putting up a hut. I anticipate applications from other tradesmen." This was the origin of Drayton. On the 1st January, 1845, a building license for "house and premises" was granted to Thomas Alford, of the Springs. On the 15th January, 1845, Rolleston wrote to the Colonial Secretary advising the starting of a weekly mail to Morton Bay, there being then 400 people on the Darling Downs. He recommended the Springs, ninety to ninety-five miles from Brisbane, as the starting point. He believed a contract could be made under £100 per annum, and that the revenue would more than meet the expenses.

On 15th April, 1845, Rolleston wrote to the Colonial Secretary to say the people wanted to know if the Governor would sell the land at the Springs, as the cost of the land would likely not be more than a building license, which would not protect their improvements. For the year beginning 1st July, 1845, building licenses for the Springs were granted to Stephen Mehan, storekeeper; Peter Flanagan, blacksmith; and Joseph Harrington, shoemaker; also one to William Jubb, blacksmith, at Goomburra.

On 24th December, 1846, Rolleston wrote to advocate courts of petty sessions; and on 13th January, 1847, he wrote to say that after consultation with the district magistrates, they had decided that the Springs would be more convenient than Cambooya (then the Border Police Station) for a petty debts court. Drayton (the Springs) was seven miles from Cambooya, on the main road to Morton Bay by the only practical dray road. He would, therefore, recommend Drayton for one court, and Canning Downs for another. He suggested the name of Cannington for what is now the township of Warwick. In his letter of 5th March, 1847, it appears the Drayton people complained of driving their cattle through the Springs, on which they

depended for water. There were then four people paying building licenses, and one a publican's license. The people had repeatedly fenced the Springs, but the fence had been pulled down.

On 11th March, Robt. A. H. Kemp reported himself willing to act as clerk of petty sessions, and John McIlman was sworn in as chief constable.

On 1st February, 1848, Rolleston wrote to say the first overland mail to Brisbane would start next day. On 1st April he wrote to say that several buildings were lately erected at Drayton and elsewhere by people paying no licenses. He had not opposed them, as tradespeople ought to be encouraged, but he required instructions. On 28th April, 1848, cedar cutting licenses, £1 for six months, were issued to John George and Thomas Bailey, of Drayton.

On 10th October, 1848, Wm. Handcock, storekeeper, of Drayton, paid his £10 business license for the year, but the Governor refused to accept it. On the 16th November, 1848, the Roman Catholic priest at Morton Bay wrote to Rolleston for permission to erect a school at Drayton, as there were several Catholic families there.

Such was the origin of Drayton, the Springs of the early years, which, up to 1860, commanded the trade of the Darling Downs, and was the head centre for all the public business of the squatters.

The first mailman from the Darling Downs to Brisbane, carrying Her Majesty's mails, started from Drayton on 2nd February, 1848. His name was James Powers. A farewell dinner at the Bull's Head was given to Rolleston when departing for England in 1853 by the "Benjamin Elkin."

## HUGHENDEN.

A town in latitude 20 degrees 51 minutes south, and longitude 144 degrees 9 minutes east, built on Rolling Downs country on the Flinders River. It is the terminus (in 1894) of the railway west from Townsville, distant 235 miles, or 154 miles by rail from Charters Towers. The railway to Hughenden was opened on 19th October, 1887. The town stands on a station taken up by Henry and Devlin in 1863. The surrounding country, chiefly occupied by sheep stations, is excellent soil for grazing or agriculture. The town is 1,070 feet above sea level, and the climate though hot in summer is remarkably healthy. Hughenden is the trade centre for the splendid country on the Flinders, the Diamintina, and the heads of the Thompson.

## CHARTERS TOWERS.

Charters Towers was discovered early in 1872 by Mosman, Clarke, and Fraser, who, when engaged in alluvial gold-mining at the Seventy-Mile, were attracted by a number of small peaks in the distance. After riding about seventeen miles through well-grassed, lightly-timbered country, they reached the largest of the hills, about 300 feet high, and prospecting round the base, discovered quartz thickly impregnated with fine gold. Each marked out a claim, and reported the discovery to the nearest gold warden, Mr. Charters, who visited the locality, and being satisfied that the find was a valuable one, granted the prospectors such reward-claims as were allowed at that time to the discoverers of a new goldfield. The name "Charters Towers" was given to the new goldfield, "Towers" or "Tors" signifying the peaks, and "Charters" being the name of the first warden. The goldfield was proclaimed on 31st August, 1872, with an area of 1,700

square miles, subsequently reduced to 600 square miles. The town of Charters Towers derives its name from the goldfield. It is a municipality, a mile square, with a population of about 10,000, chiefly engaged in trade and occupations connected with gold-mining. The climate is very healthy.

The town stands on gold-bearing slate country, surrounded by granite, 1,000 feet above sea level, eighty-two miles from Townsville.

Hughenden, on the Flinders River, lies 154 miles to the westward.

CLERMONT.

A town of 1,500 people, terminus of a branch line of sixty-two miles from the Central Railway at Emerald. This line passes over the glorious country of the Peak Downs, which roused the enthusiasm of Leichardt. Four miles from Clermont are the ruins of old Copperfield, a township prosperous from 1864 to 1870, in the palmy days of the Peak Downs Copper Company, which paid dividends of 80 per cent., and sold copper to the amount of £120,000 in 1867. But a fall to £50 per ton, and bad management, ended in the whole property being sold for £3,000, and Copperfield returned to a state of nature.

Clermont has a healthy climate, and stands in the midst of some of the finest pastoral and agricultural basalt country of Central Queensland.

SPRINGSURE.

A small town beautifully situated on a little stream in a picturesque valley overshadowed by sandstone ranges, on a branch of the Comet River, and terminus of a branch railway of forty-one miles from Emerald, a small town on the Central Railway 164 miles from Rockhampton. The Springsure Railway was opened on 15th August, 1887. This town enjoys a delightful climate, and one of the most charming situations in Australia.

BARCALDINE.

A town 951 feet above the sea, on level, sandy, gidya country, near the Alice River (named by Mitchell in 1846), and 358 miles from Rockhampton by railway. It is the trade centre of a vast expanse of pastoral country on the Barcoo and the Thompson Rivers. Forty miles west is the new township of Longreach, present Central Railway terminus, built near the Thompson River, in the channel of which is a fine lagoon seven miles in length; native name "Wing-arra."

## AGRICULTURE.

The first land under cultivation in Queensland was that now occupied by the Botanic Gardens and Government House.

Next came a large area in South Brisbane, the flats at Bulimba, and a tract at Eagle Farm, where the female convicts were established. The site of the Botanic Gardens was cultivated in 1826, and used chiefly as gardens for the officers of the penal establishment. By the end of 1829 the convict settlement had eighty-six acres under cultivation.

After settlement at Limestone in 1828 the whole of the land now occupied by the Ipswich racecourse was ploughed and planted with maize and wheat. In 1827 a branch penal settlement was fixed on Stradbroke Island, and thirty acres of the land around the present

Dunwich Benevolent Asylum was planted with cotton. Considerable quantities of maize were grown, and the crop of 1837 sold in Sydney for £1,046.

Cotton grown on Stradbroke Island in 1828 was sent home and declared to be excellent. Sugar-cane was grown at Brisbane in 1828, but used only as a hedge or border round the vegetable garden. Tobacco was also grown in small quantities. In December, 1828, S. Donaldson published, at Sydney, a pamphlet on "Some Observations on the Cultivation of Tobacco in the Australian Colonies."

Tobacco was then growing at Port Macquarie and the Hawkesbury. But all the experiments of the convict days, and the crops the convicts grew, were forgotten when the penal settlement was abolished in 1839. When the district was thrown open to free settlement in 1842, the first settlers were dependent on the pastoral industry, as Brisbane became the seaport for the Darling Downs and the central depôt for all the squatters of that period. When Dr. Lang visited Brisbane in 1846 the site of all the gardens had become a mere grazing paddock overgrown with couch grass.

Gradually cultivation was started to supply the local demands; orchards were formed, and maize and wheat grown along the banks of the river. Beyond a few vegetable and flower gardens there was no cultivation on the Darling Downs before 1848, and very little from then to 1860. There was a foolish saying that the Darling Downs would not grow a cabbage.

In 1852 D. McConnel harvested twenty acres of wheat at Bulimba, on the Brisbane River.

In 1853 Eldridge made the first arrowroot from plants growing wild round Brisbane, and three tons were sent to England from Bulimba in 1864.

Tobacco and cotton grew successfully at Wilson's Peak Station, fourteen miles from Ipswich, in 1844. Cotton-growing was resumed in 1850, and in 1869 there were 14,000 acres under that crop in West Morton.

In the year 1860 Joseph Fleming stated before a Select Committee of the Queensland Parliament that he had steam flour-mills on the Bremer River, ninety acres under wheat, and his previous year's crop had given him thirty bushels to the acre. He had seen no smut so far, and the wheat was equal to any grown at Adelaide. He had only experienced one hot wind in ten years.

Leichardt, in 1843, wrote—"I have seen the finest crops of wheat at the stations of Archer, Mackenzie, Bigge, and McConnel, though these gentlemen had only commenced the experiment, and the mixed grains of the seed wheat ripened unequally."

John Buhôt took cane in the Botanic Gardens, crushed it with a lever, boiled the juice in a saucepan, and made the first pound of Queensland sugar on 24th April, 1862. In July of the same year, George Thorn, senr., exhibited in Ipswich the first pound of Queensland silk.

In the Land Act of 1860, cotton received a potent stimulus from a £10 land-order for three years and £5 for the next two years for every exported bale of 300 lb. clean Sea Island cotton, inferior cottons to receive one-half of these bonuses.

Cotton rose from a value of £4 in 1861 to £80,000 in 1871, and thence declined to total extinction in 1887. In 1862 a parcel of eight bales of Sea Island cotton arrived in Brisbane from Maryborough. In 1860 M. Thozet successfully grew cotton, sugar, tobacco, rice, and arrowroot near Rockhampton.

In the year 1860, Dr. Hobbs (afterwards M.L.C.), before a committee on immigration, stated that—"A man who had been some time in Jamaica came out in the ship with me to start a sugar company in Queensland. After waiting some months he got a piece of land surveyed, and, though it was covered by dense scrub, the Government put 30s. to 40s. an acre as the price. It was a piece of land now called "Boggo." Several prominent Sydney people interested themselves in this proposed company, among them being Charles Kemp, of the *Herald*.

The years from 1861 to 1873 were the cotton-growing era. In 1863 Robert Towns introduced the first kanakas to work his plantation on the Logan River. In 1865 he sent away 100 bales of cotton. Bauer and Sahl planted cotton on Ferney Lawn, on the Bremer, in October, 1864, and ten acres gave 6,500 lb. of clean New Orleans cotton, worth £500.

On 9th September, 1864, the first ton of sugar was made on Captain Hope's Ormiston Plantation, near Cleveland, on Morton Bay, and the first ton disposed of by auction was sold at Brisbane on 6th January, 1886. Sugar-growing extended to the Logan, Albert, Coomera, and Nerang rivers. Then north to Maryborough, Mackay, Burdekin, Herbert, Johnstone, Cairns, Port Douglas, and Blomfield River. Finally, at the Woongarra and Isis Scrub, of Bundaberg. One plantation has been formed in the Rosewood Scrub, Ipswich district. Many sad mistakes in the choice of land were made in South Queensland by the early planters.

When Dr. Lang visited Brisbane in 1845 he "saw pomegranates, oranges, grapes, peaches, pears, sugar-cane, mulberry, bananas, castor-oil, pine-apple, passion fruit, strawberries, cabbages, onions, potatoes, carrots, peas, beans, roses, and larkspurs, all growing luxuriantly in the open air and quite at home." Dr. Simpson and Dr. Leichardt in 1844 were of opinion that grapes would not grow successfully at Morton Bay, as the wet weather came at the wrong time, but excellent table grapes grow on the east side of the Main Range, and some of the vignerons make fair wines, but the grape and wine soil and climate of Queensland are found in the west, where there are hundreds of thousands of acres of land unexcelled in the world for the production of raisins, table grapes, and wines.

Sugar-growing progressed rapidly from 1867, was checked for a time by the disease in the Bourbon canes, recovered with a new lease of prosperity, wavered for a few years, reached the zenith from 1879 to 1882, and was suddenly paralysed by a fall in prices and the prospective stoppage of kanaka labour. The planters received a three years' notice that the labour would absolutely cease, and the consequent stagnation of the industry continued until Parliament reversed this decision, the result being an immediate recovery in 1892 of the whole industry from North to South.

In November, 1872, the four sugar-growers on the Herbert River were Haigs, McKenzie, Neames, and Atkinson, employing a total of 100 white men.

In South Queensland the first mill at any distance from the coast was a small one erected at Walloon, near Ipswich, in 1872, by a West Indian named Poochee. An Ipswich merchant, John Pettigrew, erected a small mill on the Brisbane River, a few miles from Ipswich, in 1874.

One of the largest yields recorded is credited to the Logan River, where six and a-half acres of ribbon ratoons gave 27 tons of sugar in 1872.

Maize has been a popular crop with early settlers at all times, as it can be grown more easily and requires less special knowledge than any other crop. It grows better in South Queensland than the North, for maize is not a tropical crop. No part of Australia has rivalled such rivers as the Clarence, Macleay, Hunter, and Hawkesbury in the production of maize. Wheat grows well on the Darling Downs and Roma district. The Western country presents an immense area of land suited for wheat. Though good bananas are grown on the south coast, the banana climate of Queensland lies north of Mackay, and the best is north of Townsville. At the Johnstone, Barron, and Daintree Rivers, and Cooktown, they grow to perfection. Cocoanuts grow splendidly from Mackay northwards, and on the coast fourteen miles north of Cairns is a flourishing plantation of 8,000 trees, now in full bearing. About 12,000 have been planted on various islands along the north coast by the Department of Agriculture.

Rice grows to perfection at Cooktown, Cairns, and the Johnstone River, and the Chinese prefer it to the best imported. The first Queensland rice mill was erected on the Barron River, five miles from Cairns. The yield varies from a-half to two tons per acre, and the rice is of superior quality.

Queensland is a paradise for the fruitgrower, for there is not a fruit known in the tropical or temperate zone but will grow to perfection in some part of the coast or interior. The tropical mango and grenadilla grow well south even to Nerang Creek.

In 1865 George Raff and Captain Whish had sugar estates formed on the Caboolture River. The same year saw estates started at Maryborough and the first cane for plants at Mackay, there being a total of twenty acres in March, 1866. White Tuscarora maize and the small pop corn were grown by the Waldrons on the Logan in 1865, and largely used for food.

In 1865 a Mrs. Timbrell came to Brisbane and started silk culture as an industry. She gave the history of the silkworm in a series of nine Press articles. In one of these she mentions "roasting a whole barrelfull of cocoons in Mr. Ball's oven, on Petrie terrace, at a temperature of 145 degrees." Mrs. Hockings, the mayoress of that year, had also a large number of silkworms.

In 1858 Herbert Evans, C.P.S. at Warwick, grew wheat which yielded eleven tons of very superior flour. In 1860 he had fifty-seven acres. Smut was an unknown disease in the district. The crop improved every year. He used no manure, as he "rather required to exhaust the rankness of the soil." There was then no prospect of a steam flour-mill at Warwick, and the nearest flour-mill was at Tenterfield.

In 1894 there are 252,200 acres under crop, representing 30,000 acres of wheat, 93,500 of maize, 8,300 of English and 3,000 of sweet potatoes, 300 of cotton, 65,000 of cane, 2,100 of vines, and 50,000 of other crops.

## CLIMATE.

In the year 1842 Surveyor Clement Hodgkinson, in his account of the east coast of Australia, from Sydney to Morton Bay, wrote—"The experience of over half a century has proved that no country in the world is more exempt from all the class of disorders which originate in impure air and deleterious miasma than Australia."

That is the verdict of all the early writers. There is certainly no country in the world where the explorers and pioneer settlers suffered so little from the effects of climate. From Cook, in 1770, to the "Rattlesnake," in 1848, there is no charge of unhealthiness against any part of the east coast of Australia. The Sydney petition of 1836 stated that the climate of the colony is "dry, temperate, and noted for its salubrity." Collins, in 1790, wrote—"The Sydney climate is allowed by all to be fine and salubrious."

On the 17th December, 1845, Dr. Keith Ballow, after eight years' experience as Government medical officer at Morton Bay, wrote his opinion of the climate to the Rev. Dr. Lang. He said—"The district of Morton Bay is altogether an extremely healthy one, there being very few deaths from disease of any kind. The climate in the winter season is one of the finest in the world. This district is not a profitable field for doctors."

In the seven years from 1st January, 1839, to 31st December, 1845, there were 1,360 men, 198 women, and 249 children treated at the Brisbane Hospital, a grand total of 1,807 patients; and of these only 9 died, a result probably unparalleled by a hospital in the early years of any other country. In 1846 Dr. Dorsey, of Ipswich, wrote to Dr. Lang—"We have few diseases not common at home, and are exempt from many that are common there. On our first settlement there were many cases of ague, but none proved fatal, and I have not seen a case for three years. Women and children are subject to very few diseases. In short, it is almost too healthy for the doctors."

In December, 1831, Dr. Bowman wrote to the Colonial Secretary to say that in the Morton Bay Hospital there were relatively far fewer deaths than in Sydney and Liverpool, in New South Wales. During the five months of the settlement at Port Curtis, under Colonel Barney, in 1847, there was no sickness whatever.

Dr. Lang, in his "Queensland" of 1860, wrote—"There is the utmost difference imaginable between the rigours of a Canadian winter of six or seven months' duration and the Paradisical climate of Queensland, in which the productions of both the temperate and torrid zones grow harmoniously together, and the process of vegetation goes on uninterruptedly during the whole year."

The *London Gazette* of 3rd January, 1859, when announcing the coming separation of Morton Bay, said—"The climate of Morton Bay is unusually salubrious, and is frequently prescribed for invalids, especially for consumptives." In the voyage of H.M.S. "Fly," in 1843, the coxswain of the pinnace, Dowling, drowned himself, while suffering from fever, at Port Molle, off Whitsunday Passage; but where he contracted the fever, or what kind of fever it was, there is no evidence to show. Clear enough is the fact that the crews of Cook, Flinders, and King, and those of the "Beagle," "Fly," and "Rattlesnake," suffered from no sickness on the coast of Queensland or any other part of Australia. Nor do the journals of the explorers, including Oxley, Mitchell, Gray, Eyre, Sturt, Gregory, Leichardt,

Burke and Wills, McKinlay, and Stuart, record much illness except that which was probably attributable to poor diet, bad water, physical exhaustion, or all combined.

The explorers of Central Australia tell us of terrible heat, fearful droughts, and bad water; but no sickness or fever from unhealthy climate. Nor did the pioneer settlers of either the east coast or interior have any cause to complain of the climate. Surely these facts are a magnificent testimonial to the salubrity of this vast continent, even in the dawn of discovery, when the primeval forest and the tropical jungles stood untouched by the axe, the swamps undrained, the rolling downs covered by tall rank grasses, the banks of creeks and rivers piled with decomposing vegetation, and all nature rioting in wanton and lavish production; the fauna and flora checked only by the food necessities of the wild Stone Age aboriginals who rambled through the vast solitude. And the marvellous geniality of the climate is more clearly recognised when we remember how unwisely many of the pioneers lived, and still continue to live, in the North and North-west. In the early days, after the first settlement at Sydney, the pioneers were timber-getters who entered the dark scrubs of the Hunter, Macleay, Manning, Bellengen, Clarence, Richmond, and Tweed, to cut cedar and pine. In Queensland the first cedar was cut by convicts on the Logan and Albert in 1827. The timber-getter went north to the Mary and Burnett, and thence far north to the tropical jungles of the Johnstone, Mulgrave, Barron, and Daintree. These men camped often on the edges, or in open spaces, of dense scrubs, drank water full of dead vegetation, ate the commonest of flour, sugar, and salt beef, drank much rum, and generally lived hard, rough lives, and yet as a rule enjoyed first-class health, for otherwise they could never have done the heavy work which timber-getting demanded. In the early years there was a very mild fever at various points on the east coast. The prevalence of fever was the reason given for removing the first convicts from Redcliffe Point to the Brisbane River in 1825, and used subsequently as a reason for advocating removal of the whole convict settlement to Stradbroke Island; but the alleged fever at Redcliffe and Brisbane is met by the evidence of the penal establishment medical men, who record a phenomenally low death-rate, and speak of the climate as remarkably healthy. Dr. Ballow said Brisbane was quite as healthy as Madeira. And from 1840, the date of the first stations in Queensland, onwards northward and westward along the tracks of the pastoral pioneering, there is no trace whatever, except on the Gulf, of fatal illness due solely to the climate. The climate was frequently held responsible for gross ignorance or deliberate disregard of all ordinary sanitary or dietetic laws. But we have only to compare the early settlement of Australia with that of North and South America, East and West Indies, Africa, India, and various British possessions, to discover that no similar area of new country possessed, or possesses, such a wonderfully healthy climate from shore to shore. And equally certain is the fact that no similar area, new or old, can challenge the world, as Australia can, to say that "on no spot of that tremendous territory is there a climate unfitted for the healthy residence of civilised man."

In North Queensland certain localities acquired an unenviable distinction, now no longer deserved. The mild bilious fever once common in Townsville has nearly died out in the last ten years. The

fever fatal in the early days of the Johnstone River has all but vanished with the dense jungle which produced it, and the old ague fever of the Gulf country is now reduced to a few solitary cases. The mortality on the Palmer diggings in the first two years, 1873-4, was chiefly due to bad food, improper camps, and exposure to long continued tropical wet seasons. People of all ages now live and enjoy good health from Point Danger to Cooktown, from the sea coast to the Central lakes.

Considering the latitudes, the variation in temperature is astonishing.

Kennedy, in 1847, found his thermometer down to 9 degrees at an elevation of 1,800 feet on the Barcoo. Mitchell records a temperature of 7 degrees and 11 degrees on the main range at the head of the Warrego in 1846. At Cambooya, on the Darling Downs, the thermometer falls in winter occasionally to 15 degrees, or 17 degrees of frost. But these are extreme temperatures.

In far West Queensland the thermometer in summer rises even to 126 degrees in the shade, but this heat is no more severe than 105 degrees on the coast. The thermometer does not register the degree of discomfort. On the elevated plateau country, west of the main range, is a light, dry, rare atmosphere absolutely distinct from the climate of the coast, being far beyond the influence of the moist, salt-laden winds from the ocean. We have been out at Charleville during Christmas when the heat was 116 degrees in the shade, and felt it no more than 100 degrees in Brisbane.

The coldest town in Australia is Kiandra (originally Giandarra), in New South Wales. There the thermometer falls to 9 degrees below zero, with 8 or 9 feet of snow in a single month. Kiandra is 4,600 feet above the sea.

Snow fell nine miles from Sydney in 1811, and in the Sydney *Gazette* and *Colonist* of 30th June, 1836, we find that "on Tuesday morning, 28th June, between 8 and 9 o'clock, there was a heavy fall of snow in Sydney, lasting over an hour, a phenomenon unprecedented in the memory of the oldest inhabitant. The fall was not heavy in Sydney, but several inches deep towards Parramatta. It lay for an hour and more on the tops of houses, and the Sydney boys were seen for the first time making snowballs." On 5th July the *Australian* said: "Snow.—Sydney was visited by this strange visitor again on Sunday morning, though in less abundance than on the Tuesday previous. There have been very severe frosts in the country, cutting up the grass and vegetables considerably."

The Kiandra record of snow in 1872 was—May, 11½ inches; June, 70 inches; July, 100 inches; August, 50 inches; September, 4 inches; November, 15 inches; a total of nearly 21 feet for the four months.

Queensland is fortunately free from the snow and ice of the cold regions of Australia, and enjoys genial climates where even in the winter months the traveller can camp out in the open air without any severe discomfort, though, by contrast with the hot summers, the cold is keenly felt on the wind-swept open downs, or in exposed situations on the east side of the main range, when the thermometer falls below 45 degrees.

In the tropical North, from Cardwell to Cooktown, the thermometer in winter at sea level rarely falls below 55, and never below 45.

In the Cairns district, on the south peak of Bellenden-Ker, in June, 1889, the thermometer fell to 30 at 5,000 feet above sea level, and the cold on that exposed peak was felt acutely by the whole party. At the foot of the mountain the days were hot, and at night the temperature fell only to 52 degrees near latitude 17.

On the Herberton tablelands, west of Cairns, there are cold nights and sharp frosts, from 2,000 to 3,000 feet above sea level. The winter months far west, even among the red sandhills and spinifex desert, are quite cold enough to drive the aboriginals to construct warm and cozy camps of special design.

It is certain that the climate in various parts of Australia changes materially at long intervals. New South Wales has experienced periodic droughts since the first settlements, but there has been no repetition of the terrible droughts of 1827-8-9 and 1837-8-9, nor has there been a flood epidemic like that from 1799 to 1836.

In the terrible year 1839, after a three years' drought, the record says—"Cowpasture River ceased to flow, first time since discovery, forty-eight years ago. Dead cattle along the roads, no food for man or beast, Hunter salt at West Maitland." The official records of Morton Bay from 1827 to 1839 make no mention of serious droughts; so that Queensland appears to have escaped the disasters of the South.

The worst recorded drought on the Queensland coast was in 1856, when Lake Gracemere, at Rockhampton, dried up. That lake has never been dry since. An old writer says—"In 1864 I was on the Comet River, in Queensland, during tremendous floods. In March heavy rain fell for ten days and nights without ceasing, and there was no wind." The whole of the east coast rivers of Australia were flooded in the same year. No such flood as that which visited Brisbane in February, 1893, was previously seen since the first settlement. The two highest floods before 1893 were those of 1841 and 1845.

The Brisbane, Fitzroy, and Burdekin are the three coast rivers subject to the greatest floods, as their watersheds are the most extensive.

The western rivers, Warrego, Barcoo, Thompson, and Diamintina, drain vast areas, and, extending in flood time far beyond each side of their channels, are liable to sweep away all stock caught on the low-lying flats. In 1858 A. C. Gregory saw evidence of severe drought on the Thompson. He had also seen Stokes' beautiful Plains of Promise in a barren state, and Sturt's Stony Desert is now good grazing country in an ordinary season. In 1824 Lake George, in New South Wales, was twenty miles long and eight miles wide. In 1836 Mitchell found it a green meadow occupied as a cattle and sheep run. It was dry again in 1846 and 1847, and nearly dry in the droughts of 1866 and 1868. Perhaps the Rockhampton people shall one day behold again the dry bed of Lake Gracemere, but that period may be far distant.

The rainfall of Queensland shows diversity wide as the temperature. It extends from 10 or 15 inches in the dry belts of the far West to 140 and even 200 inches from Cardwell to the Blomfield on the tropical north coast. This astonishing rainfall is caused by the lofty coast range rising from 3,000 feet near Cardwell to 5,200 feet in the Bellenden-Ker Range, and thence north to near Cooktown. This range is clothed from base to summit by dense dark tropical jungle;

is nowhere more than twenty miles from the coast, dips into the sea eighteen miles beyond Cairns; retreats again on the Mosman and Daintree, returning to the sea at Peter Botte, and retires again at the valley of the Blomfield. Over the whole of that area is a rainfall peculiar to itself, and far greater than on any other part of Australia. It represents a regular wet season, usually in January, February, and March, and the heaviest fall is on the watershed of the Johnstone, Russell, and Mulgrave Rivers, where 8 to 12 feet of rain is not unusual in the first three or four months of the year. Northward from Cooktown to Cape York, and westward across the watershed of the Gulf, the rainfall is irregular in time and uncertain in quantity. There is no range at the head of the Gulf rivers, and the rain clouds from the Northern ocean are frequently swept across the dividing tableland and discharge their contents on the watershed of the interior rivers, or scatter far over the Central desert.

In 1841 Captain Stokes, of the "Beagle," describing the climate of the Gulf, on the Albert and Flinders Rivers, said—"The climate in the month of August was found to be of an agreeable character, the thermometer indicating an average temperature of 60 degrees, the minimum being 50 degrees. No satisfactory reason has been given for the low temperature of this tropical region, which, as the latitude is about 17 degrees, ought to have been at least 70 degrees or 75 degrees." When the Gulf country was first settled, and Burketown established, there were many deaths from Gulf fever, and the sickness peculiar to that region was so prevalent that the whole district was in danger of being abandoned by white men.

Meteorological observations were not overlooked in the early days of Australia, but the first records are lost. Dawes Point, in Sydney, commemorates the Lieutenant Dawes sent out in 1788 by the Board of Longitude to erect the first observatory. In 1821 Sir Thomas Brisbane established an observatory at Parramatta, but all the records from that year until 1840 are lost, except those of the first eighteen months, October, 1822, to March, 1824. In 1840 the Government first instituted meteorological observations at South Head and Port Macquarie, the one continuing to 1855, the other to 1849. In 1856 the first astronomer of New South Wales arrived, the Rev. W. Scott, who established twelve stations—Rockhampton, Brisbane, Casino, Armidale, Maitland, Bathurst, Parramatta, Goulburn, Cooma, Albury, Deniliquin, and Sydney.

After 1859 the Brisbane and Rockhampton stations were handed over to the Queensland Government. Writing in 1876, the astronomer of New South Wales, H. C. Russell, said—"Within the colony of New South Wales may be found all climates, from the cold of Kiandra, sometimes 8 degrees below zero, and frost and snow hold everything in wintry bonds for months, where sometimes 8 feet of snow falls in a single month, to the more than tropical heat and extreme dryness of our inland plains, where frost is never seen, and the thermometer in summer, for days together, reads from 100 degrees to 116 degrees, and sometimes in hot winds reaches 130; and where the average rainfall is only 12 to 13 inches, and sometimes *nil* for a whole year. This great meteorological district, containing such extremes, has for the most part a very moderate climate, and is probably the healthiest in the world."

Of Queensland also we may justly say her climates are among the healthiest in the world, and the frost and snow of Kiandra, that cold township of the Australian Alps, are unknown. As the Sydney people in a few hours can transport themselves to the delightful climate of the Blue Mountains, so can the Brisbane citizens, in five hours, reach the summit of the Main Range, 2,000 feet above the sea, one of the healthiest and most genial climates in Australia. So, in like manner, will the railway from Rockhampton, Townsville, and Cairns take the traveller in a short time from the hot, moist sea coast to the bracing, dry atmosphere of the mountains.

In the first twenty miles the Cairns railway ascends from sea level to the top of the Barron River Falls, 1,100 feet above the waters of the Pacific.

The railway from Brisbane attains an elevation of 2,000 feet in the first 100 miles, and thence westward for 400 miles more to Charleville descends 1,000 feet on that vast tableland, sloping gently towards Central Australia.

The line from Rockhampton reaches the top of the Main Range at 1,450 feet in 300 miles, and thence descends on the western slope 500 feet in the next sixty miles to Barcaldine.

The Townsville railway crosses the Main Range at 1,817 feet above the sea, and descends 800 feet to Hughenden on the Flinders. Those three lines of railway pass through three distinct climates, the climate of the sea coast, of the mountains, and the western plains, all equally healthy. The children of the schools on the sea coast and the Western towns are alike strong, fresh-coloured, and vigorous.

The climate of Charleville has a specially beneficial effect on people with lung or chest complaints, and at Cairns, on the tropical north coast, is a climate that has shown astonishing curative powers in asthma and incipient consumption. It is remarkable that these two climates, so entirely different, one a dry, rare atmosphere, 500 miles inland, and the other a moist, tropical, sea-coast climate, have much the same effect on pulmonary complaints. There is probably no human constitution that will fail to find a congenial climate in some part of Queensland, for every kind of healthy atmosphere is found within the boundaries.

Far west, among the red sandhills and spinifex ridges and cotton-bush flats, there is nothing more prejudicial than flies, which in some localities are a source of great annoyance, and frequent cause of blight. On the Barcoo at certain seasons even the least abrasion on the skin of the hands will fester, and remain in that state for some time, healing slowly. Whether caused by a peculiarity of the atmosphere, or flies coming off some poisonous shrub or dead animals, or a want of fruit and vegetables, is a conundrum so far unsettled. It is known locally as "Barcoo rot."

On the Belyando River and westward there is occasionally a peculiar but harmless sickness, supposed to be caused by swallowing live flies with the food. A person seated quietly at table will suddenly rise and rush outside to vomit, recovering immediately the contents of the stomach are gone. This mysterious gastric insurrection is known to bushmen as the "Belyando spew." Neither the Barcoo nor Belyando ailment in any way affects the general health.

## QUEENSLAND ABORIGINALS.

Probably no other savage race has suffered more than the Australian aboriginals from the misrepresentations of prejudice or ignorance.

The contemptuous description of the apparently inferior specimens seen by Dampier on the west coast, in 1688 and 1699, was accepted as reliable evidence against the whole Australian race, and ethnology framed on that misleading evidence a false verdict whose effects will never be entirely destroyed.

Unfortunately no systematic effort was ever made by qualified authorities to repeal the Dampier verdict.

Even now there are but few people who have a correct mental picture of the early Australian blacks, except a few students of ethnology and some still living pioneers, while the general public judge of the aboriginals by the few degenerate and demoralised specimens haunting the civilised settlements. As well select a band of prognathous-jawed undersized Australian larrikins and loafers as specimens of the Australian people.

The next evidence came from Captain Cook when, in 1770, he first met the Australian aboriginals on the shores of Botany Bay, and had the usual misunderstanding and consequent collision. Though there were some good specimens of men in that territory, the old Sydney natives were probably the most inferior of all the tribes in the present area of New South Wales, and bore unfavourable comparison with the men on the Murray watershed and the coast from the Hunter to the Tweed.

The majority of readers will doubtless be surprised to learn that many Australian tribes were superior physically to any race of civilised white men living at the present time, and had we met them on equal terms, with no advantage of weapons, they would probably have defeated us. We simply conquered them by gunpowder. Our duty in this article is confined to the Queensland blacks, and it will be well to hear the verdicts of the early explorers who saw the aboriginal in his wild condition, living the life of the noble savage, uncontaminated by civilisation.

Of the Morton Bay blacks in 1846 Dr. Lang wrote in his "Cooksland"—"They are tall, strong, athletic, able-bodied men. . . . . The natives of Morton Bay are remarkably athletic and well-proportioned, and far more of them are over 5 feet 8 than under. Their height would average 5 feet 10."

Leichardt, in his letter to Lynd in 1843, wrote—"The Morton Bay blacks are a fine race of men, tall and well made, and their bodies individually, as well as the groups which they formed, would have delighted the eye of an artist. Their average height is about 6 feet." In a lecture at Sydney he said—"The Morton Bay blacks are fine, well-made men, and so are the coast blacks of the Alligator River."

Sir Thomas Mitchell in 1846 wrote—"His movements in walking were more graceful than can be imagined by any who have only seen those of the draped and shod human animal. The deeply set yet flexible spine, the taper form of the limbs, the fulness yet perfect elasticity of the glutei muscles, the hollowness of the back and symmetrical balance of the upper part of the torso, ornamented as it was like a piece of fine carving, with raised scarifications most tastefully placed; such were some of the characteristics of this perfect

piece of work. Compared with it, the civilised animal, when considered merely in the light of a specimen in natural history, how inferior! In vain might we look among thousands for such teeth, such digestive powers; for such organs of sight, hearing, smelling, tasting, feeling; for such powers of running, climbing, or walking; for such full enjoyment, for all that nature provides for her children of the woods. Such health and exemption from disease, such intensity of existence, must be far beyond the enjoyments of civilised men, with all that art can do for them." He saw splendid men, many over 6 feet, on the Maranoa, Warrego, Claude, and Belyando.

Of the Darling Downs blacks in 1827 the botanist, Allan Cunningham, in his journal of that year, writes—"These three natives were young men of the ordinary stature of the aborigines of Morton Bay—namely, 6 feet—and appeared very athletic active persons of unusually muscular limb, and with bodies (much scarified) in exceedingly good case."

In a letter dated 3rd November, 1829, Sir Thomas Brisbane, referring to his trip to Morton Bay in 1824, wrote that "it is remarkable how much better is the condition of the coast aboriginals than those of the interior. While at Morton Bay I met natives who had never seen Europeans. One old chief put his hand over my arm and shoulder to feel if my clothes were part of myself, and the ecstacy of some was beyond my power of description. They had no weapons but long spears, and, perhaps, if left to themselves would not arrive at bows and arrows for some centuries. They had never seen iron or steel, and when I gave them knives, tomahawks, and scissors they displayed the most surprising antics, one man throwing himself upon the sand, rolling over and over, making a hideous noise, but all through pure delight." This is all right, except the "pure delight," as the surprising antics arose from the nervous hysteria of savage man in the first presence of a strange being possessed of unknown powers.

In 1825, Major Lockyer, in the diary of his trip up the Brisbane River, writes—"The natives are naked, stout, clean-skinned, well-made people. . . . The natives are a fine people."

Of the blacks at Port Bowen in 1843, Lieutenant Jukes, of H.M.S. "Fly," wrote—"Stout, stalwart, broad-shouldered fellows, and fat withal." At Cape Melville—"Tall, well-limbed, upright men, short curly hair, teeth perfect."

Of the Amity Point blacks in 1836, Backhouse, the Quaker, wrote—"Tall, fine-personed people, compared with the Sydney blacks."

Of the Cape Direction tribes, Jukes, of H.M.S. "Fly," wrote—"Tall, well-made men, high, square foreheads."

Of the Cape Cleveland blacks, Jukes wrote, on 30th March, 1843—"Well-made, active men, with good faces, erect, free, and graceful." At the Burdekin he saw "tall, athletic men, bold and confident; one a handsome man, with a Nubian-like face."

Uniacke, of Oxley's party, in 1823, wrote of the Bribie Island women—"Tall, straight, well-formed women, far superior in beauty to the men; in fact, to any natives of this country I have ever seen, two of them as handsome as any white women."

Stuart Russell, writing of the Boyne blacks of 1843—"Fine, stately, well-formed race, some of both sexes good looking, and many of the men 6 feet high."

Surgeon P. Cunningham, in 1826, wrote in his "Two years in New South Wales"—"A stately, healthy race, easily civilised."

W. O. Hodgkinson, describing the Mulligan River blacks in 1876, wrote in his diary—"Natives friendly, polite, and hospitable. Tall, robust men in good condition."

Flinders, at Point Parker on the Gulf, in 1802 saw "some very big men, two of them 6 feet 3 inches."

Sir George Grey (then Captain Grey) wrote—"They are as apt and intelligent as any other race of men I am acquainted with. They are subject to the same affections, appetites, and passions as other men."

Flinders, in 1802, said the blacks of Keppel Bay were "fine men, and very friendly."

Warburton, the explorer, referring to his blackboy "Charlie," wrote in his journal—"To the energy and courage of this untutored native may be attributed the salvation of the whole party." He describes some of the tribes he saw as "fine athletic men."

Describing the average of the tribes he had seen, Eyre, the explorer, wrote—"Well-built, muscular men, average height 5 to 6 feet, men with fine, round, deep chests, indicating great bodily strength, remarkably erect and upright in their carriage, with much natural grace and dignity of demeanour. The eye is generally large, black, and expressive, with the eyelashes long. When met for the first time in his native wilds there is frequently a fearless intrepidity of manner, and ingenuous openness of look, and a propriety of behaviour, about the aboriginal inhabitant of Australia which makes his appearance peculiarly prepossessing."

On the Bogan, in 1836, Mitchell saw "strong, healthy, muscular men, one of them 6 feet 4 inches. Their skill and intelligence made the white men appear stupid. The youngest was the handsomest 'gin' I ever saw, and she was so far from black that the red colour was very apparent in her cheeks."

At Port Essington, in 1848, McGillivray saw natives, "many of whom were far above the average European in intelligence."

Stokes, of the "Beagle," describing Victoria River blacks in 1839, wrote—"I could not help comparing the bold, fearless manner in which they came towards us—their fine manly bearing, head erect no crouching or quailing of the eye—with the miserable objects I had seen at Sydney. I now beheld man in his wild state; and, reader, rest assured there is nothing can equal such a sight. Before me stood two of the aboriginal inhabitants of Australia who had never until then encountered the blighting look of a European."

In 1837, Backhouse describes the natives of Perth, West Australia, as "a fine race."

Sir George Grey gives a highly complimentary description of the aboriginals, as the result of extensive experience. Sturt, the explorer, is equally flattering; and among other competent friendly authorities and writers are Taplin, Bishop Hale, Binney, Foster, Dr. Hammond, Threlkeld, Moorhouse, Hagenauer, Holden, Matthews, Gribble, Howitt, Worsnop, Dr. Frazer, Rev. Wm. Ridley, Dawson, Sadlier, and J. B. Mann, of Leichardt's second expedition.

Among the twenty-eight blacks killed by white men (of whom seven were hanged) at Dangar's Station, Myall Creek, in 1838, was one man 6 feet 7 inches, described by the manager as the biggest man he ever saw, black or white. Up to 1860 there were many 6 feet blacks in the Morton Bay district.

In 1855 there was a great battle near Ipswich between the Salt-water and the inland blacks. The lowest recorded number was 1,200, all trained athletic men and skilled warriors, some of them 6 feet 3 inches, and one giant nearly 7 feet, a black from the Gatton tribe.

There are many blacks over 6 feet still among the tribes of North and North-west Queensland.

Nearly all the Queensland squatters have used the aboriginals as stockmen, mail-boys, trackers, or general assistants, and found them as a rule highly intelligent, and, for some purposes, much more useful than any white men.

The explorers found blacks of incalculable value, and Mitchell, Sturt, Eyre, Grey, Leichardt, Warburton, Gregory, Landsborough, and Kennedy have left honourable records of their aboriginal companions. No man in Australian history is more deserving of a national monument than the blackfellow "Jackey," who saved Carron and Goddard, of Kennedy's party, in 1848, and accomplished feats of heroism and endurance rarely, if ever, paralleled in exploration. Hundreds of lives have been saved by the black trackers.

Any damaging charges made against the blacks could be made with equal justice against a large proportion of the civilised races, while the savage was free from many of the nameless vices which make civilisation blush for its common humanity.

The aboriginals were usually very fond of their children, and paid great attention and respect to the old people of both sexes.

Cannibalism (common to New Zealand, Polynesia, Africa, and so many ancient and modern races in Europe and Asia) was practised more or less by nearly all Australian tribes, from various motives. In 1873, when G. E. Dalrymple was out as leader of the Government North-east coast expedition, he saw many blacks' camps with heaps of human bones, skulls, partly roasted bodies, and lumps of roasted human flesh in the gins' dilly-bags, between Cairns and Port Douglas. Many other tribes in the Peninsula, from the Herbert River to Cape York, are also cannibals. The Stradbroke and Morton Island blacks detested cannibalism, and regarded with horror the cannibals of Bribie Island on the other side of the Bay. The Wide Bay and Burnett blacks ate their own people killed in battle, and this custom prevailed from the Brisbane River to Cape York. Cannibalism was common over the whole of the north and north-west, and west to the Gulf and the South Australian boundary. It is still common in the North from the Herbert River to Cape York, and north-west on the head of the Gulf rivers. Some tribes accepted every opportunity, and others indulged rarely. A few tribes, west, east, and south, were credited with total freedom from cannibalism in any shape.

No Australian blacks had any fixed consistent belief which could possibly be regarded as a religion. Their superstitions were few compared with those of other savage races, or the uneducated classes of the old civilised countries in Britain and Europe.

The beliefs and superstitions of the blacks were those of children, and their thoughts on nearly all subjects outside of war and hunting were "children's thoughts."

The Morton Bay blacks in camp life were fond of riddles. Here is a specimen: An old blackfellow made a handsome new boomerang and placed it in a bird's-nest fern in the fork of a tree. This blackfellow had a mischievous little boy who always made a practice of doing exactly what he was told not to do. He called this boy and said, 'I am going out to look for wallabies, and have put a nice new boomerang up in that tree. Be sure you don't touch it before I come back.' Of course, the bad little boy climbed up the tree when the old man was out of sight, took down the boomerang, and threw it. There was serious trouble for that boy when the old man came back, but the boomerang, after travelling round in space for about thirty days, returned to the starting point! It was the new moon.

Treatment of the women differed widely in various tribes. The Sydney blacks were said to have behaved badly; those of Morton Bay remarkably well. Pamphlet and Finnegan, during their seven months of 1823 among the Morton Bay blacks, saw no woman struck or ill-treated. Their treatment of the women would bear comparison with that of civilised races.

Weapons varied with localities. The spear and nulla were used all over Australia, the boomerang by at least three-fourths of the tribes. The Sydney "woomera" was eccentrically distributed. It ceased at the Bellengen River, in New South Wales, and only appeared again beyond the Burdekin River, in North Queensland. It was absolutely unknown on the Queensland coast from Point Danger to Townsville. Over that area the hand spear was used exclusively. The woomera was used from Townsville to Cape York, and west round the Gulf to the South Australian boundary. The boomerang, of many patterns, was used in every part of Queensland, except from the Herbert River past Cooktown to Cape York on the east side of the coast range, and north of the Mitchell. The nulla and shield were common to all tribes. Their stone tomahawks were made out of chert, diorite, quartzite, and hard sandstone, fixed usually in a handle bent double, then tied with kangaroo sinew, and firmly fixed with cement made of grass-tree or acacia gum mixed with fine wood ashes and blood. They ground the edges on sandstone rock, and sometimes kept grindstones in the camp. Their knives were made from flakes of chert, sandstone, or quartzite, the handle formed of gum, ashes, and blood cement.

Sometimes these knives came from long distances by barter with other tribes whose territory possessed the stone required. An extensive system of barter was common among the Australian tribes. The Morton Bay blacks got their brigalow spears from the tribe in the Rosewood Scrub, and gave shell ornaments and necklaces of reed ("Calgirrpin") in exchange. The Burke River blacks took spears, boomerangs, and shields for sale to the Mulligan River tribes for "Pituri," the narcotic chewing plant found on the watershed of that river. The brigalow spears of Dugandan were seen south on the Bellengen River in 1846. Their hand and water bags were made from the inner barks of the sycamore and curriejung, kangaroo skins, palm leaves, rushes, and outer bark of wattles. Their fishing and kangaroo nets were made from sycamore, curriejung, and the inner bark of

acacias. Their light shields were made from stinging trees, fig trees, coral trees, pine, and cedar; their heavy shields from various hardwoods. Their spears were made from brigalow, myall, ironbark, casuarina, teatree, wattle, gidya, and "minnaritchie" (red mulga). The Morton Bay spears were chiefly brigalow and ironbark, "Bonoóro" and "Tanderoo." The tribes on the Gulf waters practised the rite of circumcision, and those on the Burke River, McKinlay Ranges, and west and south-west from Boulia, across the Georgina, and down through Central Australia to Eyre's Peninsula, the custom called Sturt's "terrible rite," as Sturt was the first by whom it was described.

Each tribe was restricted to its own territory and spoke its own dialect.

In Morton Bay alone there were no less than eight distinct dialects. At Lytton and St. Helena Island, "Coobennpil"; south end of Stradbroke, "Yoocum"; at Dunwich, "Moonjine"; Amity Point, "Noonuccal"; Morton Island, "Gnoogee"; Brisbane River, "Churrabool"; Bribie Island, "Nhulla"; and mainland, "Oonda," a branch of the "Cabbee" of the Mary River and Wide Bay. The blacks of South Brisbane spoke "Yuggara," those on the north side, "Churrabool," those of Ipswich, "Catéebil; Darling Downs, "Wacca." In all Queensland there were at least 100 distinct dialects, and a black speaking any one of these was unintelligible to most of the others.

The laws relating to marriage were sternly severe, death being the penalty for a breach of that and any other established law. Each tribe was divided into "classes," and there could be no marriage between those with any blood relationship. Union of cousins of any degree was forbidden under pain of death.

The admirable class system formed a complete circle where all blood relationship was lost in making the circuit, and the final union represented strangers.

In Central Australia there was a system of group marriage, described by Gason and Howitt.

Once in three years the tribes who owned the Bunya Mountains, speaking "Cabbee" in the north and "Wacca" in the south, invited all the tribes within a certain radius as guests to a feast on the bunya nuts. These invited strangers came from the Clarence on the south to the mouth of the Burnett River on the north, and west to the Moonie and the Maranoa. The strangers were received with every hospitality. The bunyas were gathered by the proprietor tribes and presented to the guests, who were not allowed to climb the trees or take bunyas for themselves. The days were spent in hunting, in feats of arms, in duels, and sham fights; the nights with anecdotes, tales, riddles, songs, and corrobborees.

They decorated their bodies in fanciful patterns, cut with stone knives or shells, the cuts filled with clay or charcoal, so that they healed in ridges. Some of these were elaborately and beautifully executed. Dr. Lang, in 1846, wrote—"The limbs of the first Morton Bay native I saw in the pilot boat were so regularly, tastefully, and completely covered with ornamentation, that I actually thought for a minute or two his lower garment was of *flowered satin*."

Their numbers at first, and now, can only be vaguely guessed. In 1843, Commissioner Simpson reported 5,000 in the Morton Bay district. Handt, in 1841, said there were 1,500 within fifty miles of

Brisbane. Rolleston, in 1845, reported 600 on the Darling Downs. These numbers were far below the reality. In the year 1824, when the convicts first landed at Redcliffe Point, there were probably 200,000 blacks in the territory now named Queensland. At present, 1894, there are still about 30,000 scattered over the colony, chiefly along the Cape York Peninsula. War between the blacks and the settlers began in 1840, and since that year probably 600 white people and 500 Chinamen have been killed by the Queensland aboriginals; 254 whites were recorded from 1840 to 1861. How many aboriginal deaths are credited to the white man the historian cannot relate.

Chief of the murders was that of eleven of the Fraser family at Hornet Bank Station, on the Dawson, in November, 1857, followed by nineteen on Wills' station, Cullingaringo, on the Comet, 17th October, 1861. Only a fraction of those killed from time to time have ever been publicly recognised. The recordiug angel alone can number the nameless skeletons of unknown strangers who died under the spear or nulla on lonely plains and in many a dark ravine.

## WILD WHITE MEN.

In 1828 a convict escaped from the Morton Bay penal settlement, and was passed on by the blacks northwards to the Mary River, where he was adopted by a blackfellow named "Pambie-pambie," who regarded him as a long-lost son returned from the dead, with the white skin which a dead body displayed when the black surface was burned off at the cannibal feasts. This convict's name was James Davis, son of a Broomielaw, Glasgow, blacksmith. He was only sixteen years of age when sent out with a sentence of ten years for larceny. He escaped in Captain Logan's time, when the merciless use of the lash and rigorous penalties made life intolerable, and many preferred to risk their fate among savages, or death in any shape, rather than remain subject to the horrors of the convict prison.

Davis remained fourteen years with the Mary River blacks, chiefly in the vicinity of Mount Bopple, and was brought in by Andrew Petrie in 1842. Among the Cabbee blacks he bore the name of "Thurrimbie" (the kangaroo rat), and "Durramboi," in the Oondoo dialect, the word for "little." Among the blacks of that date he was only a small man. In the fourteen years he had become wild as the wildest savage, could climb a tree, throw a spear or boomerang, or use the shield and nulla effectively in peace or war. His back bore scars of many cuts from the stone knives; a spear had been driven through his thigh, and he had a boomerang cut on one knee. He spoke the Cabbee dialect fluently. After returning to Brisbane, he adopted his father's profession of blacksmith, finally started a crockery shop in George street, and died there May, 1889, leaving property valued at £10,000, nearly the whole being bequeathed in his will to a maiden lady, a native of Brisbane. He left a sum of £750 to the Brisbane Hospital, and £800 to the Catholic Church.

Another convict named Baker escaped from the penal settlement in 1832, and was adopted by the Upper Brisbane River blacks, who called him "Borall-choo." This man acted as interpreter at the Sydney trial of the two blacks who were hanged in July, at Brisbane, for the murder of Stapylton, the surveyor, in May, 1840. He also acted as guide to Lieutenant Gorman, on a trip from Ipswich to the Darling Downs in 1841.

In 1832, a convict named Bracefell also escaped from the penal settlement, and was adopted by the Wide Bay blacks, who named him "Wandi," a word meaning "very wild," and used for the dingo. After ten years' life among the blacks he was also rescued at the same time as "Thurrimbie," and brought in by Petrie in 1842. He was equally proficient in the language and the use of weapons. He and Davis spoke the same dialect, Cabbee.

Bracefell was killed at Goodna by a falling tree.

In the year 1838 a convict named John Fahey came out in the ship "Clyde" under a sentence for life. He absconded from a New England convict road party in 1842, and was taken by the New England blacks to the Bunya Mountains during the bunya season, and remained with the Bunya Mountain tribes for twelve years, until brought into Brisbane in December, 1854, by Lieutenant Bligh, of the native police. He was taken to Sydney, identified by the superintendent of convicts, and actually sentenced to twelve months' hard labour for absconding in 1842. When found he had nearly forgotten his own language, and required some time to recover a fluent expression in English. He spoke the Wacca dialect of the Darling Downs, and his body was all ornamented with the raised "moolgarra" scars of the tribe by whom he was adopted. His native name was "Gilburrie." There is a curious coincidence in the fact that Gilburrie was adopted by the blacks the year in which "Wandi" and "Durramboi" were brought back to civilisation. Within another year those three wild white men might have met at the great triennial festival on the Bunya Mountains.

In the year 1849 a barque called the "Peruvian," bound from Sydney to China with a cargo of timber, was wrecked far east of Cape Cleveland. Dreadful indeed is the narrative given to the world for the first time seventeen years afterwards by the one solitary survivor. The captain's brother perished next morning, and the others were washed away from the wrecked vessel on a raft, which carried three ladies, two children, two male passengers, the captain, carpenter, sail-maker, cook, four able seamen, four apprentices, and two black men—twenty-one in all. Their food and water rapidly diminished. They caught a few birds, drank their blood, and ate the flesh. Then James Quarry and his child died, to be thrown off the raft and immediately devoured by sharks. Two of the children and Mrs. Wilmot died, and one by one followed them to the monsters of the deep. The survivors cut the leg off a corpse, and tying it to the end of an oar, captured a shark, which they devoured raw. It was a scene worthy of Dante, the gloomy Florentine, who pictured and peopled the Inferno with the ghastly creations of his own morbid imagination. After forty-two days on that awful raft, through horrors that cannot be described, seven miserable survivors landed on the southern point of Cape Cleveland. These included the captain and his wife, George Wilmot, James Gooley, Jack Millar, James Murrells, and one of the boys. Wilmot and Gooley died a few days after landing, and Millar went away in a black's canoe and perished of starvation on Cape Upstart. After fourteen days the blacks found the others, gave them food, and treated them kindly. These poor shipwrecked people were the first whites they had ever seen. They divided the party, the captain and his wife being claimed by the Cape Cleveland blacks, while Murrells and the boy went with the tribe around Mount Elliott,

whose towering peak (rising to 4,050 feet) stands outlined against the sky to the south of Townsville. Two years afterwards the boy, the captain, and his wife died within a few weeks of each other, and Murrells was left alone. He remained with the blacks for seventeen years, living as they lived, learning their language, and forgetting his own. On the 25th January, 1863, Murrells walked up to a newly-formed station on the Burdekin, and was nearly shot before the men recognised him as a white man.

He had scrubbed himself with sand, but even then was dark as a mulatto. He called out, "Don't shoot, I'm a British object!" having nearly forgotten his own language. At the time of his death he was a warehouseman in the Customs at Bowen. He married and had a son, who sold in 1887 for £10,000 an allotment bought at the first Townsville land sale by his father for £8, the upset price.

In 1859 two girls about seventeen and ten years of age were brought to Brisbane from Frazer's Island. They were described as having "low foreheads, high cheeks, flat noses, small chins, thick lips, brown straight hair, and heavy, dull, restless eyes." They were supposed to be white girls who had been shipwrecked as children or carried off by the blacks. Others regarded them as half-castes. They were unable to give any satisfactory account of where they came from. Their names are given as "Kitty Mundi" and "Maria Quoheen," evidently an Anglicising of the aboriginal words "Giddie-mundie" and "Murreéa-coeen." They were brought in by Sawyer, master of the "Coquette." The agents of the "Coquette," Mollison and Black, had offered to search for these girls if paid £300 when successful, or £100 if they failed. Sawyer went to Frazer's Island and found them. Both were very emaciated, and covered with a brown pigment. They were supposed to be white children from the "Sea Belle," which was lost in 1857, and never heard of. James Davis, "Durramboi," received £20, and a passage to Sydney, to report. He said, "There isn't a drop of black blood in them." A board of inquiry regarded them as the children of white parents. They were probably two aboriginal albinos, if not half-caste children of ship-wrecked white women.

## THE OLD BATTLE CIRCLE.

"Here we observed," said botanist Fraser in 1828, "one of those remarkable battle circles [Bora ring] which seem peculiar to the natives of Morton Bay. It consisted of an enclosure 33 yards in circumference, edged by a path 3 feet broad and 10 inches deep, from which another path of similar dimensions diverges in a direct line, frequently for half a mile in length. The history of the circumstance which led to the formation of these circles was narrated to me by an eye witness who had lived for nineteen months among these tribes; and his testimony is strongly supported by facts that have been recently elicited during the formation of the settlement at Brisbane town. It was discovered by one of the tribes inhabiting the banks of Pumice-stone River (Bribie Passage) that a neighbouring tribe had trespassed on their hunting and fishing stations, whereupon a warrior was sent to the aggressors, who resided at three days' journey north, to demand satisfaction by battle. The challenge being accepted by the latter, they marched to meet their enemies in a body amounting to about 250 souls, including women and children, and when they had reached the

territories of the aggrieved chieftain, they sent to request permission to cross his boundary line. The chief was absent on a kangarooing expedition, but he immediately granted leave when he returned. The party, on passing the boundary line upon the beach, made each a mark across with their toes, the meaning of which is not yet known; they then approached the scene of action, and encamped for the night. In the morning all the warriors were in readiness, and advanced to meet the enemy, followed at no great distance by the women and children, whom they gave in special charge to my informant, the European Finnigan, with strict orders that he should not quit them. Curiosity, however, urged him to approach the field of battle, when he states that the picked men on both sides, being armed, entered the pathway and marched into the circle. Here two were selected from each party to fight with spears and eillmans (shields), and the contest lasted a long time, until both the men from the aggressor's party fell, covered with wounds, on which a number of their friends rushed into the circle and carried the bodies away. Immediately on this an appalling cry was raised by the tribe which had originally been injured; they fell on the enemy with the utmost fury, and chased them for a considerable distance, keeping up a running fight till night put an end to the combat. The vanquished tribe immediately forsook their former encampment, and, carrying the dead bodies with them, removed to a spot two miles distant to the north, where they kept up most horrible lamentations. Having encamped they immediately commenced their operations by flaying and burning the bodies; they then carried the skins away to a considerable distance, where they formed a triangle of spears, around which they twisted the skins, leaving the palms of the hands and soles of the feet suspended. A fire was then kindled beneath till the skins were dried to the consistency of leather, when one of the warriors took them down, and, after performing some ceremony over them, carried them away, the whole tribe uttering a dreadful yell, and nothing more was seen or heard of them.

Cunningham has in his possession the skin of one of the female aborigines procured by Private Platt, of the 57th Regiment, from the hut of a native on the Brisbane River, just above the junction with the Bremer. It consists of only the front of the body, arms, and legs; the fingers and toes have their nails perfect, but the face is wanting, though the ears remain. It had been deposited in a dilly-bag enclosed in one of their nets."

Backhouse, in 1836, describing the Stradbroke Island blacks, wrote—"The males of this tribe of aborigines ornament themselves by cutting their flesh and keeping it from healing till it forms elevated marks. They cut nineteen ridges that look like ribs right across their breasts from the line of their armpits downwards; one man about 6 feet has them as wide as my thumb and half as much elevated. Their backs and thighs are thickly marked with lighter zigzag lines of great regularity. The right shoulder is marked with lines, like epaulettes, and the left with irregular scars, received in combat, with stone knives, with which on such occasions they wound one another on the left shoulder, left thigh, or left leg, considering it a point of honour not to deface the ornamented portions of the frame. Some of them have curly hair, but others have it lank, and wear it tied up, often forming a knot at the top of the head, and decorated with feathers. In this knot they stick their bone skewers and other

implements ; for, being without clothing, this is the only place for an implement not in the hand, except under the strips of skin that they occasionally wear round their arms and loins."

## MISSIONARIES.

The first missionaries, next to the Rev. J. C. Handt, in 1837, to attempt Christianising the Queensland natives, were twelve Germans, who arrived at Morton Bay, in the "Isabella," on the 20th March, 1838, the year before it ceased to be a penal settlement. They settled at a place still called German Station. In June, 1861, only five of the original mission party remained. Before a Parliamentary Committee in 1861, Zillman and Rodé said the mission had been a failure and not one aboriginal was converted during the eight years from 1838 to 1846. Mr. Handt was offered a grant of land if he converted even one native, but the grant was never claimed. Apart from the unsuitability of men fresh from Europe for missionary work among wild tribes, there was the fatal presence of the penal settlement, where the aboriginals saw types of white men far more in need of missionaries than the worst blacks in Australia ; doubly and trebly convicted felons, debased to unimaginable depths—men compared with whom the Morton Bay savage was a hero, a philosopher, and a gentleman ; unhappy human beings impaled on the apex of that pyramid of horrors whose base rested in the time when "man first pent his fellow man like brutes within an iron den." The savage saw three types of white men—the chained convict, the armed soldier in a ridiculous costume, and the tyrannical overseers and commandants. Not one of these types inspired him with respect or admiration. He regarded the overseer and commandant with astonishment, the soldiers with fear and ridicule, the convicts with measureless contempt. How was it possible for missionaries to triumph in a battle where such unequal forces were arrayed against them ? They came, they saw, they were defeated! In Lieutenant Gorman's report of the 8th February, 1841, he mentions giving the German missionaries 1,050 lb. of flour to prevent them starving, and that one woman was so reduced that she required removal to the hospital.

One missionary admitted firing at the blacks more than once when they were seen stealing vegetables.

In 1842 the late Archbishop Polding started a Catholic mission station at Dunwich, on Stradbroke Island. To that mission he sent young priests destitute of knowledge of the aboriginals and Australian experience.

In 1847 the mission, having accomplished nothing, was finally abandoned.

Before the arrival of white men the natives were a free, healthy, and happy race. Along the coast all kinds of food were abundant. The swamps, creeks, and lagoons were covered with wild fowl, and swarming with fish and eels. The native game laws were sacred and severe, and a violation was punished by death. The hunter killed solely to satisfy his appetite. None killed for the sake of killing, or what the civilised man calls "sport." Population was limited so as not to imperil the food supply of the territory to which the tribe was restricted. No deformed or sickly children were preserved. The weakest men were killed in the tribal fights or personal duels. Except on nights of songs and dances, both sexes retired to sleep soon after

sunset. Here and there an old man would remain awake to sing again, in a low, sad voice, the songs of his early years. The old men were the first to waken, followed by the young men, children, and women. If one member of the tribe was wronged, the whole tribe accepted the responsibility of avenging that wrong. When one died the whole tribe mourned for three days, and removed to another camping ground. Dishonesty was unknown. The warrior left his weapons and ornaments, the women their domestic articles and rugs, with a marked stick or piece of bark to denote the owner, and weapons and articles were sacred until those owners returned. The virtue of the women would compare with that of any civilised race, and death was the penalty of infidelity by the wife or impropriety by the maiden. All camp life and hunting and daily intercourse were governed by clearly defined and inflexible rules of etiquette. Men and women were kind and unselfish, and uniformily polite to each other.

Selfishness and greediness were vices regarded with measureless contempt.

The wild fathers and mothers were quite as fond of their children as the world's civilised parents. Ill-treament of children was comparatively unknown. There was no baby farming, nor any need for societies for prevention of cruelty to children or animals. There were no drunkards, no lunatics, no thieves, and none of the nameless class who form one of the most terrible reproaches of civilisation. There were no hereditary diseases, and none that were the outcome of gluttony or depravity.

Their vitality was far higher than that of any civilised people, and both sexes recovered quickly and easily from terrible wounds that would have been death to members of any white-skinned race.

Their senses of hearing and seeing were infinitely keener. When water was abundant they bathed daily, and frequently scoured their skins with sand or clay.

They rubbed themselves over with fat from the dugong, emu, or iguana, mixed with powdered charcoal, the antiseptic properties of which they perfectly understood.

They were scrupulously honourable in their combats, and no warrior in his wildest rage would strike with knife, nulla, or pointed "buccan" at his enemy's right shoulder which bore the epaulette-like oval mark of the tribe, nor use the knife to cut across the stomach or stab on any part of the body or limbs.

Nakedness implied no want of modesty. The modesty associated with the wearing of clothes is a purely artificial product of civilisation, and has no meaning for savage races. The wild man and woman were quite as modest as their fair-skinned kindred. They were "naked and not ashamed," like Adam and Eve, for they had never seen the divine human form covered up with clothes and the feet encased in boots.

Each tribe was composed of eight classes to prevent the marriage of blood relations. The children in many tribes belonged to the class of the mother, as there could be no doubt of the maternal parent. These are examples of the classes :—

Bribie Island Tribe.

| Men. | Women. | Men. | Women. |
|---|---|---|---|
| Bunda | Bundaygin | Turroine | Turroingin |
| Banjoor | Banjoorgin | Barrang | Barranggin |

BALONNE TRIBE.

| Men. | Women. | Men. | Women. |
|---|---|---|---|
| Urgilla | Urgillagin | Unburri | Unburrigin |
| Oboor | Obooragin | Woongo | Woong-goo-gin |

NAMOI TRIBE.

| | | | |
|---|---|---|---|
| Ippi | Ippatha | Cubbee | Cubbatha |
| Murree | Mahtha | Cumbo | Butha |

Both sexes bore their class marks cut on the skin, and each knew at a glance to what order the other belonged.

This class system, which can only be briefly referred to here, represented eight generations. Union of first, second, third, or fourth cousins was treated as incest, and punished by death. The law varied with regard to widows and widowers. On Bribie Island a widower could marry his wife's sister, but a widow could marry no nearer her husband than a cousin. Tribes intermarried with others, even at long distances.

The children were always taught the language of the father's tribe.

BORA CEREMONY.

No published account of a bora ceremony in Queenslaud has hitherto ever appeared. In fact there have been only two or three attempted descriptions of a bora since the first Australian settlement. The most complete is that of one seen at Sydney on February, 1795, and described in Collin's "Account of the English colony in New South Wales," published in 1804. Even that is imperfect by reason of the narrator's want of knowledge of the language and customs of the blacks.

"Bora" was the word used by the Sydney tribes. At Morton Bay the ceremony was "Boórool," on Bribie Island "Doóroo." All other tribes had their own names.

It seems desirable that the rising generation of Queenslanders should know something of this most serious and important of all Australian rites. The following description is made with the extreme brevity consistent with lucidity. A complete one would require many pages. The following form of Boórool was common to all the Morton Bay tribes from Nerang Creek to Wide Bay. We have seen four Boórool ceremonies in various tribes, all different, though each had some rites that were common to all. The one described here is identical with those seen at Morton Bay in the early days by Thomas Petrie, who spoke the Brisbane dialect fluently, and understood the habits and customs of the tribes.

The Boórool was the great educational institution of the natives. It was the primary school, grammar school, and university. There the youths were taught all the laws and mysteries of the tribe, and received their first lessons in physiology. There they were invested with the *toga virilis*, and became qualified to act as warriors, receive wives, and sit at the ordinary councils of the tribe.

The impressions received at the Boórool lasted to the day of death, and governed the acts, utterances, and customs of a lifetime. That ceremony was held as sacred as any rites in the religions of civilised races.

We shall suppose that several friendly tribes have a number of youths old enough to be initiated. One tribe decides when and where the Boórool is to be held. Suppose that to be the old Brisbane tribe.

Two messengers, bearing properly carved message sticks, are sent to invite the Ipswich tribe. The Ipswich men send on their own messenger to invite tribes from Rosewood, and the Rosewood men invite the Laidley men. The messengers say how many youths are to be initiated, and also that there is to be a great battle to celebrate the death of some famous warrior. (They had several other customs in common with those of the ancient Greeks.) All the invited tribes assemble on the appointed day. The Ipswich men take the Brisbane youths; the Brisbane men the Ipswich youths; the Rosewood men those of Laidley, and Laidley those of Rosewood. All these young men were taken away, each party separate, and carefully instructed in all the laws of the tribe. At night the boys camped in a small ring about 20 feet in diameter, each lying on his side with his head pillowed on the next boy's hip. Throughout all the ceremonies they dare not speak, under pain of death. They could not even scratch themselves except with a piece of stick. About 300 yards from the small ring was a larger one about 60 feet in diameter, the two connected by a beaten path. Along both sides of this path the trees are carved with rough representations of snakes, kangaroos, emus, and various other devices. Each day the youths are marched to the big circle, with armed men in front and rear. Old men explain the meaning of the tree figures to the boys as they march along. Round the big ring are trees similarly carved, and suspended Priapean symbols made of tea-tree bark or grass. Clay figures of various animals stand on the borders of the circle. In the centre is an upright pole with long bark ropes attached to the top, like a maypole. These are seized by old men, who dance round the pole in eccentric circles, singing a peculiar song. The boys are seated round the base of the pole, and many devices are used to induced them to speak, though death is the inevitable penalty. They are taught the virtue of silence. Each night the youths are taken back to their camp in the small circle. They are fed daily, but dare not ask for food or water, or speak under any provocation. In the large ring they receive instruction in various laws of physiology, and at one stage the men dance round before them with peculiar gestures, one man singing—

Gnarra beenjoo wanyang indoo jooga ;
(Chorus) Yeppi ! Yeppi ! Yeppi !
Boorie boorie wanyang indoo jooga.
(Chorus) Yallo ! Yallo ! Yallo !

During this ceremony a couple of warriors walked round the circle whirling a small oval-shaped piece of hardwood called " Wabbilcun," which shrieked like a woman and barked like a dog. An old man whirled a large one called " Boogaram," which roared like a circular saw. In a camp a quarter of a mile away the women sat and heard this terrible sound and trembled with fear, for they believed it to be the voice of a gigantic blackfellow who swallowed all the young men after they were initiated in the rites of Boorool, and threw them up again at the end of two moons. When the whole of the ceremonies are over, the boys have been fully instructed in all the laws of the tribe, told what food they can eat and what is forbidden until they have grown to middle age, had the tribal marks cut on the right shoulder, showing the class to which they belong, and the nose bored with the point of a spear to receive the bone worn in war time. Then the youths are taken away, unknown to the women, to some lonely

spot where they remain until all the scars are healed—a period of six weeks or two months. During this isolation they are carefully guarded by some of the old men. The youths are dressed for their departure with a dingo's tail across the forehead, a white band above and the throttle of a snake beneath; an opossum-hair rope over both shoulders, crossed in front and back, and a pendent tail of opossum-hair strings attached to the back of the headband and hanging nearly to the ground. Round the waist was a two-inch netted belt of human hair, bands made of the breast skin of a wallaby round the forearm, and reed necklaces round the neck. A streak of red paint beneath the nose, two boomerangs in the belt, and a green bush in the left hand, completed this singular toilet. All the tribes to whom the youths belong assemble to welcome their return. The women are all together and carrying yamsticks which they simultaneously stick in the ground, each stick with a bunch of green leaves on the top. The men are all arranged in a square, the four tribes occupying the four points of the compass, each in the direction of its own country. The women occupy the centre of the square. At a given signal all the youths march inwards in single file, each carrying two hand spears and a small painted shield, and walk round the women, each of whom pulls up her yamstick and points at the youths who are relatives. Each youth takes the green leaves off the yamstick and places them under the left arm. Then they start and run three times round the women, separate, and go to their respective tribes. At a signal the youths all rush into the open and throw spears at one another for about ten minutes to show their dexterity in fighting. Then for the first time since the Boorool began, the youths are granted the liberty of speech and take their place as young warriors. After they retire the four tribes engage in a combat which continues for two or three days. They fight in the morning and hunt in the afternoon.

No tooth was knocked out by the Morton Bay tribes, though that practice was common over the greater part of Australia. The Morton Bay women had the two joints of one little finger taken off by binding the second joint tightly with a thick cobweb until the finger putrified. They would then hold it over an ants' nest to be eaten off. North of Morton Bay the tribes subjected the Boorool youths to much severer rites, some exceedingly cruel, and occasionally a youth died under the ordeal.

### SWORD AND SHIELD.

In December, 1841, on the Barwon River, Captain Fyans thus related to Captain Stokes an account of a personal combat with an aboriginal—"I was out with a party of mounted police in search of some aboriginals who had been committing depredations in the flocks of the settlers near Port Fairy. While crossing a valley in front of my men, I came face to face with the chief of those of whom I was in search. He, too, was alone, and made an immediate attack by throwing his spears, which all missed me. The rain had wet the priming in my pistols, and as they were useless I rode up to cut him down with my sword; but such was his astonishing dexterity in defending himself with his shield, only a narrow piece of wood, that beyond a few nicks of the fingers I was unable to touch him. Several times I tried to ride him down, but he doubled himself under his shield like a ball and the horse jumped over him. After being apparently ridden

down several times he drove his "liangle" so firmly into the front of the horse's nose that he was unable to pull it out again. The horse bled so freely that I was compelled to abandon the contest, and the native escaped. He was not only a brave man, but a savage of splendid physique, with a chest like a bullock's. I heard afterwards that he was very proud of the sword cuts on his shield."

ABORIGINAL MISSIONS.

First "native farm" at Parramatta, 1796.
First aboriginal reserve at George's Head, 1815.
Macquarie's "Native Institution," Parramatta, 1815.
Threlkeld's mission to Port Macquarie, 1824.
Wellington Vale Station started, 1832.
Handt at Wellington Vale, 1835.
Rev. Handt's mission to Morton Bay, 1837.
Mission on Yarra River, George and Mary Langhorne, 1837.
Lutheran mission to Morton Bay, 1838.
Robinson appointed protector, Port Philip, 1838.
First mission at Adelaide (Lutheran), 1838.
Catholic mission to Stradbroke Island, 1842.
Catholic mission at Port Essington, 1847.
Catholic mission to West Australia, 1849.
Hale's mission to Poonindie, 1850.
Ridley's mission on the Namoi, 1850.
King's mission to Swan River, 1850.
Moravian mission to Lake Bogo, 1850.
Mission to Yelta, on Murray, 1854.
Mr. and Mrs. Camfield, King George's Sound, 1857.
Bogo mission resumed, 1858.
Taplin's mission, Lake Alexandrina, 1859.
Mission Station, Ramahyuck, 1862.
Mission to Lake Tyers, 1862.
Moravian mission to Cooper's Creek, 1865.
Moravian mission to Lake Condah, 1866.
Moravian mission to Lake Kopperamanna, 1865 and 1869.
Fuller's mission to Fraser's Island, 1873.
Mission to the Finke River, 1877.
Gribble's mission to Jerilderie, 1880.
Mission to Batavia River (Queensland), 1892.

NATIVE POLICE.

The first official account of the native police appears in a despatch to Lord Stanley from Sir George Gipps, dated at Sydney, 21st March, 1844. Black trackers had long been used by the border police for tracking bushrangers, and two or three had been permanently attached.

Gipps writes—"The first attempt at the formation of a native corps was made in 1836 or 1837, soon after the opening of Port Philip, under an officer of the name of De Villiers, but it led to no satisfactory results, and the scheme was abandoned, or rather remained in abeyance until the beginning of 1842, when La Trobe revived it, and placed at the head of the establishment a gentleman named Dana (an Englishman), by whom the experiment has been very satisfactorily conducted. The establishment of the native police, distinct from either the mounted or border police, first appeared on the Port Philip Estimates for 1843, when the sum of £2,675 5s. was voted for their

support; and on the Estimates for the current year (1844) the sum of £2,420 was voted by the present Council for the like purpose." This settles the origin of the native police on a sound historical basis.

On the 22nd November, 1842, a report on the native police was written by H. G. Pultney Dana, dated from the "Police Paddock, Menmi Creek," and addressed to C. J. La Trobe. Dana had just returned with the natives from the Portland district, and he speaks of them in the highest terms. Two of the troopers, "Buckup" and "Yannon," had also saved him from drowning in the Wannon River. Attached to one of his reports is a list of the whole of the native police, their names, ages, character, conduct, and services. Their uniform consisted of a green jacket with opossum skin facings, black or green trousers with red stripe, green cap with red stripe round it. The force was composed on the 1st January, 1848, of one superintendent, one overseer or sergeant, one native sergeant, twenty-four troopers, and five horses. They were armed with flint-lock carbines and bayonets.

The first native police on Queensland territory came over from the Murray, in New South Wales, by way of the McIntyre, in 1848, in charge of Commandant Walker and Lieutenant Marshall, and were stationed on the Condamine.

In the second year of responsible government in Queensland (1861) a select committee of the Assembly, appointed by ballot, conducted an inquiry into the working of the native police force and the condition of the aborigines generally. Thirty-one witnesses were examined, and the evidence extends over 167 pages of printed foolscap. The committee made only one suggestion, which was never adopted.

The Queensland Estimates for 1860 show £10,216 for native police expenses, and £3,000 for the benefit of the aborigines. The force was represented by 3 lieutenants, 11 second lieutenants, 9 camp sergeants, and 120 troopers.

## QUEENSLAND FLORA.

### (TREES AND PLANTS.)

No country in the world has a greater wealth of vegetation, and among our estimated thousand species of timber are all varieties, from the lightest to the heaviest, the softest to the hardest, in all colours from ivory white to ebony black, suitable to every purpose for which timber is used in the civilised world.

We shall briefly review those who have collected in Queensland since Dr. Solander visited our coast with Captain Cook, in 1770, and collected at Bustard Bay, Broadsound, Cape Grafton, Endeavour River, and Lizard Island.

Next came Flinders, in 1799, and again in 1802, accompanied by Peter Good, a botanical gardener (after whom he named Good's Island, on the north coast).

From 1818 to 1821 the famous Allan Cunningham accompanied Captain King in the "Mermaid" and the "Bathurst" along the Queensland coast, collecting at Rodd's Bay, Percy Isles, Cleveland, Halifax, and Rockingham Bays, Endeavour River, and several other localities. In 1828 he and C. Fraser, the Colonial Botanist at that time, visited Morton Bay, and collected from Brisbane to the Main

Range at Cunningham's Gap. He returned to the Brisbane River in 1829 for a short collecting tour. Our Queensland hoop pine bears the name of this distinguished botanist (*Araucaria C.*) Several of our plants are named after Fraser, his companion of 1828, who died in 1832.

Our native pomegranate (*Capparis Mitchellii*) bears the name of Sir Thomas Mitchell, who collected on the Warrego, Maranoa, Barcoo, Belyando, and Noga in 1846. James Backhouse, the Quaker missionary, collected at Brisbane in 1836, and a genus of the myrtle family (*Backhousia*) is named in his honour. Leichardt collected in South Queensland in 1843-4, and from the Darling Downs to Port Essington in 1845.

John McGillivray, the Earl of Derby's naturalist on the "Rattlesnake," collected along the Queensland coast in 1847-8.

W. Carron, of Kennedy's fatal expedition to Cape York in 1848, brought back many new plants, among them the first pitcher plant, *Nepenthes Kennedyi*. One of our *Bauhinias* (*B. Carroni*) is named after him.

J. T. Bidwell collected at Morton Bay and the Mary River, and his name is attached to our celebrated bunya pine (*Araucaria Bidwilli*), though that honour was properly due to Andrew Petrie, the first discoverer in 1840.

Eugene Fitzalan collected with Lieutenant Smith's expedition to the Lower Burdekin, and the beautiful tree *Randia Fitzalani* bears his name.

Wm. Landsborough, the explorer, collected in North-west Queensland in 1861.

Dr. H. Beckler, the botanist of the unhappy Burke and Wills' expedition, collected at Morton Bay. Charles Moore, of the Sydney Gardens, and W. R. Guilfoyle, of the Melbourne Gardens, collected in Central and South Queensland. The Springsure cycad (*Macrozamia Moorei*) is named in honour of Moore.

M. A. Thozet, of Rockhampton, was an earnest collector for Baron Mueller, and also published a pamphlet on the edible plants of his district. Mueller has given his name to the genus *Thozetia*.

Walter Hill, long the curator of Brisbane Botanic Gardens (from 1855), collected with Dalrymple's north coast expedition in 1874, and went on to the north spur of the Bellenden-Ker Range. The scrub ironwood (*Myrtus Hilli*) bears his name.

Mr. F. M. Bailey, in 1889, added no less than 100 new plants to the known Queensland flora when out with the Government scientific expedition to the Bellenden-Ker Range and the Mulgrave and Russell Rivers. No such botanical results had been obtained for sixty years.

Among other collectors worthy of mention is the late Alexander McPherson, a great enthusiast on native fibres; Dr. T. L. Bancroft, after whom the Johnstone River hardwood is named (*Backhousia Bancrofti*); and Christie Palmerston, after whom is named the Northern kawri pine (*Agathis Palmerstonii* and *Cryptocarya P.*).

In 1887 Sayer was collecting for Baron Mueller on the Russell side of the Bellenden-Ker Range, and on an outlying peak of the range, "Chickaboogalla," secured a specimen of *Drachophyllum Sayeri*, a small hardwood tree bearing one of the most splendid wild flowers in the world.

J. F. Shirley is a specialist in lichens and a botanical enthusiast. *Cupania Shirleyana* bears his name.

Edward Palmer did much useful collecting on the watershed of the Gulf of Carpentaria.

To the credit of A. Meston, leader of the Bellenden-Ker expedition of 1889, is Meston's mangosteen (*Garcinia Mestoni*), one of the finest wild fruits in Australia, and *Piper* (*Chavica*) *Mestoni*, or long pepper; the one collected on Bellenden-Ker and the other on the lower Russell, both named by Bailey.

Such is a brief outline of Queensland hunters in Flora's realm, from Captain Cook to the present time.

The seven volumes of Bentham's "Flora Australiensis" represent the labours of a whole army of botanists and collectors who had previously worked on Australian plants. All the then known Australian phanerogams and vascular cryptogamous plants are clearly described and arranged according to the system of Bentham and Hooker's "Genera Plantarum." The standard work on Queensland botany is F. M. Bailey's "Synopsis of the Queensland Flora," containing a list of all the then known plants in the colony.

This book is in general use throughout the colony and Australia, together with the supplements and bulletins issued since the publication of the "Synopsis." Bailey has followed the classifications of Bentham and Hooker's "Genera Plantarum" for the flowering plants, and equally well known authors for the cryptogams.

Queensland was the first of the colonies to publish a separate descriptive Flora, impelled by the necessity arising out of the vast number of her native plants and their valuable properties. The botanical wealth of the colony can be seen in the pamphlets on our indigenous woods, economic plants, and grasses, compiled by Bailey and issued by the Government.

Queensland is probably unrivalled for the richness of her natural pastures. Leichardt in 1844 got seventeen grasses seeding on thirty yards of a cattle track near Ipswich. Besides numberless nutritious herbs, the true grasses include about 250 species, very few of which could be classified as useless. Overstocking and dry seasons have been more or less fatal to some of the more delicate varieties. Only a few of the favourite grasses can be mentioned in this brief chapter. The local names occasionally mislead and confuse. Several grasses are known in various localities as the "Mitchell grass," all of them good for fattening, generally kinds of *Astrebla*, apparently dry and coarse and not suitable for fodder. Their special value lies in their astonishing vitality, as the smallest shower of rain produces a remarkable resurrection, transforming the presumedly dead plants into living green healthy herbage. Even when dry they are sweet and nutritious, specially adapted by nature to harmonise with their environment, and submit to floods and droughts with equal equanimity. These grasses are peculiar to the far West district, and produce a grass-seed extensively used in past years as food by the blacks. The Landsborough, Barcoo, or red grass of the Gulf, *Anthistiria membranacea*, is a great favourite with the Gulf country squatters, and stock will lick the broken fragments off the ground and consume it to the last stalk. This is an annual grass of rapid growth, suitable

for hay, and, when cultivated, forming a dense tangled mass a foot and a half in depth. When dry it disjoints easily and, in consequence, is regarded as a brittle grass.

The satin-top is also an excellent species, the flowering stems attaining a height of 4 to 6 feet, with a dense leafy growth at the base, covering the ground like a mat. The kind usually known as blue grass is *A. sericeus*, a fast grower, free seeder, and highly nutritious. These grasses are found in open pasture lands fraternising with love grasses (*Eragrostis*), the far spread kangaroo grass (*Anthistiria ciliata*), and species of the genus *Panicum*. One of the *Panicums* (*P. lavidum*) has been named Vandyke grass, from its abundance on a place of that name near Springsure on the Warrego, where it is known as summer grass, and considered one of the best fattening herbages in the district. Even in our scrubs there are patches of soft, rich grasses, and the swamps and waterholes contain rich nutritious herbage.

Many of our plants produce excellent fibres, and in some localities grow in sufficient quantity to justify the erection of machinery. Others have given superior samples of paper. Both paper and fibre have been shown at various exhibitions.

Queensland plants are particularly rich in oils, for which there is an unlimited demand. The essential oil of our Eucalypts is superior to that obtained in any other part of Australia. Some resemble the oil of peppermint, and others have the odour of lemon and citron oils. Beside the Eucalypts, there are other myrtaceous trees which yield rich essential oils, such as the *Backhousias* and *Melaleucas*, while the same compliment may be paid to the Labiatæ. The common weed plant known as "Brisbane Penny Royal" yields 7 oz. of sweetly-flavoured oil from 100 lb. of fresh leaves.

Many of the nut-like fruits, particularly on the Northern trees, are rich in useful oils, which would pay for collection. Many of our plants possess valuable medicinal properties, their efficacy having been proved from time to time in various parts of the colony, but all we know in this direction is probably only a decimal fraction of what we have yet to learn when the qualities of our plants are systematically investigated. The oil of the broad-leafed tea-tree (*Melaleuca leueadendron*) has been used as an antiseptic inhalation in phthisis, and the clarified gum of the white gum (*E. hæmastoma*) to promote the healing of cuts and long-continued sores. The exuding crystallised gums of several Eucalypts, such as bloodwood and Morton Bay ash, are wonderfully efficacious in diarrhœa and dysentery. The tincture made from our fever-bark tree (*Alstonia constricta*) is a potent tonic in general debility and the earlier stages of typhoid. In ophthalmic practice an extract from the leaves of *Duboisia myoporoides* is now in general use in the colonies and Europe. Active medicinal properties have been discovered in many of our plants, and doubtless we shall yet find, by proper investigation, some of incalculable value to mankind.

Among the indigenous fruits of Queensland are several of excellent quality and flavour. The Davidsonian plum, fruit of *D. pruriens*, is oval in form, growing to the size of a goose egg, with a rich, purple, very juicy interior, sharply acidulous, and extremely refreshing. The Herbert River cherry, *Antidesma Dallachyanum*, is a fruit resembling the European cherry, and makes an excellent jelly, equal to the best

red currant. Among the new fruits found recently in North Queensland is one which Bailey has named *Garcinia Mestoni*, after the discoverer, a bright green fruit allied to the famous mangosteen, and growing to the size of a large apple, pleasantly acidulous, and remarkably healthy, the effect on the system decidedly beneficial. Several indigenous fruits, especially *Eugenias*, are used for jam-making, and two species of the orange family, one of Southern Queensland and the other from the Russell River, are well worthy of cultivation.

All fruits referred to here are suitable for the orchard, and would doubtless greatly improve in size and flavour by cultivation.

We have many edible kinds of mushroom and other fungi, some of the best of which the people overlook from want of knowledge.

Even on dead logs in the scrubs are fungi which form an article of export from other countries to China, and might be profitably collected here.

Lovers of the beautiful will find a splendid field in "Flora's Kingdom" in Queensland. In no other part of Australia can you behold such superb foliage as that of our Northern tropical jungles.

Even our scrubs of the South present a splendid picture to the admirer of primeval nature in unadorned loveliness. Nowhere can you find more beautiful or varied or fragrant flowers. Ferns are specially rich in number and variety, from the minute and delicate *Trichomanes*, with glittering fronds, often only a few lines in length, up to the tall graceful *Alsophilas*, 20 to 40 feet in height, and the colossal, far-spreading *Angiopteris*, whose tree-like fronds radiate from the parent stem to a length of 20 or 25 feet. Beautiful climbing plants are also abundant, woven round the stems of tall scrub trees or hanging in festoons from the branches. Among the epiphytes are the staghorn and bird's-nest ferns, and the lovely ribbon-like adder's-tongue ferns, one of the glories of our scrubs, associated with pendulous tasselled *Lycopodiums* and sweetly fragrant, showy orchids, the combined beauties making our wild scrubs a series of pictures from fairyland. The Darling Downs and Western Downs in good seasons are a blaze of radiant colours with many-hued flowers, purple and rose and white; the Darling pea, and other leguminous plants, the various *Pimeleæ*, *Goodenias*, terrestrial orchids, liliaceous and amaryllidaceous plants.

Our lagoons are lovely in the bright blue and white tints of magnificent water lilies, glorious *Nymphæas* and *Nelumbiums* embowered in broad green leaves, the home of the lotus bird (*Parra gallinacea*).

> "Silent pools that far outspread
> Their lone waters—lone and dead;—
> Their still waters—still and chilly,
> With the snows of the lolling lily."

There is no certain season for the flowering of our indigenous plants. They can be found in flower at all times of the year, and ripe fruit and flowers can frequently be seen on the same tree. This erratic behaviour is chiefly confined to the Southern parts of the colony, where the seasons are not so regular as in the North.

The flora of Queensland and North Australia is not so purely Australian as that of South and West Australia, as it includes a large number of Asiatic species. Many of our woods are identical with those of India. The common red cedar (*Cedrela toona*) is the same as that exported from Burma, and known as Moulmein cedar in the

London market. It is the toon tree of India. The tree which produces the domba oil of Ceylon, and the tree from which poon spars are cut, can both be found in our North coast scrubs. The ponga tree of India is very common along the creeks of tropical Queensland. Among the plants discovered on the Mulgrave by the Bellenden-Ker expedition, is a species related to the one which yields the gambier, or *Terra japonica* of commerce.

These and other Indian plants are purely indigenous, but there are several which have been introduced and become naturalised and widely distributed, until there is some difficulty in distinguishing them all from those belonging to the colony. The known naturalised plants number about 200, some of them a public calamity, overspreading the country as noxious weeds that could only be eradicated by great trouble and heavy expense. Others of course are valuable additions to the plants of the colony.

The plants at various times reported to be poisonous are not more than fifty, and the most of these are really not poisonous at all. In periods of drought and scarcity of feed, stock browse on tough fibrous plants that cause death by constipation or indigestion. The really poisonous varieties are too limited in their habitat or quantity to cause any serious mischief. Most of the stock reported as being poisoned were travelling, and then they eat herbage and bushes that would never be touched on their usual pasture grounds.

PRINCIPAL QUEENSLAND FLORA.

Hibbertia, 20
Capparis, 16; native pomegranate
Sida, 12
Abutilon, 14; lantern flower
Hibiscus, 20; wild rosella
Sterculia, 11; bottle-tree
Elæocarpus, 9; quandong
Boronia, 12
Citrus, 3; lime
Dysoxylon, 11; pencil cedar
Flindersia, 10; yellowwood, crow's ash
Vitis, 15; grape
Cupania, 18
Nephelium, 10
Harpullia, 5; tulip wood
Dodonæa, 18; hop-bush
Crotalaria, 17; rattle pods
Indigofera, 14
Cassia, 23; senna
Bauhinia, 5; ebony wood
Acacia, 102; wattles
Rubus, 5; raspberry
Terminalia, 11
Leptospermum, 9
Malaleuca, 18; tea-tree
Eucalyptus, 57; gums
Myrtus, 12; ironwood
Diospyros, 5
Maba, 9
Jasminum, 7; jasmine
Alstonia, 4; fever bark
Strychnos, 3
Heliotropium, 12
Ipomæa, 38; morning glory
Convolvulus, 3
Solanum, 41; nightshade
Nicotiana, 3; tobacco
Myoporum, 5
Eremophila, 15; sandal-wood
Prostanthera, 13; mint-tree
Piper, 5; pepper
Cryptocarya, 9; laurel
Persoonia, 11; geebong
Grevillea, 23; silky oak
Hakea, 16
Banksia, 5; honeysuckle
Euphorbia, 13; spurgeworts
Phyllanthus, 24
Mallotus, 9; kamala-tree
Ficus, 36; fig
Casuarina, 7; oak
Callitris, 6; pine
Araucaria, 2; hoop and bunya pines
Macrozamia, 8
Orchids (tree), about 80

Eugenia, 25; white apple, scrub cherry, lillypilly
Passiflora, 8; passion fruit
Gardenia, 6
Brachycome, 15; daisy
Olearia, 10
Helichrysum, 17; everlastings
Leucopogon, 17
Sideroxylon, 10; scrub crab, black apple
Orchids (ground), about 76
Musa, 3; banana
Dioscorea, 2; yams
Xanthorrhæa, 6; grass-trees
Palms, 21
Cyperus, 59; sedges
Fimbristylis, 34; sedges
Grasses, about 270
Lycopods, 21
Ferns, about 200.

Many of our plants bear names absurdly misapplied. The native pomegranate is a caper; the so-called apples belong to the myrtle family; the she-oak is a cone-bearing *Casuarina;* the silky oak belongs to the family of beefwoods and honeysuckles; the scrub beech is shown by its flowers to be a *Verbena;* the ash, or crow's ash, is an ally of the so-called red and white cedars, differing utterly in flowers and fruit from the true ash; the rock roses are *Hibbertias;* the black currant of our school children is a little *Solanum*, one of the potato family; and the blackberry is a fruit of the lantana, one of the *Verbenas;* the native fuchsia of the West has no relationship to the fuchsias, and belongs to the typical Australian order of Myoporineæ.

The spinifex of the desert sandstone country is not a spinifex at all, although one species of this genus is found along the coast, where it receives an entirely different name.

The leguminous, or bean-bearing plants are largely represented. Best known of these are the bean-tree, or Morton Bay chestnut; the coral-tree, with its prickly stem, soft wood, and flowers that appear before the leaves; and the wattles, or acacias.

In Britain the myrtle family is represented by a small pot plant, but in Queensland the mighty order of Myrtaceæ includes our gums, ironbarks, bloodwoods, boxes, peppermints, mahoganies, tea-trees, scrub cherries, and bottle-brushes.

Far West we enter the scrubs of gidya, bendee, and weeping myall. These and the *Bauhinias* and *Albizzias* ("dead finish") represent the bean-bearers. The acacia scrubs are the home of the bottle-tree (*Sterculia*), first found by Mitchell at Mount Abundance in 1845.

The bottle-tree is also abundant in the brigalow scrubs of Dugandan and the Lockyer, on the east side of the Range. Cunningham found the coral-tree first at Mount Flinders in 1828. Fraser got the Morton Bay chestnut first at Breakfast Creek, Brisbane, in the same year.

Mitchell first saw the weeping myall and the Western cypress pine in 1831, on the Peel River. McGillivray got the lawyer vine on Fitzroy Island.

The most remarkable Western plant is that known as "Pituri" or "Pitcherie," botanically *Duboisia Hopwoodi*, growing chiefly on the watershed of the Mulligan River. The southern Queensland limit is about eighty miles north of the South Australian border near Goyder's Lagoons. It grows as a low bush, and the blacks pull off the young shoots which grow after the running fires have pruned the

older branches. These shoots are carefully dried in the sun, or in trenches of artificially-heated sand, then broken up into small pieces to facilitate packing in peculiarly constructed bags, usually made of opossum fur or their own hair. Since the introduction of blankets the women pull them to pieces and weave bags from the woollen threads.

These bags of pituri are carried for hundreds of miles through many tribes and bartered for weapons, red and yellow ochre, grindstones, or ornaments. The carriers are never molested by hostile blacks, and their arrival in a camp is a signal for a corrobboric of welcome. Certain tribes were invited to the pituri country. In using the plant a mouthful is chewed, mixed with gidya or whitewood ashes on a flat dish-shaped woomera, or piece of bark, and chewed again into a paste. It is then ready for use. In the camp each man chews a piece for three or four seconds and passes it on to the next. In long journeys a small piece is chewed occasionally, and assists the traveller to endure fatigue, hunger, and thirst. It is also a strong soporific, and ensures long and sound sleep.

It has no effect in stimulating courage, and is carefully avoided during warfare. Kennedy, the explorer, mentions pituri in use by the blacks in 1847, when he discovered and named the Thomson River. It is also mentioned by Wills, of Burke's expedition, in 1861. The western boundary line of Queensland runs through the centre of the pituri country. The plant grows into a bush 7 or 8 feet in height, with a light close-grained wood smelling like vanilla. Near the ground the stem may be 6 inches in diameter, with a very coarse yellow bark. Many suckers spring from long, rough, surface roots. The leaves are about 3 inches in length, tapering at each end. The flower is a funnel-shaped tube, and the fruit, when ripe, is a small black berry like a currant, with minute kidney-shaped seeds. The boys of a tribe are not allowed to use pituri; it is confined to the old men and the warriors.

Subjected to chemical analysis, the active principle was found to be a volatile alkaloid, practically identical with nicotine, but very much stronger. It is known as "Piturine."

Pituri really acts like wine or spirits. King, the survivor of Burke and Wills' party, said a chew made him forget his hunger and misery. After using it a little in excess of the usual quantity a blackfellow will remain in a stupor out of which it is difficult to awaken him. The mixture with ashes liberates the alkaloid, and both are chewed together like lime and betel-nut in the South Sea Islands. The North American Indians, at the time of discovery, used several narcotic plants which they dried and pulverised and compressed in small bags in exactly the same way as the Central Australian blacks with pituri. Another species of *Duboisia*, called *myoporoides*, grows along the east coast of Australia. The active principle is an alkaloid called "Duboisine," possessing the same power of dilating the eye as the atropine of belladonna, but of far greater potency. It was first introduced in medical practice by Dr. Petit, of Paris, in 1878.

The Queensland flora bears a strong resemblance to that of India. Hooker said there were 500 Indian plants in Australia, but no typical Australian plant was found in India. Many Queensland trees belong to the *Euphorbia* family, well known for their poisonous sap and fruits, including the scrub bloodwood, milky mangrove, the bitter crab

apple, and the erotons. In England the garden rue represents Rutaceæ, and in Australia there are 200 plants of that order, 75 being found in Queensland. Many of this family supply valuable woods, such as the union nut of New South Wales, and the scrub satinwood, while others are allies of the orange and limes used for preserves in the bush.

Distinctly Australian is the Proteaceæ, or silky oak order, locally known as beefwoods, honeysuckles, needle-trees, Queensland nuts, geebongs, tulip flowers, wooden pears, and spanglewoods, representing timbers of beautiful grain and colour.

Plants of this order are now almost entirely confined to Australia and the Cape of Good Hope, yet at one time must have been much more widely distributed, as fossil fruits and leaves have been found in Miocene Beds near Schaffhausen, on the Rhine, and in the Jura Mountains, while fossil honeysuckles (*Banksias*) have been found in Eocene beds beside the bones of fossil opossums near the Lake of Geneva.

On our coasts and sandy islands the heaths are represented by the prickly-leaved Epacrids, bearing white flowers. There are no true heaths in Queensland; but one specimen of an allied plant, the *Rhododendron*, has been found on the Bellenden-Ker Range.

The *Goodenias* are represented by 220 species in Australia. This order is named after Dr. Goodenough, Bishop of Carlisle. In West Queensland the Chenopodiaceæ are represented by salt and cotton bushes, valuable food for stock, while the fat-hen and goosefoots are common specimens.

Queensland possesses fifteen species of true grape-bearing vines, some of the fruit large as marbles; and doubtless some of these can be improved by cultivation into valuable wine and table grapes, just as the native vines of America evolved such products as the Isabella, Catawba, Morton's seedling, and the Scuppernong.

There are two native limes on which lemons and oranges might be grafted with highly successful results.

There are five species of *Rubus*, or raspberries, all large and palatable.

Among our imported weeds are the Bathurst burr, brought from Valparaiso in the manes and tails of imported pampas horses in 1850, and first grown on the flats of the Murrumbidgee. It spread so rapidly that in 1856 there were seventeen men employed eradicating it on Goomburra Station, on the Darling Downs.

The Chinese burr came to Queensland with the Chinese, on the Palmer Gold Field, in 1874.

To America we are indebted for the lantana and the Noogoora burr. The Scottish thistle and the prickly pear have become mischievous weeds on the Darling Downs and elsewhere along the coast.

Many other weeds have been introduced along with seeds, and in straw and grass packing.

The *Sida retusa* is a native weed, of which there are eleven other species in Australia. In 1863, Walter Hill, of the Brisbane Botanic Gardens, imported two machines to make fibre from this plant.

The valuable couch grass (*Cynodon dactylon*) came in horse fodder from India, and was seen growing in front of E. W. Rudder's house in Spring street, Sydney, in 1834. It was at once recognised by Captain Wright, of the H. E. I. C. service, as the "Doob" grass of India, and he informed Rudder of its valuable properties. The first in Tasmania grew from ten casks full of roots, sent there to Simeon Lord by his father, from Sydney. Sir William Jones, the Oriental scholar, mentions that "every law book, and nearly every poem in Sanscrit, contains frequent allusions to the holiness of this plant." It is also addressed as "Darbha," in a glowing panegyric in the fourth Veda. Couch appeared in Brisbane in 1838.

F. M. Bailey considers the couch grass to be a native of Australia, as it was seen and mentioned by Brown in 1805. Probably what Brown saw was a patch grown from seed accidentally imported by one of the early ships from India.

In 1843, the Suffolk grass came to New South Wales in hay bands wrapped round some machinery.

Italian rye grass was first grown by Dr. Sherwin at Mittagong, in New South Wales, in 1837.

## QUEENSLAND AVI-FAUNA—BIRDS.

Of the 736 birds known in Australia, Queensland possesses about 600, and of these some are exclusively her own. In the cassowary and crocodile, Queensland owns the largest bird and animal in Australia, the cassowary being much heavier and more strongly built than the emu. This noble bird is restricted to the Cape York Peninsula, north from Halifax Bay. Next in size is the emu, and the two other largest birds are the native companion and the bustard, usually known as the plain turkey. In the scrubs the largest birds are the scrub turkey and the Northern scrub hen. The colony is rich in birds, rich in variety and beauty of plumage. The tropical jungles of the North are a splendid field for the naturalist, from the sea beach to the summit of the loftiest mountains. The handsomest birds in Queensland are found among the rifle and bower birds, parrots, finches, pigeons, dragoon birds, and wrens.

Among the birds found in Queensland only are the Victoria and Cape York rifle birds, Spalding's orthonyx, Johnstone's cat bird, Meston's bower bird, Maclot's dragoon bird, silver-tailed and yellow-bill kingfishers.

Among the most widely distributed large birds are the emu, native companion, bustard, cockatoo, jackass, Nankeen heron, straw-necked ibis, and the jabiroo. They are found over the whole of Queensland. The bustard, a strong far-flying bird, is found south in the Laidley valley, from Toowoomba west to Cooper's Creek, and north to the Gulf of Carpentaria.

On the east sea coast of the North this bird is found on the open forest of the Herbert River and the small plains of the Mulgrave, near Cairns.

The emu was common in the early days on the Logan and Coomera, and from there he extended westward to the red sandhills of the desert.

The lonely silent jabiroo is seen from the marshes of Stradbroke Island north to the mangrove flats and saltpans of the Gulf. The stately native companion parades on the oyster banks of Bribie Island

and round the lagoons of the Georgina. The Nankeen heron was the totem of the Nerang Creek blacks in the South, and gives its native name to the fierce "Calcadoou" tribe of the McKinlay Ranges, in the far North. The straw-necked ibis roves from the swamps of the Brisbane River to the salt lakes of Central Australia.

The common cockatoo is equally at home banquetting on the maize fields of Morton Bay or dining on the wattle beans of the Gulf rivers and Cape York.

The laughter of the jackass is heard among the cedar brushes of the east coast and the gidya scrubs and cotton-bush flats of the West. The pelican scoops the mullet fry of Morton Bay and the perch in the salt lakes of Central Australia. The aquatic birds of Queensland are widely distributed. The journals of the early explorers, Leichardt, Gregory, Landsborough, Walker, the Jardines, and Hodgkinson, have recorded the game shot on the expedition. Landsborough, in 1862, on the Albert River "saw more game than he had ever seen in his life before."

On the Herbert River (now the Georgina) he saw mobs of blacks loaded with game. In 1864 the Jardine brothers found the lagoons on the Einasleigh alive with grey and wood ducks, teal, whistlers, pigmy geese, Burdekin ducks, and many other water fowl, while harlequin and brouze-wing pigeons were in hundreds in the forest. They got the scrub turkey all the way along the Cape York Peninsula.

In the scrubs of the Archer River they "shot turkeys, Straits pigeons, and wallabies."

The first Queensland bird killed by a white man was the plain turkey shot at Bustard Head in 1770 by the cook of Captain Cook's vessel, the "Endeavour." That historic bird weighed 17½ lb.

Leichardt shot emus, bustards, black and white cockatoos, black duck, and teal, from one end of Queensland to the other. On the Limmen Bight River, geese, grey ducks, whistlers, and spoonbills were in thousands. So that the true game birds of the colony are dispersed impartially from north to south and east to west. The swan, plentiful in South Queensland, is unknown on the Cape York Peninsula, and the watershed of the Gulf. Leichardt has no reference to swans north of the junction of the Burdekin and Suttor rivers.

The wonga pigeon is not found in the jungle country of the north-east coast.

The lyre bird (*Menura Alberti*) is common in the scrubs on the head of the Coomera River, and is found on the Bunya Range, but nowhere north of the head of the Burnett.

The regent bird, common in the South, is not found in North Queensland.

The Cape York rifle bird (*Craspedophora magnifica*), "Yagoonya" of the natives, is only found near Cape York.

The Victoria rifle bird (*Pthiloris Victoria*) is not found south of the Cardwell Ranges. The first specimen was shot on the South Barnard Island, by McGillivray, of H.M.S. "Rattlesnake," in 1848. The Russell and Mulgrave blacks call it "Jong-go-barr." The rifle bird of South Queensland is *Pthiloris paradisea*. The slate-coloured crested flock pigeon, and the large green fruit pigeon with the magenta

breast, are found along the whole east coast of Queensland. The Torres Straits pigeons come south to Broadsound but no farther. The blue wader, known as the redbill, destructive to maize, cane, or wheat, extends from Nerang Creek to the shores of the Gulf and, round the continent. The spur-wing plover is found over the whole colony, and the stone plover (the night curlew), from the McPherson Range to Cape York.

The grey duck, usually called the black duck, the whistling duck (Eyton's tree duck), the wood duck, the pigmy goose, and the common tree goose, are found along the whole Queensland coast. The little dab chick grebe is everywhere, like the Blue Mountain parrot and the black and white cockatoos.

### WEIGHTS.

The cassowary weighs up to 250 lb. One shot on the Bellenden-Ker expedition in 1889, and now in the Brisbane Museum, weighed 185 lb. The emu weighs up to 150 lb., the bustard 28 lb., the scrub turkey 8 lb., the swan 16 lb., the tree goose 6 lb., the black duck $3\frac{1}{4}$ lb., the wonga $1\frac{1}{2}$ lb., scrub hen 4 lb., the musk duck 6 lb. These are all large specimens.

### REMARKABLE BIRDS.

#### The Mound Builders.

There are two species of mound builders in Queensland, the scrub turkey and the Northern scrub hen (*Megapodius tumulus*). These two megapodes build their nests on the ground, and lay year after year in the same nests, adding fresh material every laying season. These extraordinary nests consist of a huge heap of dead leaves, sticks, sand, and mould scraped together in the densest part of the scrubs ; the birds walking backwards throwing the stuff behind them, and clearing the ground all round 10 to 20 yards from the centre. When the heap is about 3 or 4 feet high, and 12 yards in circumference at the base, it is large enough to receive the eggs which are deposited at a depth of 18 inches to 2 feet in the centre, or on the sides, in holes scooped out by both male and female birds, working one at a time. The hen turkey lays one egg every other day, and fills the hole in very loosely until the last egg is deposited. Then the hole is finally filled and each layer trampled down by the birds' feet. The heat generated by this packed decomposing vegetation hatches the eggs in three to four weeks, and each chick on leaving the shell digs itself out, working upwards on its back, passing the stuff beneath it until emerging on the surface. The old birds are constantly in the vicinity of the nest and ready to welcome the chicks as they come out. On leaving the nest they are strong and active as domestic chickens a week old. The scrub hen occasionally builds her nest between the two flanges of a tree, and lays her eggs among the roots. This is a great economy of material, as such a nest only requires a quarter of the stuff used in one unprotected. In August, 1844, McGillivray, the naturalist, when shooting on Captain Cook's Possession Island, saw a scrub hen's nest 10 to 12 feet high and 50 feet on the slopes. We have seen nests on the Barron, Russell, and Daintree rivers up to 8 feet, and 40 yards round the base. The turkey lays a large white egg, big as that of a tame goose, the scrub hen being a little smaller, equal at both ends, covered with a brown coating which

is easily rubbed off, disclosing a white shell underneath. The turkey goes to roost at dusk and remains silent until daylight. The scrub hen roosts at the same time, but occasionally cackles loudly and discordantly at all hours of the night. Both these birds run with great rapidity. On the Bellenden-Ker Range and Bartle Frere we found the hen at 2,000 feet, the turkey at 4,000. The turkey is only found in Australia; the scrub hen extends to New Guinea and the Malay Archipelago. In the scrubs of the Murray River is the *Leipoa*, or mallee hen, the third mound builder of Australia. This bird scoops a hole in the loose ground, lays her eggs on layers of leaves and sand, and over all heaps a mound of sand and rubbish to create heat to hatch the chicks. Describing this bird in 1841, Eyre, the explorer, wrote—"One nest that I examined—and that only a small one—was 12 yards in circumference, 18 inches high, and shaped like a dome. It was formed entirely of sand scraped up by the bird with its feet; under the centre of the dome and below the level of the surrounding ground was an irregular oval hole about 8 inches deep and 12 in diameter. In this the eggs were deposited in different layers among sand and leaves; on the lower tier was only one egg, on the next two, at a depth of 4 or 5 inches from the ground. All the eggs were placed upon their smaller ends and standing upright. The colour of the egg is a dark reddish pink; its length, $3\frac{6}{10}$ inches; breadth, $2\frac{2}{10}$ inches; circumference, lengthwise, 10 inches, and across, $7\frac{2}{10}$ inches. The eggs appear to be deposited at considerable intervals. In the nest alluded to, two eggs had only been laid sixteen days after it was discovered, at which time there had been one previously deposited. The bird is shaped like a hen pheasant, of a brown colour barred with black, and weighs about $4\frac{1}{2}$ lb."

## Bower Birds.

These are peculiar to Australia and among the most interesting of all known birds in their "habits and customs." In Queensland, the ten bower birds include the satin bird, cat bird, regent bird, and spotted bower bird of the South, and in the North, Johnstone's and Meston's bower birds. All these birds form playgrounds, and build bowers of sticks, leaves, twigs, and grass, and decorate them with flowers, or shells, or coloured fruits.

The lyre bird, though not a bower builder, forms a playground like a small circus ring; in fact, is so extraordinary a mimic that even its playground is probably an imitation of the bora circles of the aboriginals. These lyre bird grounds are made exactly like the bora, even to the surrounding circle of twigs, and a rough imitation of blacks' temporary camps, or wind shelters, erected outside the rings.

The lyre bird's power of mimicry is phenomenal. It will imitate the voice of any bird, so as to deceive the bird itself, and, on the borders of civilisation, will rehearse the chopping of an axe, the whistle of a timber-getter, and even make fair attempts to copy the sharpening of a cross-cut saw and the crack of a whip.

The satin, regent, and cat birds make horizontal bowers on the ground—either a small circle of twigs or a section of a tunnel with curved sides, the floor of the inside strewn with shells, flowers, fruit, or any portable object that attracts the bird's attention.

On Bellenden-Ker, Meston's bower bird (*Wargandilla*) builds two half pyramids of sticks in two vertical sections on the side of two saplings, to a height of 4 feet to 8 feet, the two bases 1 foot to 2 feet apart, sloping to 4 feet at the summits. From base to base, a few inches above the surface, there is occasionally a cross stick on which the male bird builds a small platform, 3 inches or 4 inches in diameter, and then covers it every day with fresh flowers. On this floral stage the female stands and admires the male bird while he plays and sings and whistles, and imitates all the birds in the surrounding scrubs. The bowers vary in shape.

The lyre bird is named from the shape of the tail, which resembles a lyre—the ancient harp. There are three species in Australia—*Menura Victoria*, *superba*, and *Alberta*. These birds form a species distinct from all others. Gould considered the lyre bird to be a gigantic wren, probably because its running powers, erect tail, restless habit, bristles at the base of the bill, and dome-topped nest brought it nearer to the wrens than any other bird. This bird eats snails, centipedes, grubs, worms, and beetles. It is the wildest and most restless bird in Australia.

The *Menura Vietoria* bears the name of the southern colony to which it belonged, and was shot in the early days within twenty miles of Melbourne, where it was called "Boollin-boollin" (Bullen-bullen). *Menura superba* was common in the Liverpool Range and Tumut country of New South Wales, and the scrubs of Illawarra. In Queensland *Menura Alberta* is common in the dense brushes from the Tweed River across the heads of Carumbin, Tallebudjera, and Nerang Creek to the Tambourine Range between the Coomera and Logan. This was supposed to be the northern limit, but we have heard the peculiar whistle of *Menura* on the Bunya Mountains, within a mile of Mobilan, so the head of the Burnett is the extreme northern limit of this remarkable bird.

*Superba*, the handsomest species, has sixteen feathers in the tail, the two outer feathers broadly webbed. The female has no lyre tail, though old hen birds have been shot and found to possess the lyre feathers.

The first discovered was obtained under remarkable circumstances. Some of the convicts who escaped from the first penal settlement at Sydney started to walk "overland to China," so dense was their ignorance of the position and distance of that country. This craze continued until Governor Phillip sent a party of convicts away in charge of soldiers, with six weeks' provisions, to try the "China journey," and so satisfy themselves and all the other convicts that they were actuated by a foolish delusion.

The soldiers of that party brought back the first wombat and also the first specimen of a lyre bird, in February, 1798, probably shot in one of the scrubs at the foot of the Blue Mountains or on the coast towards Illawarra.

*Menura Alberta* is not found south of the Nambucca River, on the New South Wales coast, and extends north from there to the head of the Burnett in South Queensland. The first known specimen was sent to Gould by F. Strange, who shot it on the Richmond, and at the same time another was sent to Dr. Bennett by Dr. Stephenson, of York Station, Richmond River, both in 1849. This Dr. Stephenson was one of Sir Thomas Mitchell's party on the Belyando expedition of

1846. Strange was killed at the Percy Isles in 1854. At Tumut, in New South Wales, the lyre bird was known to the blacks as "Balangara" and "Beelec-beelec," on the Logan and Coomera Rivers of Queensland, "Calboonya," Richmond River, "Colwin."

The black swan, another bird peculiar to Australia, was first found on the west coast by the early navigator, Captain Vlaming, of the "Geelvink," in 1696. He obtained specimens in the Swan River, which he named after the bird, and took three alive to Batavia. In a letter from a Dutchman named Witsen to Dr. M. Lister, from Batavia in 1698, there is the following first mention of this noble bird:—By a ship of our East India Company from South Land, 'Hollandia Nova,' came black swans, parrots, and seacows." The seacows were dugongs. The swan was therefore the first purely Australian bird discovered by civilised mankind. At that time a black swan was regarded as a fabulous and improbable bird. In Queensland the swan is not found north of the valley of the Burdekin. They still frequent the waters of Morton Bay in hundreds. Leichardt, in 1845, saw no swans north of the junction of the Suttor and Burdekin Rivers.

Beneath the black feathers is a beautiful white down. The bird is good eating when young and in good condition. He ranges far to the westward, probably right across the continent, as he is found on the west coast, and Hodgkinson in his expedition of 1876 reports seeing the first swan of his trip in the lake named after him in Central Australia.

Captain King, of the "Mermaid," from 1817 to 1821, after his voyages on the Australian coast, said—"Black swans we have never seen at all within the tropics."

Flinders found them numerous at Port Phillip when he went there ten weeks after discovery by Lieutenant Murray. In May, 1792, the people of D'Entrecasteaux's ships in search of La Perouse shot the first black swan they ever saw or heard of, in the Huon River of Tasmania.

Captain Vancouver, in 1791, shot swans and kangaroos at King George's Sound, on the west coast. Stokes, of H.M.S. "Beagle," in 1841 said he saw "no swans on the north-west coast."

Sturt saw only one swan at his depôt on Cooper's Creek. Stuart found them right across Central Australia. We may regard the 20th parallel as the northern boundary of this elegant and remarkable bird.

The first Australian cassowary (*Casuaris Australis*) was shot by the aboriginal Jackey on Kennedy's Cape York Peninsula expedition, on 14th November, 1848, in a scrub near Newcastle Bay.

The first ever seen in captivity in Australia was brought to Sydney on 17th August, 1857, by Captain Devlin, of the cutter "Oberon." He got it from New Britain, where it was known as the moorook. This moorook of New Britain and New Guinea is somewhat smaller than the Queensland cassowary.

## QUEENSLAND BIRDS.

### Number of each Species.

Three eagles; 1 osprey; 4 falcons; 7 hawks; 1 kestrel; 1 buzzard; 4 kites; 2 harriers; 3 true owls; 6 hawk owls; 3 night jars; 7 *Podargus;* 1 *Caprimulgus;* 3 swifts; 2 swallows; 2 martins; 1 bee-eater; 1 roller (dollar-bird); 8 wood swallows; 11 kingfishers;

7 *Pardalotus;* 2 crow shrikes; 4 butcher birds; 1 magpie lark; 5 *Graucalus;* 2 *Lalage;* 6 *Pachycephala* (thickheads); 3 *Colluricincla* (shrike thrushes); 1 shrike tit; 1 *Oreica cristata* (ventriloquist bird); 1 drongo shrike; 1 *Manucodia;* 15 flycatchers; 1 *Gerygone;* 4 *Pseudogergone;* 1 *Smicrornis;* 1 lyre bird; 11 robins; 1 coachman; 1 wedgebill; 6 wrens; 1 *Cistriola;* 5 *Sericorns;* 5 *Acanthiza;* 1 *Chthonicula;* 6 larks and reed warbler; 2 *Pittas;* 12 finches; 3 mountain thrushes; 3 orioles; 2 crows; 2 ground thrushes; 10 bower birds; 2 fig birds; 2 *Pomatorhinus;* 1 *Corcoran* (chough); 1 *Struthidia;* 1 starling; 35 honey-eaters; 3 wattle birds; 4 friar birds; 1 fruit swallow; 4 zozterops; 3 rifle birds; 3 tree-creepers; 2 orthonyx; 4 sittellas; 13 cuckoos; 7 cockatoos; 3 lories; 8 parrakeets; 2 fruit doves; 1 cockatoo parrakeet; 6 lorikeets; 7 fruit pigeons; 9 pigeons (seed-eaters); 1 megapode; 1 turkey; 3 doves (seed-eaters); 7 quails; 1 emu; 1 cassowary; 1 bustard; 9 plovers; 4 dottrels; 3 ibis; 2 spoonbills; 1 native companion; 1 jabiroo; 2 snipe; 4 bitterns; 10 herons; 3 water crakes; 3 water hens; 1 coot; 1 sheldrake; 1 parra; 2 rails; 2 frigate birds; 1 swan; 4 geese; 1 tropic bird; 3 gannets; 2 grebes; 4 cormorants; 1 snake bird (darter); 1 pelican; 10 ducks. Terns, petrels, and other sea birds are not included. Sandpipers and other waders come and go in ever varying numbers.

## NESTS AND EGGS OF WELL-KNOWN BIRDS.

The laying season for nearly all Queensland birds, north and south, is during the last four months of the year.

The swan builds usually in reedy swamps; and on a heap of floating vegetation lays four to eight large pale-green eggs stained with brown.

Ducks lay six to ten cream-coloured or brown eggs in long grass near water, or in the hollows in tree forks, beside swamps and creeks. The female carries the young on her back from the tree nest to the water. The musk duck lays two very large pale-olive eggs, 3 inches by 2 inches.

The jabiroo makes a huge nest of sticks on a tree top, like all the crane family.

Nearly all the kingfishers build in white ant nests on trees, or the ground. Leach's kingfisher uses a hollow tree. The smallest of all the family, the beautiful little *Alcyone pusilla*, lays in a hole in the bank of a creek or river. The kingfisher's eggs are all pure white.

All the parrot family lay from two to nine eggs, in holes of trees, except the handsome parrakeet *Psephotus pulcherrimus*, which scoops a hole in a white ant's nest, and lays from three to five eggs, white as those of the other parrots. One parrakeet lays on the bare ground.

All the fruit pigeons lay one or two white eggs. On Bellenden-Ker we found the pheasant-tailed and white-headed pigeons laying a single egg in the tree ferns, from 4,000 to 5,000 feet.

Pigeons build nests of small sticks, so open that the egg can be seen from beneath.

The two mound builders, turkeys and scrub hens, pile up a mass of dead leaves on the ground in thick scrub, and lay seven to twelve eggs in holes dug in the sides or centre. Turkey eggs are white, and those of the megapode are brown.

Spalding's orthonyx, or spine-tailed scrub bird, of the north coast, lays one white egg in a nest at the foot of a tree.

In the swamps the grebes and dab chicks lay in rush nests floating on deep water, the eggs just below water level, and partly hatched by the sun. The bird covers her eggs when leaving the nest.

The common redbill forms a nest by breaking down a lot of rushes, and lays on the small matted platform thus created.

The lovely little Northern sun bird lays two tiny brown eggs in a nest hanging from the branch of a bush.

The metallic starlings (*Calornis metallica*) of North Queensland build their nests in hundreds on a single tree, usually a green-barked tree out of whose root-flanges the blacks make their broad, thin shields. These nests are made of grass, big as a tall black hat, and hang mouth downwards. They give the tree the appearance of having intercepted a flying haystack.

Both rifle birds, Victoria and Paradisea, build in palms, in thick creepers, and in the centre of dense bunches of mistletoe.

The satin and regent birds build in similar situations.

The nightjars lay one egg, that of the white-throated and spotted species being a dusky-green spotted with black.

The bee-eater lays four beautiful pink-white eggs in a hole in a sandbank.

The dollar bird lays three to four pearly-white eggs in a hole in a branch.

The wood swallow lays four dull-white eggs, spotted with umber brown.

The wagtail lays three dull greenish-white eggs in a neat little cup-shaped nest, cased in cobwebs.

The lyre bird lays one egg, purple-grey with spots and blotches of purple-brown, in a nest shaped like a hassock with a hole in the side, built at the root of a tree or on a ledge of rock.

The coach bird lays in a small bush, two green-white eggs dotted with black and grey spots.

The large wedge-tailed eagle (*Aquila audax*) lays stone-coloured eggs clouded with blotches of purple, and small specks and lines of yellowish-brown.

The little eagle lays two blue-white eggs with brown blotches.

The falcon's two eggs are buff, marked with chestnut.

The podargus lays white eggs on a 7-inch neat nest in the fork of a horizontal branch.

The crow lays three or four long dull-green eggs, spotted and freckled with brown, on a large-sized dry stick nest on a tall tree.

The honey-eaters usually lay two buff-coloured eggs, spotted with red or brown.

The leatherhead lays three eggs, pale salmon colour with small dark spots.

The cuckoos lay one cream-colour egg, spotted with brown; white, with brown spots; olive brown; or light-green, with brown blotches. All cuckoos lay in the nests of other birds.

The white cockatoo lays two pure-white eggs in a hole in a tree or branch.

The rose-breasted cockatoo lays three white eggs.

The black cockatoo lays two snow-white eggs in hollows of lofty trees on the sides of ranges.

Quail eggs are cream-coloured, dotted with brown specks.

The herons lay two pale bluish-white eggs on dry stick nests on low trees.

The cat birds build on small trees, 10 to 20 feet from the ground, and lay two cream-coloured eggs.

The dragoon bird (*Pitta strepitans*) lays in a small neat nest at the foot of a tree.

The stone plover, known as the night curlew, lays two eggs, pale-buff blotched with brown, on the ground in a clump of wattles or forest oak.

The native companion lays two large cream eggs, blotched with red and purple-brown, on a small mound in an open flat or swampy country.

The emu lays from two to seven green eggs on the bare ground on an open plain, or the edges of myall or gidya scrubs.

The plain turkey lays two large olive-green eggs dashed with brown in an open nest on the side of a hill or in a sheltered valley, hatching in September and October.

The cassowary lays from two to six eggs, 16 inches round the ends and 12½ inches in circumference, on the ground in a thick part of the tropical jungle. Both birds sit on the eggs, and the male takes charge of the young when hatched.

The Nankeen heron lays three pale blue eggs in a stick nest on trees or rocks.

The bittern lays two eggs of a pale green or bluish green.

There is no secret where the pelican builds. On the 10th August, 1820, Captain King and Allan Cunningham found a flock of pelicans with about twenty young ones on Pelican Island on the north coast, and on 31st October, 1823, Surveyor-General Oxley, on his way to discover the Brisbane River, landed on Captain Cook's Island, off the mouth of the Tweed, and found about 100 pelicans with many eggs and young ones, of which several were taken. Pelicans nest on the islands along the coast, north to the Gulf.

## MIGRATORY BIRDS

In North Queensland the two most remarkable migratory birds are the Straits pigeons and silver-tailed kingfishers. They come down from New Guinea regularly every year to breed, passing Cape York in thousands; the kingfishers south to Halifax Bay, the pigeons south even to Broadsound.

The pigeons nest on the branches of low trees on the islands along the coast, particularly the Barnards and the Franklands. The nest is made of a few small sticks, on which the female lays one egg.

The kingfishers nest in the small white ant nests in thick scrub. These clay nests are from 2 to 3 feet in height. The birds burrow a hole into the centre, scoop out a cavity about 4 inches high and 6 in width, and lay two round white eggs. These two birds come South in the end of September, and return North in February and March.

The dollar bird, the bea-eater, and the pied crow shrike migrate from North to South.

Ship captains report their vessels suddenly covered by hundreds of bee-eaters on their way to or from New Guinea to Cape York. Flocks of silver-tail kingfishers arrive in one night in October, and are found in the morning too exhausted to fly.

Tens of thousands of metallic starlings pass the Cape on their way to breed in the scrubs along the Peninsula.

Severe droughts will drive birds from one part of Australia to another into regions where they were never seen before by white men, and certain birds change their habitat at long intervals.

In 1867 the plain turkey and the ibis made their first appearance on the Lower Clarence River. The advent of white men has also driven many birds from their ancient habitations into new localities.

The native companion has even crossed from Cape York to New Guinea.

Chief of the bird collectors in Queensland were Gilbert, Stevens, Strange, Rainbird, Cockerill, Diggles, Kendal Broadbent, and Spalding. Broadbent had the longest and widest experience of Queensland birds, as he began collecting in 1865, and is still collector for the Brisbane Museum, which he joined in 1880. *Sphenura Broadbenti* and *Orthonyx Spaldingi* bear the names of himself and Spalding.

Sylvester Diggles was an enthusiastic naturalist, and left a large gracefully hand-painted work on the birds of Queensland.

The great scientific work on the birds of Australia is that written by the famous Gould, who first published a synopsis in 1838, and his "Birds of Australia" in 1848.

A magnificently illustrated edition was also issued, a copy of which is now valued at from £250 to £300.

## QUEENSLAND MAMMALS.

Queensland possesses one very interesting marine mammal found in the waters along the coast from Morton Bay to the South Australian boundary. This is the celebrated dugong, an animal not found south of Morton Bay, where it was known to the blacks as "bakeérang" and "yungun"; at Maryborough "oolbal" and "yoongan." The scientific name is *Halicore dugong*, bestowed by Gmelin in 1788. The dugong is found also through the Malay Archipelago, along the southern shores of India to the Red Sea, and on the east coast of Africa and Mauritius. Species were plentiful far back in the Miocene and Pliocene periods, in the seas of Europe and North America, and fossils of one species were found in limestone hills, near Cairo, in Egypt. The dugong therefore represents very ancient animals on this planet, an order called Sirenia, from the Latin *Siren*, a mermaid.

The Queensland dugong is a huge animal, weighing up to 12 or 14 cwt., measuring 10 feet in length and 7 feet in girth. The hide is very thick, especially on the back of an old male, where it measures up to 1 inch, and tans to about the same thickness. The blacks caught them in nets, or killed them with spears. The dugong lives solely on a sea grass, marine Algæ, growing on the bottom of bays, inlets, and the mouths of rivers. They come in from the ocean with the tide, and go out with the tide.

At New Guinea and Torres Straits the natives spear the dugong from a fixed platform, where they wait for the animal. They use a heavy spear like a harpoon, with a loose barbed point and a long handle, with a rope attached to both. This spear was seen by Cook at the Endeavour River. In 1847, McGillivray, of the "Rattlesnake," found white men catching dugong at Amity Point. In 1849 Dr. Hobbs and T. Warry, of Brisbane, started a fishing station on the Island of St. Helena, in Morton Bay, and in 1854 and 1855 Dr. Hobbs received a medal for his dugong oil at the Sydney and Paris exhibitions. For general debility, and in all cases where oil is beneficial to the human system, the oil of the dugong has been proved to be the best yet known to mankind. The flesh, either fresh or cured as bacon, is an excellent and nutritious food, and the oil has truly marvellous medicinal qualities. The bones are solid and heavy, and take a beautiful polish, while the tusks of the male are the finest ivory. Those of the female do not project from the jaw. The tanned hide makes the best of brakes for wheels and heavy belting. The female has only one young one, and in danger she clasps it to her breast with one of her hand-like flippers. The dugong must come up to breathe about every three minutes. In 1699, on the West coast, Dampier got the whole of a dugong in the inside of a big shark, and thought it was a hippopotamus.

The other mammals in our seas are seals, dolphins, and whales. On land the mammals include all species of kangaroos, wallabies, bandicoots, squirrels, bears, rats, mice, bats, flying-foxes, opossums, platypus, echidna (porcupine), native cat, and dingo.

The Tasmanian wolf, Tasmanian devil, and the wombat of the other colonies are not found in Queensland. Several Australian opossums, bandicoots, wallabies, rat kangaroos, a marsupial mole, and ant-eater are also absent from Queensland.

Our two most interesting mammals are the platypus and common porcupine (*Echidna aculeata*). The platypus was named by Shaw in 1799. It is found in Tasmania and all Australia except Western Australia. This extraordinary animal has fur like a seal and a bill like a duck. It burrows a long hole in the bank of a creek or waterhole, going inward and upward from 6 to 30 feet, lays two soft shell eggs, and the young are fed on milk from the milk glands of the mother. Surgeon Cunningham mentions platypus eggs in 1826, and the blacks told the early settlers long before that time. The fact was long known, but those who knew never thought of giving it publicity. The platypus represents an early stage of mammalian evolution, and is a connecting link between the mammals and reptiles. Fossils of a platypus of the Post Pliocene Period were found on the Darling Downs, and have been described and named by De Vis. The echidna, commonly called "porcupine," was named by Shaw in 1792. It is found all over Australia and Tasmania. This strange animal also lays an egg, and hatches in the external pouch. Like the platypus, it has no breast nipples, but feeds the young on milk squeezed out of the mammary glands, through the soft porous skin. The platypus and echidna represent the lowest and most ancient forms of mammalian life. In Morton Bay it was called "wadjeen," on the Russell River "goógoola." The echidna at Morton Bay was "caggara."

The Dingo (*Canis dingo*), named by Blumenbach in 1780, is distributed over the whole of Australia. Professor McCoy believes this dog "was one of the most ancient of the indigenous mammals of the country, and abounded, as now, probably before man himself appeared." This opinion is supported by the discovery in Victoria of fossil dingo bones with those of the Tasmanian devil and *Diprotodon*. In 1825 Major Lockyer saw black dingoes on Stradbroke Island; and on the north-west coast, Murchison River, A. C. Gregory saw big white dingoes with the blacks. Dingoes were seen by the earliest Dutch navigators. They have been found of all colours, black and red, black and white, black and yellow, white and brown, red and grey, varying in colour like the wallabies and kangaroos.

The dingo of to-day is identical with the fossil dingo of the Pliocene Tertiary Period. With the blacks nearly every tribe had a different name. Hunter River, "warrigal"; Clarence River, "wongo"; Morton Bay, "gnoomam," "gnahgam," "gnalgal," "watcha," and "toolbeelam"; Wide Bay, "wandi" and "merree"; Russell River, "gnoota"; and out on the Georgina River, "woora."

The dingo is one of the non-marsupial animals in Australia. He was unknown in Tasmania The flying-foxes and rats are not marsupials.

The Grey Kangaroo (*Macropus giganteus*) is distributed over all Queensland, from Stradbroke Island to the Gulf of Carpentaria. This word "kangaroo" was obtained by Captain Cook from the Endeavour River blacks in 1770. There are no kangaroos on the coast side of the range from the Herbert River to Cooktown, there not being enough forest country to run on.

The kangaroo is too big for the scrubs full of undergrowth, and so keeps out in the open forest and the downs. The wallaroo (a name from the old Sydney dialect), is an inhabitant of the mountains and stony ridges. He was named *Macropus robustus* by Gould in 1840, and is darker in colour, stronger built, and fiercer than any of the kangaroos.

The first kangaroo was named *Yerboa gigantea* by Zimmerman in 1777. This species is now known as *Macropus giganteus*, named by Shaw in 1790. Dampier was the first man to mention the marsupials, in 1688 and 1699.

Native Cats.—Genus *Dasyurus*. Of the six Australian species nearly all are found in Queensland, and two species, *D. hallucatus* and *D. gracilis*, the North Australian and the slender native cat, are found only in this colony. The first native cat discovered was the spotted tail common variety, named by Kerr in 1792. These animals are very destructive to poultry of all kinds, and do great damage among the wild birds. A fossil native cat is found in the Wellington caves and on the Darling Downs.

Wallabies.—The word "wallaby" (wallaba, wallabee) comes from the old Sydney dialect. Wallabies are found in all parts of Queensland, in timbered country. There are many varieties, and they vary in size from the little scrub wallaby ("paddimella" of Sydney blacks) up to the tall white-throat and red-neck wallabies that frequent forest ridges and open brushes. Several species of wallaby are not found in Queensland, while the colony possesses some unknown elsewhere.

Bandicoots.—Family Peramelidæ. Many fossils of bandicoots are found in the Wellington caves and on the Darling Downs. There are ten species living, and of these we find four in Queensland. Far west in Central and North-west Australia is the white-tailed rabbit bandicoot (*Peragale leucura*), named by Thomas in 1887, differing from the common rabbit bandicoot of South and West Australia. The common bandicoot was named *Perameles nasuta* in 1804 by Gregory. Bandicoots are excellent eating, their flesh white and tender, being clean feeders, living chiefly on roots and seeds. They annoy the farmer by rooting up newly-planted grains, feeding only at night, and sleeping by day in hollow logs, holes at the roots of trees, and nests in long grass.

There is only one Australian specimen of the animal erroneously called native bear, widely distributed over Queensland. This tailless tree climber was named *Phascolarctus cinereus* in 1819; "koala" of the Sydney blacks; at Morton Bay, "toomirrpee," "coollah," and "bootellim." Thousands of skins of this harmless animal are now annually exported to the old countries, and the hair used for felting purposes.

Opossums.—In Australia and Tasmania there are twenty-one species, of which thirteen are found in Queensland, while three belong entirely to Tasmania. Of the thirteen there are five found only in Queensland, and three of these were obtained by Lumholtz, on the Herbert River ranges in 1884. They are known to the blacks as "tula," "yappee," and "gnoota." One is *Pseudochirus Archeri*, one *P. Herbertensis*, and the other *P. Llemuroides*. The striped opossum and lesser flying opossum belong to Central Queensland. The common grey opossum is *Trichosurus vulpecula*, named by Kerr in 1792. The spotted cuscus (*Phalanger maculatus*, 1803) is found towards Cape York and in Southern New Guinea. Everywhere the opossum was used as food by the blacks, whose women's aprons and men's belts and armbands were made from the twisted fur. The front teeth were used for grooving their weapons. The taste of the flesh, to Europeans, depends on whether the opossum is fed on grass, gum leaves, or scrub trees. They feed only at night, and sleep all day in holes of trees. The Southern scrub opossum builds a nest of leaves and sticks. The north jungle opossums, "tula," "yappee," and "gnoota," sleep on the branches among the thick leaves, and in the staghorn and bird-nest ferns, and are very difficult to discover without the aid of blacks.

Mice and Rats.—There are seventeen species of pouched mice found in Australia, and at least eight of these inhabit Queensland. Of rats (order Muridæ) there is a large and varied assortment, no less that forty-one species in Australia and Tasmania. Queensland is the unfortunate possessor of fifteen or sixteen of these active rodents, and occasionally in the far West one species appear in numbers sufficient to constitute a plague. In 1869 and 1870 they were specially bad in the north and north-west country of Queensland.

Edward Palmer wrote as follows concerning the years mentioned:—"Where those rats came from is a mystery. After the flood subsided the rats increased to an extent scarcely credible. They covered the plains in every direction. They could be heard squeaking and fighting with each other; they swarmed into the huts and gnawed

everythiug. Flour, meat, groceries, and leather articles had to be stored in galvanised iron rooms and safes built expressly. Hobbles of green-hide and leather were eaten off the horses' feet; dogs and cats got surfeited and took no notice of the rats. For hundreds of miles along the Flinders these rats were seen, the grass cut down, and 6-inch saplings bitten through." These plagues are not uncommou in the West, and rats are a common article of aboriginal diet. Parts of India are also subject to rat plagues. The largest Queensland species, *Hydromis leucogaster*, is a big brown rat, half the tail white and bare, found iu North and South Queeusland. He is the size of a large bandicoot, and runs up trees like an opossum. He is equally at home on the land or in the water. Eight of the forty-one species of Australian rats belong to Tasmania.

Bats.—Order Chiroptera; genus *Pteropus*. Of these there are thirty-one species in Australia and Tasmania, while sixteen are fouud iu Queensland, from the small fruit-eating and inseetivorous bats, with bodies 1½ inches in length up to double that size.

To the same family belong the flying-foxes, the great fruit-eating Australian bats, of which there are five species. The first specimen of the spectacled flying-fox was found on Fitzroy Island by McGillivray, of the "Rattlesnake," in 1848, and named *P. conspicillatus* by Gould in 1849. The eommon grey-headed fox, so well and unpleasantly known to all our fruit-growers, is *Poliocephalus*, named by Temminck in 1827.

The dusky flying-fox (*P. brunneus*) was found on the Percy Islands, and named in 1878 by Dobson. Four out of the five speeies are found only in North Queenslaud and the islands off the coast. All five are eaten by the blacks for food. The foxes are all equally destructive to fruit. When Captain Cook was at the Endeavour River in 1770 oue of his men saw a flying-fox struggling on the ground, aud ran back to say he had seen the devil. No fox can fly from the grouud; he must first climb a few feet on some elevated object.

Among the imported fauna are axis and fallow deer, landed in 1872, and red deer in 1873. They were sent to Cressbrook and Canning Downs, aud increased until they are now numbered by hundreds. Shooting one involves a fine of £10.

The first hares were half-a-dozeu sent from Victoria by Norman Darcy in 1873. They arrived in Brisbane by the City of Melbourne on the 1st September, accompanied by the imported greyhonnd slut "Hebe."

Hares are now in thousands on the Darling Downs, and slowly spreading.

## FISHES.

No eountry in the world commands a greater variety or finer quality of fishes suitable for food. There are already about 1,200 known speeies, and of these probably 700 or 800 ean be eaten. There must be hundreds of speeies still unnamed, for the marine ichthyology of Queensland—particularly that of the tropical oeean on the north coast—is comparatively unknown. The edible fishes that frequent our rivers and harbours vary in size from the small gar and whiting to huge gropers weighing a quarter of a ton. This splendid fish (*Oligorus terræ reginæ*) is caught with hook and line in the rivers and among the shoals of sehnapper in the open sea along the coast.

There are four species of groper. Among the best-known fishes—those common in our markets—are the deep sea, grey, and red mangrove mullet; garfish, whiting, and dewfish; golden, dusky, silver, and thick-lipped perches; schnapper, parrot fish, black and silver breams, red rock cod, black and white trevallies, tailor fish, flathead, flounder, three kinds of sole, long tom, and eels.

A very fine fish, north from Keppel Bay, is the giant perch (*Lates calcarifer*), which grows up to 50 lb., and is found in the open sea and harbours and rivers. The writer has caught it in the fresh water of the Barron River, where the stream emerged from the ravine in the mountains. It is a hollow-headed fish, with beautiful iridescent eyes. This fish is known in India, where it is highly esteemed.

Morton Bay is visited by the Samson fish (*Caranx hippos*), called "gnarrim chooragnan" by the aboriginals of Stradbroke Island. This fish grows up to 50 lb., and, if properly cooked, is one of the finest flavoured and richest fishes in Australian waters. Many species of splendid fishes are caught by the fishermen of Townsville, Cairns, and Cooktown.

There are more than twenty known sea perches, some beautifully marked with bright colours. The best flavoured mullet are the red, of which there are six species. There are ten or twelve species of rock cod, including the red rocks of the Sydney market, and the rock gurnet of Melbourne.

Among the many tassel fishes is Sheridan's tassel fish, which has been caught in Hervey's Bay and Sandy Island Straits up to 100 lb.

The dewfish of Brisbane (*Corvina axillaris*) grows up to 40 lb. or 50 lb., and is very abundant.

The tailor fish grows to 15 lb., and is widely distributed. This is the "blue fish" of the United States. There are twelve species in Morton Bay. Several members of the mackerel family, four species of whiting, seven or eight flathead, twelve species of grey mullet, one weighing up to 10 lb. or 12 lb. plentiful from April to July; five species of garfish, several edible catfishes, eight species of herrings, three silver bream, six red mullet, and many other species of useful food fishes are abundant along the coast. There are two species of true anchovies, visible in shoals from Morton Bay to Cape York. The sea swarms with sharks, skates, and rays. Whales are common along the coast; but there are no seals.

The most remarkable freshwater fishes in Queensland are the Murray cod (*Oligorus Macquariensis*), the barramundi of the Dawson (*Osteoglossum Leichardti*), and the famous Burnett salmon (*Ceratodus Forsteri*), named after William Forster, once Premier of New South Wales, and a squatter on the Burnett River in the early years. He sent a specimen to Gerard Kreft in 1870, the first known to science, though it had been sold in Gympie for three years, and was common among the Mary and Burnett squatters. This extraordinary fish, known as "theebine" to the Mary blacks, is often stupidly confounded with the barramundi of the Dawson.

The *Ceratodus* belongs to the Dipnoid fishes, of which there are only two other species in existence, the *Lepidosiren* of the Amazon, and the *Protopterus*, or mud fish, of South Africa. It grows up to 3 feet 6 inches in length, and a weight of 30 lb., is covered by large scales up to the size of a five-shilling piece, and has cartilaginous bones like those of a shark. Having gills which enable it to breathe in the

water, and one lung capable of breathing atmospheric air, the *Ceratodus* is a connecting link between the fish and the amphibians. Fossils of *Ceratodus* are found in the Triassic and Jurassic beds of Europe. So far it is absolutely unknown to-day except in the upper fresh waters of the Mary and Burnett Rivers of Queensland. It is easily caught with a hook and line, baited with fresh meat, piece of an iguana, prawns, and various vegetable substances. The flesh has a pink tinge, and is excellent eating if flaked and grilled on red coals. Live specimens were sent to the Brisbane Botanic Gardens in 1869, and in October, 1872, one weighing 3 lb. was taken out of the garden pond with a seine net belonging to Captain Peakes, of the steamer "Kate." Nobody knew what it was, and the paper described it as a "strange fish." There are three still alive in the pond in the south-west corner of the gardens.

The barramundi of the Dawson is a handsome fish of the perch family, covered by large scales with red spots. He bites readily at a beef bait, and is excellent eating. This fish is found in all the tributaries of the Fitzroy. A second species of barramundi was found by Leichardt in 1845, in a branch of the Mitchell, but has only been recently named *Osteoglossum Jardinei*, by Saville Kent. This fish, differing somewhat from the Dawson species, is found in the rivers running west to the Gulf from the Cape York Peninsula.

The Murray cod is found in the heads of the Brisbane River and the Logan. It is also reported from the head waters of the Mary, but no further north on the coast side of the Main Range. It is abundant in the Condamine.

No eels or mullet are found anywhere in the Western rivers or lagoons of Queensland, being apparently unknown west of the Main Range.

## INSECTS.

Insect life is abundant in all parts of Queensland, especially in the tropical north, and many of the moths, butterflies, and beetles are extremely beautiful, some of the former of large size, such as the rare moth called *Attacus Hercules*, measuring 12 inches across the expanded wings. Among the more magnificent butterflies are the Ornithoptera (bird-winged), *O. Cassandra*, *O. pronomus*, and *O. Richmondiana*—named after the Richmond River, where it was first discovered; and *Papilio Ulysses*, the lovely large bright-blue butterfly of the east coast, north of Cardwell. These are four of the handsomest butterflies in Australia, and all are fairly numerous in their respective localities. Only the third Ornithoptera is found in South Queensland. Some of the "leaf butterflies" are indistinguishable from leaves, and others are saved from the keen eyes of insectivorous birds by their resemblance to lichens and bits of stick.

Among the most destructive insects is the peach maggot, the larva of a small fly, which destroys about a fourth of the yearly peach crop of Queensland. Cabbages, cauliflowers, and potatoes are much injured by the larvæ of the cabbage and potato moths. Two species of moths in the larva stage feed on wax, and are a source of great trouble to beekeepers, frequently ruining whole hives. The larvæ of some moths live on scale insects, eating them in thousands, and are thus beneficial to man.

Queensland is rich in beetles, possessing at least 6,000 species out of the 10,000 found in Australia.

Among the mischievous are the various weevils, some of which bore into living trees, and others destroy all kinds of grain.

The Bruchidæ, once classed with the true weevils, destroy peas, beans, and other legumes, and are well known as "pea and bean weevils."

Some beetles possess an apparatus which ejects a puff or jet of smoke from which is derived their name of "Bombardier beetles." This smoke stains the skin a deep brown, and takes some little time to wear off. Like the ink of the cuttlefish, it enables the beetle to escape from an enemy. Many of the beetles feign death when surprised or touched. One of the most destructive is the red-banded plant-eating *Galeruca*, which settles in thousands on fruit and various other trees, and in a few days destroys every green leaf.

Among those beneficial to man are some of the ladybirds—owing to their scale-eating propensities—and the scavenger beetles, which eat all animal excrement and dead birds, animals, fish, or reptiles, which would poison the atmosphere with the gases evolved by decomposition.

A few of the Hemiptera have formidable probosces, and can inflict a painful wound, especially one called *Nepa*. One of these is very injurious to the orange, and nearly all emit a disagreeable odour when handled or disturbed. The musk bug, which comes out to fly just before dusk, possesses an odour of true musk, so strong that one or two will scent the whole contents of boxes or drawers, and continue to do so a long time.

There are many representatives of the Diptera, or two-winged flies, including such old friends as the mosquitoes, house flies, cheese maggot, daddy longlegs, and the sheep ticks.

The Neuroptera are also numerous, some of large size, as the dragon flies, and others very minute. The terrible ant lion, the white ants and caddis worm. In North Queensland there is a large dragon fly which captures and devours the largest butterflies.

Homoptera.—Cicadas, plant lice, and scale insects belong to this family.

The Hymenoptera, or four winged insects, include bees, wasps, hornets, sawflies, and ants, all numerously represented, there being several hundred species of ants, the worst being the big red bulldog, soldier ant, and the jumper, their stings being acutely painful. The ants, male and female, are winged, but the males are the smallest. The workers are often of two forms, one with large heads and the other with smaller ones. The nests are usually of mud or clay. One species fastens a number of leaves together, and others in North Queensland live inside a parasitic plant to which they give the name of *Formicaria*. The habits of ants, their economies, and slave customs are described in the works of Kirby and Spence, Latreille and Lubbock.

To the Orthoptera belong the grasshopper, locust, cockroach, phasma, mantis, and earwigs. There are many species of phasma, some nearly a foot in length.

Spiders are very numerous along the east coast, and some of those in the tropical jungles are large and handsome. There is one species weaves a web strong enough to capture small birds such as the wren and other tiny warblers.

The trapdoor spider has an underground room closed by a self-acting beautifully contrived trapdoor which shuts immediately the prey enters. The hinge acts on a strong spring woven from many threads.

One small black spider with a red spot on the abdomen is very poisonous, and has even caused the deaths of people whose blood was probably out of order. Many spiders resemble other insects. This enables them to trap unsuspecting prey, and also protcets them from enemies. Some spring on their victims like a tiger.

Scorpions and centipedes are numerous in all parts, west and north. Their bite produces intense pain, and may even cause death by blood poisoning.

Chief names among insect-collectors of Queensland are Diggles, R. and G. Turner, Illidge (senior and junior), Wild, and Masters.

## CROCODILES.

There are two species of crocodiles, but no alligators, in Queensland. The only living alligators are in America and China. The large crocodile on the North coast, equally at home in salt, brackish, or fresh water, comes south to the Boyne River, and ranges from thence to Cape York and along the shores of the Gulf.

This species (*Crocodilus porosus*) grows up to 24 feet in length, and is a very dangerous animal. Many white men and aboriginals have been taken in the Northern rivers. He comes nearer to the crocodile of the Ganges than the crocodile of the Nile (*C. Niloticus*). Plentiful in the Herbert, Johnstone, Russell, Mulgrave, Barron, Mosman, Daintree, and Endeavour rivers, and intermediate inlets. This crocodile is never found west of the Coast Range, except in Gulf waters. The female lays from forty to eighty eggs, close to the water, and covers them with a heap of grass, reeds, and decaying vegetation, to be hatched partly by the artificially generated heat and partly by the solar rays. The eggs are about the size of a duck's, with a hard rough shell and dark bluish tinge. They are eaten by the natives.

Both jaws of the crocodile have powerful conical teeth, renewed from time to time up to old age and death. The two front teeth in the lower jaw protrude through two holes in the top jaw. The nostrils are on the point of the top jaw, and connected thence by a long passage with the throat. There is no apparent tongue, as this rudimentary organ is fastened all round to the base of the teeth.

The crocodile differs chiefly from the alligator by a fringe on the hind legs, webs on the toes, and the two teeth projecting through the top jaw.

The crocodile steals stealthily on his prey, and strikes like lightning with jaws or tail.

Pliny tells us that crocodiles were among the wild beasts in the amphitheatre. An ancient race sacrificed them in the temple of Typhon, the Evil Genius.

In Siam their flesh is sold in the market like beef. It is a white, clean-looking flesh, very fat along the tail.

At Townsville the crocodile was called "Tuccanang," and "Canyahra" from the Russell River to Cooktown.

The small crocodile (*Philas Johnsoni*), growing up to 9 feet, is found in the lagoons and freshwater heads of the Gulf rivers. This species appears to be harmless. The flesh and eggs are eaten by the

natives. The female lays her eggs in the sand of the beaches above water-mark. The head is long and narrow, both jaws armed with formidable teeth. The colour is a brownish-yellow, while that of the large crocodile is a dark brown. On the Flinders the large crocodile is called "Chalgar," the small one "Udondo"; on the Burke River, "Oolgoonya" and "Ternamba"; on the McArthur, "Moodoomboórie" and "Bimbie"; on the Roper, "Turrajella" and "Olajendama." On the Mitchell, at the junction with the Lynd, the small one is "Adnahra."

## SNAKES.

Snakes are common in all parts of Queensland. The deadliest reptile is the death adder, found from Point Danger to Cape York. This reptile grows up to an extreme length of 3 feet, and varies in colour —grey, light-brown, dark-brown, reddish-brown, yellowish-brown— according to the colour of the soil or sand where he is found. He is sleepy and slow-looking, never attempting to move out of the way, but strikes like lightning when trodden on or touched with a stick. His habit of bringing the head and tail together when biting led to an erroneous belief that he carried a poisonous sting in the tail, which is perfectly harmless. On Stradbroke Island the adder was called "Man-ool-coong"; on Morton Island, "Moonoom"; at Brisbane, "Moondoo-loógan"; and "Moonoolgoom" at Bundaberg. The poison fangs of a full-grown specimen are slightly over $\frac{3}{10}$ of an inch in length, the centre channel about $\frac{7}{500}$. The three deadliest snakes are the tiger and black snakes, and a copper-head snake on Stradbroke Island known to the blacks as "Coorallbong," of which they were more afraid than of the death adder.

Black snakes are numerous in tea-tree swamps, and in long grass on the borders of lagoons or anywhere near water.

Eight feet six inches may be regarded as the extreme length of this snake, which grows largest in the tropical jungles of the north coast. They are specially dangerous in pairing season. In the North is one species of large black snake with no poison fangs. He moves about at night, and is common in the Cairns district.

The brown tree-snake, with the small opalescent spots which disappear when he is killed, is also harmless. This snake winters in hollow trees, and twenty-six have been found coiled together in one branch.

The carpet snake is also harmless. He belongs to the boa family, and kills his prey by coiling twice round it, a movement done with astonishing rapidity.

This snake lives on opossums, rats, bandicoots, birds, and wallabies. One 10 feet in length can swallow a wallaby 10 lb. in weight. The largest recorded was 22 feet, killed in April, 1874, by L. F. Sachs, near Cooktown. In South Queensland they are rarely found over 12 feet.

A carpet snake 17 feet 8 inches was killed at Myall, Maitland, New South Wales, in 1863, the largest recorded in that colony.

The blacks' name at Morton Bay was "Cabbool," and this word extended for hundreds of miles, over many tribes. The carpet snake was a class totem in nearly every tribe on the east coast of Australia. He is one of the tree-climbers, and ascends in search of birds, animals, and eggs. His flesh was a favourite food with all blacks in whose class he was not a totem. They also ate the black snake, and some even cooked the death adder.

When an aboriginal was bitten by a snake he at once cut or scarified the wound, and generally tied a ligature above and below. If possible he sucked the poison out, otherwise the suction was done by a companion. If running water was available the wound was placed there to have the poison washed out. Aboriginals, being ever on the alert to watch where they trod, were rarely bitten, and a death from snakebite was so rare an event among them that the author can only remember one in thirty years of observation. A poultice of hot gum leaves on tea-tree bark was used for snake bites and ordinary wounds. We have also seen the bite cauterised with a firestick.

## SHELLS.

Sea shells are numbered by hundreds, infinite in their colouring and design, and varying in size from minute organisms a hundredth of an inch in length up to enormous clam shells (*Tridacna gigas*) weighing over a ton; some so fragile as hardly to bear the softest handling, and others that could only be broken with a sledge hammer. The whole Barrier Reef, from Lady Elliot Island to Cape York, is one vast field of splendid shells, a perfect paradise for the conchologist.

Land and freshwater shells are numerous, some beautifully marked. In the sands of the Western rivers are vast quantities of mussels that formed a perpetual source of excellent food for the aboriginals.

The tropical ocean on the north coast teems with myriad life-forms: fishes, starfish, crabs, prawns, sponges, corals in endless variety, only a fraction yet known to science.

The chief shell collectors of Queensland have been Strange, Rainbird, Mr. and Mrs Charles Coxen, Tryon, Hedley, and Wild.

## FOSSIL FAUNA.

Nearly the whole territory of Queensland is one vast cemetery of dead and buried life-forms of past geological periods. In the Cretaceous graveyard of the West, scattered along the surface, or hidden far beneath clays, sandstones, or drifts, are myriad fossils of the marine animals which lived in the depths, or on the reefs, of that ancient ocean which divided Australia into two or many islands, far back in the unknown past, whose existence is only revealed by the silent testimony of the rocks. That mighty ocean of the Mesozoic Age swarmed with life, like the tropical ocean that to-day washes the northern shores of Queensland; fishes, sharks, and rays, countless strange forms that swam on the surface, crawled on the ocean floor, or clung to the ooze-covered rocks. Huge fishes 20 feet in length, giant turtles, two species of the *Icthyosaurus*, and two of *Plesiosaurus*, 20 to 30 feet, and countless varieties of shells, from the huge clams down to the minutest organism represented in the living species of to-day.

An enormous tract of the interior of Australia is covered by Cretaceous fossils; shells, chiefly *Trigonia*, *Crioceras*, *Cyprina*, *Belemnites*, and *Ammonites*.

On the tableland of the Greenough River, in West Australia, are many fossils common to the Upper Lias and Lower Oolite of Europe. In the sandstones of the Hawkesbury, in New South Wales, are fossil ganoid fishes, *Myriolepis* and *Cleithrolepis*, corresponding to ganoids in the limestones of the European Mesozoic.

The Darling Downs country is a rich field for the paleontologist, and has been a famous specimen ground since the first discoveries in King and Gowrie Creeks in 1842.

Leichardt, writing from Canning Downs in 1843, said—"These plains (Darling Downs), so famous for the richness of their pasture, are equally remarkable as the graveyard of extinct species of animals, several of which must have been of gigantic size, being the marsupial representatives of the pachydermal order of other continents. Mr. Isaac's station is particularly rich in these fossil remains.

"At Isaac's Creek they occur together with recent freshwater shells of species still living in the neighbouring ponds, and with marly and calcareous concretions, which induce me to suppose that these plains were covered by large sheets of water, fed probably by calcareous springs connected with the basaltic range, and that huge animals, fond of water, were living either on the rich herbage surrounding these ponds or lakes or browsing upon the leaves and branches of trees forming thick brushes on the slopes of the neighbouring hills. The rise of the country, which is very generally supposed to have taken place, was probably the cause of the disappearance of the water and of the animals becoming extinct."

Immense quantities of bones of the ancient giant animals, herbivora and carnivora (grass eaters and flesh eaters), are scattered along the valley of the Condamine. They are seen protruding from the banks or beds of watercourses on the surface, and have been dug up from wells at a depth of over 100 feet. The tremendous animals these bones represent must have lived in incredible numbers, and died in thousands and tens of thousands in the Condamine valley. Professor Owen thought they were exterminated by human agency after savage man appeared upon the scene.

Daintree considered there was "no trace in any part of Queensland of any convulsion that would cause the total destruction of the *Diprotodon* and other animals of that period." He attributes their extinction to change of climate and drainage of the tablelands. Our own theory of their destruction is a total change of climate, and repeated and terrible droughts extending periodically over hundreds of years, whereby the land animals were driven in upon the surviving lakes and lagoons, consuming the whole of the surrounding vegetation, bogged by hundreds in the mud of the dried-up water reservoirs, and dying there like stock in the last waterholes in droughts of to-day.

The alligators were the last survivors in the pools and lakes, and would live royally on the thirst-stricken herbivora driven in on them in the life-and-death struggle for water. On the shore the marsupial lion fed on the unhappy animals to whom thirst was more terrible than the jaws of the carnivora; and finally the last *Diprotodon* and the last giant wallabies and kangaroos, children of Anak, expired in the dried mud or starved on the barren plains; the marsupial lion, unable to catch the swift-footed small animals, perished among the skeletons of his last victims; the grim saurians crawled out and died on the banks of the muddy pools; and, last of all, there remained only the hardy small animals, capable of enduring thirst or travelling long distances in search of water.

Terrible beyond conception, cruel beyond the human imagination, was that awful death struggle among the last animals of ancient Australia. In that appalling contest for existence, involving life or

death alike to fauna and flora, all the larger and slower and softer birds and animals were exterminated, leaving only the smaller and hardier species with a natural capacity to endure the changed environment; and the trees left for their companionship and shelter were the hard and wiry eucalypts and acacias that to-day stand in the Western solitudes, defying alike the rushing waters of the periodic floods, and the burning sun and scorching fires of the years of drought.

In the silence of the Australian Post Pliocene and Cretaceous graveyards, representing two Ages, lie the bones of flesh-eater and plant-eater, pursuer and pursued, the devourer and the victim, bird and animal, fish and reptile, giant marsupials, huge alligators, dugong, platypus, native cats, dingoes, moas, pouched lions, enormous native bears and opossums, porcupines, great bustards, gigantic wingless birds, lizards, ducks and pelicans, helix shells and ceratodus, enormous skeletons of *Icthyosaurus*, *Plesiosaurus*, the *Diprotodon*, and *Nototherium*, all involved in "one merciless wreck of grey annihilation." The modern palæontologist walks now through the labyrinth of broken bones and scattered teeth, with his magic lantern of comparative anatomy, bridging over the countless ages, and projects on the canvas of the present the phantom forms of extinct races, long buried in the oblivion of the unknown past.

Five-sixths of the marsupials of the present day are found only in Australia and adjoining islands; the remaining sixth are peculiar to America. They are divided into two groups, Diprotodonts with two teeth in front on the lower jaw, and the Polyprotodonts with many or more than two. The Diprotodonts are represented by three families, the first being the Macropodidæ, or long feet, kangaroos, wallabies, kangaroo rat, and musk rat. The Phalangeridæ or hand-footed marsupials, such as opossums, squirrels, and native bears. The third family is represented by the wombats alone. Polyprotodonts include three families, the first containing the bandicoot, the second the *Dasyurus*, such as native cats and the Tasmanian tigers and devils. The true opossums of America are the third family of this group.

## FOSSIL ANIMALS.

The following is a brief outline of the animals represented by Queensland fossils discovered up to the present time:—Five species of wombats, the largest twice the size of any of the three species still living in Australia. Two native bears, each probably weighing about 5 cwt., the size of a small cow.

Two species of the Tasmanian devil, about the same size as the present, and two species of the Tasmanian wolf, double the size of the present.

One echidna (porcupine) larger than the present, and a platypus smaller than those now living.

A fossil dugong, and a pig-like land animal.

Four species of kangaroo, all larger than the present.

Wallabies were in great numbers, as their bones and jaws are everywhere. They differed only in minor details from those of to-day in general structure. In size they were giants, one of 9 feet in height and at least three times the bulk of the largest living wallaby.

One phalanger weighing about 2 cwt., and another, nearly related, the size of a grizzly bear.

A cuscus big as a brown bear.

*Thylacolea* was a marsupial lion the size of the present African species, evidently a bone and marrow eater, as he had only one back tooth on each side of each jaw; formidable cutting teeth closing like a hedge-knife.

Many fossil bones show the marks of the teeth of this ancient Australian lion.

*Diprotodon Australis* was a huge semi-wombat animal with teeth like a kangaroo, but no other resemblance. He stood about 6 feet high, with a length of 10 feet. *Diprotodon minor* was 5 feet high and 8 feet long. They were marsh and lake-feeding animals, apparently near the modern African tapir in their habits. Their bones were light and spongy. Two species of *Nototherium*, one equal in size to the smallest *Diprotodon*.

Of *Sceparnodon* there have been found so far only a few thin chisel-like teeth indicating an animal the size of an ox.

*Zygomaturus* was an animal with a huge swollen head, great cheek bones, deep set eyes, bulging brows, short flat face, and enormous muzzle, diabolically ugly, but probably mild in disposition.

*Palorchestes*, the old jumpers, were enormous animals, primitive kangaroos, one 14 feet in height and about a ton in weight, twelve times the bulk of the kangaroos of to-day.

Of *Sthenurus* there were five species—heavy, massive, strange-looking kangaroo-like animals, one 11 feet in height.

One species of alligator, *Palimnarchus*, the Old Pool Ruler; over 30 feet in length.

Several species of enormous turtles, the biggest, *Meiolania*, his head studded with great horns.

An enormous lizard, *Megalamia*, at least 20 feet in length, like an enormous iguana, must have been a formidable presence among the land animals of the period.

Among the fossil birds are ducks, pelicans, herons, rails, bustards, pigeons, scrub turkeys, and emus.

Remains of the moa and apteryx are also found on the Darling Downs. The apteryx still lives in New Zealand, and the moa, a wingless bird 10 to 13 feet in height, has become extinct in that country, probably within the last 300 years.

No fossil snakes or bats have been found in Queensland. Fossils of rats show that the calamitous rodent is one of the oldest inhabitants.

LIST OF FOSSILS FOUND ON THE DARLING DOWNS, AND NAMED BY C. W. De VIS.

Trionyx australiensis; Tortoise
Varanus dirus; Lizard
Varanus emeritus; Lizard
Pallimnarchus pollens; Alligator
Taphaetus brachialis; Eagle
Necrastur alacer; Hawk
Pelicanus proavus; Pelican
Paleopolergus nobilis; Heron
Platalea subtenuis; Spoonbill
Anas elapsa; Duck
Dendrocygna validipinnis; Tree duck
Metapteryx bifrons; Apteryx
Phascolomys angustidens; Wombat
Nototherium duuense; Nototherium
Euowenia grata; Euowenia
Euowenia robusta
Phalanger procuscus; Cuscus
Pseudochirus notabilis; Opossum
Koalemus ingens; Koala
Archizonurus securus; Ringtail opossum
Sthenomerus charon; Kangaroo
Triclis oscillans; Muskrat

Biziura exhumata; Musk duck
Nyroca robusta; Duck
Nyroca reclusa; Duck
Plotus parvus; Diver
Lithophaps ulnaris; Pigeon
Progura gallinacea; Goura
Chosornis præteritus; Mound Bird
Porphyrio (?) reperta; Redbill
Porphyrio mackintoshi; Redbill
Gallinula strenuipes; Waterhen
Gallinula peralata; Waterhen
Fulica prior; Coot
Tribonyx effluxus; Waterhen
Xenorhynchus nanus
Dromaius patricius; Emu
Dromaius gracilipes; Emu
Dinornis queenslandiæ; Moa
Ornithorhynchus agilis; Platypus
Brachalletes palmeri; Kangaroo
Thylacinus rostralis; Native Tiger
Synaptodon ævorum; Kangaroo
Chronozoon anstrale; Dugong
Prochœrus celer; Peccary
Palorchestes parvus
Sthenurus pales
Sthenurus orcas
Halmaturus vinceus; Wallabies
Halmaturus dryas; Wallabies
Halmaturus siva; Wallabies
Halmaturus vishnu; Wallabies
Halmaturus odin; Wallabies
Halmaturus thor; Wallabies
Halmaturus orcinus; Wallabies
Macropus fannus; Kangaroos
Macropus pan; Kangaroos
Macropus magister; Kangaroos

## CHIEF ISLANDS.

There are more islands on the east coast of Queensland than on any equal extent of coastline in the world. Between Stradbroke Island in the south and Thursday Island in the north there are hundreds of islands, varying in size from bare rocks, small tropical coral isles of an acre in extent, up to Fraser's Island, sixty-eight miles, and others twenty miles in length, covered by lofty mountain ranges.

The following list includes the principal, and all available interesting historical facts with which they are associated.

These facts form part of the history of Queensland.

### MORTON AND STRADBROKE.

These two islands form Morton Bay, and extend from Nerang Creek in the south to Cape Morton in the north. Stradbroke is thirty-five miles and Morton twenty-five miles in length, divided at Amity Point, where the two islands are separated by the South or Rous Channel, which is about two miles wide. The name "Rous" and "Rainbow," applied to the entrance channels, come from Captain Rous, who, in H.M.S. "Rainbow," was surveying on the coast in 1828, and discovered in that year the Clarence and Richmond Rivers.

Stradbroke Island was named by Captain Logan in 1827, and Morton Island, after Cape Morton, by Flinders in 1799.

To the aboriginals Stradbroke was known as "Minjerriba" and "Charangarie," Morton Island as "Gnoorganbin." Several tribes and three dialects were found on Stradbroke. Morton Island possessed one tribe with a dialect distinct from all others, a remarkable ethnological fact. They are both poor islands, Morton consisting almost entirely of sandhills, clay flats, and tea-tree morasses, timbered by bloodwood, gum, tea-tree, cypress pine, honeysuckle, and wattle.

At Dunwich, the asylum for the aged of both sexes, there is a fertile patch of basalt. On this spot in 1828 there was a branch penal settlement, and in that year the land cultivated for the Benevolent Asylum was under cotton. Here also, in 1842, Archbishop Polding sent three Catholic priests for missionary work among the blacks

The north end of Stradbroke is named Amity Point, so called after the brig "Amity," which brought up the first convicts in September, 1824. Here Major Lockyer landed in 1825. In April, 1836, it was visited by Backhouse and Walker, the Quaker missionaries, by McGillivray, the naturalist, and the now famous Professor Huxley, who landed from the "Rattlesnake" on the 18th October, 1847. All these visitors saw the blacks fishing with the porpoises, and described the natives as fine athletic men. There are several small lakes on both islands. On Stradbroke, wallabies and kangaroos are numerous; but no bears or opossums are found on any part of the island. On Morton there was no animal life except snakes and iguanas.

Amity Point has been the favourite dugong fishing station periodically since 1846.

On the Bar, at the entrance, the steamer "Sovereign" was wrecked on the 11th March, 1847, and only ten people saved out of fifty-four.

### ST. HELENA.

A small volcanic island in Morton Bay, five miles from the mouth of the Brisbane River. It was proclaimed a penal settlement on the 14th May, 1867. The name was originally given by the officer in charge of the branch penal settlement at Dunwich. A blackfellow whom the whites named "Napoleon," from his supposed resemblance to that emperor, was caught stealing an axe, and forthwith exiled in March, 1828, to the island, which was thenceforth called St. Helena. The native name was "Noógoon." In August, 1799, Flinders landed on this island and pulled round it, going thence in the direction of Fisherman's Islands at the mouth of the Brisbane River, which he narrowly escaped discovering. At that time St. Helena was covered by dense and luxuriant brush growing on the rich red basaltic soil, and timbered down to the water's edge. In January, 1868, John McDonald, the first superintendent, started to clear ten acres to receive cane plants from the Brisbane Botanic Gardens. In the following year he erected a small sugar-mill made in Brisbane for £120. It consisted of three vertical rollers 18 inches diameter and 15 inches high, driven by four horses. This primitive mill was replaced by a superior one in after years, and sugar was successfully grown by the convicts until it was abandoned and the land devoted to potatoes, sweet potatoes, and lucerne.

St. Helena is the principal penal establishment of the colony, the prison to which all long-sentence prisoners are sent. The whole of the island is cleared of the original timber, except a few solitary mangroves. It contains a total area of 220 acres.

### BRIBIE ISLAND.

Historically, this is the most interesting island on the south coast. It lies at the north end of Morton Bay, is about twenty miles long and from one mile to three miles wide, consisting chiefly of tea-tree swamp, salt flats, low sea-sand ridges, and slightly raised patches timbered by bloodwood, gray gums, and turpentine. On the low sand-ridges are cypress pines and honeysuckle. There is not an acre of good soil on the whole island. Opossums and kangaroos are numerous. In 16th July, 1799, Flinders landed on the south end of Bribie, and had a skirmish with the natives. On that point, therefore, the first Queensland native was shot by a white man. There Flinders

saw the first dugong, and took it to be a sea-lion. He beached his sloop at a point now known as the White Patch (Taranggeer), went over to the mainland, and ascended the low hill beside the present Beerburrum railway station.

Flinders thought Bribie Passage was a river, and called it the Pumice Stone River, on account of the pumice-stone lying along the shores. The south end, the scene of the shooting, he called Point Skirmish. Here, in November, 1823, Surveyor-General Oxley met the white men who showed him the Brisbane River. Through Bribié Passage sailed Andrew Petrie in May, 1842, when on his way to the Mary River to recover Bracefell and Davis, the escaped convicts, known as "Wandi" and "Durramboi."

On the south end of Bribie a man named Charles Gray, master of the ketch "Aurora," and once a ferryman at Kangaroo Point, was killed by the blacks on 10th July, 1849. The Bribie natives were a very warlike tribe, a race of tall fine men and women, notorious for their cannibalism, and a terror to all the mainland tribes. There is now in 1894 but one man and one woman to represent the race of Joondoobarrie.

FRASER'S ISLAND.

The Great Sandy Island of the charts. Behind this island lie the Great Sandy Island Straits and Hervey's Bay. This island is from three to fourteen miles wide, about sixty-eight miles in length, and at the north-east a long shoal, known as Breaksea Spit, named by Cook, extends for nineteen miles beyond Sandy Cape.

In 1850 the blacks on this island were estimated at 2,000. They came into collision with the whites at an early period, and thenceforth killed several white men who landed on the island. When the ship "Stirling Castle," which first came out to Sydney in 1831 with Dr. Lang's Scottish immigrants, was wrecked on a shoal to the eastward, the captain, his wife, and some of the crew landed on Sandy Island, and were all killed except Mrs. Fraser, who was finally rescued and sent home to London. The ship was wrecked on 21st May, 1836, on Elizabeth Reef, and the first news reached Sydney on 10th September.

On 26th July, 1802, Flinders landed on Sandy Cape, and had a friendly interview with the natives, whom he described as "fine men." They were a tribe called "Doondoora"; the island was "Moonbi" and "Talboor"; and Sandy Cape, "Carree."

LADY ELLIOTT ISLAND.

Named after the ship "Lady Elliott," which passed there in 1816. It is a low sandy coral island, a few feet above high water. On the south-west side is a white tower lighthouse, 60 feet high, with a half-minute dioptric light. This was completed on 1st August, 1873. A vessel called the "Wild Wave" was wrecked on the island in 1864.

Guano is obtained here and at the Bunker Group.

The island is remarkable as the extreme south end of the Great Barrier Coral Reef.

FACING ISLAND.

Opposite Gladstone, and named by Flinders, who discovered and named Port Curtis on the 2nd July, 1802.

This is the island on which the eighty-eight people sent to form a colony at Gladstone landed from the "Lord Auckland," a vessel of 600 tons, in January, 1847, before going over to the mainland.

In November, 1847, McGillivray and Huxley landed there from the "Rattlesnake," and had a two days' tour collecting on the island. They saw two of the horses left by Colonel Barney.

CURTIS ISLAND.

Named by Flinders after Admiral Sir George Curtis, then at the Cape of Good Hope. A large island, thirty miles in length, and from six to twelve miles in width, extending from the north end of Port Curtis into Keppel Bay, with a north-east projecting point called Cape Capricorn. The north end of the island protects Keppel Bay from the eastward.

PERCY ISLANDS.

Named by Flinders on the 2nd October, 1802, after the family name of the Earl of Northumberland. The "Rattlesnake" called there on the 3rd December, 1847, and Huxley and McGillivray landed to collect specimens. The birds were chiefly black and white cockatoos, swamp pheasants, and crows. The sailors foolishly fired the grass of the island on which they landed, and McGillivray had to soak his clothes in water, throw away all his powder, and make a rush through the flames to save himself. Here in June, 1821, Captain King, of the "Bathurst," landed, and cut some pine trees for top-gallant masts, and he found them "tough as any spar he ever saw."

They hauled a seine net on the beach, and only caught two enormous sun-rays, one of them 12 feet across, and the liver of the largest filled a small pork-barrel. On 4th June, 1819, the same Captain King, while on a surveying cruise in the "Mermaid," had landed on the Percy Islands, where he says he "spent the birthday of late venerable and good king," George the Third. He found quails very plentiful on these islands.

In 1847 a vessel which left Sydney for Port Essington was wrecked here. Among the passengers were three Roman Catholic priests on their way to start an aboriginal mission station at Port Essington. Of the three only Father Anjello was saved, and he afterwards died at Port Essington, where he became delirious from loneliness and privation in an effort to civilise the blacks.

King described the formation as porphyritic conglomerate, with serpentine, felspar, and slaty clay.

In the year 1854 a botanist named Strange was collecting specimens in the Morton Bay district, and among the islands off the coast. He visited the Percy Islands in a ketch called the "Vision," G. E. V. Maitland, master, accompanied by Walter Hill, three other men named Shinks, Spurling, and Gittings, and an aboriginal named Deliapee. On the 14th October the "Vision" anchored off the south island, and next day Strange, Hill, Spurling, Shinks, Gittings, and Deliapee went ashore, chiefly for a supply of water. Strange carried a single-barrel gun, the others being unarmed. On returning to the boat with the cask of water, from the head of a small gully, they were hailed by some aboriginals, nine of whom came up and walked with them to the landing-place. Then Hill, Strange, and Shinks went away with three of the blacks, leaving Spurling, Gittings, and Deliapee with the other six at the boat, which was to go round and meet Hill's party at another part of the island. It appears that Hill left his two friends and went away alone to the top of a hill, from whence he returned to the spot at which the boat was to meet him

and the two others. Seeing no boat at the appointed place Hill walked back to where he left the party, and found Spurling's dead body lying among the mangroves. Then he saw Deliapee along the beach waving his shirt to the master of the "Vision." He told Hill the blacks had killed all the four white men by braining them with nullas, and that he barely escaped with his own life. He and Hill went on board the "Vision," which left next morning for Brisbane. No one was willing to go ashore except Maitland, and he was not prepared to go alone, so they left without ascertaining if the other three men were dead or alive. Such are the facts disclosed in the evidence at the sworn inquiry in Brisbane. Six aboriginals were afterwards captured on the island and taken to Sydney to be tried for the murders. Walter Hill was afterwards many years curator of the Brisbane Botanic Gardens, which he started to form in 1855.

## BUNKER GROUP.

A cluster of small coral islands north of Lady Elliott Island and Capricorn Group, east of Bustard Head. Captain King, in the "Mermaid," called at this group on 19th July, 1820. On 7th January, 1843, Captain Blackwood, of H.M.S. "Fly," and McGillivray, landed on the first Bunker Island, and found the wreck of a vessel of 600 or 700 tons. On the west island, cut on one of the trees, they saw the words "The America, June, 1831," on another "Mary Ann Broughton," and on a third "Capt. E. David," and "Nelson, November, 1831." They also found an old cask, some bottles and broken dishes, and the soles of a child's shoes.

These were the only records of a doomed ship and those she contained. There was nothing to show whether the crew and passengers were rescued by a passing vessel, starved to death on the island, were drowned in an effort to find some inhabited port, or reached the mainland and were killed by the blacks. It is now but a "tale of the times of old," of those who went down to the sea in ships and never returned.

There are guano deposits on the Bunker Group, and in 1849 two ships in search of guano were wrecked on these islands and totally lost. They were the "Countess of Minto," Captain Allen, and the "Bolton Abbey." Allen was afterwards harbour-master at Newcastle in New South Wales. Guano is being collected on the Bunker Group and Lady Elliott Island at the present time.

## WHITSUNDAY ISLANDS.

Between the Percy Islands and the celebrated Whitsunday Passage lie the Beverley Group and Northumberland Islands; in fact, the sea from the Percy Islands to Bowen is covered by a wilderness of islands of many sizes and every conceivable shape, from solitary bare bleak rocks up to pine-clad islands several miles in length. Shaw Island is the largest in the Northumberland Group, and Whitsunday and Hook Islands are the largest in Whitsunday Passage—a name bestowed by Cook, who passed through on Whitsunday, 1770. The splendid archipelago of islands forms one of the loveliest scenes on the Australian coast. The actual passage extends from Cape Conway in the south to Hannah Point on North Molle Island in the north, a distance of twenty miles. The mountains on the two largest islands rise to 1,520 and 1,568 feet.

GLOUCESTER ISLAND.

Named by Cook in 1770 after the Duke of Gloucester. A large island at the entrance to Port Denison. It consists chiefly of a steep range rising abruptly to 2,000 feet.

MAGNETIC ISLAND.

A triangular island of ten square miles in area, named "Magnetical Isle" by Cook in 1770, under the impression that the variation in his compasses was caused by magnetic iron. This belief was not confirmed by any subsequent navigator. Magnetic, called "Daggoombah" by the blacks, is a large mountainous island in Cleveland Bay, the highest peak, Mount Endeavour, rising to 1,700 feet. The Townsville Quarantine Station is on the inner shore of this island. In June, 1841, Stokes, of the "Beagle," stayed at Magnetic Island five days to rate his chronometers.

In the year 1892 A. Gibb Maitland, of the Government Geological Department, made a careful examination of the island, but saw no reason for the influence on Cook's compass. He found the main part composed of granite, with a few quartz reefs; the flats round Horseshoe Bay, along the west side and Nelly's Bay, consisting of recent superficial deposits, and the northern end formed of lavas and ashes of the Permo-Carboniferous Period. He also saw dolerite dykes like those on the Cape Cleveland Range. Various prospectors have sunk shallow shafts and cut trenches in search of gold, and one sample of quartz is said to have assayed $2\frac{1}{5}$ oz. to the ton. Captain King, of the "Mermaid," in 1819, found his compass vary in a surprising manner in shifting it a distance of only 8 yards on the Cape Cleveland mainland.

PALM ISLANDS.

Named by Cook, who passed them on Palm Sunday, 1770. Between Magnetic Island and the Palms, towards the coast of Halifax Bay, lie the small islands called Rattlesnake, Herald, and Acheron. The largest is the Rattlesnake, an island about one and a-half miles long and half-a-mile wide, used chiefly by the Townsville Municipal Council as a penal settlement for town goats. It is also a favourite resort for turtle, which go there to lay. It is a prominent landmark for seamen from Townsville to the Palms.

The Palms are a group of large islands with mountains rising on the Great South Palm to 1,890 feet, and in the centre island to 1,020 feet (Mount Curacoa).

These islands are known to the blacks as "Boorgaman," the name of the tribes who inhabit them. Several white men have been killed there. A cutter called the "Will o' the Wisp," sent out by a Sydney merchant on a secret search for sandalwood, anchored beside the Palms in June, 1848. A mob of blacks boarded the cutter, threw burning bark into the hold, and knocked the captain and a sailor senseless as they rushed on deck. Then the mate came up from the cabin and cleared the deck with a sword, finishing the combat by firing a swivel cannon at the retreating canoes. The master of the cutter reported this adventure to the "Rattlesnake" on 20th June at Fitzroy Island, and the captain of that vessel reported to the New South Wales Government. The cause of the conflict and the number of blacks killed are facts not related by the "Will o' the Wisp" historian. As a matter of course all subsequent white men visiting the Palms had an unpleasant reception.

Captain King, of the "Mermaid," landed on 18th June, 1819. He saw gracefully built arched camps of the natives (same as on Morton Island), canoes 8 feet long sewn at one end with fibre, and a big bunch of clipped human hair in one of the camps.

When Cook named the islands in June, 1770, they were visited by Lieutenant Hicks, Joseph Banks, and Dr. Solander, who went ashore on the 7th and collected a lot of plants.

### HINCHINBROOK ISLAND.

Called after King's Mount Hinchinbrook, of 19th January, 1819. This is a large island at Rockingham Bay, the south end approaching within four miles of the mouth of the Herbert, and the north end is opposite Cardwell, a total length of twenty-two miles. Behind this island is Hinchinbrook Channel, with deep water from end to end. The island consists almost entirely of steep ranges clothed with tropical vegetation. In wet weather the cataracts from the top of some of the loftiest peaks descend 2,000 feet. Mount Bowen rises to 3,560 feet, Mount Straloch to 3,000, and Mount Pitt to 2,000 feet.

On the east side two of the boats, with twenty-eight of the shipwrecked people from the brig "Maria," landed in March, 1872. After leaving Ramsay Bay they passed round the south end of the island, entered Hinchinbrook Channel, and followed it to Cardwell.

### GOOLD ISLAND.

A large island in Rockingham Bay, named by Captain King on 19th June, 1819. The "Fly" anchored there on 19th May, 1843, and Jukes and McGillivray went ashore. The natives were numerous and unfriendly. A fishing boat was attacked, and one blackfellow shot. The natives "had fine large canoes and diamond-shaped paddles like those of Torres Straits."

On 21st May, 1848, the "Rattlesnake" anchored there beside the barque "Tam o' Shanter," which carried the whole of Edward Kennedy's doomed exploring party. The "Will o' the Wisp," cutter, of Palm Island notoriety, called at Goold Island, and those on board shot several of the blacks in the following month (June), yet the blacks were very friendly with the "Rattlesnake" people.

On 17th January, 1872, two fishermen, Charley Clements and Harry Smith, were speared to death by the Goold Island blacks while drawing their nets on the beach. The island is about seven miles round, and rises to nearly 1,400 feet. Lieutenant Jeffreys, of the armed transport "Kangaroo," found the Goold Island blacks friendly in 1815 on his way to Ceylon.

Captain King, in 1819, found them very friendly. They wore armlets of plaited hair, had their teeth perfect, and cooked in stone ovens like those of Taheite. They used small bark canoes, with a piece of bark in each hand for a paddle.

### DUNK ISLAND.

Next to Goold Island come Cook's Family Isles, small islands close to the shore; and next is Dunk Island, where, on 26th May, 1848, the "Rattlesnake" anchored and remained for ten days. It was the starting point of a coast survey which extended 600 miles. The natives were friendly and came off with fish, but "were fired at by two young gentlemen of the 'Bramble,' because the blacks stopped

them going towards the camp of the gins." The island is nine miles in circumference, and rises to 860 feet. There is a considerable area of good land.

Cook named it after George M. Dunk, Earl of Halifax.

### BARNARD ISLAND.

These are two islands a few miles north of Dunk Island. They were named by Captain King, of the "Mermaid," on 21st June, 1819, after his "friend Edward Barnard."

No. 3 Barnard Island is memorable as the spot on which McGillivray shot the first specimen of the Victoria rifle bird (*Phtiloris Victoria*) in May, 1848.

At Double Point, near the North Barnard, he landed and got a "green-painted boomerang" from the blacks. As the blacks in that locality used no boomerangs, it was probably one of the small curved wooden swords.

### FRANKLAND ISLANDS.

These are two small coral islands three and a-half miles off the mouth of the Mulgrave River, and were named by Captain Cook after Admiral Frankland, June, 1770. The Mulgrave blacks call them "Wanacca." On the north-east end of the south island is a clump of cocoanut trees which are evidently very old, as two clumps of cocoanuts were seen there by the "Rattlesnake" people on 19th June, 1848. McGillivray says that was the only part of Australia in which they had seen cocoanuts growing. They shot off a few with their muskets. He thought the Franklands a grand place for shells. Rats were also plentiful. The north island is only a patch of dead coral. On the south island is a low hill covered with dense scrub and good soil. It is a favourite nesting island for the Torres Straits pigeons.

Between the Franklands and the mainland is High Island—"Caparra" of the natives—a tropical jungle-covered island about 400 feet high and two miles in circumference. On the north-east side is a grass-covered point, with a small stream of good water.

### FITZROY ISLAND.

This is a large island about two miles off the rocks of Cape Grafton, at the entrance to Trinity Bay. It was named by Cook after Henry Fitzroy, third Duke of Grafton. The natives call it "Goonggan-jee."

On the west side is a stream of good and permanent water. The island is entirely covered by rough hills, which rise to over 860 feet, clothed with tropical vegetation. Here Allan Cunningham landed on 22nd June, 1819, and collected some rare plants—a new nutmeg tree, two species of olive, and three palms, including the first specimen of the notorious lawyer vine (*Calamus Australis*).

On 20th June, 1848, McGillivray shot a new flying fox (*Pteropus conspicillatus*). About ten miles north is a low coral island called Green Island by Captain Cook, about a mile and a half in circumference, covered by stunted timber and frequently used as a bêche-de-mer station. Two seamen of the cutter "Goodwill" were killed here by the blacks in 1872. On 11th July, 1873, three white men, James Mercer, Charles Reeves, John Finlay, and a kanaka named Towie, were murdered by three native blacks from Cleveland Bay. Mercer was master and joint owner with R. J. Gorton in the cutter

"Florence Agnes," which left Cleveland Bay on a bêche-de-mer trip to the Frankland Islands. The others were the crew. They had four native blacks, three men and a gin, and these three men killed the three whites and the kanaka at daylight, the excuse being the refusal of Mercer and party to give them more bread, but there must have been some other cause for so sudden and treacherous a massacre.

Fitzroy Island was once a quarantine station to intercept ships with any epidemic diseases from China or Batavia.

On Rocky Island, in False Bay, Captain King landed on 17th June, 1821. He saw thousands of bronze moths, got a fishing rod, a line, and a shell hook in a native's camp.

### DOUBLE ISLAND.

A small narrow island about a mile long, two miles off the coast in Trinity Bay, composed entirely of quartz and slate, timbered by box gums and cotton trees, with a pool of permanent good water in the rocks on the eastern face. McGillivray landed there from the "Rattlesnake" in July, 1848, and saw large numbers of quail.

### SCHNAPPER ISLAND.

Off the mouth of the Daintree River. This island was named in 1815 by Lieutenant Jeffreys of the armed transport "Kangaroo."

Captain King anchored the "Mermaid" there on 24th June, 1819, and Cunningham landed to collect plants.

### LIZARD ISLAND.

Named by Captain Cook on 12th August, 1770, from the number of small lizards. This island lies north of Cape Flattery. On the highest point Cook stood and saw the Barrier Reef opening through which he passed into the open sea.

The "Fly" anchored there on 5th June, 1843, and Jukes gave a poetic picture of his midnight watch on a rock.

The "Rattlesnake" stayed there for two weeks in August, 1848, and McGillivray and Huxley explored the whole island.

In June, 1821, Captain King landed from the "Mermaid," and a party of blacks threatened him with their spears. He had stayed there for a couple of days in August of the previous year, 1820. The whole island is composed of coarse-grained grey granite and felspar. The highest point is nearly 1,200 feet. On the west side of the Lizard is Eagle Island, named by Cook, who found a nest with young eagles, which he killed. There was also a huge nest 26 feet in circumference and nearly 3 feet high, made of sticks. An American professor thought this must be the nest of some North Australian moa. Gould and McGillivray thought it was the nest of the big fishing sea eagle. On Eagle Island Cook saw a great quantity of handsome shells of many species. In June, 1863, two boats from the wrecked barque "Antagonist" met at Lizard Island and stayed there two days. They "saw the remains of a brick house, the walls all burned away." They found a lot of melons growing there, and took all they could carry.

On the night of 11th August, 1770, Captain Cook and Joseph Banks slept all night on Lizard Island, camped beneath a bush near the beach.

Lizard Island is also sacred to the memory and heroic death of Mrs. Watson, a heroine who reached it in half of an iron tank, accompanied by her child and a Chinese servant. All three perished from thirst. They had fled there from the blacks after an attack at the station on another island. Mrs. Watson left a record of their sufferings, written calmly, up to her last moments. A memorial was erected by the Cooktown people.

### HOWICK AND FLINDERS GROUP.

Between the Howick Group, off Cape Bowen, and the Flinders Group, at the south entrance to Princess Charlotte Bay, are several small isles, including Barrow and Pipoa. The Howicks consist of one large and several small islands. Off the Flinders Group is Clack's Island, where Captain King, of the "Bathurst," in 1821, saw many drawings by the natives on a black schistose rock, done with white lines and spots on a red ochre ground, and representing sharks, porpoises, turtles, lizards, bêche-de-mer, starfish, clubs, canoes, gourds, dogs, and kangaroos—a grand total of over 150 figures. King says those were the first specimens of aboriginal art they had ever seen.

### CLAREMONT AND HARDY ISLES.

Named by Captain King, of the "Bathurst," on 16th July, 1819. A group of islands in Princess Charlotte's Bay. On one of this group, Pelican Island, also named by King, and consisting entirely of dead coral, King and Allan Cunningham landed on the 10th August, 1820, and found a flock of pelicans with about twenty young ones, which they killed and skinned for the sake of the down. They also found three very neatly built aboriginal camps, used by blacks who came out there on fishing expeditions.

No. 6 Claremont Island was chosen as the position from which the eclipse of the sun was to be observed on the 12th December, 1871, by the Sydney and Melbourne scientific party who went up there in the "Governor Blackall." They placed the telescopes on piers of brick and cement, and built a room for the photographers, but the 12th was a wet day and the eclipse passed over unseen. Sylvester Diggles, the naturalist, was the only Queensland representative on board. The island is only a coral bank 8 feet out of high water, three-quarters of a mile long and a quarter wide.

Between the Claremont Isles and Sir Charles Hardy's Islands, off Cape Grenville, the whole ocean is spangled over with coral reefs, obstructions in the path of the navigator. The Sir Charles Hardy Isles were named by Captain Cook on the 19th August, 1770. Here in August, 1861, the "Firefly" was nearly wrecked on her way to the Gulf with Wm. Landsborough's Leichardt search expedition. They managed to get the vessel off and she was towed round to the mouth of the Albert River by the "Victoria."

### STRAIT ISLANDS.

Albany Island (Pahbajoo), after Albany Pass, which was named in 1846 by Lieutenant Yule of the "Rattlesnake." On the highest point of this island, on Sunday, 13th May, 1849, Captain Simpson, of the "Freak," buried the bones of Wall and Niblett, two of the eight men left at Weymouth Bay in 1848 by Kennedy on his fatal expedition along the Cape York Peninsula.

Possession Island (Beedanug and Coolbi).—Named by Cook, who, on that island, on the 21st August, 1770, took formal possession of the east coast of the Australian continent as New South Wales. McGillivray landed there from H.M.S. "Fly" in August, 1844, with Jukes and Melville, the artist, shot the first specimen of the North Queensland scrub hen (*Megapodius tumulus*), and saw the bird's gigantic nest, measuring fifty yards round, 10 to 12 feet high, 18 to 24 feet on the slopes.

Booby Island.—Named by Cook from the number of boobies he saw there. Captain King, on 16th August, 1820, got a lot of turtles and a thousand eggs on this island. It was said by subsequent visitors to be merely a bare rock-resort for boobies and hawk-bill turtles.

In 1844 the "Fly" people found there a small shed with stores of beef and biscuit for shipwrecked seamen, and a blank book for visitors to write their names and any useful remarks. The "Beagle" people shot 145 quails, 18 pigeons, and 12 rails on this island within two months, according to Stoke's game book.

Good's Island (Peelalug).—Named by Flinders on 2nd November, 1802, after a botanical gardener on board his vessel.

Hammond Island (Keereérie), of which McGillivray relates the following native legend:—A giant named Adi was drowned while fishing off the island, and a huge rock sprang up to mark the spot. His two wives drowned themselves, and were changed into two dry rocks on the reef near Ippilay (Ipilé). The Hammond Island blacks murdered eighteen people in one of the boats from the "Sapphire," a vessel wrecked in Torres Strait in the year 1859. Only one man escaped from the boat which landed on the island, and among those killed was a German named Schmalfus, said to be a cousin of Leichardt. The "Sapphire" was on her way with a cargo of horses from Port Curtis to India.

Wallis Isles.—Two small islands named by Cook, south-west from Prince of Wales Island, and not far off the mainland.

Sunday Isles.—Named by Captain Bligh, of the "Bounty," when he went through the Strait in 1792 with the "Providence" and "Assistant," carrying breadfruit plants from Tahiti to the West Indies. Flinders served as a midshipman on that expedition. King described the rock of this island as a compact felspar.

Cape York Island (Wamalug).—On 24th August, 1844, Jukes, McGillivray, and Melville landed there from the "Fly." They saw a huge heap of bones and skulls of turtle and dugong, and thought the place was a grave, but actually it was one of the heaps made by the Torres Strait islands fishermen out of the bones of turtle and dugong. They were also lookout places on which the natives stood when watching for dugong.

York Isles (Masseed and Coodáhla).—Named by Cook on 21st August, 1770.

Cairncross Island.—Off Orford Bay, not far from Cape York. On 14th August, 1820, Captain King and Allan Cunningham stayed all night on the island, and next day the botanist got the first specimen of the *Gueltarda octandra* tree. On this island, in September, 1848, seven men from the "Rattlesnake" shot 159 Torres Strait pigeons in one hour.

Warrior Island.—Named by Bligh, of the "Bounty," in 1792. He found the natives warlike and ferocious, and when attacked he used cannon loaded with round shot and grape. Bligh was then on his way with the "Providence" and "Assistant" to take bread fruit from Tahiti to the British West Indies.

Darnley Island (Erroob).—Also named by Bligh in 1792. Here, in 1793, Alt and Bampton (who named Bristow and Talbot isles), of the "Hormuzeer" and "Chesterfield," sent a boat ashore with Shaw, chief mate, Carter, Captain Hill, of Sydney, and five men. Of these Captain Hill and four men were killed. The others escaped to Timor, where Carter died of his wounds. Alt and Bampton landed forty-four men under Dell, who burned 135 huts, sixteen big canoes, and destroyed a lot of the plantations.

## PRINCE OF WALES ISLANDS.

Torres Strait is occupied by many islands, the largest of which are Prince of Wales, Horn, Wednesday, and Mount Adolphus.

The chief island is the one named Prince of Wales by Captain Cook on the 22nd August, 1770. This island was peopled by a people called Cowrareéga, who called the west island "Mooralug" and the east island "Nahrupi."

McGillivray regarded them as a tribe of Papuanised Australians. They certainly form an ethnological connecting link between the Australians and Papuans, and traded between New Guinea on the one hand and Cape York on the other. They even used the bow and arrows of New Guinea, and the woomera and spear of Australia. Their language is Papuan, though Latham regarded it as Australian.

Between the mainland and this island lies Endeavour Strait, named by Cook on 23rd August, 1770, after his own vessel.

Bligh, in 1792, named Clarence Archipelago, Mount Cornwallis, The Cap, Bond's Reef, Six Sisters, The Brothers, Bligh's Entrance, Dalrymple, Nepean, Dungeness, Stephen's, Campbell's, Turtle Back, Burke's, Turn Again, Captain Banks, Jervis, Mulgrave, and North Possession Islands.

Murray Islands.—Named by Captain Edwards, of the frigate "Pandora," wrecked in the Strait on 29th August, 1791, and thirty-nine men lost.

## STRAIT ISLANDS.

Thursday Island; Geéalug
Mount Adolphus Island; Morilagah
The Brothers; Coorobi
Entrance Island; Jooua
Friday Island; Weebeénie
Wednesday Island; Mowrurra
Mount Ernest; Nahgeer
Banks Island; Moóa and Itah
Mulgrave Island; Báhdoo
Murray Isles; Mer, Dowar, and Wahyer
Bourke Isles, Owrid and Poorem
Hawkesbury Island; Warahra
Evans Point; Mahodeemja
Horn Island; Dioógabai
Green Island; Peewir
Travers Island; Mooeoónaba
Prince of Wales Island; Mooralug
East Prince of Wales; Nahrupi

Sweers Island.—Named by Flinders, 17th October, 1802, after Salamon Sweers, one of the Batavia Council, who gave Abel Tasman his instructions. Here Flinders beached his vessel, and found her so rotten that he decided to run back to Sydney. In July, 1841,

on this island the "Beagle" people shot 151 quail, 87 doves, 20 pigeons, 3 pheasants, 8 white and 2 black cockatoos, and 5 spur-wing plovers.

Mornington Island and the Wellesley Islands.—Named by Flinders on 5th December, after the Governor-General of India; Bountiful Island on the 4th, from the great numbers of turtle; Pellew's Group after Sir Edward Pellew; Vanderlin's Island after the Dutch navigator; Allen's Island after a practical miner on Flinders' ship; Horseshoe Island from the shape; and Bentinck Island after Lord William Bentinck.

## PRINCIPAL CAPES.

The following are the principal Queensland capes from Point Danger on the east coast, round to Point Bayley, opposite Mornington Island, on the Gulf of Carpentaria. Between them are many small points and capes, the names of which could answer no useful purpose.

The first cape on the south is Point Danger, named by Cook, at the mouth of the Tweed River. Across this rocky scrub-covered headland runs the line that divides Queensland from New South Wales. The aboriginals called it "Booningba," from "booning," the name of the spiny ant-eater (porcupine).

The next conspicuous headland is Point Lookout, on the east coast of Stradbroke Island, about nine miles south of Amity Point. It is a lovely spot, famous for its scenery and fishing. This point ("Mooloomba") was a favourite resort of the blacks in the old days.

Cape Morton.—Named by Captain Cook after James, 16th Scottish Earl of Morton, President of the Royal Society from 1764 to 1768. In the Scottish Morton there is no "e." This cape is a scarped rock, 400 feet high, forming the north end of Morton Island, and overlooking the northern entrance to Morton Bay. On top stands a white stone lighthouse, 75 feet, with a light revolving at minute intervals.

Next comes Double Island Point, at the entrance to Wide Bay, named by Cook in 1770. On the top of this cape, 315 feet above sea level, stands a circular tower with a dioptric light, flashing every half-minute.

Passing Indian Head, named by Captain Cook, who saw a number of aboriginals whom he called Indians (all savages were called Indians at the time), we come to Sandy Cape, at the north end of Great Sandy Island, now usually known as Fraser's Island, after Captain Fraser, of the "Stirling Castle," wrecked in 1836.

Beyond Sandy Cape extends a long sandspit for a distance of nineteen miles. This is the notorious Breaksea Spit, named by Cook in 1770. On Sandy Cape, on a hill 315 feet, stands an 85 feet iron tower, with a dioptric light flashing every two minutes.

Bustard Head, on the point of the Peninsula forming Rodd Bay, was named North Head by Cook; and the point now known as Round Hill Head was called South Head by Cook. The bay between he called Bustard Bay.

Cape Capricorn.—Named by Captain Cook, being nearly on the tropic of Capricorn. It forms the north point of Curtis Island, and commands the north entrance to Keppel Bay.

Cape Manifold and Cape Clinton.—Two capes near Port Bowen. Manifold was named by Cook after the peculiar formation; and Clinton in 1802, by Flinders, after Colonel Clinton, of the 85th Regiment.

Cape Townshend (next to Cook's Island Head).—Named by Cook after Viscount Townshend, Chancellor of the Exchequer; the end of Townshend Island, which forms Shoalwater Bay.

Cape Palmerston.—Named by Cook after Lord Palmerston. On the mainland, near the Beverley group of islands.

Next to Palmerston comes Slade Point and Cape Hillsborough, both named by Cook.

Cape Conway.—Named by Cook after the then Secretary of State.

Cape Gloucester.—Named by Cook after the Duke of Gloucester, third son of Prince of Wales. Standing on Gloucester Island, at the entrance to Port Denison, at the head of which stands the town of Bowen.

Beyond Port Denison comes Cape Edgcumbe, named by Cook after a sergeant of marines on the "Endeavour," next to which is Cape Upstart, named after Cook's Mount Upstart, a granite hill which rises abruptly to 2,420 feet. Here H.M.S. "Fly" anchored in March, 1843, and Jukes and McGillivray explored the coast and collected specimens of plants and birds. Here is where Captain Owen Stanley, in the "Beagle," in 1847, turned back because there was no water in the pools which supplied the "Fly" in 1843, and he was afraid he might get none at Goold Island, the next watering place. Next to Upstart is Cape Bowling Green, named by Cook, on a dreary level coast, with a lighthouse only 70 feet above the sea.

Between Bowling Green and Upstart are the mouths of the Burdekin River, once called the Wickham River before it was identified as the river crossed far inland, and named by Leichardt in 1845. Twenty miles south-east of this Cape, on 24th February, 1875, the steamer "Gothenburg," Captain Pearce, was wrecked and 102 lives lost.

Cape Cleveland, named by Cook after the second Duke of Cleveland, is a rocky red and grey granite headland at the entrance to Cleveland Bay. This rocky point is 210 feet above the sea, and on top is a 35-feet lighthouse, with a 20-second red and white light.

Cape Sandwich, next to Cook's Point Hillock, named by Cook after Lord Sandwich, is a steep point on Hinchinbrook Island, near Rockingham Bay.

Cape Grafton, named by Cook after the Duke of Grafton, is a high, savage, red, grey, and yellow granite hill at the south entrance to Trinity Bay, and opposite Fitzroy Island. At the north side of the Bay is Cape Tribulation, so named by Cook because opposite here his vessel was nearly wrecked on a coral reef. Behind this cape rises the fantastic emu-like granite peak of Peter Botte, named after the Peter Botte of Mauritius, by the captain of H.M.S. "Rattlesnake," in 1848.

Cape Bedford.—A few miles north of Cooktown. Named by Cook after Lord John Russell, fourth Duke of Bedford.

Cape Flattery.—Named by Cook. From Point Lookout, north of this Cape, he saw an opening in the Barrier Reef, opposite Lizard Island, went through, and recrossed the reef again at Providential Channel, south-east of Cape Weymouth.

Cape Melville.—Named by Lieutenant Jeffreys, of the armed transport "Kangaroo," in 1815. Between this Cape and the next lies an immense bay named after Princess Charlotte, the largest bay on the east coast of Australia. On 17th June, 1843, Captains Blackwood, Mackay, and Jukes, of H.M.S. "Fly," landed at the Cape.

Cape Sidmouth.

Cape Flinders.—A cape on one of Flinders Group of isles, at the mouth of Princess Charlotte Bay. Captain King's party saw the wreck of the ship "Frederick," on a reef off this cape, in June, 1821. King's party had a conflict with the natives, and one of his men's lives was saved from a spear by a hatfull of shells he was carrying at his breast. On 13th July, 1819, King first saw the wreck of the "Frederick." It appears she left early in 1818, and ran on the reef off Cape Flinders. The captain and four of the crew finally arrived at Coepang, but no one ever heard of the longboat, which left the wreck with twenty-three people on board.

Cape Direction.—At this cape in June, 1843, Bayley, of the "Fly," was speared by the blacks, and died on the third day.

Cape Weymouth.—Named by Cook.

Next is Cook's Bolt Head, south point of his Temple Bay.

Cape Granville.—Named by Cook after George Granville, Prime Minister from 1763 to 1765.

Cape York.—Named by Cook, York Cape, the extreme north point of Australia.

## BAYS AND HARBOURS.

The Gulf of Carpentaria is the only gulf on the Queensland coast; but bays of many sizes are numerous from Morton Bay in the south to Newcastle Bay near Cape York. Some are, so far, only used by cutters and small coasting steamers, and others are not used at all, there being no settlement near their shores. Only those important in navigation or possessing interesting historical records are described.

Morton Bay, named after Cape Morton, is formed by the two Islands of Morton and Stradbroke, and has a total length of sixty miles, with a breadth from the mouth of the Brisbane to Amity Point of twenty miles.

From that dividing line south to the southern entrance at Southport and Nerang Creek the bay tapers to a point, and is crowded by small islands, mostly covered by mangroves. From Cleveland to Southport the navigation is only available for small craft drawing up to 9 feet of water. Small steamers running to the Tweed once took the south entrance opposite Southport; but this is not a safe passage, and is now condemned. In the early days the Amity Point passage was generally used, but the wreck of the "Sovereign," in March, 1847, and the frequent changing of the channel, sent the majority of vessels round Cape Morton, and this entrance is now seldom used except by small steamers going through on schnapper fishing excursions.

Northwards, the bay receives only small rivers such as the North and South Pine, and the Cabulture, running out into Bramble and Deception Bays on the west shore.

What Captain Cook really called Morton Bay in 1770 is the curve in the outer coast of Morton Island, south of Cape Morton. The bay now known by the name of Morton was seen by Cook, who regarded Morton and Stradbroke Islands as part of the mainland, and gave the name of Glass House Bay to the whole of the open water behind Cape Morton. Cook's Glass House Bay was therefore actually the present Morton Bay.

Laguna Bay.—A small inlet bay about fifty miles north of Cape Morton, and behind Noosa Head. It receives the Noosa River and several smaller creeks, and is navigable for small vessels. The tide inside only rises about 3 feet 6 inches at spring tides, and there is only 2 to 4 feet on the bar at low water.

Wide Bay.—An open bay affording little shelter, lying between Double Island Point and the south end of Fraser's Island, about eighty miles from Cape Morton. It only affords shelter from south and south-east gales.

Hervey's Bay, named by Captain Cook after Captain Hervey, on 21st May, 1770, is a large bay formed by Fraser's Island, and sheltered from all quarters except the north and north-west. At the south end the Great Sandy Island Strait, a continuation of the bay, enters the sea at the south end of the island, which is sixty-eight miles in length. From this entrance at Inskip Point to the mouth of the Mary River is a distance of twenty-eight miles. In 1842 a whaleboat containing Andrew Petrie, Henry Stuart Russell, Wrottesley, and a boat crew passed through this strait on their way to the Mary River, an excursion from which they brought back Davis and Bracefell, the two white men who had been fourteen and ten years with the blacks. Probably the first navigator to pass through the strait and across Hervey's Bay was Lieutenant Dayman, of the "Asp," attached to the "Rattlesnake," in 1848.

Stuart Russell went up by whaleboat to the Boyne in 1842, looking for station country, and Surveyor Burnett in 1847. The Burrum, Isis, Gregory, and Elliott Rivers run into Hervey's Bay, and the Burnett River at the extreme north entrance. In Sandy Strait the tide rises from 3 feet to 6 feet. The best anchorage is under the White Cliffs and in Platypus Bay. Three miles from the White Cliffs, the quarantine station, is the State forest nursery for growing pines Inside the strait, near the south entrance, a bay called Tin Can Bay runs eastward into the land for thirteen miles. It is a famous place for oysters and timber supplies.

Rodd Bay, named by Captain King, of the "Mermaid," on the 1st June, 1819, lies between Bustard Head and Port Curtis, of which it is actually the south end.

Port Curtis.—Discovered by Flinders on 2nd July, 1802, and named after Admiral Sir George Curtis. After discovering this port he went back to Sydney, and returned along our east coast in 1802. The sheltered part of the bay lies behind Facing Island, also named by Flinders, and thence extends on a long narrow strait to Keppel Bay, between Curtis Island and the mainland. Port Curtis is one of the two best harbours on the Queensland coast, the second being Trinity Inlet at Cairns. It is interesting historically as the scene of the misguided attempt to found a North Australian colony in 1847.

Colonel Barney, in his report to Governor Fitzroy on 20th July, 1847, said Port Curtis was, "the third harbour in importance on the east coast of New South Wales." There is only 7 feet and 8 feet of water on spring tides through the narrow channel from Port Curtis to Keppel Bay, inside Curtis Island. The tide rises 10 feet to 12 feet in Port Curtis.

Keppel Bay.—Named by Cook on 27th May, 1770, after Admiral Keppel. A large bay protected by Curtis Island and the Keppel islands. Fitzroy River enters this bay.

Port Bowen.—Named by Flinders on 24th August, 1802, after Captain James Bowen, R.N. A sheltered bay lying behind the Cape Clinton Peninsula, and about sixty miles north of Keppel Bay. Captain Blackwood anchored H.M.S. "Fly" here on 4th February, 1843, and remained for a month. While there he saw the famous comet of 1843. The tide rose 16 feet. They found the remains of a big dugong partly eaten by the blacks. On 20th July, 1820, Captain King ran the "Mermaid" aground at Port Bowen, and got her badly damaged. The blacks called to see them, carrying hand-spears and boomerangs, the latter like those of Sydney. Vessels now going to Port Bowen must take a pilot from Keppel Bay.

Shoalwater Bay.—At the back of the Peninsula, behind Port Bowen.

Broadsound.—Named by Cook on 1st June, 1770; separated by the Palmerston Peninsula from Shoalwater Bay. At the south entrance is Townshend Island, separated from the mainland by Captain Cook's Thirsty Sound, where he was unable to obtain any fresh water. He landed there, and got his clothes full of spear-grass. He saw big white-ant nests on the gum-trees and amphibious fishes jumping about on the mud. They belong to the same species as the tree-climbing fishes of the north coast. Broadsound is the harbour for St. Lawrence, and receives the river Styx, Waverly and St. Lawrence creeks, and a number of smaller streams between St. Lawrence and Cape Palmerston. Cook found the tides rising from 18 feet to 30 feet, and that is the present rise at the St. Lawrence fairway buoy. The tide runs in for four hours, and takes eight hours to run out. At the township of St. Lawrence the spring tides rise 14 feet, and in the port itself 9 feet to 25 feet. The present port for St. Lawrence is on Waverly Creek, where the tides rise from 18 feet to 25 feet at the wharf.

In describing what he saw in Broadsound, Cook writes—"We also found an incredible number of butterflies, so that for the space of three or four acres the air was so crowded that millions were to be seen in every direction, and every branch and twig was covered by others not on the wing." This was on Townshend Island. Captain King and Allan Cunningham saw them in equal numbers at Cape Cleveland on 15th June, 1819.

Port Mackay.—Named in 1861 after Captain John Mackay, discoverer of the Pioneer River. This port lies 625 miles north from Brisbane, in latitude 21 degrees 9 minutes south and longitude 149 degrees 13 minutes east. It was declared a port of entry in 1861. There is really no harbour at Mackay, the coasting steamers anchoring in an open roadstead under shelter of Flat-top Island. The tides on the bar of the Pioneer River rise from 12 to 16 feet, and 10 to 12 feet at the township.

Repulse Bay.—Named by Cook on 3rd June, 1770. Forty miles north of Mackay; sheltered on the east and south by Cape Conway and Repulse Islands. This bay receives the Andromache, O'Connell, and Proserpine Rivers; Thompson, Lethe, and Goorana Creeks. At the mouth of the Proserpine the spring tides rise 18 feet.

Port Molle.—Behind Molle Islands, in Whitsunday Passage. On 8th December, 1848, the "Rattlesnake" anchored for two days, and McGillivray went ashore and shot the sun bird, scrub hen, scrub turkey, and pheasant-tailed pigeon. On 25th March, 1843, the "Fly" anchored, and Captain Blackwood, Jukes, and McGillivray landed to collect specimens. Here Dowling, the coxswain of the pinnace, drowned himself while delirious with fever. The tide rose 16 feet, same as at Port Bowen. Jukes, in his journal of the "Fly" cruise, writes—"The great shipyards of the future will lie between Broad-sound and Whitsunday Passage." There is no sign of those yards at the present time.

Port Denison.—One of the three best harbours on the east coast. Discovered in 1859 and named in honour of Governor Denison. (*See* "Bowen.") At the head of this beautiful port is the township of Bowen. The entrance is protected by Gloucester and Middle Islands, and the anchorage inside is secure in all weather. The tides rise from 6 to 10 feet.

Edgcumbe Bay.—Named by Cook after John Edgcumbe, sergeant of marines on the "Endeavour." On Cook's chart this bay lies behind Cape Gloucester, and clearly represents the present Bowen Harbour, or Port Denison. As Cook sailed very near to Cape Gloucester, we may be quite certain that he saw the whole of Port Denison, and named it Edgcumbe Bay. The present Cape Edgcumbe has no name on Cook's chart.

Upstart Bay.—Passing Abbott Bay, which receives the Elliot River, and rounding Cape Upstart, we enter Upstart Bay, into which the Burdekin discharges itself, and where Molonglo and Wangaratta Creeks enter the sea. The boats of the "Fly" explored the shores of this bay in May, 1843, and Jukes and McGillivray had some interesting interviews with the aboriginals. On 13th May they pulled seven miles up the Burdekin.

Bowling Green Bay.—A large open bay between Cape Bowling Green and the Cape Cleveland Peninsula. This bay receives the waters of Baratta Creek and the Houghton River. The cape and bay were named by Captain Cook on the 5th June, 1770. The tides rise 6 to 9 feet.

Cleveland Bay.—Named by Cook after the Duke of Cleveland. A large bay lying west of Cape Cleveland, and sheltered from the north by Cook's Magnetical Island. Ross Creek and Ross River flow into this bay, and Townsville stands on the west shore, at the foot of Mount Cootharinga, the Castle Hill of the first settler.

## MOUNTAINS.

There is but one main chain of mountains in Queensland—that which leaves the McPherson Range at the head of Teviot Brook, on the head of the Logan, and runs thence through the colony at varying distances from the coast, and terminates in the North at Herberton, south-west of Trinity Bay. Due east from Point Danger it is 60 miles

from the sea; east from Brisbane, 80 miles; from Port Curtis, 240 miles; from Broadsound, 220 miles; from Port Denison, 190 miles; and from Trinity Bay, 50 miles; so that this range describes a gigantic irregular boomerang, the two ends about equidistant from the sea at Point Danger and Trinity Bay, the centre of the curve on the head of the Belyando, where the Rockhampton railway crosses the Drummond Range, and the total length from north to south about 1,100 miles. All eastern ranges are distinct from this one great irregular tableland, which divides the whole of the eastern and western waters, from the Condamine in the south to the Mitchell in the north.

The Cooyar and Blackall Ranges, both connected, divide the waters of the Brisbane River from those of the Mary and Burnett.

The Carnarvon and Expedition Ranges divide the coast and the Dawson.

The Drummond and Denham Ranges separate the whole north and west watershed of the Fitzroy tributaries from that of the Belyando, which runs into the Burdekin.

A coast range starts from the sea north of the Kolan River, and goes northward, leaving a gap of twenty miles for the Fitzroy, and continuing thence to within sixteen miles of the Burdekin. It bears the names of Dawes, Broadsound, O'Connor's and Clarke's Range.

A branch range runs down into the south end of Broadsound, and then northward. On the east side are only small streams not entitled to be called rivers, while the western slope of the range is a watershed of the Isaacs River, which flows to the Fitzroy.

The north end of this range, known as Clarke's Range, divides the waters of the Bowen River from small streams on the east side, from the Pioneer River at Mackay, north to the Elliot, entering the sea near Cape Upstart.

The Leichardt Range divides the Suttor and Bowen Rivers, leaves a gap for the Burdekin, and runs thence northward into the Seaview Range, at the head of the Herbert River; turns north-west and junctions with the Main Range on the north head of the Burdekin, of which it forms the eastern watershed.

The Cardwell Range starts at the Herbert River, near Hinchinbrook, and runs northward into the Main Range, near Herberton, the south end of it separating the Herbert waters from the small rivers flowing into Rockingham Bay, and the Moresby and Johnstone, while near the Main Range it divides the heads of the Herbert and the Barron.

A small range called the Lamb divides the Barron from the Mulgrave and Russell Rivers, and between this range and the sea lies Bartle Frere and the famous Bellenden-Ker Range.

From the mouth of the Mulgrave River to Trinity Bay is a high coast range in which the Grey and Bell Peaks rise 3,360 feet.

A range starting from Port Douglas runs north-west to the head of the Hann River, separating all the east coast rivers from Port Douglas to the North Kennedy River (which runs into Princess Charlotte Bay) from the Mitchell and the Palmer, which flow west to the Gulf of Carpentaria.

Thence towards Cape York are only small detached ranges on the west side of the peninsula, throwing a few small rivers and creeks to the east coast, and all the western waters to the Gulf.

Chief of these ranges are the McIlwraith, Sir William Thompson, Carron, Geikie, Janet, and Wilkinson, all named by Jack, the Government Geologist, in 1879-80.

The Richardson Range was named by the Jardine brothers in 1864 on their overland journey from Bowen to Somerset. Richardson was one of the party.

The ranges west of the Main Range are, all but one, isolated from each other, nowhere continuous, starting and ending abruptly, and running to all points of the compass. The one exception is the Warrego Range, starting from the Main Range at the junction with the Drummond, and running far south-west into the Grey Range, which continues into the New South Wales boundary thirty miles from Lake Bulloo. These Grey and Warrego Ranges separate the Bulloo and Warrego waters from Cooper's Creek and the Barcoo.

A low sandstone range divides the waters of the Thompson and Diamintina Rivers, starting south from near Windora, and continuing north to the divide between the central rivers and those running to the Gulf.

The Selwyn Range divides the heads of the Burke and Cloncurry Rivers.

Moriarty's Range lies between the Paroo and Warrego, opposite Cunnamulla.

The Coleman, Canaway, and McGregor Ranges lie between Cooper's Creek and the Wilson River and Kyabra Creek.

The Gregory Range divides the upper Gilbert River from the tributaries of the Norman.

Sword Range, at the head of Middleton Creek, a tributary of the Diamintina.

There are scores of other small unimportant ranges, while isolated sandstone hills are scattered all over the western interior, from the New South Wales boundary to the Gulf, and the Main Range to the border of South Australia.

Nearly the whole of the western ranges and solitary hills are composed of desert sandstone, with a few granite exceptions, while the south end of the Grey Range and a small isolated range called Stokes, near the South Australian border, are composed of slates, schists, and quartz.

The Desert Sandstone belongs to the Mesozoic Period, representing the Upper Cretaceous, which overlies the Lower Cretaceous, represented by the rolling downs formation of the West.

## ORIGIN OF NAMES.

Leichardt, in 1845, named the Gilbert, Murphy, Lynde, Christmas, Coxen, Robey, and Thatcher Ranges; also Mounts Aldis, Nicholson, Bigge, Stewart, Scott, Roper's Peak, McArthur, Calvert's Peak, Gilbert's Dome, Lowe, Phillips, Fletcher's Awl, Coxen's Peak, McConnel, Graham, Lang, and the Four Archers.

McKinlay, in 1862, named the Gregory Ranges, Mounts Wildash, Buchanan, Middleton, Bertram, Haverfield, Grierson, and Roberts; also Morphett's Peak, Hawker's Bluff, Fletcher Range, and Foster's Peak.

Mitchell, in 1846, named Mounts Abundance, Bindango, Biudago, Kennedy, Sowerby, Lonsdale, Owen, Clift, Ogilby, Faraday, Mudge, Kilsyth, Beaufort, Pluto, Playfair, Aquarius, Salvator, and Hope's Table Lands at the head of the Warrego.

Landsborough, in 1861, named Mount Moore and the Heale's, Hull's, Prior, Smith's, Bramston, and Mackenzie Ranges.

Captain Logan, in 1828, named the McPherson Range, Mount Lindesay, Mounts Clanmorris, Hughes, Hooker, Shadforth, French, Dunsinane, Minto Craigs, Wilson's Peak, Knapp's Peak.

Allan Cunningham named Mount Forbes, Mount Sturt (Mooganmilly), and Mounts Mitchell and Cordeaux (Coonyinirra and Niamboyoo), at Cunningham's Gap (Cappoong).

F. Walker, the explorer, in 1861, named Mounts Macalister, Horsfeld, Gilbee, Castor, Pollux, Barry, Pylades, and Orestes.

Burke and Wills, in 1861, named Mounts Birnie, Aplin, Bruce, Murray, and Merlin.

Oxley named Mount Forbes in 1824.

The first mountains named in Queensland were the Glass Houses of Captain Cook in 1770.

At Cairns, the Walsh Pyramid, Mount Whitfield, and Mount Williams were named by Dalrymple in 1873, after the late Hon. W. H. Walsh, E. Whitfield, a storekeeper then at Cardwell, and F. Y. Williams, a Crown Lands Commissioner. The Bell Peaks were named by Dalrymple after the lato Sir J. P. Bell. They stand between the Mulgrave River and Cairns.

## PRINCIPAL MOUNTAINS.

The highest mountains in Queensland are in the neighbourhood of Trinity Bay. In the Bellenden-Ker Range, named by Captain King on 22nd June, 1819, is the centre peak, Wooroonoóran, 5,200 feet; Bartle Frere (Chooreechillam), 5,000 feet; Mount Sophia, 4,500 feet; Mount Toressa, 2,600; near them are Mounts Massie and Harold, 4,100 feet, and the Walsh Pyramid (Charroógin), 3,050.

Near Cape Tribulation are Mount Alexandra (Manjalgoóloon) 4,200 feet, and Peter Botte (Numbalburroway), 3,320 feet. This mountain was named by the captain of the "Rattlesnake" on July, 1848, as he thought it looked very like the Peter Botte of Mauritius. Manjalgooloon is "lightning mountain"; Numbalburroway, "rock emu." Mount Cook (Coongoon), at Cooktown, 1,500 feet, was named by Captain King on 27th June, 1819.

Mount Elliott (Bungolunga), near Townsville, rises 4,050 feet.

Mounts Blackwell and Jukes, at Mackay, were named by G. E. Dalrymple in 1861, after the captain and naturalist of H.M.S. "Fly"; and Mount Dalrymple, in the same locality, bears the name of G. E. Dalrymple.

Mount Dryander, at Bowen, was named by Captain King on 24th July, 1820, after Jonas Dryander, a famous Swedish botanist. He gave the height at 4,566 feet.

Pudding Pan Hill, at Orford Bay, was named by Captain Bligh, of the "Bounty," in 1791, in passing to Coepang in the "Bounty's" launch.

Spicer's Peak was named after Peter Spicer, overseer of convicts at Brisbane from 1825 to 1839. The McPherson Range was named in 1828 after Major McPherson, and Mount Lindesay (Changgámbin) after Colonel Patrick Lindesay, both of the 39th Regiment. Mount Barney was named after Colonel Barney, the commander of the Port Curtis settlement in 1847.

The famous Glass House Mountains, on the line from Brisbane to Gympie, were named by Captain Cook in 1770, from their apparent resemblance to masses of glass. Their old native names were—Beearwah, 1,760 feet; Coonowarrin, 1,160 feet; Beearburrim, 920 feet; Toomboomboodla, Teeborcaggin, Nuhroom, Turrawandin, Yooan, Birriebah, Ennee, and Daiangdarrajin. Those names varied in the three different neighbouring dialects, "Wacca," "Cabbee," and "Oonda."

Mount Flinders (Booroompa), with his outlying peaks, Muntannbin and Teenyeenpa, was first called High Peak by Flinders in 1799, and afterwards named in honour of himself.

The two small hills near Brisbane—Gravatt and Cotton (Caggaramahbil and Boolimba)—recall the names of two of the convict settlement commandants, Major Cotton and Lieutenant Gravatt.

In the Peak Range, west of Clermont, in the Central districts, are several remarkable granite peaks named by Leichardt—Gilbert's Dome, Roper's Peak, and Fletcher's Awl. Also, Table Mountain, (Wingganna and Bahbaboolla,) from "bahba," a mountain, and "boolla," two.

## COAST RIVERS.

The first river discovered in Australia was the Staaten, which enters the Gulf of Carpentaria ten miles north of the Gilbert. This river was named by the master of the yacht "Pera," sent out with the yacht "Arnheim" by Governor Coen, of Batavia, in 1623. The "Pera" crossed the Gulf to the Staaten, and returned along the north-west coast. The next river was the Swan, of Western Australia, named by Vlaming, of the "Geelvink," on 4th February, 1697. Then a long interval until Cook named the Endeavour in 1770; and exactly 200 years after the Dutchmen landed at the Staaten, Oxley discovered and named the Boyne and Brisbane on the south-east coast in 1823. The first named New South Wales rivers were the Parramatta, Cowpasture, George, Hawkesbury, and Hunter.

Queensland is just as eccentric in her river system as in flora and fauna. Along an eastern coast-line of 1,500 miles one series of rivers, chiefly very short courses, run east from the slopes of the Main Range to the Pacific Ocean. Another series flow westward and northward to the Gulf of Carpentaria. The southern rivers, from the Main Range westward to Grey's Range, flow south to the Murray. The great western rivers, from the Barcoo to the Georgina, with all their thousand tributaries, converge their united waters upon Central Australia, and vanish in the dismal lakes and fathomless red sands, the mighty basin of the ancient Mesozoic Sea, which once rolled its waves on either shore from the Gulf of Carpentaria to the Great Australian Bight. In Europe the Volga, Ural, and several other rivers are lost in the lakes of a rainless district far below sea-level, such as the Caspian Sea, and the Tertiary basin in which Mount Ararat rears its giant peak 17,000 feet in the surrounding solitude.

No Queensland coast river can be navigated to the interior; no interior river is navigable at all. The Brisbane and Norman Rivers are navigable for a greater distance than any of the others on the coast.

All interior rivers are fresh water; all coast rivers are running streams of fresh water above the influence of the tide. A short distance from the sea their branches diverge to the north and south. From the Fitzroy north to the Burdekin the intermediate streams are only creeks sixteen to forty miles in length, the largest being the Pioneer River. Those navigable for small vessels are Raglan Creek, Waverley, Herbert, Scrubby, West Hill, and Basin Creeks, all flowing into Broadsound; Burbank Creek, Louisa, Sandy, Cabbage-tree, and Baker's Creek, all within twenty miles south of the Pioneer River, on which is the town of Mackay; Habana Creek, south of Cape Hillsborough; St. Helens and Lacy Creeks, north of that Cape, and the Proserpine River, running into Repulse Bay.

Brisbane River.—Running into Morton Bay; navigable for large ocean-going steamers to the Victoria Bridge, between North and South Brisbane, and for small steamers to Ipswich on the Bremer tributary, forty miles beyond Brisbane.

South of the Brisbane River, Morton Bay receives the Albert, Logan, Coomera, and Nerang Rivers, navigable for small craft.

Northward the bay receives the two Pine Rivers and several creeks.

Malula River.—Seven and a-half miles north of Caloundra Head, with 2 to 3 feet on the bar at low water.

Maroochie and Noosa Rivers.—Two small rivers between Morton Bay and Wide Bay, navigable for very small craft.

Mary River, originally the Monoboóla and Wide Bay River—named "Mary" in 1847, after Lady Mary Fitzroy—flows into Hervey's Bay. This river is navigable for vessels drawing 10 feet up to Yengarie, nine miles above Maryborough, and for 7 feet twenty miles beyond Yengarie.

Burrum River also flows into Hervey's Bay by the same mouth as the Isis and Gregory, all small streams of little importance except for their coal resources.

Burnett River.—Named after Surveyor Burnett in 1847; enters the north-west corner of Hervey's Bay; is navigable for ten miles to Harriet Island, and beyond that point is only accessible to boats. The spring tides at the bar rise 9 feet.

Kolan River.—Eleven and a half miles from the Burnett; navigable for small craft only.

Baffle Creek.—Sixteen miles north of the Kolan; navigable for small craft.

Bustard Creek, Jenny Lind, and Pancake Creeks are passed before arriving at the Boyne River, which was discovered and named by Oxley in 1823.

The Boyne and Calliope enter Port Curtis; both navigable for small craft.

Fitzroy River.—Named after Governor Fitzroy; was called "Toonooba" by the aboriginals. This river is navigable for medium-sized coasting steamers from the entrance to Rockhampton, a distance of thirty miles. This river was first navigated in 1855.

Pioneer River, on which is the town of Mackay. First called the Mackay River, after the discoverer, Captain Mackay, but re-christened the Pioneer on 27th December, 1862, after H.M.S. "Pioneer." Captain Mackay found this river on 24th May, 1860.

Proserpine.—Runs into Repulse Bay; 80 yards wide at nine miles from the entrance (which is a mile across), and a depth of 20 feet at high spring tides, which rise 18 feet.

Burdekin River.—A river with the largest watershed in Queensland (about 50,000 square miles), but useless for navigation except for a distance of twelve miles. It forms a delta at the mouth by bifurcating into two channels called Plantation and Baratta Creeks. On the coast this river was first called the Wickham, after the captain of the "Beagle"; but Leichardt crossed it inland in 1845, named the great south branch the Suttor, and the north the Burdekin.

Plantation and Baratta Creeks.—The first, seventeen miles south-east of Cape Bowling Green, navigable a few miles for vessels drawing 5 or 6 feet; and Baratta Creek, flowing into Cape Bowling Green Bay, and navigable ten miles, with 12 to 18 feet of water after crossing the shoal at the mouth.

Ross Creek, at Townsville; a small stream navigable for half-a-mile only, with a width of 50 yards.

Ross River.—Six and a-half miles south-east of Ross Creek; navigable for five miles, to the site of R. Towns's old boiling-down station.

Herbert River, south end of Hinchinbrook Island, only navigable for small vessels for five miles.

Seymour River, six miles west of the Herbert, and running into Hinchinbrook Channel, carrying 6 feet of water on spring tides for seven miles.

Tully and Murray Rivers, and Liverpool Creek run into Rockingham Bay. Small craft drawing 6 feet can ascend the Tully about four miles. The Murray has a depth of 8 feet for eight miles, and Liverpool Creek admits small craft for only half-a-mile.

Moresby River, named after Captain Moresby of the "Basilisk," runs into Mourilyan Harbour; navigable for eleven miles, with a minimum depth at low water of 4 feet.

Johnstone River, named in 1873 by G. E. Dalrymple after Robert Johnstone, then native police officer, enters the sea six miles north of Mourilyan Harbour; navigable for small craft for twelve miles. Spring tides rise 7 to 9 feet.

Mulgrave and Russell Rivers enter the sea opposite the Frankland Islands. They were named by G. E. Dalrymple in 1873. These two rivers enter the sea as one stream, separating a mile and a-half inland; the Russell turning south and thence westerly to the spurs of Bartle Frere, while the Mulgrave course is westward past the Walsh Pyramid to the head waters behind Bartle Frere. Inside the bar the depth is 18 to 24 feet. The Russell flows from start to finish through dense tropical jungle, and so does the Mulgrave, except a mile or two of open forest near the Pyramid. These rivers are only navigable for about ten miles for small craft; pulling-boats ascending over thirty miles.

Barron River enters south end of Trinity Bay, at Trinity Inlet, and is navigable for small craft for ten miles, or a mile above the site of the old Smithfield township, long since passed out of existence. From the mouth to the coast range is only twelve miles, and three miles up the gorge is the famous Barron Falls, where the whole river descends a precipice 700 feet deep.

Mowbray River, three and a-quarter miles from Island Point, is navigable for two miles for vessels drawing 5 feet.

Mosman River, four miles north of Port Douglas, has only 1 foot of water on the bar at low tide, with a rise of 7 to 8 feet springs.

Daintree River, entering the sea three miles west of Schnapper Island. For five miles both banks are covered with dense bright-green mangrove. The whole courses of the Daintree and Mosman are through thick tropical jungle and rich soil. The Mosman was named after the Charters Towers prospector, and the Daintree after R. Daintree, by Dalrymple, in 1873.

Blomfield River flows into the south end of Captain Cook's Weary Bay. The name originally bestowed was Blomfield's Rivulet, by Captain King, on the 26th June, 1819. This river is navigable for small boats for seven miles, stopped thence by a ledge of rocks. The tide rises from 5 to 9 feet.

Endeavour River, discovered by Captain Cook in 1770, and named after his vessel, flows into Cooktown Harbour. The tide rises here from 6 to 10 feet.

Beyond Cooktown there are no important navigable rivers on the east coast. A number of small rivers flow into Princess Charlotte Bay—the Normanby, seven miles from Bathurst Head; the Stewart, nine miles; the Kennedy, seventeen miles; the Saltwater River, twenty-one miles. Then come all the small unimportant streams from Princess Charlotte Bay north to the Kennedy River, flowing into Newcastle Bay.

Albert River, thirty miles from Sweers Island, in the Gulf of Carpentaria, has 3 to 5 feet at low water on the bar, with a rise of 5 to 8 feet in the south-east monsoon, and 8 to 12 feet in north-east monsoon. Burketown is thirty-five miles from the heads, and the tide rises 5 feet at the township.

Norman River enters the Gulf north of the Bynoe and Flinders Rivers. The bar is three miles off the shore, and has 4 to 7 feet at low water.

For the first fifteen miles the river is half-a-mile wide, and can be navigated for forty-five miles by vessels drawing 20 feet. From there only craft drawing not more than 6 feet can ascend to the township of Normanton, a distance of ten miles.

The largest rivers flowing into the Gulf are the Albert, Leichardt, Flinders, Norman, Gilbert, and Mitchell.

The Albert and Flinders were named by Stokes on 28th and 30th July, 1841; the Gilbert and Mitchell, after Gilbert, the botanist, and Sir Thomas Mitchell, by Leichardt, in 1845.

The Leichardt River was named by A. C. Gregory.

The Staaten was named in 1623 by the Dutch. The Jardines, in 1864, not knowing it to be the Staaten, called it the Ferguson, after Governor Bowen's christian name.

## WESTERN RIVERS.

From the Dumaresq River (pronounced Doomerric) and the Barwon on the southern boundary of the colony, far north to the head of the Gulf rivers, and thence west to the Georgina, there are many important rivers, though none are fitted for navigation. Those in the south, the McIntyre, Weir, and the Moonie, the Condamine, Maranoa, and Warrego, with all their thousand tributaries, flow into the Darling, and thence by the Murray to the ocean at Adelaide. The whole of the other western rivers flow to Central Australia, and vanish in the lakes and red sand ocean.

The Barcoo and the Thomson run into Cooper's Creek; the Diamintina becomes the Everard River; the Hamilton, Burke, and Georgina flow together into Eyre's Creek, and, joined by the Mulligan from the west, go thence to their mysterious destination in the lakes and sands. All these main rivers have hundreds of tributaries, some permanent streams, others waterholes in an ordinary dry season.

All the western rivers rise on the slopes of the Main Range, except the Diamintina, Hamilton, Burke, and Georgina, which rise on the south side of the dividing tablelands at the head of the rivers flowing to the Gulf. The whole Western country is a network of rivers, creeks, waterholes, and billiebongs, all subject to tremendous floods, the main rivers spreading miles on both sides of their channels, and submerging the adjoining country in a wide torrent of muddy water, sweeping all before it.

Some of these rivers which run only in wet seasons have not even cut out channels for themselves, but form a chain of lagoons, some of which are miles in length and widely separated. The traveller may cross the valley of the Paroo and other rivers in many places without seeing any channel to indicate the course of a river. Rivers disappear and reappear, and finally vanish for ever in the central sands and lakes.

The Warrego, Maranoa, Nive, Salvator, Claude, Nogoa, and Belyando were named by Sir Thomas Mitchell in 1846. (*See* "Mitchell.")

Balonne is a native word for the pelican, "balloon," "ballon."

The Condamine commemorates M. De La Condamine, Governor Darling's private secretary in 1827. The Weir is named in honour of Weir, owner of old Callandoon Station.

The Diamintina bears the Greek name of Sir George Bowen's wife—Roma Theamintina, anglicised to Diamintina.

The Thomson was named by the explorer Kennedy in 1847, after E. Deas Thomson, of Sydney.

The Barcoo was first named the Victoria by Mitchell in 1846; but in the following year Kennedy identified it with the Cooper's Creek of Sturt, and called the upper part the Barcoo, a word supplied by the natives.

The Paroo River bears the native name of a small fish.

The Mulligan River was named by Hodgkinson in 1876, after the discoverer of the Palmer.

The Cloncurry was named by Burke, the explorer, on his fatal journey across the continent in 1861.

The Georgina, originally named the Herbert by Landsborough, was re-christened, there being already a Herbert River on the east coast north of Townsville.

Leichardt named the Dawson River from R. Dawson, Black Creek, Hunter River; the Boyd River from Benjamin Boyd, who brought the first kanakas to Australia in 1846, and was afterwards killed on Guadalcanar; the Comet River from a comet seen while camped there; the Mackenzie River from Sir Evan Mackenzie, on the 10th of January, 1845; the Isaacs after F. Isaacs, of Gowrie Station, Darling Downs; the Suttor after W. H. Suttor, who gave him four bullocks; the Cape after the captain of the steamer "Shamrock"; the Burdekin after Mrs. Burdekin, of Sydney; the Clarke after the Rev. W. B. Clarke, geologist; the Perry after Captain Perry, Deputy Surveyor-General; the Lynde after Lieutenant Lynde, of Sydney; the Mitchell after Sir Thomas Mitchell; the Gilbert after the naturalist killed on the Nassau; Beames' Brook after Walter Beames; and the Nicholson River after Dr. W. A. Nicholson, of Bristol.

William Hann, in 1872, named the Tate, Walsh, Palmer, Coleman, Stewart, Kennedy, and Normanby Rivers; and Colemau, Warder, Balelutha, and Oakey Creeks.

In 1879-80, R. L. Jack, the geologist, named the Stareké and Lockhart Rivers; and Croll, Horne, Crosbie, Tadpole, Falloch, Attack, Hall, Hull, Sefton, Canoe, and Notice Creeks. The Hann, Lukin, and King Rivers were named by Mulligan, the prospector.

All these rivers and creeks of Hann and Jack are in the Cape York Peninsula, north of the 16th parallel.

The Jardines' list of creeks in 1864 included the Pluto, Canal, Warroul, Byerley, Belle, Maroon, Coekburu, Maramie, Arbor, Eulah, Hearsey, Duusmuir, Thalia, McLeod, Keudall, Kinloch, Skardou, and Eliott. They also named the Archer and Einasleigh Rivers.

The Jardine River they named the Deception, but Sir George Bowen changed it to the Jardine.

## LAKES, SPRINGS, AND WELLS.

The lakes of Queensland are few and far apart. The most remarkable are two on the tableland valley of the Upper Barron, on the divide of a creek flowing east to the Mulgrave. These two lakes are known to the blacks as "Yeetcham" (Eacham on the maps) and "Barrang." The surface of Yeetcham is 2,400 feet above the level of the sea, and 280 feet below the surrounding ridge. It is a calm, silent sheet of water of unknown depth, about a mile and a-half long and a mile wide. It is frequented by no waterfowl, and there are apparently no fish. The platypus is common in both lakes, but so far we know not what other forms of life they contain. Both are surrounded by dense tropical jungle, and form a lovely picture. The blacks speak of a small third lake which they call "Boonoobagolamee." They have a curious legend about an immense cedar log which passes occasionally from one lake to another by a subterranean passage, and will one day become a gigantic crocodile (Canyahra), out of whose mouth is to come a mighty legendary blackfellow called "Murgalainya." This "Murgalainya," when alive on the earth in a remote period, had his camp on the north peak of Bellenden-Ker, still called "Murgalainyaba Booroomba," or the "camp of Murgalainya." There is no outlet to any of these lakes, and the rise and fall from wet weather to dry is only 2 feet to 3 feet. The water is beautifully clear and pure, and excellent for drinking. As the surrounding ridges

are composed of volcanic ash, and the lakes lie in volcanic country, they probably occupy the crater of ancient volcanoes from whence came the basalt overlying the valley of the Upper Barron.

Lake Salvator is a remarkable and very beautiful lake, about seventy miles from Springsure, on the head of the Nogoa River, in a triangle of the Main Range between Buckland's Tableland and the Drummond Range, with a vast amphitheatre of picturesque mountains looking down on it from all sides. The lake lies in basalt country, and on the shores is a dense, luxuriant jungle, full of splendid ferns and palms. This lake is fed by many springs of delicious, cool, clear water, and is covered by wild fowl, and full of fish and platypus.

Lake Buchanan.—A strange lake near the Main Range, about sixty-five miles west of the junction of the Comet and the Belyando Rivers. It was named after the discoverer. The basin of this lake is about ten miles in diameter, shallow when full of water, and a vast expanse of sand in dry weather. In a good season it is covered by myriads of wild fowl, ducks, geese, swans, and pelicans, while native companions, the ibis, and the jabiroo feed around the shores. In walking over the bed in a dry season the traveller beholds a mirage deceitful as those seen in the desert, sheets of fictitious water appearing in front as he goes forward, and behind him if he looks back.

Around the lake are saltbush flats, and poison-bush is common in the back country.

Lake Elphinstone.—A freshwater lake six miles long and two miles wide, between the Nebo and Suttor Rivers.

In the Noosa district of South Queensland are Lakes Cootharaba, Cooroiba, Wyba, Donella, Illandra, and Cooloola, discovered by Lieutenant Bligh, of the native police, in 1854. These are all freshwater lakes, favourite resort of wild fowl, and situated in the midst of beautiful scenery.

Lake Galilee.—A large lake, about forty miles south of Lake Buchanan, across the Main Range to the west side, on the head of a tributary of the Thomson, and about fifty miles north-east of Aramac.

Lake Ameroo.—On the Mulligan River, in the "Pituri" country, among the red sandhills, spinifex, cotton-wood flats, and stunted gidya.

Lake Phillip, between Eyre's Creek and the Mulligan.

Lakes Yamma Yamma (Mackillop) and Barrolka, on Cooper's Creek.

Lakes Bulloo and Bullawarra, on the Bulloo River.

Lakes Numalla, Yumberarra, Kingie, Tharlinda, and Wyara are on the lower Paroo.

North-west, on Pituri Creek, a tributary of the Georgina, is Lake Idamea, two miles long and a quarter of a mile wide. On a stony ridge overlooking this lake is Glen Ormiston Station, owned by James Tyson.

In Idamea Lake the South Australian survey party, in charge of Surveyor Peebles, lost some fine camels and part of their equipment, while camped on the dry bed when sudden heavy rains came down and caught them by surprise. Pituri Creek became a furious torrent and the dry flat a deep lake. Some of the camels refused to

move, such is their stupidity in water. The men dived and opened their hobbles, but even when free the camels preferred to stand and drown rather than make an effort to reach the high ground.

On the western part of the map of Queensland the letters "W.H." indicate the site of waterholes, usually in the beds of creeks and rivers whose ordinary channels are dry in a rainless season. On Pituri Creek is a remarkable waterhole known as the "Paravituary" ("Parrapitcherie"), about sixteen miles long. Surveyor Bedford wrote—"We found it salt at one end and fresh at the other. We were camped at the centre, and during a north wind the water became so salt as to be unfit for use, but in a south wind it was only slightly brackish. This water made us thin and emaciated, and our camp-keeper suffered for months, and nearly died from chronic dysentery. Fish are plentiful, chiefly bream, and one man caught 40 lb. in an hour."

In the coast districts of Queensland, from Point Danger to the Gulf, there are few sheets of water deserving any other title than lagoons, except Lakes Yeetcham and Barrang on the Barron River tableland, and Lakes Salvator and Buchanan.

## MINERAL SPRINGS.

Springs of various kinds, hot or cold, soda, mud, or pure water, are found throughout all Australia. Far West, on the Mulligan River, are soda springs, bubbling up strong enough to float a man waist-deep when standing erect. Concerning these springs, Bedford says that the aboriginals consult them about the weather. "One blackfellow dives in with two large pebbles in his hands. A second jumped in and forced him down by the feet, followed by a third who forced them both down. When they came up, the first man said he had consulted the oracle at the bottom, and learned that a big flood would come in a month." In that case the flood actually did come.

The COOLGARRA hot springs, twenty-six miles from Herberton, possess valuable medicinal properties, and have already become a resort for many invalids.

Springs of cold spa water, equal to the best German, are found on the Brisbane River, at the head of the Lockyer, and several other localities in the colony. Many valuable springs of fresh water rise from the Desert Sandstone of the West, and saved tens of thousands of stock in periods of drought, previous to the artesian wells.

Hot springs are found between the Warrego and Darling, and on the Barcoo below Inniskillen. McDowall Stuart saw mud and hot and cold springs all through Central Australia, and in latitude 29 degrees 17 minutes 43 seconds named two the Elizabeth and Beresford, the latter discharging enough water to drive a flour-mill. On the lower Flinders are several clusters of small springs round central large springs. At Mount Brown and Fort Bowen, two small ironstone and granite hills rising out of the plains on the Flinders, and twenty miles apart, are many hot and cold springs, the former discharging streams of mud and water at a temperature of 120 degrees on the surface. The hot water is clear and good, the cold water is unfit to drink. The water lies in unfathomable basins on the tops of huge mounds covered by very large tea-trees, among the roots of which

hot water steams in small clear pools, the ground all round hollow and treacherous, the surface held together by densely matted vegetation.

The water from the mud springs of Manfred Downs contains water $27\frac{4}{5}$, silica $\frac{1}{3}$, chlorine $3\frac{1}{3}$, sodium $2\frac{1}{5}$, carbonic acid 34, and soda 32 per cent.

There are hot springs near Georgetown beside an old lava-flow, and the water contains soda 37, lime 3, oxide of iron $2\frac{2}{5}$, and sand 32 per cent. There are cold springs on the Burnett, at Toowoomba, on the Logan River, on the Maranoa; hot and cold on Cooper's Creek; and four strong-running springs on Allingham Creek, 140 miles west of Townsville.

ARTESIAN WELLS.

The uncertainty of the Western rainfall, and the occasional dry seasons, culminating in the drought of 1885, led to the starting of a general system of artesian wells, under the direction of the Government Hydraulic Engineer. The first bore was sunk at Blackall, a small Western town on a tributary of the Barcoo, the site being recommended by Jack and Henderson. Another was started at Barcaldine, on the Rockhampton railway line, a Western township on the Alice River, and there the first artesian water was struck.

Since that time artesian bores have been sunk over an immense area of the Western country, the whole giving copious supplies of fresh water, so that stock in the territory liable to droughts are no longer in danger of perishing with thirst. These priceless bores, tapping probably an inexhaustible supply of subterranean water, have effected a complete transformation in the pastoral industry of the West. The temperature of the water varies from 70 degrees to 172 degrees. At Back Creek 70 degrees; Aramac, 81 degrees; Muckadilla, 124 degrees; Barcaldine, 102 degrees; Saltern Creek, 115 and 128 degrees; Blackall, 119 degrees; Tambo, 98 degrees; Cunnamulla, 106 degrees; Charleville, 106 degrees; and Manfred Downs, 110 and 118 degrees. The whole of the bores now discharging water, end of 1894, represent about 80,000,000 gallons daily, equal to about the total annual rainfall of 20 inches on 100 square miles.

Besides the Government bores, there are scores of others sunk by the owners of the stations.

On Richmond Downs Station, on the Flinders, five bores, all less than 1,000 feet, discharge 8,000,000 gallons daily.

Barcaldine water gave 66 and 63 per cent. of fixed salts, chiefly bicarbonates of sodium and potassium, a trace only of organic matter, sulphuric acid, and ammonia, and a small quantity of chlorine. A couple of private wells on the Alice River struck salt water.

The Blackall water gave 71 per cent. of fixed salts and chlorine. The Tambo bore gave 40 per cent. fixed salts and $8\frac{1}{2}$ of chlorine.

The following is a section of the Muckadilla bore, one of the deepest in the Australian colonies. It is down 3,262 feet, giving 23,000 gallons daily, at a temperature of 124 degrees.

The pressure varies in all the bores, the one at Cunnamulla recording 185 to the square inch, the water shooting from a $1\frac{1}{2}$-inch director to a height of 100 feet.

STRATA OF A BORE.

| | Feet. | | Feet. |
|---|---|---|---|
| Yellow clay ... ... | 50 | Sandstone, brownish grey... | 85 |
| Black shale ... ... ... | 370 | Sand drift, white and grey... | 148 |
| Sandstone ... ... ... | 24 | Shale, blackish ... ... | 150 |
| Black shale ... ... ... | 234 | Sandstone, grey ... ... | 29 |
| Grey pipeclay ... ... | 116 | Shale, slate coloured to brownish grey ... ... | 98 |
| Grey sandstone ... ... | 195 | Shale, black with streaks of coal ... ... ... | 277 |
| Sand drift, white and lignite; tapped water ... | 21 | Sandstone and shale, soft ... | 265 |
| Shale, brown and grey ... | 61 | Sandstone, white; water flowing 10,000 gallons per day ... ... | 618 |
| Sandstone conglomerate, grey ... ... ... | 26 | Sandstone; micaceous; 12,960 gallons per day, at 3,170 feet ... ... | 52 |
| Shale, brown and grey ... | 54 | Sandstone, white and soft, 23,000 gallons per day ... | 92 |
| Sand drift, white and brown; water increased ... | 127 | | |
| Shale, brown ... ... | 15 | | |
| Sand drift, grey ... ... | 32 | | |
| Shale, grey, silicious ... | 123 | | |

The bore on Darr River Downs Station is down 3,530 feet on a sandstone bottom, with an overflow of 500,000 gallons per hour, at a temperature of 172 degrees. The French were the first to sink artesian wells in waterless country; and the first experiment in the desert of Algeria, on 11th June, 1856, gave a rush of fresh water equal to 4,016 quarts per minute. No wonder the joy of all the Arabs was indescribable.

In 1841 a well was sunk for 1,806 feet at Grenelle, near Paris, and gave a permanent supply of 600,000 gallons per hour.

In Queensland, end of 1894, there are twenty Government bores, with a total depth of 34,500 feet.

The whole of the artesian wells, private and public, represent about eighty-five miles of boring.

Uanda Station has twenty-nine bores, from 194 feet to 753 feet. Amongst the deepest bores in the colony are Malvern Hills, 3,948 feet, and not completed; Wellshot No. 1, 3,500 feet; Dagworth, 3,335 feet, giving 1,250,000 gallons per day; Chatsworth, 3,130 feet, still boring; and Bowen Downs No. 4, 3,109 feet, giving 60,000 gallons. Murra Murra bore, which is 1,891 feet deep, has a capacity of 4,000,000 gallons per day; so also have No. 2 Tinnenburra, and No. 8 on the same station; while there are several which yield 3,000,000 gallons. The hottest water is that yielded by the Dagworth bore, which gives 1,250,000 gallons, at a temperature of 196 degrees. Beaconsfield yields 1,500,000 gallons at 170 degrees. In many of the bores the water is upwards of 100 degrees, and in some it is quite cool.

## GEOLOGY AND CAVES.

Geologically Queensland is one of the most interesting countries in the world. Australia is peculiar in fauna, flora, and geological formation. Queensland represents the three great geological periods—Cainozoic, Mesozoic, and Palæozoic—with their tributary subdivisions of Tertiary, Upper and Lower Cretaceous, Upper and Lower Triassic, Permo-Carboniferous, and Devonian. To the Upper Cretaceous of the Mesozoic belongs the Desert Sandstone, and to the lower the whole of

the vast Rolling Downs of the Western interior. Within the Permo-Carboniferous of the Palæozoic lie the whole of the Bowen River Coal Measures and Gympie Beds. The Trias Jura of the Mesozoic includes the important coalfields of Ipswich and the Burrum.

The Devonian of the Palæozoic includes a large area of limestones, slates, serpentine, volcanic ash, basalt, diorite, granite, porphyry, and trachite of undetermined age.

In 1872 Daintree wrote that—"All the great plains west of the coast range consist of subærially decomposed Oolitic and Cretaceous shales, limestones, and sandstones, or the river detritus of such redeposited on their surface."

Since that time Queensland secured the services of R. L. Jack, an able geologist, and as the result of his continuous systematic researches and generalisation, ably assisted by W. H. Rands and A. G. Maitland, we have a lucid outline of the geological formation of the whole colony.

Robert L. Jack, Queensland Geologist, and Robert Etheridge, junr., Government Palæontologist of New South Wales, have issued, as their joint production, a work on the "Geology and Palæontology of Queensland and New Guinea," in two volumes, with excellent maps and liberal illustrations. Much useful work was done by Daintree, 1872, Stutchbury, 1854, and D'Oyly Aplin, 1869, but their researches extended over a very limited area compared with those of Jack. In 1853 the Rev. W. B. Clarke visited the Darling Downs and Morton Bay districts, and South Queensland was traversed from the Condamine to Keppel Bay, in 1854, by Samuel Stutchbury, the Government Geologist of New South Wales from 1853 to 1855. In 1868 D'Oyly Aplin and Richard Daintree were appointed geologists for South and North Queensland, and held that position to 1869 and 1871, respectively. Leichardt's articles on the geology of Morton Bay and Darling Downs in 1843 appeared in Waugh's Almanac for 1868, edited by W. B. Clarke.

Daintree issued six reports, dealing with the Cape River, Gilbert, Mount Wyatt, and Ravenswood diggings, and the general geology of the colony. The Hon. A. C. Gregory, for many years Surveyor-General, and famous as one of the most successful of Australian explorers, was State geologist from 1875 to 1879, and published several important papers on Queensland geology and the coal and gold deposits. On the 29th March, 1876, R. L. Jack was appointed geologist for North Queensland, and arrived from Scotland in 1877, after ten years' experience on the geological survey of that country. In 1883 and 1888, W. H. Rands and A. Gibb Maitland, both well qualified, were appointed assistant geologists, and Jack and his assistants have issued nearly 100 reports on various geological subjects from 1878 to 1894.

James Smith, an enthusiastic naturalist, collected geological specimens for many years in the Rockhampton district, and from February, 1889, to his death on 10th April, 1891, he held the position of collector to the Geological Survey.

"The eastern third, or perhaps nearly the half of Queensland, is the remnant of a lofty tableland composed of hard materials which have resisted denudation, and culminates in the Bellenden-Ker Range, at an elevation of 5,200 feet. This tableland is the chief seat of the mineral wealth of the colony. Its eastern edge presents a series of escarpments, or a short and steep slope down to the Pacific. Besides

granites and syenites, partly of Plutonic and partly of metamorphic origin, and basic igneous rocks, both bedded and intrusive, and of various ages, the east coast region contains a series of stratified rocks, of which the older members are more or less metamorphosed. The Western interior presents a totally different aspect. The tableland slopes gradually westward, and falls away towards the Gulf of Carpentaria and the south-western boundaries of the colony. The greater part of the interior is covered by soft stratified rocks, of Cretaceous age, which weather into a fine soil supporting nutritious grasses, but almost treeless, except in the South-western districts, where thick scrubs of mulga and gidya cover a region which is perhaps partly of Tertiary Age. The rainfall over this area is comparatively small, and the watercourses are ill-defined and dried up to waterholes during the greater part of the year. This defect on the part of Nature is rapidly being remedied by the sinking of artesian wells. At intervals, portions of the interior are occupied by detached tablelands of what has been aptly named Desert Sandstone, supporting, as a rule, only spinifex grass and stunted timber.

"The evidences that the Desert Sandstone once covered the whole of the Western interior are unmistakable, and it is a matter for congratulation that it has been so extensively denuded as to lay bare over an immense area the rich soil producing Cretaceous rocks. Between the Desert Sandstone and the recent deposits is a series of drifts containing the remains of extinct marsupial and other animals." Such is a portion of Jack's introduction to his latest and greatest work. The following is the classification of the various formations :—

Post Tertiary.—Recent and Post Pliocene. Recent alluvium, and sand. Raised beaches. Lake drifts.
Post Pliocene.—Cave breccias. Bone drifts.
Tertiary.—
Miocene.—Lower volcanic and drifts.
Pliocene.—Upper volcanic and drifts.

In the Upper Cretaceous of the Mesozoic is the Desert Sandstone; in the Lower, the Rolling Downs. In the Upper and Lower Triassic of the Mesozoic are the Ipswich and Burrum Coal Fields.

In the Permo-Carboniferous strata of the Palæozoic are the Upper, Middle, and Lower, Bowen, Star, and Gympie Beds. The Burdekin Beds lie in the Middle Devonian of the Palæozoic.

The Mesozoic and Palæozoic formations include nearly the whole colony. The Rolling Downs formation, in the Lower Cretaceous of the Mesozoic, covers about three-fourths of all Queensland. It extends from the McIntyre River in the South to the Palmer River in the North. West of that line it includes the whole territory, except the plateaus and peaks of Desert Sandstone, and the Palæozoic rocks of the Cloncurry River, the De Little, Cairn, and Grey Ranges. It extends west and south across South Australia in Western Australia and New South Wales.

The whole of that Cretaceous area formed the bottom of the ancient sea which once divided Australia, from the Gulf of Carpentaria to the Great Australian Bight.

Marine fossils, sharks, rays, ganoid fishes, cuttle fish, and bivalve and univalve shells are found over the whole expanse from north to south.

The richest soils of the colony are found in the Basalt and Rolling Downs formation, excepting those formed of mingled alluvium and decomposed vegetable mould in the jungle-covered country along the rivers and creeks of the east coast from Nerang Creek in the South to Princess Charlotte Bay in the North. The basalt is eccentrically distributed. The basic igneous rocks and diorite of the basalt are invariably accompanied by red soil and luxuriant vegetation.

In Queensland there are outcrops of basalt on the head of the Logan from Nindooinbah to the McPherson Range.

On the Darling Downs, from Mt. Maria to the Valley of Killarney, and from Toowoomba north-west to Bowenville, north and north-east of Jondaryan; Grayton Range, north of Roma.

From the Drummond Range on the head of the Claude, taking in both sides of Main Range and Buckland's Tableland, away south of the Carnarvon Range.

From Springsure across the Comet, north by Clermont and across the Diamond Range into the watershed of the Suttor River.

On the coast, the Woongarra Scrub, at the mouth of the Burnett, and the Isis Scrub, on the head of the Isis River.

A patch at Rockhampton and two large areas on the tributaries of the Isaacs River.

A large tract of basalt from the Suttor to the Isaacs River.

Large tract of basalt between Burdekin and Main Range, and from Lolworth Creek to Clarke River.

From the head of the Clarke River across the Main Range and occupying the valley of the Upper Einasleigh River.

From the head of the Burdekin across the Main Range on to the heads of the Herbert.

On the east side of the coast range, from the south head of the Johnstone northwards down the valley of the Upper Barron towards the Clohesy.

Large tract on the McIvor, Morgan, and Endeavour Rivers, north of Cooktown.

Large tract north of Hughenden, on the head of the Flinders River.

Considerable area between the Langlo River and the head of the Bulloo.

A rough calculation shows that Queensland possesses from ten to twelve million acres of basalt country, rich soil, well watered, with regular rainfall and healthy climate.

## COAL MEASURES.

Queensland possesses a practically inexhaustible supply of coal suitable for all purposes. Her known Coal Measures extend from the Brisbane River in the South to Princess Charlotte's Bay in the North.

The Ipswich Coal Measures of the upper Trias Jura alone cover an area of 12,000 square miles, and include varieties from the light gaseous cannel coal of the Walloon district onwards to the harder steam coals and the anthracite.

The Burrum field, between Maryborough and Bundaberg, occupies 4,000 square miles. The immense basin drained by the tributaries of the Fitzroy River represents 30,000 square miles of coal-bearing country. Even in 1845 Leichardt noticed the Mackenzie River,

"beds of coal, undistinguishable from those of the Hunter in New South Wales." Beds of kerosene shale are also found on the Upper Dawson.

Queensland coal was first noticed by Oxley in the Brisbane River in 1824 and Major Lockyer in 1825. It was used in small quantities during part of the convict period, from 1828 to 1839.

In Queensland the Coal Measures are probably the same age as those of Europe, there being a decided correspondence between the Carboniferous flora and fauna of both countries.

A vast tract of coal country is represented by the Upper, Middle, and Lower Bowen beds in the Port Denison district. Coal is found in several localities between Cooktown and the Laura River; and the Star River beds, west of Townsville, cover an extensive area.

## DESERT SANDSTONE.

This gloomy formation, suggestive of Silence and Desolation, is scattered over the whole colony, appearing here and there in isolated patches, or continuous for 340 miles, like the area from the head of the Warrego to the head of the Flinders, with a breadth of 120 miles between the Cape and Thomson Rivers. In the far North this sandstone starts a little north of the Palmer River and extends thence down and over the whole of the Peninsula to Cape York, except a belt of Post Tertiary alluvium on the west, to the mouth of the Archer River, and a belt of granite on the east to Temple Bay. There is not much Desert Sandstone on tho coast side of the Main Range, the largest area being a tract lying between the Cape River and the Belyando, a narrow belt on the head of the Dawson, small patches between the Clarke River and Seaview Range, in the Mackay district, and in stray places south even to the head of Nerang Creek. A small solitary piece crops out at the mouth of the Mary River in Hervey's Bay. Westward it includes nearly the whole of the hills and ranges rising out of the Rolling Downs.

In the Cooktown district and elsewhere it contains small coal seams. The Desert Sandstone overlies granite, the Coal Measures, syenite, vertical strata of slate and quartzite, and slaty rocks.

## CAVES.

There are many magnificent caves in Queensland, equal to any in Australia. The finest on the coast side of the Main Range are those in the limestone hills of Chillagoe, Herberton district. Describing these caves in 1891, William Thompson, C.E., mineralogical lecturer, wrote—

The number of caves in the different ranges is so large that it was found impossible to describe them in detail. Four of them, which have been named the Royal Arch, the Ellen, Herculaneum, and Pompeii, are close to the road to Zillmanton, within a radius of one and a-half miles from its crossing over Chillagoe Creek, and are easy of access. The largest cave discovered was in the Royal Arch, with a length of about 170 feet, and breadth over 100 feet, and height about 40 feet. Other chambers in the same cave were 70 to 80 feet long, and from 50 to 80 feet high.

The ornamentation in many of the caves is truly remarkable; walls, roof, and floor—indeed, every available surface—presenting some beauty of its own. It may be of interest here to mention that all the varied forms of deposit found in limestone caves are due to the same agency—namely, the action of water containing carbon dioxide (or carbonic acid gas, as it is generally termed) dissolving the limestone (calcium carbonate), and redepositing it under favourable conditions. Ordinary air, which consists in the main of a mixture of the gases nitrogen and oxygen, contains on an average about three and a-half parts of carbon dioxide in every 10,000 parts; during falls of rain much of this gas is absorbed by the rain water, which also procures further supplies

from the soil and from decomposing animal and plant remains. As limestone is soluble in water containing this gas, during the passage of the rain water through the limestone forming the ranges much of the limestone is dissolved and carried away in the waters of the creeks of the district. In this manner caves are formed. In favourable positions water will ooze drop by drop through the pores of the rock into openings already made; here evaporation will to a certain extent take place and the water lose carbon dioxide. It can then no longer retain the same amount of calcium carbonate (limestone) in solution, and the excess will be deposited on the face of the rock. When the drop falls, as it eventually will, the same result will obtain upon the cave floor—carbon dioxide will be liberated and calcium carbonate deposited; and from the floor will gradually grow upwards a column to meet the pendant descending from the roof. To such pendants the general name of stalactites has been given (from the Greek word stalaktos—dropping); the floor column is known as a stalagmite (from the Greek stalagmos—a dropping).

To another form of deposit the term "drapes" has been given from the resemblance to drapery, and a great part of the ornamentation of the caves is of this class. Over projecting ledges, smooth rounded white coverings were found, as though a cascade of milk had been suddenly frozen and arrested in its fall; from the border of the ledge a fringe depended, one "drape" running into another, half-an-inch to an inch in thickness, and 1 inch, 2 inches, or 3 inches in depth, and from inches to feet in length.

In many places these drapes hang from the roof or the wall singly like curtains, perhaps 10 feet to 15 feet long, $\frac{1}{2}$ inch to $\frac{3}{4}$ inch thick, and from 6 inches to 15 inches from the wall to the outer edge, the same width obtaining from the top nearly to the bottom. When sharply struck many of these long thin sheets give forth a beautifully clear musical note, exactly like that of a Japanese solid brass gong. Similar sounds are produced by striking stalactites, the depth of the tone depending upon their length and thickness; the sounds are very penetrating, and the effect when a chime is heard ringing in a distant cave is very pleasing.

The dazzling whiteness of many portions of the caves, particularly of columns and clusters of stalactites is, however, infinitely more pleasing than any colouring, and when, in addition, the lime is crystallised and presents to the candlelight the faces of countless tiny crystals, which sparkle and scintillate like thousands of gems, the spectator, however stolid, is generally surprised into a little enthusiasm.

R. L. Jack, Government Geologist, wrote as follows:—

Entering by a lofty hall on the western side of the range we walked erect for perhaps 60 yards, and then found ourselves in a magnificent theatre, about 100 feet in diameter and 80 feet high. The cupola-like interior was lighted from the top by a hole which had an area of perhaps 200 square feet. The roof was festooned with stalactites, while the floor was covered in places with stalagmites. Occasionally these met, forming long and graceful columns. But the stalactites and stalagmites were rarer than is usually the case in limestone caves, this circumstance probably pointing to the dryness of the climate. The greater part of the floor was deeply covered with drab-coloured "cave-earth," representing probably the insoluble argillaceous impurities of the limestone. Shells of Helix, in all stages of incrustation by lime, were plentifully scattered over the floor in some places, probably the sites of pools in wet weather. On one side of the "theatre" a dark recess opened out, its lower half blocked by a nearly-flat limestone boulder, in front of which a row of stalactites depended from the roof like a partially-uplifted curtain. Perhaps the most picturesque aspect of the cave was that seen from behind the stage, looking past this screen into the proscenium. A narrow passage behind the stage led to other caves, some at lower and some at higher levels. One of these must have been at least 200 feet in length and 50 feet in width, with a Gothic roof 80 feet high.

There were many rocks where the stalactites were little thicker than pencils, and arranged in groups of exquisite beauty. Very few of them had, at the time of our visit, the drop of water which one expects to find in such a position. From a few, drops of water fell at very long intervals. The floors of the caves appeared to be on a level with the surrounding country.

## ROCKHAMPTON CAVES.

Describing the caves near Rockhampton, the late James Smith said—

Traversing these long extensive subterranean passages, lofty galleries, spacious chambers, and wide-spanning arches by the light of a candle that but reveals the gloom, you cannot help becoming possessed with a sense of solemnity and awe in the presence of Nature's mysteries.

But these walls are not of a black and ghastly funereal hue. They are everywhere of a neutral tint of shaded white, abundantly tapestried with incrusting inflorescence, panelled with curiously carved pendent and painted alabaster decorations, and clothed with many hangings of petrified cascades, entirely made up of minute hexagonal, needle-pointed, reversed crystals of purest calcite. Do these caves contain any records throwing any light on the conditions of local former life? This is occupation for many labourers for long years to come.

What has been done already is interesting enough, but nothing very strange or startling as yet. The shells and bones locked in the stalagma, and those found loose in the bat exuvial, are identical with those of existing species. Casts of fossil millipedes are among them. The first new cave is in a low mound, a few hundred yards to the left of the big hill. You descend a deep, narrow shaft half-way by means of a rope, and there is a further descent by leaping from one projection to another in a slanting direction till you come to the bone bed. There is no foul air; ventilation seems to come from another opening, but there is the closeness of the charnel-house and the mustiness of the tomb. The bones are the remains of a large kangaroo. The leg bones are 16 inches and thigh bones 10 inches. The lower jaw was originally 10 inches long. I did not see the skull. They are very decomposed and crumbly. I think the animal must have fallen down the shaft and floundered along in its uninjured state to the centre of the deep cave where it was lying. In the other new caves adjoining a complete skull of a native cat, with its retractile teeth, and several wallaby and opossum skulls, with other remains, were found. These bones are now on view at the School of Arts, Rockhampton.

Describing other caves in the same district, Smith says—

These caves are situated contiguous to our local "Mount Etna." They are in a great mountain of compact limestone—a grey dense marble—exactly corresponding to the Rock of Gibraltar, hard, homogeneous, and unstratified, but cracked and tilted in thick, irregular beds. The outside weathering is of the usual sharp-pointed, pock-pitted nature all these formations throughout the district present to the eye. All round the base of the mountain are the usual fallen masses, and the numerous lumps of stratified stalagma among them tell how cave action has reduced the hill to half its former size. The chief entrance is greatly blocked up by the fallen roof of a former cave. One feature of these caves is their narrow entrance and their wide swelling proportions inside. You crawl and creep through a hole in the ground that hardly admits you, and in a moment you may walk for six solid hours through the great squares, wide streets, intricate labyrinthian mazes, circular winds, courtyards, and lanes, through "gaun closes," of a great subterranean town with surrounding suburbs. The architecture is entirely Gothic, of cathedral form, and the strong impression besets you that you have stumbled on the ruin of a mediæval city. The black gloom of these lofty corridors, of which no candle can show the roof, and the great groined arcades, with rear aisles, deep secret recess arched alcoves, and hanging rock flitches, must be seen to be appreciated, for they beggar description.

There are basalt caves in the Main Range, Buckland's Table Land, at the head of the Nogoa River.

Far north-west, in the Camooweal district, on the Georgina River, are peculiar underground limestone caves representing irregular chasms over 100 feet in depth, the walls formed by large limestone boulders, and the floor covered by limestone slabs resembling tombstones. There are side passages, and small caves, some adorned by beautiful stalactites covering the roof.

Bones of animals and aboriginals, and heaps of drift, are found on the floors of these remarkable subterranean caverns.

## PORT ESSINGTON.

Though not in Queensland, the first settlement at Port Essington, Leichardt's terminal point of 1845, is sufficiently interesting historically to justify a brief account.

Previous to the year 1824, masters of vessels trading in the Indian Archipelago discovered that large quantities of bêche-de-mer and pearl and tortoise-shell came from the north coast of New Holland, and they recommended the establishment of a British trading settlement. This proposal received the approval of the Colonial Office, and on the 24th August, 1824, Captain Gordon Bremer sailed from Sydney for Port Essington with three vessels, on board of which were two officers and fifty soldiers of the 3rd Regiment, one surgeon, two officials in the Commissariat Department, and forty-five convicts, besides stores and cattle.

On 20th September these vessels anchored in Port Essington. Failing to find any water supply near the anchorage, Captain Bremer sailed for Melville Island, and anchored outside the Mermaid Shoal on the 24th. On the 26th he anchored off Luxmoore Head, a cape on Melville Island. In the evening of the fourth day the shore party found a small stream of fresh water on the island, and on the 30th the soldiers and convicts were landed to start clearing for the buildings. On the 13th November Captain Bremer left for India, leaving Captain Barlow, Lieutenant Everard, Lieutenant Williamson, Surgeon Turner, Mr. Miller, Mr. Tollemache, thirty soldiers of the Royal Marines, fifty of the 3rd Regiment, and forty-five convicts. In November, 1825, the first despatches from the settlement reported want of fresh provisions and vegetables, no agricultural tools, and a great deal of scurvy and sickness. The natives also were hostile, and repeatedly attacked the settlers. The vessel "Lady Nelson," sent to Timor in February, 1825, never returned; and the schooner "Stedcombe," engaged by Captain Barlow to obtain buffaloes from Timor, was captured by pirates off the east end of Timor. Scurvy raged for a long time until the ship "Sir Philip Dundas" arrived from Sydney with fresh provisions on 5th August, 1826.

In that month Governor Darling, of New South Wales, appointed Major Campbell, of the 57th Foot, commandant at the island, and he left Port Jackson on the 19th August, and arrived on the 19th September, on board the schooner "Isabella," with troops, convicts, stores, and live stock.

Major Campbell saw at a glance that the place chosen was not suitable for settlement.

Melville Island in length is seventy-five miles, and thirty-five miles wide, divided from Bathurst Island by Apsley Strait, four and a-half miles wide and forty-five miles in length. The island was not healthy for men or stock. In the first three years two-thirds of the cattle, sheep, and goats died within fourteen days after landing. Those that survived did very well afterwards, and though the sheep never fattened they produced fine lambs, which grew into healthy maturity, like the calves and kids from the cows and goats.

The wild animals and birds were represented by kangaroos, opossums, dingoes, bandicoots, squirrels, rats, flying-foxes, white and black cockatoos, seven kinds of paroquets, six of pigeons, four of kingfishers, quail, curlews, ducks, geese (rare), redbills, and many birds with beautiful plumage. Snakes were plentiful, and up to 10 feet in length. White ants destroyed clothes, books, blankets, boots, and everything else available, even two dozen of claret in the Major's cellar. Presumably they only ate the corks. In three weeks they destroyed £30 worth of clothes, one tent 20 feet long, 300 feet of timber, three boxes of ammunition, sixty-five pairs of trousers, and twenty-three smock frocks in the engineer's storehouse. Mosquitoes and sandflies were intolerable.

From September, 1824, to May, 1828, there were twenty-six deaths out of a population of 136.

Sharp shocks of earthquake were felt on four days of August, 1827.

The natives killed two officials, one soldier, and one convict.

Buffaloes were brought over from Timor, and in the first two weeks a fourth of those also died from inflammation of the bowels. Pigs did no good unless fed on grain and cook's fat. Poultry did fairly well. In one year nearly every person in the settlement was under hospital treatment.

At the end of 1827 Major Campbell decided to look for a better locality, and he went to examine Port Essington, on the north side of the Cobourg Peninsula, which projects for fifty miles from the mainland, is fifteen miles across the widest part, and only two and a-half across from Mount Norris Bay to Van Diemen's Gulf.

He considered the port equal to Port Jackson. Finally he selected Raffles Bay for a new settlement, and sent over the necessary people to start clearing and building. This bay was named by Captain King, in 1818, after Sir Stamford Raffles, and lies close to Bowen Strait, east of Port Essington. At Fort Wellington, on the end of the peninsula between Raffles Bay and Bowen Strait, Major Campbell's party started the second settlement. This was only occupied for two years, and in 1829 Fort Wellington at Raffles Bay, and Fort Dundas on Melville Island, were abandoned, leaving the whole Australian coast unoccupied from Morton Bay north round Cape York, across the Gulf and down the east coast to Swan River, a distance of over 3,000 miles.

The buffaloes imported from Timor were left at Raffles Bay and Fort Dundas, and their descendants spread over Melville Island, and across the mainland to Van Diemen's Gulf and the Gulf of Carpentaria. One solitary old buffalo rambled to the Flinders River, to be shot there and have his skull sent to the Brisbane Museum. Leichardt shot a fat young buffalo on his way to Port Essington in 1845.

Port Essington was again occupied, and again all the settlers were removed in 1849 by Captain Keppel, in the "Mæander." A third occupation has continued to the present time.

## EXPLORERS BY SEA AND LAND.

### CAPTAIN COOK.

This immortal navigator was born on the 27th October, 1728, at Marston, in Cleveland, Yorkshire. His father was an agricultural labourer and farm bailiff. At the age of thirteen he was apprenticed to a haberdasher in Staiths, near Whitby. One old biography says he was apprenticed to a grocer. Disliking his occupation his indentures were cancelled, and in 1746 he was engaged by one Walker, a shipowner, of Whitby. In 1752 he became mate of one of Walker's coal ships, and in 1759, through the influence of Osbaldiston, M.P. for Scarborough, and Captain Sir Hugh Palisser, was made master of a sloop in the navy, and joined the fleet in the St. Lawrence against the French. His skill as a hydrographic surveyor, combined with bravery and judgment, secured his promotion. Returning home in 1762 he married Miss Elizabeth Batts, who at the time of Cook's death was the mother of six children. In 1764 he was appointed marine surveyor of Newfoundland and Labrador, and chosen commander of the scientific expedition sent out on the recommendation of the Royal Society to witness the transit of Venus at the Isle of Otaheite on 3rd June, 1769. On this trip he was accompanied by Green as astronomer, Dr. Solander as naturalist, and Banks, afterwards Sir Joseph Banks, as botanist.

Thence Cook went in search of the supposed "Southern Continent," sailed round New Zealand, thence west until he sighted the shores of Australia, landed at Botany Bay, sailed north along the east coast to Torres Strait and Batavia on his way to the Cape, losing Green and twenty-three other men by death, finally anchoring the "Endeavour" in the Downs on 12th June, 1771. Leaving England again on 13th July, 1772, he was absent for three years, losing only one man from sickness. In February, 1776, he became member of the Royal Society, and received the Copley medal for the best method of preserving the health of crews on long voyages.

In July, 1776, Cook sailed in the "Resolution," accompanied by Captain E. Clarke in the "Discovery." From the Cape he went to New Zealand through the Pacific, discovering the Sandwich Group and other islands, finally appearing at Behring's Straits in the summer of 1778, surveyed the Aleutian Islands, and returned to winter at the Sandwich Group.

On the night of 13th February, 1779, one of the boats was stolen by the natives, and next day Cook went on shore with a boat's crew to enforce the return. He attempted to take the old king on board, and the infuriated natives rushed on Cook and clubbed him, only his mangled remains being recovered. Four of his men were also killed in the struggle.

One of his early biographers says: "In the extent and value of his discoveries Cook surpassed all other navigators. His surveys and latitudes and longitudes are extremely correct, and he may be said to have been the first scientific navigator."

His widow received a pension of £200, and each of his children £25. Thus, on the 14th of February, 1779, the useless savages of Owhyee, in a miserable squabble over a boat, killed one of the most remarkable men the world has ever produced.

### Discovers Australia.

On the 19th April, 1770, one of Cook's officers, Lieutenant Zachary Hicks, sighted the east coast of Australia, and Cook named the visible headland Point Hicks, now known as Cape Everard. Cook passed and named Cape Howe, Cape and Mount Dromedary, Bateman's Bay, and Point Upright; on the 23rd, Cape St. George and Long Nose, on the 25th Red Point, and anchored in Botany Bay on Sunday, the 29th. A party consisting of Cook, Banks, Solander, four seamen, and Tupia, a native of Otaheite, went ashore. Two natives, armed with spears, stood on the beach to oppose them, and could neither be coaxed by presents nor scared by threats, so Cook fired a charge of small shot at their legs, and they retired. During their stay here they caught on Sunday, the 6th May, a couple of huge rayfish, weighing over 300 lb. each, and Cook called the place Sting Ray Harbour, the name which it bears in all the other journals kept on board the "Endeavour." The name "Botany Bay" appears nowhere in any of the papers of Cook or his officers, and was probably bestowed by Dr. Hawkesworth, who acted as editor of all Cook's journals. Cook sailed out of Botany Bay on the 6th May, the day the fishing party caught the two big rays. Sailing northward he saw the entrance to what is now Sydney Harbour, and named it Port Jackson, after Sir George Jackson, secretary to the Admiralty.

On the 1st May, while the "Endeavour" was in Botany Bay, a seaman named Forby Sutherland died, and was buried on shore, the locality now being known as Sutherland Point.

On the way north, Cook named Port Stephens, after Phillip Stephens, Secretary to the Admiralty; Cape Hawke, after Sir Edward Hawke; Point Danger, Mount Warning, Smoky Cape; Cape Byron, after Commodore Byron, of the "Dolphin"; Morton Bay and Cape Morton. What Cook called Morton Bay was the bend in the outer coast from Point Lookout, on Stradbroke, to Cape Morton, on the north end of Morton Island. Morton Bay he called Glass House Bay, after the Glass House Mountains. Adverse winds prevented him from entering. His chart shows that he passed at least five miles from Cape Morton, bore across towards Noosa, named Wide Bay and Double Island Point, and then steered along off the shore of Fraser's Island, which he thought was part of the mainland. He named Indian Head, Sandy Cape, and Break Sea Spit, rounded it, and steered for Bustard Bay, which he named after a bustard shot there by the cook of the "Endeavour." He called both sides of this bay the North and South Head. Thence he went on along the coast, naming Cape Capricorn, Keppel Bay, Keppel Isles, Cape Manyfold, the Two Brothers, Harvey's Isles, Island Head, Cape Townshend, Shoalwater Bay, Bay of Inlets, Long Island and Broadsound, Northumberland Isles, Cape Palmerston, Point Slade, Cumberland Isles, Cape Hillsborough, Repulse Bay, Cape Conway, Whitsunday Pass, Cape Gloucester, Edgcumbe Bay, Mount Upstart (no "Cape" Upstart on his chart), Cape Bowling Green, Cape Cleveland, Cleveland Bay, Magnetical Isle, Halifax Bay, Palm Isles, Point Hillock, Cape Sandwich, Rockingham Bay, Family Isles, Double Point, Frankland's Isles, Fitzroy Isles, Cape Grafton, Green Island, Trinity Bay, Cape Tribulation, Weary Bay, Endeavour River, Cape Bedford, Cape Flattery, Point Lookout, Eagle Island, Lizard Islands, Islands of Direction, Providential Channel, Cape Weymouth, Weymouth Bay, Bolt Head, Forbes, Cockburn, and Sir Charles Hardy's Isles, Temple Bay, Cape Granville, Bird Isles, Shelburne Bay, Orford Ness, Newcastle Bay, York Cape, York Isles, Prince of Wales Island, Cape Cornwall, Endeavour's Straits, Possession Island, Booby Island, and Walter's Isles. Thence the "Endeavour" sailed homewards, *viâ* Timor and Sumatra.

### His Death.

A complete account of Cook's death was written by David Samwell, surgeon of the "Discovery." On the 11th February, 1779, the ships "Resolution" and "Discovery" anchored off the Island of Owhyhee, now called Hawaii. The natives came on board to barter feather cloaks, sugar-cane, pigs, yams, etc., for Cook's articles of exchange. The warriors chiefly wanted long iron daggers which were made on board the ships by the armourer. The natives stole some articles from the armourer's forge on the 13th, and escaped, though pursued and fired at. On the same night they stole one of the cutters, and the launch and another cutter were sent out with armed crews in search of the stolen boat. Cook himself went ashore at the village of Kavaroa to get the king, Kariopoo, on board and hold him as a hostage until the cutter was returned. The King consented, and sat down to have a talk with Cook before starting. A great crowd of natives stood round in a circle, some of them very excited and a few armed. At this moment two men in a canoe arrived

to annouuce that Cook's men in the search-boats had killed a chief called Karemoo, on the opposite side of the bay. This intensified the excitement, and the natives began putting on their coarse mats which acted as shields, and arming with spears, daggers, clubs, and stoues. Cook ordered the party of marines to march down to the edge of the water and form on the rocks near to the two boats lyiug off the shore as a cover to the land party. Cook followed them, leading the king by the haud, an old priest singing a noisy song. An old woman threw her arms round the king's neck, and implored him not to go on board the ships. A chief named Coho was obscrved watching for a chance to stab one of Cook's men or himself with a dagger, and an officer struck him with the butt of his mnsket. Then Cook fired small shot at one threateuing him with a stone, but the mat stopped it, and then Cook knocked him down with his musket. Then came a shower of stones, and the marines fired into the crowd and flung down their muskets, and rushed into the water to reach the boats, leaving Cook alone in the midst of 2,000 or 3,000 infuriated savages. Herc is the final scene: "The Indians immediately rushed down upon them, dragged those who could not swim upou the rocks, where they dashed their brains out. Captain Cook was advanced a few paces before the marines when they fired; the stones flew as thick as hail, which knocked the lieutenant down, and as he was rising a fellow struck him in the back with a spear; however, he recovered himself, shot the Indian dead, and escaped into the water. Captain Cook was now the only man on the rock. He was seen walking down towards the pinnace, holding his left hand against the back of his head to guard it from the stones, and carrying his musket nnder the other arm. An Indian came rnnning behind him, stopping once or twice as he advanced, as if he was afraid that he should turn round, then taking him unaware he sprung to him, knocked him on the back of his head with a large clnb taken out of a fence, and instantly fled with the greatest precipitation. The blow made Captain Cook stagger two or three paces; he then fell on his hand and one knee, and dropped his musket. As he was rising, another Indian came running to him, and before he could recover himself from the fall drew ont an iron dagger concealed under his feathered cloak, and struck it with all his force into the back of his neck, which made Captain Cook tumble into the water by the side of the rock, where it is about knee-deep. Here he was followed by a crowd of people, who endeavoured to keep him under water, bnt struggling very strong with them he got his head up, and looking towards the pinnace, which was not above a boat-hook's length from him, waved his hand to them for assistance, which it seems it was not in their power to give. The Indians got him under water again, but he disengaged himself, and got his head up once more, and not being able to swim he endeavoured to scramble on the rock, when a fellow gave him a blow on the head with a large club, and he was seen alive no morc. They now kept him under water; one man sat on his shoulders and beat his head with a stone, while others beat him with clubs and stones; they then hauled him up dead on the rocks, where they struck him with their daggers, dashed his head against the rock, and beat him with clubs and stones, taking a savage pleasure in using every barbarity to the dead body; as soon as one had struck him another would take the instrument out of his body and give him another stab. At the same time four of the marines

were killed--James Thomas (the corporal), Theophilus Hinks, Thos. Fatchet, and John Alleu (privates). The corporal was stabbed in the bowels while in the water. He fired at the fellow who had stabbed him, and killed him. He was soon hauled on the rock with the rest of our people, where the savages dashed their heads aud beat them with clubs and stones in such a violent manner and so long continued as if they thought they would never be dead."

The dead body of Cook and the bodies of four marines were left lying on the rocks when the natives fled from the guns on the boats, but the boats went back to the ships and left the bodies exposed to insult from the natives, who finally carried them all away to the top of the hill. The man who killed Cook was a chief named Nooah. The first man who struck him with a club was a chief named Carrima-na-coaka. About thirty of the natives were killed. On 15th February a native came off to the ships with a buudle containing a large piece of human flesh cut from one of Cook's thighs, and on the 20th a chief named Eeapo came off with another bundle containing "the thighs and legs joined together, but not the feet; the skull with all the bones, the face wauting, the scalp separated from it, but in the bundle with the hair cut short; both hands whole, with the skin of the forearms joined to them. The hands had uot been iu the fire, but were salted, several gashes being cut to receive the salt." They knew the hands by a cut on the right, between the thumb and forefinger. Afterwards they recovered his sword and gun; and ou Sunday, 21st February, Cook's mangled remains were consigned to the deep, and ten cannons fired as a final requiem over the last resting-place of the great navigator.

## FLINDERS AND BASS.

Mathew Flinders was born at Douington, in Lincolnshire, in 1777, a descendant of the Flemish colonists introduced by Henry VII., who first taught the English how to turn desolate, heron-haunted swamps into rich pastures. At the age of sixteen he became a volunteer on board the "Sapio," Captain Pasley, on whose suggestion he joined, as a midshipman, the "Provideuce," in which Captain Bligh was to carry breadfruit from Tahiti to the West Indies. Bligh placed him in charge of the chronometers. On his return he joiued the "Bellerophon," a 74-guu ship, aud acted as aide-de-camp to Lord Howe in the victory of 1st June, 1794. From the "Bellerophou" he passed to the "Reliance."

George Bass was born at Asworthy, near Sleaford, where his father was a farmer. He was apprenticed to a Dr. Francis, a surgeon at Boston, walked the hospitals, and took his diplomas. His desire to go to sea induced his widowed mother to invest a considerable sum in buying a share in a ship, which was totally lost. His mother last heard of him iu the China Straits. He had only been married three months when starting on that journey from whence he never returued.

Flinders arrived in Sydney as a midshipman with Captain Hunter iu the "Reliance" in 1795. Bass came out as surgeon.

Flinders, Bass, and a boy went round to Botany Bay and George's River in a small boat 8 feet long, called the "Tom Thumb."

On 25th March, 1796, they started for another trip in this frail vessel to the south of Botany Bay, were capsized, washed ashore, and Flinders entertained a lot of blacks by cutting their hair and beards while the powder was dryiug.

In December, 1797, Bass went out in a whaleboat with six men and discovered Twofold Bay on the 19th. Continuing south to 4th January, 1798, he entered and named West Port, from whence he returned to Sydney.

Flinders went with Captain Hamilton in the schooner "Francis," in 1798, on a voyage south from Port Jackson to bring up the cargo of the wrecked vessel "Sydney Cove," and the few people left in charge.

On the way Flinders named Green Cape, and Kent's Group after Captain William Kent of the "Supply." On Cape Barron and Clarke's Islands they found numbers of wombats, an animal then only recently discovered near Sydney. The "Francis" returned on 9th March. On 7th October Flinders and Bass left Sydney in the "Norfolk," a colonial sloop of twenty-five tons, and landed at Twofold Bay to make a survey. Thence they went north, naming Cape Portland, Point Waterhouse, Double Sandy Point, Mounts Heemskerk and Zeehan, Point Hibbs, and many other places. On 22nd December they were in Sullivan Cove, to which Collins removed the convicts from Risdon Cove in 1804.

Flinders discovered and named Bass Strait after his friend.

On 8th July, 1799, Flinders sailed from Sydney in the "Norfolk" to explore Morton and Hervey Bays.

On Saturday, 13th August, 1799, he anchored at 8 o'clock inside Cape Morton, and went ashore on Morton Island. Ten blacks appeared and one waved a green bough as a token of friendship.

Next day Flinders anchored in eleven fathoms two miles off the shore of Bribie Island, on the west side of the bay. His Sydney black, Bungaree, went ashore naked and met a party of natives on the spot named and known ever since as Point Skirmish. Here there was an unfortunate misunderstanding; the natives were fired at and two or three wounded—the first Queensland blacks shot by white men. The huts were 12 to 15 feet long, much the same as those at Shoal Bay. In one was an old net equal to one done by a European seine-maker. Next day they anchored a mile and a-half from Redcliffe Point, and pulled over to the spot still known as Woody Point.

In a camp they found a seine net 84 feet in length and 3 feet deep, stronger and larger than any English net; and Flinders coolly appropriated this, leaving only a small axe in exchange. Next day they crossed the bay, and passed between Mud Island and St. Helena, going towards Peel Island. Flinders landed on St. Helena, which he described accurately. On the way back he passed near the small islands off the mouth of the Brisbane River, and saw what he regarded as a number of blacks advancing, with hostile intentions, in two canoes. "Then the ship was put under easy sail, her decks cleared of every encumbrance, and each man was provided with a competent number of musket balls, pistol balls, and buck shot, which were to be used as distance might require, for it was intended that not a man should escape if they commenced the attack." He suddenly discovered that the enemy were only a few peaceful blacks driving fish into the nets by beating the water with their paddles. The blacks sank their canoes and retired to the shore, and Flinders named the Fisherman's Islands without even a suspicion that behind those islands was the mouth of a large river.

On the 20th he returned to Bribie Island, went six miles up the Bribie Channel, which he named the Pumice Stone River, and beached his sloop on the 22nd at the spot now known as the White Patch (Tarang-geer). He remained there until the 30th, and while the sloop was being cleaned and caulked, Flinders started on the 25th to explore the supposed river. He anchored off the point opposite the present Glass Mountain Creek, and next day rowed up that creek to the head of deep water. Taking two men and Bungaree, Flinders started for the Glass Houses, reaching the top of the round mount at the present Beerburrum railway station. He described it as covered by stones of all sizes among long spindly grass and tall straight trees. Thence they started towards the lofty flat-top mountain now known as Beerburrum, and camped all night at two-thirds of the distance. Early next morning they were under the frowning cliffs, which Flinders rightly regarded as inaccessible (he being on the wrong side), and returned to Bribie, shooting the first known specimen of the swamp pheasant on the way back. During the stay in Bribie Channel they shot eighteen swans, fired three shots at a dugong, and had friendly interviews with the blacks, who sang musical and pleasant songs which made Bungaree's Sydney corrobboree appear harsh and unpleasant. Three Scottish sailors danced a reel which the blacks regarded with indifference. A tune on the bagpipes would doubtless have caused a sensation. Bungaree tried in vain to teach the Bribie men the use of the woomera. Flinders saw no spears, but these would be purposely kept out of sight. He records the first names of Queensland blacks, three of the men being Yeewoo, Yelyelba, and Bomarrigo. They wore belts round their waists, and fillets on the forehead and upper arm, all composed of twisted hair. Their canoes were made of stringy bark.

Flinders left Bribie Channel on the 31st, after being weather-bound at the mouth for two days. While in the Bay he discovered the Amity Passage, and named Morton Island after Cook's Cape Morton.

He then went north to examine Hervey's Bay, and from Port Curtis returned to Sydney, arriving in Port Jackson on the 20th August, leaving for England the same year in the "Reliance." When in London the charts of all his Australian discoveries were published by the Admiralty. Flinders had rashly decided that no river of any importance entered the sea between the 24th and 30th degrees of south latitude, though that distance includes the Clarence, Richmond, Tweed, Brisbane, and Mary. He was singularly unfortunate in missing the rivers. He named Shoal Bay at the mouth of the Clarence, and even anchored in sight of the entrance. He rowed round St. Helena in Morton Bay, and actually named the small islands at the mouth of the Brisbane River.

On 9th January, 1801, Flinders was appointed to the command of the "Investigator" (the old "Zenophon"), left Spithead on 18th July, and arrived at Sydney on 9th May, 1802. Accompanied by the brig "Lady Nelson," Captain John Murray, he started north on 22nd July, and named Shoal Bay, at the mouth of the Clarence River, on the 25th. Thence he went on to the Queensland coast, which he examined from Sandy Cape, naming Mount Larcombe, Gateombe Head, Facing Island, Curtis Channel, Sea Hill, Townsend, Leicester and Aken Islands, and Mount Westall, Cape Clinton, Mount Funnel, Upper Head, and the Percy Isles.

He regarded Broadsound as suitable for cattle, maize, sugar, and coffee. Humpback whales were numerous off Thirsty Sound and at the Percy Islands.

At Sandy Cape, Flinders and three parties had landed to collect specimens and obtain firewood. A mob of blacks waved them back with green boughs. Bungaree left his spear and clothes and went naked to meet them. Flinders fed twenty of these wild warriors on the flesh of two porpoises brought ashore for the purpose. One tried to throw Bungaree's spear with the woomera, but threw both spear and woomera together. They were all quite friendly.

Leaving Broadsound on the 28th September, he sailed for the Cumberland Isles, from whence he sent the "Lady Nelson" back to Sydney, as she was not in a fit condition for a long voyage. On Curtis Island the master's mate and a seaman had rambled away into the bush, were kindly treated, and brought back by the blacks. Flinders went outside the Barrier Reef and steered for Torres Strait, arriving at and naming Pandora's Entrance on the 28th October, named Murray and Good's Islands, landed at the Coen River on the 7th November, was off the Nassau on the 13th, named Sweer's Island, Inspection Hill, Bentinck Island, Allen's Island, Wellesley Isles, Horseshoe Island, and Bountiful Island, where they found many turtles full of eggs. One weighing 459 lb. had 1,940 small eggs inside. He named Mornington Island, Vanderlin's Island, Observation Island, West, North, and Centre Isles, Pellew's Group and Cape Pellew, Cape Maria, Winchelsea, Finch and Chasm Islands (where they got the Eugenia apple and nutmegs), Burney's, Nicol's, and Woodah Isles, Bustard Isles, Mount Griudall, Blue Mud Bay, and Morgan's Island. At Blue Mud Bay one of the party (Westwood) while on shore was attacked by the blacks and struck by four spears. Morgan's Island was named in honour of a seaman who died raving mad from sunstroke. After visiting Timor, Flinders returned to Sydney.

On Wednesday, 10th August, 1803, he left Sydney in the "Porpoise," accompanied by the East India Company's ship "Bridgewater," of 750 tons, Captain E. H. Palmer, and the London ship "Cato," Captain John Park, and steered north-east for Torres Strait. On the 17th the "Porpoise" and "Cato" were totally lost on Wreck Reef. The "Bridgewater" kept on her course, and left the wrecked crews to take care of themselves. This vessel reached Calcutta, where Palmer published an untrue account of the ships; and he and the "Bridgewater" were lost on the way to England. In the "Porpoise" and "Cato" wrecks, three lads were drowned, one of these having been wrecked on three or four previous occasions. All the others landed on a reef above high water, erected tents, and secured enough stores to serve the ninety-four men for three months.

On 26th August, Flinders and thirteen men left for Sydney in the cutter "Hope" to bring a relief vessel for the people left on the reef. On the 30th they passed Cape Morton, landed to obtain water on Mortou Islaud, and anchored for the night in the bight near the rocks a mile and a-half north of Point Lookout. On the 8th September they entered Port Jackson, where Governor King engaged the "Rolla," the "Cumberland," and "Francis," small schooners of 29 tons each, to bring back the people from the wrecked vessels. Flinders started from Port Jackson in the "Cumberland"

on 21st September, accompanied by the "Francis" and "Rolla," arriving at the wrecks on 1st October, to the great joy of the eighty officers and men camped on the sandbank. During Flinders' absence the people had built a new cutter, and called her the "Resource."

Flinders took ten officers and men for the "Cumberland's" voyage to England. Some of the others returned to Port Jackson in the "Francis" and "Resource," and the balance went to China in the "Rolla."

On 11th October Flinders parted from the "Rolla" and steered for Torres Strait, and on the 10th November anchored off the Island of Timor.

From Timor and Coepang he sailed for Mauritius, and on 17th of December, 1803, entered the harbour of Port Louis. Here the "Cumberland" and all the charts and papers were seized, and Flinders detained as a prisoner by Governor du Caen, an officer of the French Revolution. France and England were then at war. Flinders was detained as a prisoner at Mauritius for six years, finally leaving on the 14th June, 1810, arriving in England in October, after an absence of nine years and three months. He died in London in 1814, on the day that his book was published.

## OXLEY.

Surveyor-General Oxley sailed from Sydney in the cutter "Mermaid," Captain Penson, on 2nd October, 1823, accompanied by Lieutenant Stirling, of the Buffs, John Uniacke, a Sydney aboriginal called Bowen, and the crew. At that time the penal settlement had been formed at Port Macquarie for two years, and the district was required for free settlement. Oxley was therefore sent north to find a suitable site to which the convicts could be removed. The "Mermaid" called at Port Macquarie, and left again on the 27th. On the 31st, Oxley ran the cutter under the lee of an island near the mouth of the Tweed, and called it Turtle Island, as they captured seven large turtle out of twelve, on the south-east shore. He also discovered and named the Tweed River. Uniacke and Stirling landed on the island, the sides of which were covered with nests and eggs of petrels, mutton birds, and redbills. On the top were about 100 pelicans with many eggs and young, of which several were taken.

On the north-west end of the island was the wreck of a vessel, but nothing by which she could be identified, though they found a piece of slate with part of a name scratched on, and a case of mathematical instruments. Oxley thought the vessel might be one of the ships of La Perouse. He and Uniacke went some miles up the Tweed in the whaleboat, and were delighted with the beautiful scenery. On returning to the "Mermaid," they decided to sail at once with the favourable wind, and left the anchorage, watched by 200 armed blacks dancing and shouting on the main beach. On Thursday, 6th November, at noon, the cutter anchored at Port Curtis inside Gatcombe Head. Oxley was to survey Port Curtis and Morton Bay to find a suitable site for a convict settlement. The weather was hot, the thermometer standing night and day from 85 to 95 degrees in the cabin. Next day they started, with two boats and three days' provisions, to explore the shores of the port, camping all night on a sandy beach. Next day they marched twelve miles inland, over a succession of barren steep hills covered with loose quartz stones, coarse grass, and stunted gum trees. Beside a creek they saw a native grave at the

foot of a tree, from which 6 feet of the bark was stripped all round, and the wood carved with symbols like the tracks of birds and animals. In the meantime Captain Penson, who was away in another direction, discovered a river, which Oxley and Stirling ascended next day to the head of tide water, and returned to the "Mermaid." On the following day they again started and went up twelve miles, the river showing traces of tremendous floods. The water was covered by teal, widgeon, and black duck, and Stirling shot two swamp pheasants. Next day the boat went six miles higher, and returned to the cutter. The mate of the "Mermaid" had been down the coast for twelve miles, being away all night, and reported finding a large harbour, which proved to be the Rodd's Bay of Captain King.

The river explored by Oxley he named the Boyne, and from 1840 to 1846 this stream was confounded with the Burnett by the Morton Bay squatters. Oxley abandoned his intention to go north and examine Port Bowen, the harbour behind Cape Clinton, and sailed south to Morton Bay.

At 6 o'clock in the evening of Saturday, 29th November, the "Mermaid" anchored at the mouth of Bribie Island Passage (Flinders' Pumice-stone River), about 150 yards from the shore, which had not been visited by Europeans since Flinders landed there in August, 1799. Uniacke, in his journal, writes: "Hardly was the anchor down when we saw a lot of natives about a mile away coming rapidly towards the vessel, and on looking at them with the glass I saw one larger than the rest and of a light copper colour, while all the rest were black. This I pointed out to Mr. Stirling, so that we were all on the lookout when they approached, and to our surprise and satisfaction this man when opposite the vessel hailed us in English. The boat was launched at once, and Oxley, Stirling, and I went ashore. The natives were dancing and embracing the white man, who was nearly as wild as themselves. He was so bewildered with joy that we could make little out of his story that night, so we distributed a few knives and handkerchiefs among the blacks and returned to the cutter, taking the white man with us." This man was Thomas Pamphlet, one of four men driven north from Illawarra in a cedar cutter's boat, and finally cast ashore on Morton Island. Their names were Richard Parsons, John Finnegan, John Thompson, and Thomas Pamphlet, all ticket-of-leave or time-expired convicts. They had left Sydney on 21st March, 1823, in a large open boat 29 feet 6 inches long and 10 feet beam, driven north by gales. On 15th April they ran ashore on the outer beach of Morton Island. Thompson had died from thirst and been thrown overboard. The other three were treated kindly by the blacks and taken to Amity Point, from whence they went over to the mainland. They were so ignorant as to believe themselves south of Sydney, though the east coast had been on their left hand all the way north from Illawarra. They were evidently men of a low type, and could hardly have given the blacks a very favourable opinion of the white race. The three were continually quarrelling, and Parsons tried several times to kill Finnegan. Finally they started to walk to Sydney, and on the way crossed the Brisbane River. Pamphlet turned back after going about fifty miles, and Finnegan, after a row with Parsons, also came back and appeared on the beach at Toorbul Point in the afternoon of the day following the Saturday on which Pamphlet was discovered.

So Finnegan was also taken on board the "Mermaid," and on Monday morning, 2nd December, 1823, he piloted Oxley and Stirling into the Brisbane River, while Uniacke remained collecting specimens on Bribie Island. At sunset they camped five miles above the present site of Brisbane, and next day went up thirty miles more, according to Oxley's journal, and turned at a place he called Termination Hill. He was much impressed by the beauty of the scenery, and the magnificent timber. He unwisely concluded that the river had its source in some inland lake, and not on any of the ranges. They reached the "Mermaid" at Bribie Island late at night on the 5th, after an absence of four days. He named the river after Sir Thomas Brisbane, the Governor of New South Wales. Oxley recommended Redcliffe Point as the best site for a penal settlement, but to be regarded "more in the light of a naval post or depôt for stores than as being well adapted for a principal settlement." He regarded the west side of the river at the head of Sea Reach as a better site for a permanent establishment. This would refer to the locality from Breakfast Creek upwards.

## ALLAN CUNNINGHAM.

This is the first connected biographical sketch of the famous botanist, and the facts, brief as they are, were scattered over many publications long out of print and public notice.

Allan Cunningham, eldest son of Allan Cunningham, of Renfrewshire, was born at Wimbledon, Surrey, on 13th July, 1791. He arrived at Sydney a passenger in the convict ship "Surrey," Captain Raine, on 20th December, 1816, as collector for the Royal Gardens at Kew. He was collecting at Bathurst in April, 1817, and in December of that year went out with Captain King in the "Mermaid," from Sydney, and accompanied him on all his four year voyages along the Australia coasts in the "Mermaid" and "Bathurst," from 1817 to 1821. He was at Parramatta on 4th January, 1823, and left for Bathurst with five men and five packhorses, with provisions for ten weeks. On that journey he discovered and named Pandora's Pass, through the Blue Mountains to Liverpool Plains. On 20th January, 1827, he landed in Sydney, after a tour in New Zealand; and on 20th April of that year he left the Hunter River with six men and eleven horses *viâ* Liverpool Plains and the Peel River to the Darling Downs, which he discovered, and named on 5th June. He also named Canning Downs, Peel's Plains, Mount Sturt, and Logan Vale. On his return he named the Gwydir River, and arrived at Liverpool Plains on the 21st July.

In June, 1828, he started by sea in the "Lucy Ann" for Brisbane, with Fraser, the Colonial Botanist, went up the Logan River to Mount Lindesay with Fraser and Captain Logan, left the party near the Peak Mountain, called at Ipswich (Limestone), and started for the Gap he had seen the previous year from the Downs. Discovered it on the 25th August, and passed through to the Downs; returned to Brisbane, and left in the schooner "Isabella" for Sydney on 29th October, 1828. In January, 1829, he went again over the Blue Mountains, and in May returned to Brisbane by sea, went up to the head of the Bremer, collected over West Morton, and left for Sydney in September.

He left Sydney in May, 1830, in the "Lucy Ann" for Norfolk Island, where Colonel Morissett was then commandant. He went over to Phillip Island, and was plundered there by eleven runaway convicts. Returned to Sydney on 28th July, and paid a last collecting visit to his beloved Illawarra. On 6th January, 1831, he started on his last trip to the Blue Mountains.

He left Sydney for London on 25th February, 1831, and while lying off Watson's Bay, in Sydney Harbour, went ashore and rambled over Vaucluse, discovering there the beautiful *Spiranthes Australis*, which he had only seen once in fourteen years.

He arrived in London in July, 1831, after an absence of fifteen years.

In Sydney in 1832, Fraser, the Colonial Botanist, died, and Richard Cunningham, Allan's brother, was offered the position.

He arrived in Sydney in February, 1833, and was killed at the age of forty-two, in the end of April, 1835, by the Bogan blacks, after rambling away from Sir Thomas Mitchell's expedition. His body was never found.

Final proofs of his death were received by his brother in May, 1836, and then Allan accepted the vacant position, arriving in Sydney 12th February, 1837, with Captain Gatenby in the convict ship "Norfolk."

In the New South Wales *Government Gazette* of 1st March, 1837, appears a notice of his appointment as "Colonial Botanist and Superintendent of Botanical Gardens." He resigned that position in disgust in December, the same year, as he declined to preside over a vegetable garden for officials. In a letter to a friend he wrote—"Tell all that I have discharged the Government cabbage garden in disgust."

He left Sydney on 15th April, 1838, in the French corvette "L'Heroine," thirty-two guns, Captain Cecille, who offered a pass to New Zealand, and treated Cunningham so well that he said they were the most agreeable days of his life. He assisted Captain Cecille while collecting timber specimens on the Wycuddy River, and stayed there for some time with Mr. Williams, at the mission station, returning to Sydney on 30th October, 1838, in a state of physical collapse, and his health ruined.

His last letter is dated at Sydney on 8th June, 1839. On the 24th he was taken from his lodgings in Elizabeth street to the cottage in the Botanic Gardens, where he died on the 27th in the arms of James Anderson, his successor, and was buried in the Scots Church, in which a monumental tablet was placed by his friend, Captain King.

Cunningham called himself an Englishman of Scottish extraction.

In the Sydney *Gazette* of 26th October, 1839, appears a notice from the originators of a movement to erect a worthy memorial, signed by P. P. King and J. Dobie, R.N., H. H. McArthur, M.C., N. Leithbridge, J.P., and C. Nicholson, M.D.

Thus peacefully, at the age of forty-eight, passed away the gentle spirit of Allan Cunningham, the botanist, one of the most beautiful characters among that gallant band whose genius and heroism were the first sun-rays through dark clouds in the gloomy morning of Australia.

## CHARLES FRASER.

Charles Fraser, Colonial Botanist in 1828, was sent to Brisbane, June, 1828, to "establish a public garden, to collect the vegetable products of the country, to make observations on their uses and importance, especially the forest trees, to report on the nature of the soil, and to what extent it is fitted for grazing or agriculture." He came through Amity Point in the ship "Lucy Ann," after a passage of twenty-three days from Sydney; arrived at Brisbane next day, accompanied by Allan Cunningham. On 2nd July he crossed the river to examine some dense forests on its southern bank. "On my return to Brisbane town in the afternoon I accompanied Captain Logan to the intended site of the new garden, where we felled a magnificent tree of *Flindersia Australis* loaded with ripe fruit." This is the first mention of the site of the present Brisbane Botanic Gardens. Next day, 3rd July, he was employed in "laying down the boundaries of the new garden, and fixing the situation of a large pond in the centre."

On the 4th he "accompanied Captain Logan to examine a forest on the bank of a stream called Breakfast Creek, three miles north-west of Brisbane town, noted for its gigantic timber and the vast variety of its plants." In this scrub he and Cunningham found and named the Morton Bay chestnut, or "bean tree" (*Castanospermum Australis*). The roasted bean of this tree was eaten largely by the convicts, and used regularly by the blacks. On 5th July he found an aboriginal cemetery in the hollow trunk of a dead gum tree, filled with bones of all ages mixed together. Many of the skulls had been "carried away by scientific persons."

On 11th July he went with Logan to the Limestone station on the Bremer River. The south side of the Brisbane River was covered with forests of pine. The scrubs on the north side contained vast quantities of yellow-wood, tulip, and silky oak. At that time Oxley Creek was called Canoe Creek. Two miles above that creek was a quarry of excellent freestone, which was soft when cut and became hard as granite by exposure. This stone was used for the convict buildings.

He saw many beds of coal cropping out of the river banks, from Redbank up to the Bremer. On 12th July he thought of going to Mount Flinders, the Peak Mountain ("Broompa" of the natives), and from the top of a high range obtained a magnificent view of the Peak with its terrific northern front of perpendicular rock.

On 15th July, while following up Breakfast Creek, he met some aboriginal women who set up a dreadful yell which brought a lot of the men, but they offered no violence.

On 19th July he examined the cotton plantation at Dunwich, on the site of the present asylum for the destitute aged of both sexes.

On 23rd July he and Captain Logan, Allan Cunningham, one soldier, and five convicts started with pack bullocks to go to Mount Warning, at that time confounded with Mount Lindesay. They crossed Cowper's Plains next day and camped on the banks of Canoe Creek (Oxley). Near this creek they saw a high oval-shaped grave, and about forty large *Banksia* trees lying round it, cut by a steel axe, and their tops placed over the grave, near which was a big hole full of water, terminating a well-beaten path. Fraser erroneously assumed the grave to be that of a runaway convict. On the bank of the Logan he saw a triangle of upright sticks capped by a sheet of bark. Logan

told him the blacks, when leaving a locality, left their nets, bags, mats, chisels, and superfluous implements in these places until they returned, and no other blacks would disturb them under any circumstances.

In this depôt he found "a kangaroo net 50 feet long and 5½ feet wide, of most excellent twine, fine as any made in Europe, but much stronger and woven in a manner that would do credit to a professed net-maker. Also a fishing net of a beautifully fine mesh and dyed black, forming in the water an inverted cone 7 feet deep. (This was the towrow net of the Morton Bay tribes.) Also a dilly-bag made of grass-tree leaves, and strong enough to bear any weight; heelamans light as cork and made of the wood of the stinging-tree; two chisels pointed with flint, and an iron wedge, evidently stolen from Brisbane town."

Thence the party travelled up the valley of the Logan towards Mount Lindesay, passing a blacks' camp where the gins were roasting beans and the root of cunjieboy, the fire in a semicircle of stones with the wood projecting. The camps were roofed with grass. Crossed a plain covered with emus, forded the Logan River on 1st August, the morning cold and frosty, thermometer down to 35 degrees. Along the valley of Glen Lyon, Mount Lindesay towering in the distance, past cedar scrubs full of turkeys, and on 3rd August started to ascend the spurs of Mount Lindesay.

On the 4th they took the heights by trigonometrical survey, which gave 4,755 feet to Mount Lindesay above their base line, estimated at 900 feet; Mount Hooker at 4,000, and Clanmorris at 5,000 feet. [Mount Lindesay is only 4,700 feet above the sea.]

Latitude of Mount Lindesay, 28 degrees 18 minutes 21 seconds south, longitude 152 degrees 0 minutes ·06 seconds. Thence they travelled towards the Teviot by Minto Craigs (on the Teviot), where a lot of emus followed them for some distance.

On the 7th Fraser ascended Minto Craigs, precipices of silicious trap, and got a new acacia and several other plants. At the foot of the rock he killed an 8-feet brown snake, torpid with cold. Dalhousie Plains were covered with emus, and enclosed some of the largest ponds in the east coast of New Holland. Here they abandoned the hope of reaching Cunningham's Gap on account of the impervious pine scrubs on Mount French, and started on a more easterly course. On the 8th they passed over the flats on the east side of Mount French, and the chain of ponds that commences at their north-east extremity soon becomes united, and forms a beautiful stream which was named the Esk, and the dale, Eskdale.

On 11th August, Fraser and Logan returned to Brisbane, while Cunningham with three men and two bullocks started to discover the Gap. Fraser finished laying off the garden before leaving for Sydney.

"BEAGLE" AND "FLY."

The "Beagle," Captain Wickham, was out on surveying cruises from 1837 to 1843. The account of these was written by J. Lort Stokes, a lieutenant on board. On 17th October, 1838, they were on the north-west coast of Australia, and discovered and named the Victoria River. Not until June, 1841, did the "Beagle" appear on the East Queensland coast. She stayed five days at Magnetic Island to

rate her chronometers. Stokes says the blacks at that time probably walked across at low tide from Magnetic Island to the mainland at Cape Pallarenda (Cape Marlowe).

Thence the "Beagle" went round Cape York, and down to the shores of the Gulf on an exploring tour. They discovered the Flinders River, and entered with the boats on 28th July, 1841, and on the 4th August Stokes got his first view of the open downs, which he named the Plains of Promise. They saw abundance of game—redbills, geese, ducks, emus, bustards, wallabies, and kangaroos, but no swans on the north-west coast.

Two days after finding and naming the Flinders they discovered and named the Albert, entering the mouth on the 30th July. After returning to Sydney, *via* Port Essington, the "Beagle" was ordered home, and the "Fly" and "Bramble," under Captain Blackwood, arrived in Sydney 10th October, 1841, to take her place. At Tasmania Stokes took the last of the Tasmanian natives from Port Dalrymple to Flinders Island in the "Vansittart." They included one old man and woman, two young men, and a boy.

The cruise of H.M.S. "Fly," Captain Blackwood, extended from 1842 to 1846. An account was written by J. Beete Jukes. John McGillivray was the naturalist on board, sent out by the Earl of Derby. Bynoe was surgeon. The "Fly" anchored off the Bunker Group on 7th January, 1843.

On "W" Island, on the 21st, they saw where shipwrecked people had cut letters on the trees; on one "The 'America,' June, 1831"; "Mary Ann Broughton," "Captain E. David," and "'Nelson,' November, 1831"; also soles of a child's shoes, bottles, broken dishes, and an old cask. There was nothing to show if all had escaped or perished. The "Fly" stayed a couple of weeks at Port Bowen, and while there her people saw the famous comet of 1843. On 25th March they were in Port Molle, where Dowling, the coxswain of the pinnace, drowned himself while suffering from fever. On 13th May, the boats pulled seven miles up Wickham's River, now called the Burdekin, crossed inland and named by Leichardt in 1845. Jukes said "the soil of this river is very good—for Australia."

On 19th May the "Fly" was at Goold Island, where a fishing party were attacked by the blacks, one of whom was shot, and some charges of No. 4 fired at others. The blacks there used fine canoes with long diamond-bladed paddles like those at Torres Strait. On 5th June they were at Lizard Island, and while ashore near Cape Direction one of the men, named Bayley, was speared in the back by an aborigiual and died on the third day, the barbed spear having passed between two of the ribs and the spine, splintering all three bones.

They saw the wrecks of the "Ferguson" (1840) and the "Martha Ridgeway" (1841). The "Ferguson" had some of the 50th Regiment on board, but nearly all were saved by a companion vessel. Jukes spent a night on the wreck of the "Martha Ridgeway." On 1st August the "Fly" anchored in Pandora Entrance, named after H.M.S. "Pandora," wrecked there in 1791 returning from Tahiti with part of the mutineers of the "Bounty." On 20th August, 1844, Jukes, McGillivray, and artist Melville landed on Cape York Island, and saw a big heap of skull and bones, chiefly turtle. They took this

to be a grave, but it was really a lookout place for dugong fishermen. They found the Murray Islanders tall, stout, muscular men, heavier limbed than the Australians, dark brown skin, teeth perfect, quite naked, with a raised oval-shaped epaulette scar on the shoulder.

## LEICHARDT.

No previous history of Leichardt has ever been published, the only attempt being an article on "Lost Leichardt" written by me for the Christmas number of a Brisbane weekly newspaper in 1889. This biography includes Leichardt's early life in Germany, and a brief outline of all else known of the famous explorer up to the present time. [In Australia he frequently spelled his name with one "h."]

Frederick William Ludwig Leichardt, second youngest son of Christian Leichardt and his wife Sophia Strehlow, was born in the village of Trabatsch, Neumark, Prussia, on 23rd October, 1813. In 1824 he entered the Friedrich Wilhelm's Gymnasium (grammar school), and in 1829 he left there, with flattering testimonials, for the University of Berlin, where he remained until 1833, and then went to Gottingen, where he heard Blumenbach, Muller, Ewald, Bartling, Webber, and Herbart, all of whom testified to young Leichardt's abilities and industry. He stayed at Gottingen until September, 1834, and then returned to Berlin as a student at the university. Fortunately for Leichardt he met a fellow student named William Alleyne Nicholson, who became an earnest and generous friend. His liberality enabled Leichardt to study medicine from 1836 to 1837 in Germany and at the Royal College of Surgeons in England.

Nicholson's father died on the 16th June, 1838, leaving a fortune to his son, who esteemed Leichardt so highly that he actually made a will leaving him all he possessed. Lucy Nicholson, a sister of his friend, was the woman to whom Leichardt was passionately attached, and for whose sake he desired fame and fortune as an explorer so that he might be worthy of her hand. On the 14th July Leichardt left London with Nicholson and went to Paris, where they entered as students of the university, and heard lectures from the great naturalists Dumreil, Geoffroy, and St. Hilaire.

In 1841 Leichardt visited Rome, Ferrara, Venice, Verona, Milan, and Bologna, and arrived at Berne, in Switzerland, on 16th May, 1841. His first appearance in Australia is in the position of an applicant for the curatorship of the Sydney Botanic Gardens on 10th May, 1842. He found another generous friend in Robert Lynd, the barrack master at Sydney, and in the end of 1842 he started on a collecting tour overland from Newcastle to Morton Bay. In 1843 and 1844 he was collecting in the Morton Bay and Wide Bay and Darling Downs districts, and wrote letters dated German Station, near Brisbane, 23rd June, 1843; Eale's station, Wide Bay, 7th August; Archer's station, 4th September; Mount Brisbane, 19th October and 8th November, 1843; and Archer's station on 9th January, 1844. The whole of the geological work done by Leichardt in those two years is only to be found in "Waugh's Almanac" for 1867 and 1868. In July, 1844, he had returned to Sydney, and in August he and his party left on the first exploring expedition. He left on his last journey in 1848. In the year 1853 the New South Wales Legislative Council voted a pension of £100 to Leichardt's mother.

In his journey to Port Essington he was subjected to no severe ordeal, having abundance of food and water, and a fair season from start to finish. In eight months they had only three days' rain. He was ill during nearly the whole of his second journey, and when starting from McPherson's station, on the Cogoon, in April, 1848, was suffering from palpitation of the heart. Leichardt was not a leader of men. He possessed hardly one of the qualifications of a leader. Any competent Australian bushman reading his account of his journey to Port Essington would see clearly enough that the first time he met with serious troubles he would involve himself and party in disaster.

As a scientist he commands our admiration. Very little escaped notice within the range of that ever-watchful eye. He collected intensely interesting information on the flora and fauna seen along the journey to Port Essington. Much of that information was embodied in lectures delivered in Sydney on the 18th and 25th August, 1846. These lectures were revised and published in a pamphlet by a Mr. Baker, of King street, a publication unfortunately so rare that I was able to obtain or hear of only one copy. He described all the roots, seeds, fruits, and vegetables used as food on the journey. His knowledge of botany enabled him to ascertain to what species the plants belonged, and the properties of those to which they were allied in other parts of the world. His botanical skill supplied his party and himself with a variety of vegetable food unknown to all other explorers. He was not sentimentally fastidious in his diet, and ate all available animal food, from tree grubs and snakes to kangaroos and flying-foxes. Fat foxes were a favourite dish.

### His First Journey.

He left Sydney in the steamer "Sovereign" (afterwards wrecked at the South Passage with the loss of forty-four people) on the 13th August, 1844, bringing James Calvert, John Roper, John Murphy (a boy sixteen years of age), a ticket-of-leave man named Bill Phillips, and Harry Browne, a Newcastle aboriginal. The "Sovereign" occupied a week on the journey, a little more than is required by the clipper steamers of to-day. Before leaving the Downs the party were increased by Pemberton Hodgson; Mr. Gilbert, a naturalist who had been with Gould; Caleb, an American negro; and Charley, a Bathurst aboriginal. There was not one competent bushman in the whole expedition. The instruments were represented by a sextant and an artificial horizon, a chronometer, Kater's compass, and small thermometer. He also carried Arrowsmith's map of New Holland. Among the provisions were 1,200 lb. of flour, 200 lb. of sugar, 80 lb. of tea, and 20 lb. of gelatine. They took 30 lb. of powder and eight bags of shot, chiefly Nos. 4 and 6. Those were the days of muzzle-loaders. He estimated the time at seven months, whereas the journey occupied fourteen months and a-half. They left Jimbour, then called Jimba, on the 1st October, 1844, and launched, buoyant with hope, into the wilderness of Australia. On the 17th Charley threatened to shoot Gilbert, and was in a state of insubordination. He was dismissed in the morning and pardoned in the evening. They were all poor sportsmen, and, like Burke and Wills and King, would have starved in the midst of plenty. On 3rd November he decided to reduce his party, and Caleb and Hodgson returned to the Darling Downs. On the 6th November they crossed the Dawson, named after

R. Dawson, of the Hunter River. On the 7th an old-man kangaroo killed two of the dogs. On the 14th he named the Gilbert Range after the naturalist, and Lynd's Range after Robert Lynd. They passed waterholes full of dewfish and eels, and swamps covered with plovers and ducks. They ate iguanas, 'possums, shellfish, and all manner of birds. On the 27th Leichardt named the Expedition Range, Mount Nicholson after Dr. Nicholson, M.L.C., Sydney, and Aldis Peak after a Mr. Aldis, of Sydney. On the 28th he named the Boyd River after Benjamin Boyd. On 5th December he had named Zamia Creek and Bigges' Mountain after Bigges, the squatter at the present Grandchester. On the 7th one of the horses was speared by the blacks. On the 29th he named the Comet River, from a comet visible on that date. On the 31st they saw the remains of a camp, evidently made by white men, with a ridge-pole and two forks cut by a sharp axe. Who were these lonely strangers, and whence and whither? No answer from the Silences. One native seen that day looked like a half-caste. On 10th January he reached the Mackenzie, called after Sir Evan Mackenzie.

The blacks, so far, were either friendly or declined communication. He says—"The Mackenzie blacks called water 'yarrai,' the same as on the Downs," whereas water on the Downs is "goong," and "camoo" and "coomoo" on the Mackenzie and Dawson. The scared old gin on a tree top was not alluding to water when she said "yarrai-yah," but simply telling him laconically to go away. He says—"The hunting nets were made from the bark of the cooramin tree," whereas "cooramin" is the word for kangaroo, the animal caught by the nets. Sir Thomas Mitchell was equally unfortunate in confusing the information received from the blacks.

And so the explorers journeyed on to the Burdekin, following that river past the Valley of Lagoons, away up to the head waters; crossed the Dividing Range on to the Lynd, followed that river down to the Mitchell, along the Mitchell until near the coast; then doubled back on the 25th June, and came down the shores of the Gulf, touching the coast a little north of the Staaten River, thence skirting the Gulf away across all the rivers to within sight of the sea near the mouth of the Limmen Bight River, and thence travelled westward across the Peninsula to the settlement at Port Essington, arriving on the 17th December, 1845. They were kindly received by the commandant, Captain McArthur, and, after recruiting there for some weeks, started with Captain McKenzie in the schooner "Heroine," and arrived in Sydney on the 29th March, 1846.

Of the party who had started from Jimbour one man never returned. That man was Gilbert, the naturalist, a pupil of the famous Gould. Poor Gilbert lies in his lonely grave by the side of a lagoon on a box-tree flat on the Nassau, the victim of a leader's want of caution. On the night of the 28th June, 1845, the party camped by a lagoon on the Nassau, in latitude 15 degrees 55 minutes. They were at that time surrounded by hostile, dangerous blacks. Yet no watch was kept. They camped in tents far apart, Phillips actually on the opposite side of the lagoon, and all went serenely off to sleep, leaving even the fires burning brightly to mark their position to the blacks. A shower of spears and a chorus of fearful yells woke them up to find that their guns had no caps on, and the whole party only

eseaped total destruction in a manner little short of miraculous. Calvert and Roper were pierced by several spears and severely bruised by nullas. A fine-pointed spear had been driven into Gilbert's left lung. He walked over to where Leichardt and Charley were standing by the fire, handed his gun to Charley, saying, "The blacks have killed me"; pulled out the spear, and died in a few minutes.

Leichardt and party landed at Sydney on the 29th Mareh, 1846, greatly to the astonishment and much to the delight of the general public, who had come to regard them as the "lost explorers." Leichardt and his men were either swept away by floods, dead from starvation, perished from thirst, murdered by blaeks, or hopelessly lost.

Pathetie artieles and mournful paragraphs bewailed the fate of the doomed men, and chief of the bards who rushed prematurely into epitaphic verse was Robert Lynd, whose name Leichardt had bestowed on the tributary of the Mitchell. His poem, expressing a sad desire for someone to "pluck a leaf on Leichardt's tomb," is printed in Dr. Lang's "Queensland." Much more useful to Leichardt than the applause of the crowd and the pæans of poets was a grant of £1,000 from the Legislative Counеil, and a snm of £1,518 18s. 6d. subscribed by the general publie. From the last amount Leichardt reeeived a share of £854, and from the State grant £600; Calvert and Roper getting each £125, Murphy £70, Phillips £30 and a free pardon, and the two blaeks £25 each. The £854 was presented to Leichardt in the Sydney School of Arts by the President of the Council on the 21st September, 1846. He thus received personally a total sum of £1,454.

After a few months' sojourn in Sydney, where he was treated to the most generous hospitality, Leichardt prepared for his second expedition.

Particulars of this trip were written by John F. Mann, a member of Leiehardt's party.

Leiehardt's intention was to cross the continent from east to west. At the end of one of the leetures delivered in Sydney in August, 1846, he thus announced his future intentions—

I shall proceed at once to latitude 23 degrees, where I found the Mackenzie and Peak Range during my last journey, and as the Mackenzie was well supplied with water, shall follow it up to its sources, probably 80 or 100 miles west of where we struck the river. I might then find out if the western branches of the supposed watershed go south to join the Darling, or turn north as the sources of the great rivers of the Gulf. In the last case, if there were sufficient water, I would go west and try to reach the north-west coast. If there were no water to go west or north, I would return down the Mackenzie and follow my first journey up to the junction of the Clarke and Burdekin in latitude 19 degrees 12 minutes. I would follow the Clarke, and doubtless easily find the head of the Flinders after crossing a tableland or dividing range. I would then go on to the Albert, and follow it up to find the latitude of its sources and nature of country. Then I would try a westerly course to the heads of the Nicholson, Van Alphen, Abel Tasman, Robinson, and Macarthur, and from the latter river would hope to reach the waters of the west coast in about latitude 17 degrees 18 minutes. Should I succeed, I shall turn south parallel to the north-west and west coast until I reach Swan River. This journey I hope to complete in two years.

On the night of 30th September, 1846, Leichardt, Hovenden Hely, and Daniel Bunce left Sydney for Raymond Terrace in the H.R.S. Company's steamer "Thistle."

On the following day, Perry, Bœcking, and Meyer left by the "Cornubia."

On the 15th October J. B. Mann left for Brisbane by the "Tamar" in charge of the heavy luggage, and to pick up ten head of cattle presented out of the Government herd at Redbank. He wisely

sold these cattle, bought others on the Downs at the same price, and saved droving and risk. All the stores went to Ipswich in the "Experiment" (Pearce, owner), the first steamer that ever ran on the Brisbane River.

On the 6th October he went to Ipswich with J. Bowie Wilson, McConnel, and Gideon Scott, dining on the way with Dr. Simpson, C.L. Commissioner. At Ipswich he got a letter from Leichardt at Eton Vale, telling him to see Major North about certain horses and to get some rhubarb and magnesia. Mann says that Dr. Dorsay kindly supplied him with all the medicines he could spare.

In the Maitland *Mercury* of 1846 I find that Leichardt's party were in Stroud on the 8th October, preparing to start. All "wore red shirts and cabbage-tree hats," and were daily expecting the doctor from Taree. They had twelve horses and fifteen mules, twelve of which were obtained from the A. A. Company; one was presented by Wentworth, and two by H. H. McArthur, besides 270 goats purchased from Wentworth, of Windemere. The horses came from King's Irrawang Station.

When the whole party were finally together at Oakey Creek they possessed 14 horses, 16 mules, 270 goats, 100 sheep, 4 dogs, and 40 head of cattle. That was certainly a lively procession to face the flooded rivers and mulga and brigalow scrubs of the West! Leichardt less resembled an Australian explorer than one of the old Hyskos or Shepherd Kings driven forth by tribal wars to stock and populate a new territory. They carried ½ ton of flour, 200 lb. tea, 200 lb. sugar, 200 lb. salt, 50 lb. powder, 200 lb. shot, six bars soap, and 20 lb. of gelatine and tapioca. Their weapons included eight guns and two swords. For camping they had only two 8 x 6 tents. The mules were a source of trouble from the start. These cantankerous animals, when not engaged exercising their hind legs in kicking the atmosphere, were distributing their loads impartially over the surface of the surrounding territory.

They started along Leichardt's first track towards the Comet and the Peak Range, intending to go thence towards the west coast of Australia. The party included H. Hely; James Perry, a saddler; Bœcking, a German tanner and baker; Daniel Bunce, botanical collector; J. B. Mann; Turnbull, from the A.A. Company; and Brown and Womai, two blacks from Newcastle and Port Stephens. On this trip Leichardt resembled "some unhappy master whom unmerciful disaster followed fast and followed faster," until there was no prospect of escape. On Charley's Creek they were detained twenty-five days recovering their stock scattered in a night panic by Leichardt walking through them to "accustom them to his presence!" Hely came into camp on the 13th, from Drayton, then called the Springs (myall "Moyumneura"), with the mails and letters. Reaching the Dawson they found that river and its tributaries flooded, and the country very soft. One of the mules kicked the doctor in the stomach. Colds, face-ache, and influenza were prevalent. The mules were one prolonged calamity. The atmosphere was thick with sandflies and mosquitoes. The doctor was usually in a frantic rage with the mules, or the goats, or some of his party. When his men were sick he had no physic. He told them at the start that he had a complete medicine chest and a set of surgical instruments. He had no ointment, bandage, physic, lint, or plaster of any sort, and his "instruments consisted of a knife

for skinning birds and a bullet mould for drawing teeth!" He had actually induced those who had medicine to leave it behind at the stations! This neglect entailed incalculable suffering on the whole party. He would not even kill the sheep or cattle to supply proper food, but kept them on lean, tough goat meat. They were delayed for weeks camped by the flooded Mackenzie, and all were miserably ill with fever and ague. The doctor was very despondent in his illness, but said he "would die in Australia for Australia."

On 19th April they sighted the Peak Range. All the sheep and goats (230) had been abandoned in the Mackenzie scrubs, and some of the mules, horses, and cattle were lost. On the 5th May they camped close to the Peaks. [The Comet blacks call these peaks "Bababoola," and Table Mountain "Wingganna."]

Weeks of valuable time were wasted here in hunting for stray mules and cattle. Five of these mules actually went back for 600 miles to the Darling Downs, making for Port Stephens. Hely and Brown were once out for eleven days, and again for nine days. The weather was cold, the thermometer even falling to 25 degrees; they had a wretched camp, and were all sick. Their flour and sugar were done, and much of the meat was more or less putrid. Their lives were probably saved by the game they shot. On the 21st June they started to return to the Darling Downs, and on the 24th July, after a miserable journey—in which the thermometer once fell to 18 degrees—arrived all half dead from sickness at Jimbour, where they were hospitably received by Bell. There was a decidedly strained relationship between the doctor and his companions, not one of whom entertained towards him any very friendly feeling.

On the 3rd August Hely and Mann left for Brisbane, arriving on the 7th at Ipswich, where Mann remained for a few days with Dr. Dorsay. In Brisbane they were entertained by Gordon Sandeman, Pierce, and others, with a supper at Bow's Hotel.

On the 9th August Leichardt started away West for Fitzroy Downs to connect his surveys with those of Mitchell. He was accompanied by F. N. Isaacs, Bunce, Perry, and a blackboy. That journey was also a failure. After returning to the Downs he started for Brisbane, and arrived on Monday, 4th October, 1847, and left on Wednesday by steamer for Sydney.

The following graphic and interesting description of Leichardt is given by J. B. Mann, who for a period of eight months had the best possible opportunities of observing his appearance and general disposition:—"In appearance Leichardt possessed a commanding presence, being a little over 6 feet in height. He was by no means the strong man which those who knew him only in Sydney supposed him to be. All tendency to robustness vanished soon after we commenced our journey. I was much surprised to notice his slightly built frame and absence of muscular development. His head was well shaped, with high intellectual forehead, small gray intelligent eyes, dark brows, brown hair; the lower part of his face was hidden by a bushy beard and moustache; nose slightly aquiline. A few months in his company were sufficient to convince one that he was a man of more than ordinary intellect. His conversation was most fascinating; a thorough English scholar, writing and conversing most fluently in that language; his slight foreign accent, I suppose, added to his charm. His age, he said, was thirty-five years. As a

naturalist I believe that he stood high in the estimation of those who were competent to form an opinion of his talents. As a leader he was wholly unfitted for such a responsible position, being deficient in almost every requirement for such an important post. He possessed neither patience, temper, nor ingenuity ; the organ of locality was apparently absent, as well as any mechanical conception. He really had no taste for drawing, nor could he distinguish one picture from another any more than he could distinguish one tune from another. He did not like music; there were only two tunes he cared to listen to. They were the huntsman's chorus in 'Der Freischütz' and the overture to 'Masaniello.' It was difficult to make out what religion he professed. He certainly was not a Christian. He might have been a Unitarian. Judging from more circumstances than one, I believe him to be a Jew. Bœcking, his countryman, a most intelligent, well-informed man, was of the same opinion. It was suggested to him by one of our party that prayers should be read every Sunday. His reply was, 'I do not care for those things myself, but if you choose to have them among yourselves I have no objection.'" And now

THE LAST JOURNEY,

in which Leichardt unexpectedly fulfilled his Peak Downs intention of "dying in Australia for Australia." His companions on this fatal expedition were Hentig, Classen, Donald Stuart, Kelly, Womai, and Billy. Donald Stuart had been for some time with Leslie at Canning Downs. The blackboy Womai was the Womai of his second trip. The party came overland from the Hunter, with the mules and horses, and Leichardt came from the Downs to Brisbane to get thirty fat bullocks from Redbank, presented by Sir Charles Fitzroy. He left Brisbane on Wednesday, 16th February, 1848. They started from the Downs with fifty bullocks, twenty mules, and six horses ; besides 800 lb. flour, 150 lb. tea, 100 lb. salt, 250 lb. shot, 40 lb. powder, but *no sugar*. His last letter is dated the 4th April, 1848, from McPherson's station, on the Cogoon, beyond Mount Abundance. He was then suffering from palpitation, and apparently had never recovered from the effects of his unfortunate journey to the Peak Downs. On the way out he stayed a night with Chauvel at Weeambilla Creek.

Hovenden Hely went out with a search party to the head of the Warrego in 1852, and returned with a collection of consistent tales from the blacks. In 1858 A. C. Gregory, with eight men and a complete equipment, went west from Juanda across the divide of the Dawson on to the Maranoa, and found a Morton Bay ash marked ⊏ and other evidences of a camp in latitude 25 degrees 35 minutes, longitude 36 degrees 6 minutes. The country was in a state of desolation, the long drought having dried up the rivers and lagoons, and turned the beautiful downs into a desert. On the 28th May they saw one of Kennedy's marked trees, of 1847. They went out to Streletzki Creek, past Lake Torrens and Mount Hopeless, thence to Adelaide, and returned to Sydney by sea. The marked tree seen by Gregory was eighty miles beyond where the blacks told Hely all Leichardt's people were murdered. That solitary letter on the Morton Bay ash is left to tell us of the direction travelled by the lost explorer, if we are sure it was not cut by one of Kennedy's or Mitchell's men. Landsborough's expedition, after

Burke and Wills, obtained no information whatever concerning Leichardt. Hely had traced him to the head of the Warrego, and his last known camp when Gregory went out was 230 miles beyond Surat. Thenceforth the Egyptian darkness is only pierced by the lightning flash of rumours which reveal nothing. Hume's tale of Classen living with the blacks, and Skuthorpe's relics of the lost explorer, must be consigned to the usual fate of discoveries that rest solely on the unsupported assertion of the discoverer. If Classen was a man of vitality and strong physique it would be quite possible to remain alive to old age among a tribe of friendly blacks. Buckley was with the Victorian natives for thirty-three years. Finding goat-hair ornaments among far Western tribes is not much value in face of the fact that Leichardt took no goats on the last expedition. The hair from the 150 goats abandoned on the Mackenzie on his second trip would be passed from tribe to tribe over immense distances. Goat mutton would be a standard dish at myall banquets in the Comet district long after Leichardt left. There are still old blacks out there who remember Leichardt's goats, cows, and mules. They called the sheep and goats "mang-gee," the bullocks "boolah," and the horse "wandee," the word for wild.

In the year 1866 Uhr's black troopers at Cardwell had two gins who were brought down from the Suttor River. They gave a complete and perfectly true account of Leichardt's party and all their movements on the Comet, but concluded by saying that the blacks surprised them one night and exterminated the whole band.

Gregory says Leichardt intended to follow down the Barcoo to its northern bend, and then steer towards supposed ranges at the head of north-west rivers. His opinion is that the party left the Barcoo at the junction with the Alice, and travelled far into the desert country to the north-west and perished from thirst. Ernest Favenc holds a somewhat similar opinion, believing the whole party vanished in the Central Desert.

In his work on the "Dominion of Australia," W. H. L. Ranken draws a highly poetic picture of the last hours of Leichardt's party involved in tremendous floods in the basin of Cooper's Creek and swept away into destruction. "Last of all, as the waters sapped and drowned the camp fire, Ludwig Leichardt strode into the flood and passed away upon that exploration of which no traveller has ever reported." The flood theory is also that of Mann, Giles, and Forrest.

In 1864 the ladies of Victoria sent out a Leichardt search expedition under McIntyre, who had previously seen a tree marked L and two old saddle-marked horses 300 miles from the Gulf to the west of Burke's track. Unfortunately McIntyre died of malarial fever before leaving the Gulf.

Gilmour found six skeletons away out in Central Australia, heard various rumours concerning a white man living with the blacks, but came back with only a piece of moleskin and oilcloth.

In 1862, when McDowall Stuart was returning across Sturt's Desert, he was met by a small party of wild blacks, among whom was a half-caste boy about thirteen years of age. This boy would be accounted for by Leichardt's party passing that way in 1848, unless we are to credit him to Sturt's expedition of 1845. It is incredible

that Stuart took no notice of this boy, nor ever thought of an attempt to ascertain his parentage. He passes over that most important episode as an ordinary occurrence of no interest whatever.

On 13th July, 1856, A. C. Gregory saw a tree marked L on Elsey Creek in the Northern Territory. In his last letter but one Leichardt said—"I shall go north from the Victoria (Barcoo) until I come to decided waters of the Gulf, and then go west."

## SIR THOMAS MITCHELL.

In this volume we are concerned only for the last expedition of the famous explorer who has left so much interesting record of his journeys into wild Australia of the early days. His final trip was intended to open an overland route from Sydney to the Gulf of Carpentaria, partly to facilitate an export horse trade to India, and avoid the then dangerous navigation along the tropical north coast and through Torres Strait. A sum of £2,000 was voted by the New South Wales Government, and the whole party started from Buree on the 15th December, 1845. Second in command was Edmund B. Kennedy, who in 1848 led the fatal expedition in the Cape York Peninsula. Besides Mitchell, Kennedy, and Dr. Stephenson, there were twenty-six other white men, of whom all but three were convicts in different stages of probation. The equipment included 8 drays, 3 light carts, 2 iron portable boats, 80 bullocks, 17 horses, and 250 sheep, certainly the most imposing and formidable land expedition ever fitted out in Australia. An aboriginal named Bultje acted as pilot from Goobang Creek to the Bogan. On the Bogan Mitchell saw the "remains of dairies burned down, stockyards in ruins, and untrodden roads" where pioneer squatters had been driven back by the blacks.

On 13th February the dry bed of the Macquarie was snddenly swept by a flood which came down in a wall of water, a "moving cataract tossing before it ancient trees, and snapping them against its banks, the product of heavy rains in the Turon Mountains, for there was not a shower in the locality of the camp." Mitchell is one of the very few explorers to whom the present is indebted for the preservation of many aboriginal names for lagoons, rivers, and mountains. The Castlereagh was called the Barron; the Macquarie, Wammerawa; the Darling, the Barwan, the name now given to the McIntyre.

From the blacks he also got the name of the Narran River, which he crossed on 21st March.

Guided by natives, the party crossed the Balonne and the Culgoa, turned and followed up the course of the Balonne to a branch the blacks called Cogoon. On 5th May the thermometer, at sunrise, stood at 19 degrees, or 13 degrees of frost, near Mount Minute. On the 6th he rested his theodolite on the top of Mount Redcap, so named from the colour of the rock.

Starting a north-west course on the 7th May, he discovered and named Mount Abundance, the well-known station near Roma. Next day the thermometer stood at 21 degrees, yet there was not even a hoar-frost. He stood on Mount Abundance and beheld the finest country he had ever seen in a primeval state. He named it Fitzroy Downs, and the mountains to the south-east the Grafton Range. Here Mitchell saw the first specimens of the bottle-tree

(*Sterculia rupestris*), some 12 feet in diameter, the bulging centre double the size of the base. On 11th May he got the names of Mounts Bindango and Bindaigo from the blacks, being then camped by Tangando Creek. On the 12th he rode into the channel of Amby Creek, the name given by a blackfellow, who also called it Culgoa, doubtless meaning that it ran into the Culgoa. At Tangando Creek, an old black had pointed to the north-west, and frequently repeated the word "Maranoa," and on the 17th May Mitchell rode on to the banks of that stream, and saw a river large as the Darling, with steep sloping banks, dark green reeds, and extensive reaches of water. The temperature at sunrise was 29 degrees, noon 78 degrees. In the open air on 20th, it fell to 12 degrees, the river frozen and the grass white with hoar-frost. Here he awaited the arrival of Kennedy and rear party with the drays, on the 1st June. Forming a depôt on the Maranoa and leaving Kennedy and the main body in charge, he took the blackboy Yuranigh and a small party and started north-west towards the head of the Warrego, crossing the dry channel of the Maranoa on the 17th June, naming Mounts Kennedy, Owen, Clift, Ogilby, Faraday, Hope's and Buckland's Tablelands, and Mount Aquarius. Passing Mount P. P. King, 2,646 feet, he followed up the Warrego, crossed the divide with his carts near Mount Faraday, 2,500 feet, and entered the valley of the Salvator River through magnificently picturesque scenery. Mitchell was then looking for a river that would take him to the Gulf of Carpentaria. On top of the range the thermometer fell to 12 degrees at sunrise. The valley of the Salvator he called Salvator Rosa, after the immortal artist. He says it was a discovery worthy of the toils of a pilgrimage. The hills overhanging that valley surpassed all he had ever seen in picturesque outline. Some resembled Gothic cathedrals in ruins, others looked like forts. Many were perforated, and being mixed and contrasted with the flowing outlines of evergreen woods, and having a fine stream in the foreground, gave a charming appearance to the whole country. Those beautiful recesses of unpeopled earth could no longer remain unknown. The river was full of springs, and ended in a lovely lake, Salvator.

Martin's Range forms one of the most charming pictures among Mitchell's sketches of that journey. Descending the Salvator and passing through a "sea of brigalow," they came once more on the graceful *Acacia pendula* (myall) and open plains blended with waving lines of wood extended far into blue distance, beyond which an azure coronet of mountains, of romantic forms, terminated the charming landscape, the finest he had ever the good fortune to discover. On the 11th July he discovered and named the Claude, after another famous artist, and on that river next morning the thermometer showed 21 degrees of frost at only 1,107 feet above the sea! Thence he travelled north, crossed and named Balmy Creek, a tributary of the Nogoa, past the wonderful Tower Almond and Glen Turret, across the Drummond Range into the valley of the Belyando, naming Mount Mudge (after Colonel Mudge), Mount Beaufort, Mount Narrieu, past big lagoons full of wildfowl, through brigalow scrubs, across flats of wild indigo 6 feet high, discovering many new and rare plants, and meeting many natives, some of them splendid men over 6 feet in height and nearly all very friendly and polite. On 10th August one of the natives gave Mitchell the name of the Belyando, which he followed down to the Suttor in latitude 21 degrees 30 minutes, and then turned back, being

satisfied that it ran to the east coast. On returning to the Claude he named Mantuan Downs, after Mantua, the birthplace of Virgil, whose pastoral poems Claude de Lorraine so beautifully illustrated.

In the gorge at the head of the Claude, Mitchell formed a depôt camp, where he left Dr. Stephenson in charge, and taking the blackboy and two of the men he started on a journey westward, crossing the range at Mount Pluto, through vine scrubs and thickets of cypress pine, into brigalow on the western slopes, and down to a chain of lagoons, where they met an old gin who told them the lagoons were called Coono (evidently "Coomo," the word for water in that dialect), and they ran into the Warrego, or she pointed north-west and said "Warrego," and Mitchell took the word to be the name of a river; but "Warrego" in that dialect is "bad," and the old gin was simply warning Mitchell that he better not go farther in that direction. Two days afterwards, on 13th September, 1846, he found and named the Nive and Nivelle in commemoration of Lord Wellington's action on the Nive. He fondly hoped that this river would run to Carpentaria. He ran the Nive for twenty-two miles without seeing a drop of water, but got a pool next morning near the camp. From the Nive he crossed the Warrego Range on to the Barcoo watershed, and there "beheld downs and plains extending westward beyond the reach of vision," the course of a stream visible in the distance. Here at last was an interior river, a "reward direct from Heaven for his perseverance." He compared himself with Ulloa looking out on the Pacific. And so he travelled on across beautiful downs, through brigalow, following the waterfall until he found the river, no longer a chain of dry ponds in brigalow scrub, but a channel shaded by lofty Yarra (box-gum) trees, with open grassy banks and long reaches of water covered with wildfowl. Old mussel-shells (Unio) were in heaps like cartloads along the banks, remains of native feasts. Mitchell is full of wonder, full of poetry and enthusiasm, as he describes all the beauties and marvels of that country. On 22nd September he reached the point where two rivers formed a junction, the result being the "broad, deep, and placid waters of a river large as the Murray." Wildfowl were in thousands, mussel-shells of extraordinary size, resembling snow, and covering the ground. He was lost in rapture at the verdure of the vegetation, the lake-like expanses of water, the boundless plains, "all forming the finest region I had ever seen in Australia." The native bees, according to his blackfellow, Yuranigh, were the smallest he ever saw, but they produced good honey, fine flavour, slightly acidulous.

Across open downs, the soil a fine blue clay with gravel, still following down the Barcoo tributaries until he reached a river which he called the Alice. From thence he went westward towards the Thomson, but turned before reaching that river, and recrossed the Barcoo on his way homewards on 25th September, the river 400 yards wide, and on the 28th he named Mounts Grey, Gowen, Kœnig, Northampton, and Inniskillen, reaching the river again, and "with sentiments of devotion, zeal, and loyalty gave it the name of my gracious Sovereign Queen Victoria."

This river was traced downwards the following year by Kennedy, and found to be the upper part of Sturt's Cooper's Creek. Kennedy met blacks who called it the Barcoo, the name it has retained ever since.

Mitchell then returned to the Nive and Nivelle, travelling straight for Mount Pluto in the Main Range, ascending that mountain on the north-west side to the summit at 2,420 feet, the temperature at noon 9 degrees on 6th October, and arrived at the depôt camp to find all well. On the 10th they started the return journey, Mitchell ascending Mount Faraday, 2,523 feet, finding it volcanic, with broken sides of an old crater towards the north-west; some compact basalt on the summit.

Thence back along the old track to Mount Owen, following down the Maranoa to the base of supplies, and the rearguard party, on 19th October, 1846.

This party had erected a stockyard, and the garden was full of lettuce, radish, melon, and cucumbers.

From there Mitchell followed the Maranoa to the Balonne, and thence by the Mooni, the Barwan, and the Namoi to Sydney.

One of Sir Thomas Mitchell's daughters married Captain J. B. Mann, a member of Leichardt's second expedition, and now residing at Neutral Bay, Sydney.

"RATTLESNAKE."

H.M.S. "Rattlesnake," 180 officers and men, Captain Owen Stanley, was commissioned at Portsmouth on 24th September, 1846, for a surveying and scientific cruise. On board were Huxley, the now famous evolutionist, and John McGillivray, naturalist for the Earl of Derby. A history of the whole cruise was written by McGillivray. They appeared in Queensland, at Morton Bay, on 18th October, 1847. There they saw a small dugong fishery, by white men, and the blacks fishing with porpoises. On 4th November they left, in company with the "Bramble," for Port Curtis, where the settlement first attempted in January, 1847, had been abandoned. Huxley and McGillivray had a two days' excursion on Facing Island. The blacks never came near, as they had been fired at frequently by the "Lord Auckland" people. They shot a plain turkey, weighing 22½ lb.

On 8th December they anchored in the Molle Passage, inside Whitsunday Passage, and stayed two days. Thence they ran north to Cape Upstart, and sent two boats ashore to get water from the pools visited by the "Fly" people in 1844. The pools were empty, and Captain Stanley, being afraid of not finding water on Goold Island, actually turned and ran back to Sydney.

It is amusing at this date to read of a vessel turning back in dread of a water famine on the best watered coast in Australia. While in Sydney the 50,000 inhabitants of that city were celebrating their 60th anniversary.

On 29th April, 1848, they left again for the North, escorting the "Tam o' Shanter" barque, on board of which were all the members and outfit of Kennedy's exploring party. On the 21st May the "Rattlesnake" and "Tam o' Shanter" were anchored on the north-west side of Goold Island, in Rockingham Bay. On the 24th (Queen's Birthday) the party landed near Tam o' Shanter Point, under a salute from the guns of the "Rattlesnake." Captain Stanley remained there assisting Kennedy with the ship's boats until he crossed the Liverpool Creek and Murray. On the Franklands they found two clumps of cocoanut-trees in full bearing, the first seen on Australian soil.

At Double Point a wallaby, chased by a dingo, swam out to sea, and was taken on board the vessel, where it lived several days. On Cape Grafton they found a huge crocodile skull, pronounced by Gray to be identical with the crocodile of the Ganges. While off Cape Tribulation they named the Peter Botte Mountain, because it looked exactly like the Peter Botte of Mauritius.

On Eagle Island they found the largest number of pretty shells. On this island Captain Cook had seen a sea-eagle's nest 26 feet round and 2 feet 8 inches high. An American professor said it was the nest of a moa!

On 16th October they rescued a white woman from the Kowrarega tribe of Prince of Wales Island (Mooralug). Her name was Barbara Thomson, and she had originally emigrated with her parents to New South Wales. Four and a-half years before her rescue she left Morton Bay in the cutter "America," with her husband, who went to pick up some oil from a whaler wrecked on Bampton Shoal, intending to go on to Port Essington. Two of the men were drowned and one left on an uninhabited island. The rest were wrecked on a reef off Prince of Wales Island. The two men were drowned while swimming for shore, and she was rescued by the blacks. She became the wife of her rescuer, a native named Boróto; and a chief named Piaquai said she was the ghost of a long-lost daughter named Giom, and adopted her in the tribe, with whom she was a favourite. She spoke the language fluently, and McGillivray's vocabulary of Kowrarega was chiefly obtained from her. She was handed over, in excellent condition, to her parents in Sydney after the return of the "Rattlesnake."

Among the collectors was a Mr. J. C. Wilcox, the naturalist, said by McGillivray to be the best shot on the expedition. This gentleman settled, in after years, on the Clarence River, where he died.

## EDWARD KENNEDY.

This explorer was assistant surveyor and second in command under Sir Thomas Mitchell in 1846, when the Barcoo was discovered.

Mitchell's enthusiasm concerning the Barcoo, which he called the Victoria, not knowing it to be Sturt's Cooper's Creek, induced him to describe it as the most important in Australia, and the downs and plains through which it flows equal to supplying the whole world with animal food! Kennedy traced this river down for 100 miles in 1847. He found a considerable river entering the Barcoo from the north-east, and named it the Thomson, after E. Deas Thomson, of Sydney. Kennedy saw the Barcoo spreading out into many channels, which again united in fine broad reaches, showing traces of extensive floods. He went far enough to identify the Barcoo with Mitchell's Victoria and Cooper's Creek, his track following for a time a course afterwards taken by Gregory in 1858, and extending near to Burke's farthest point north-east on 14th December, 1861. Kennedy intended to go to the Gulf, but the provisions he had buried at his Barcoo camp of the 16th August were found and removed by the blacks, so he started back, returning by Mount Playfair, across the Warrego, and down the Maranoa and Culgoa to the Barwan, and thence to Sydney.

Kennedy's last journey was to the Cape York Peninsula. He intended to follow the Peninsula along past Princess Charlotte's Bay to Cape York, thence back along the shores of the Gulf to the

Flinders, and south by the Belyando across the continent to Sydney. He landed from the schooner "Tam o' Shanter" in Rockingham Bay, under the guns of H.M.S. "Rattlesnake," on the 24th May, 1848. He had 12 men, 28 horses, 100 sheep, 3 kangaroo dogs, and 1 sheep dog, 8 carbines, 4 shotguns, 1 rifle, 13 pairs of pistols, 1 ton of flour, 90 lb. tea, 600 lb. sugar.

The party included E. B. Kennedy, leader; W. Carron, botanist; T. Wall, naturalist; C. Niblet, storekeeper; Luff, Taylor, and Costigan, carters; Goddard, Mitchell, Douglas, Dunn, and Carpenter, labourers. There was also a blackfellow called Jackey Jackey (Galmarra), a native of Patrick's Plains, Hunter River. The "Tam o' Shanter," Captain Merionberg, left Sydney on 29th April, 1848, in charge of the "Rattlesnake," and after a weary passage of three weeks arrived in Rockingham Bay on the 21st May, losing one horse and eleven sheep on the voyage.

The equipment included 1 heavy square cart, 2 spring carts, harness for 9 horses, 4 tents, a canvas sheepfold, 24 pack saddles, 22 lb. gunpowder, 130 lb. shot, quarter-cask of ammunition, and all other necessaries for an exploring expedition. On the morning of the 24th May, Queen Victoria's 29th birthday, they began landing the expedition near the present Tam o' Shanter Point in Rockingham Bay, latitude 17 degrees 58 minutes 10 seconds, longitude 146 degrees 8 minutes. Kennedy was under the delusion that he had to travel over open downs country like that of the Barcoo and Maranoa, whereas before him rose the lofty coast range clothed from base to summit by dense tropical jungle. The rations for the week for the thirteen men were 100 lb. flour, 26 lb. sugar, 3½ lb. tea, and a sheep every second day. Finding the range impassable they went south along the coast towards Cardwell. A boat was sent from the "Rattlesnake" to help them over the Mackay River. Large numbers of blacks assembled, but were all friendly. Next day they reached another river, and crossed with some difficulty, continuing along the coast to the vicinity of Cardwell before finding a possible ascent of the range. On the way they saw a native village of eighteen camps, one 18 feet long, 7 feet wide, and 14 feet high, roofed with tea-tree bark. Inside were wooden swords, a large shield, and fishing-lines with mussel-shell hooks. Beside the camps were four large ground-ovens, 2 feet deep and 3 feet in diameter. These are filled with waterworn stones and a fire made on top. When the stones are hot the fire is swept off and the food placed on top to cook. The blacks helped the party to cross one of the rivers. One of the men, Carpenter, sneaked away and took a lot of provisions, but he returned and was pardoned. Carron, in his journal, says this man was little better than an idiot. Subsequent experience proved that some of the party were worthless characters, and at least two or three were common scoundrels. In one river (now the Tully) they saw a crocodile 20 feet long. Kennedy and five men were out for four days trying to find a track across the swamps lying between the coast and the range. On 27th June they first started on a westerly course, after a month wasted in zigzagging along the coast. Two or three of the men suffered from fever. On 24th July some blacks made a hostile demonstration, and one spear was thrown. Kennedy ordered his men to fire, and four of the blacks were shot. This unfortunate

fatal collision meant war with the natives for all the rest of the journey, for each tribe would advise the next, and so the tribes along the route would treat the whites as enemies. On 8th July they were cutting a track through thick scrub in approaching the coast range.

On the 14th an axle broke, and the cart and harness were left behind; the other carts were also left at the camp where the party stayed at night. On the 28th July they arrived at the foot of the range, and on the 31st began the ascent through thick scrub. Carron says—"Kennedy spoke very highly of Jackey, and thought him one of the best men of the party for cutting away scrub and choosing a path, and he never seemed to be tired, and was very careful to avoid deep gullies." On the 9th August they were 2,000 feet above the sea, and the trees mentioned by Carron show that the party were over the range and on the heads of the Herbert River. On the 14th Kennedy found that Niblett had been making false returns of the stores issued weekly, and placed Carron in charge. There was then only 7 cwt. flour, and the weekly ration was reduced. On the 16th they killed one of the horses and ate him. On the 18th they were travelling up the Herbert, a "fine river, with steep reedy banks lined with casuarinas and flooded gums." And so the party wandered on along the watershed of the Herbert, on to the heads of the Mitchell, and north to the rivers running to Princess Charlotte Bay, on their route along the peninsula to Weymouth Bay, killing and eating their horses, exhausting their provisions, and gradually losing health and strength. On the 5th September they were on the head of the Palmer River (site of present Maytown), which they followed westerly until the 10th and then turned northwards. The blacks here were hostile, and threw spears into the camp. On the 14th Carron got his first "pitcher plants," evidently on the Palmer River, as it was running south-west. A mob of blacks threatened the party and were fired at several times. So shamefully dishonest were some of Kennedy's men that Carron and Wall had to watch the food while cooking, and provisions were frequently stolen. On the 23rd September they got a supply of Leichardt's "Nonda" fruit and ate large quantities. On the 4th October they were in sight of Jane's Tableland, near Princess Charlotte Bay, and on the 9th crossed the Stewart River. The strength of the party was rapidly failing, and some were unable to walk.

On 4th November Jackey shot the first known Australian cassowary on the head of the Lockhardt River. On the 10th Kennedy decided to form an advance party with Jackey, Costigan, Luff, and Dunn, to push on to Cape York, and bring back supplies from the vessel "Ariel" sent to meet him at Albany Island. On the 11th they killed their last sheep near Weymouth Bay, and on the same day three of the men ate a black's tame dingo killed by Kennedy's dogs. Kennedy started on the 13th November, leaving Carron and the seven other men, all much emaciated and heartsick with hardships and disappointment. They were to try and make their provisions last for six weeks, the time in which Kennedy hoped to return. Kennedy with the three white men and Jackey travelled near the coast. Three weeks after leaving Carron's party, Costigan accidentally shot himself, the ball entering under the right arm and coming out at the back. Kennedy decided to leave Dunn and Luff with the wounded man at Pudding Pan Hill (named by Bligh, of the "Bounty,") and push on

with Jackey to Port Albany. Those three men were never seen again, dying either of starvation or being killed by the blacks. Some malignant fate presided over every stage of the expedition.

Kennedy and Jackey were continually surrounded by hostile blacks, now and then a few professing friendship, until one day in a patch of scrub near Escape River, in Newcastle Bay, a large mob of blacks, armed with bundles of long woomera spears, closed in on them and speared Kennedy in the back, the side, and through one leg. Jackey drew the spears and cut out the jags, he himself being struck by a spear over the left eye. The horses were also speared and ran into the swamp. The final scene is thus described by Jackey—"Kennedy say he feel bad inside. I tell him blackfellow always die when he get spear in back. He tell me give him paper and he try to write, but fell back and die, and I caught him and held him, and turn round myself and cry a good while until I got well." There is no more pathetic scene among the tragedies of exploration, not even in the Burke and Wills disaster. After digging a grave with a tomahawk and burying the body, Jackey started for Port Albany, and after unspeakable misery, starvation, and hairbreadth escapes, he arrived on 23rd December, 1848, on the shore opposite the "Ariel" in Port Albany, and was taken on board. "He looked very haggard, and told a woeful tale." Next morning the "Ariel" started to rescue the men left at Shelburne and Weymouth Bays. The attempt to find the men at Shelburne Bay was a failure, in fact the landing party did not even go where they were left, the presumption being that they had either died or been killed by the blacks, and a delay in searching for them or their remains would imperil the eight men left at Weymouth Bay. On 30th December the "Ariel" party landed at this bay and followed a lot of blacks sent on ahead with a note from Captain Dobson to Carron. Dr. Vallack thus refers to the first view of the camp—"On the other side of the hill, not 200 yards from us, were two men sitting down looking towards us, the tent and fire immediately behind them, two of the most pitiable creatures imaginable." Those two men were Carron and Goddard, the sole survivors. The other six had died of starvation or fever, and their remains were lying in shallow graves or in the bed of the creek beside the camp. Great numbers of blacks were near the two survivors. They had been hostile for some time, daily watching for an opportunity to come in and kill them. Another day would probably have left Jackey the sole survivor of Kennedy's expedition. When Jackey saw the large number of armed blacks he warned Dr. Vallack to "leave tent, leave everything, you get two men down long boat quick." Taking all they could carry, the party returned to the "Ariel." Carron was in a dreadful state, his legs swollen to three times their natural size. From Weymouth Bay the "Ariel" went direct to Sydney. Then the "Freak," Captain Simpson, was sent up by the Government to learn the fate of the three men left at Shelburne Bay, to recover Kennedy's papers concealed by Jackey in a hollow tree, and find Kennedy's remains.

On board the "Freak" were Jackey and two other natives from the same tribe. On 3rd May, 1849, the "Freak" landed her party at Weymouth Bay, accompanied by Captain Simpson, and others of the "Ariel" people. Jackey took them all direct to the site of the camp KLXXX, where they collected the bones of Wall and Niblett, the

last two men who died, and gathered a few mournful relics from the wreckage of the deserted camp. Then the "Freak" returned north to Escape River, as Jackey said it was useless looking for the three men left at Shelburne Bay. He took the party straight to where Kennedy was killed, and he carried the body to the scrub, but they failed to find the grave, as all trace of it had been washed out by the rain. "Jackey crossed the creek and found a small wooden bottle of quicksilver in the place where he had left it." He also recovered Kennedy's papers from a hollow tree, a long way up the Kennedy River in Newcastle Bay.

On 13th May, on the highest hill on the south end of Albany Island, the people from the "Freak" buried the remains of Thomas Wall and Charles Niblett, a dozen wild blacks being among the spectators. "Poor Jackey was much affected, and could not refrain from tears."

Captain Stanley afterwards erected a tombstone with inscription, and planted two cocoanuts near the grave.

The last resting-place of Kennedy remains unknown to the present day, and no tombstone will ever mark the grave of the lost explorer. Had there been no "Jackey Jackey" in that expedition, Kennedy and all his party, like those of Leichardt in the same fatal year, would have vanished into utter annihilation, leaving a dark curtain of oblivion to shroud for ever their journey and their graves.

Jackey is one of the truest heroes, one of the noblest characters, in Australian history. His reward was £50 from the Government, and his two companions received £10 each.

The *Maitland Mercury* of January, 1851, records the presentation of an address and a breastplate to Jackey, in the presence of a large number of whites and aboriginals.

The presentation was made by Major Crummer, Police Magistrate of East Maitland, at the local Court House.

A white man with a similar record would have been eulogised by poets and historians, and his memory perpetuated by some splendid monument. But that poor Hunter River savage shall long live in the annals of history, and his noble deeds, like all other noble work, grow more luminous as we recede from them, surest of all proofs that they deserve immortal remembrance.

## GREGORY BROTHERS' EXPLORATIONS.

The brothers Augustus Charles and Francis Thomas Gregory hold a prominent and honourable position among the early explorers of Australia. They began exploring on the east and north of Swan River in Western Australia in 1846. In 1848 A. C. Gregory led the Settlers' Expedition to the north of Perth, and the same year accompanied Lord Charles Fitzgerald's expedition to the Geraldine lead-mine. On this trip Lord Charles was speared through the leg by the blacks on the Murchison River.

In 1857 F. T. Gregory was engaged surveying on the Murchison, and made a long journey to the eastward of the Geraldine mine. In 1858 he led an expedition to the Lyons and Gascoyne Rivers, where a large tract of useful country was discovered. In 1861 he led the North-west Australian Expedition to Champion and Nicol Bays, and the Maitland, Ashburton, Sherlock, De Gray, and Harding Rivers. He returned to Perth on the 9th November, 1861.

On the 22nd July, 1855, A. C. Gregory anchored the barque "Monarch" and schooner "Tom Tough" at the bar of the Brisbane River on his way north as leader of the North Australian Exploring Expedition. On the 12th August he sailed from Morton Bay accompanied by H. C. Gregory, assistant commander; geologist, J. S. Wilson; artist and storekeeper, J. Baines; surgeon and naturalist, J. R. Elsey; botanist, Ferdinand Von Mueller; collector and preserver, J. Flood; overseer, G. Phibbs; and stockmen, &c., C. Humphries, R. Bowman, C. Dean, J. Melville, W. Dawson, W. Shewel, W. Selby, S. Macdonald, H. Richards, and J. Fahey.

On the 27th August they anchored in Port Essington. On the following day the "Monarch" ran on a reef off Port Patterson. They had to swim the horses two miles to the shore, and five were lost in transit at Treachery Bay on the 18th. On the 24th September the "Monarch" left for Singapore, after transferring all stores to the "Tom Tough," which then proceeded up the Victoria River, under Mr. Wilson, while Gregory and nine others started overland across the MacAdam Range. They saw lagoons covered with game, and many wild blacks, who were more frightened of the horses than the men. Two or three horses died from eating some poisonous plant. On the 12th October three horses were badly bitten by crocodiles in a salt-water creek near the Fitzmauriee River. On the 16th October they sighted the Victoria River, and shot a turkey, a hawk, and thirty-nine cockatoos. On the 20th they joined the party from the schooner. On the 29th they brought the schooner up to a point four miles above Sandy Island, and started to land the stores. One of the kangaroo dogs was taken by a crocodile. Eleven of the sheep were drowned in landing, leaving only twenty-six. All were engaged for a couple of weeks landing stores (much of which were damaged), erecting huts, planting vegetables, and repairing the schooner.

On the 24th November, accompanied by H. C. Gregory, Wilson, and Mueller, with seven horses and twenty days' provisions, Gregory started on an exploring tour up the Victoria River.

On the 5th December he found the river running through box flats, fine reaches of water, with dry sandbars, plenty of catfish, perch, and mussels. Returned to the main camp on the 13th. On the 3rd January, 1856, certain men were left in charge of the depôt camp, and Gregory made a final start, accompanied by H. C. Gregory, Baines, Mueller, Flood, Phibbs, Bowman, Dean, and Fahey, with thirty packhorses and six riding-horses. The provisions for five months included 1,470 lb. flour, 1,200 lb. pork, 200 lb. rice, 44 lb. sago, 280 lb. sugar, 36 lb. tea, 28 lb. coffee, 21 lb. tobacco, and 51 lb. soap. The equipment consisted of instruments, clothing, tents, ammunition, horseshoes, tools, saddlebags, saddles, bridles, and hobbles, 2,100 lb., a total weight of 2½ tons, or 180 lb. on each packhorse.

Each person took two hours' watch during the night. On the 28th January, formed a depôt camp in a small valley, while Gregory, H. C. Gregory, Dr. Mueller, and C. Dean, with eleven horses, started for the head of the Victoria River. Across sandstone hills, basalt plains, rocky ridges, spinifex-covered ranges, deep watercourses, vast flats covered by kangaroo grass 7 to 9 feet high, sandy country overgrown by small gums, acacias, and spinifex, called *Triodia* in Gregory's journal. Shot the crested pigeon, several varieties of ducks, snipe, small gulls, ground flock pigeons, and geese.

On the 22nd February named Sturt's Creek and Mount Wittenoon. On the 24th, on Sturt's Creek, saw great numbers of cockatoos, ducks, cranes, and crows feeding on wild rice and panicum. On the 28th, ducks, pelicans, and spoonbills were numerous and very wild. On through forests of white gum, white clay flats, red sandhills, ridges of sandstone rock, and red sand spinifex plains; named Mount Mueller on the 2nd March, passed a dry salt lake eight miles in diameter, and crossed country covered by a thin film of salt. On the 10th they started to return to the Victoria River across hills of schist and sandstone, through ironbark and bloodwood, acacia, and spinifex. Blacks tried occasionally to set fire to the camp by burning the grass, and they were fired at several times. Arrived at the depôt on the 28th, and started again on the 2nd April to explore the country to the eastward; reached the Wickham River on the 22nd April, followed it down to Depôt Creek, and reached the Victoria on the 29th. Arrived at the main camp on the 9th May, and found all well. Left again on 21st June for another exploring tour with six men, thirty-four horses, and five months' provisions. On the 13th July they saw the remains of a hut, the ashes of a fire, and trees cut down by iron axes on the banks of Elsey Creek. "Could not have been one of Leichardt's camps on his first journey to Port Essington, as not on that route, but possibly one of his camps on the last journey in which all were lost." On the 15th July camped on the Roper, where they found the fan-palm and the gigantic water-lily. Saw several circumcised natives, accompanied by a small dog.

On the 21st July two horses died from eating poison-bush. On the 31st August they reached the Albert River, and on the way had to fire at nineteen hostile blacks. Then they turned south on the overland journey to Morton Bay; reached the Burdekin on the 16th October, the Clark on the 20th, the Suttor on the 30th; crossed the Belyando on the 6th November, the Mackenzie on the 15th, the Comet on the 17th, the Dawson on the 21st; arrived at Connor and Fitz Station next day; and thence by Rannes, Rawbelle, Boondooma, Tabinga, Nanango, Collinton, Kilcoy, Durendur, and Caboolture, to Brisbane on the 10th December, 1856.

In response to a request from the Government of New South Wales, A. C. Gregory prepared an estimate of the cost of a Leichardt Search Expedition.

The estimate amounted to £4,158 7s. 8d., and was dated at Sydney, 16th September, 1857. Finally the party were equipped, and started from Juanda Station on the 27th of March, 1858. They included A. C. and C. F. Gregory, S. Burgoyne, G. Phibbs, R. Bowman, W. Selby, T. Dunn, W. Von Wedel, and D. Worrell, with 31 pack and 9 saddle horses, 300 lb. beef, 500 lb. bacon, 1,600 lb. flour, 100 lb. rice, 350 lb. sugar, 60 lb. tea, and 40 lb. tobacco, besides 1 Minie rifle, 8 double guns, 9 revolvers, 25 lb. powder, and 150 lb. shot and ball. On the 5th of April they reached the Maranoa, and followed it up to Mount Owen, passed Mount Playfair, on to the Nive, and thence by a north-west course to the Barcoo (the Victoria of Mitchell); saw a Morton Bay ash marked L in latitude 24 degrees 35 minutes, longitude 36 degrees 6 minutes, the supposed site of one of Leichardt's camps. The period was one of prolonged drought, which "had not only dried up all the water except in the deepest hollows in the channels of the main river, but the smaller

vegetation and even the trees were annihilated, making the country almost impassable by the quantity of dead branches, and it was scarcely possible to find subsistence for the horses."

Everywhere were traces of tremendous floods in some previous year. The back country was covered by scrubs of dead acacia. Heavy rain fell on the 2nd May. The country on the Thomson was a picture of desolation. Hardly a tree was left, and even the lower surfaces of the clouds assumed a lurid tinge from the reflection of the bare surface of red sand.

On the 28th May they saw a marked tree at the second camp of Kennedy on his return from the journey on which he proved the Victoria River of Mitchell to be the Cooper's Creek of Sturt.

Gregory then proceeded by Strcletzki Creek and Mount Hopeless to Adelaide, having discovered no traces of Leichardt except the marked tree eighty miles beyond where the blacks told Hely, in 1852, that Leichardt and all his party had been speared.

## BURKE AND WILLS.

The names of these explorers are familiar to Australians chiefly by reason of the tragic termination of their expedition.

Burke was the leader, with Landell and Wills second and third in command.

There was a strong desire in Victoria to emulate, and excel if possible, the other colonies in exploring the unknown portion of Australia.

Ambrose Kyte offered £1,000, which was increased by £3,400 from the public and £6,000 from the Legislature, besides a grant of £3,000 for camels from India, the total sum available being £13,400.

It was the most expensive and elaborately equipped of all Australian expeditions. Besides the three leaders already mentioned, the party included H. Beckler, L. Becker, W. O. Hodgkinson, C. J. Ferguson, T. F. McDonagh, W. Paton, P. Langan, O. Cowan, W. Brahe, R. Fletcher, John King, H. Creher, J. Dickford, and three Indians in charge of the camels. There were 17 men, 26 camels, and 28 horses. They left Melbourne on 20th August, 1860, parading through a joyful demonstration by the whole population. Trouble arose at an early date. Burke was destitute of all the qualities necessary in a leader of men, except courage. At Balranald he dismissed Ferguson for insubordination. Landell, the second in command, resigned, and was followed by Dr. Beckler, who subsequently withdrew his resignation. Landell predicted nothing but disaster after he discovered Burke's incompetence as leader.

Wills was a man deficient in that stern determination necessary to candidly advise a headstrong leader deficient in judgment. He was an amiable, polite man, whose policy was a fatal tacit acquiescence.

After Landell's resignation, Burke gave the position to Wills, and the post of third officer to a man named Wright, who was managing a station at Kinchica. This man was a calamity to the whole expedition. He fooled away three months' valuable time at Menindie, on the Darling, when he should have followed Burke and Wills. The advance party, including Burke and Wills, six men, half the camels and horses, arrived at Cooper's Creek on the 11th November, all well. They remained there for some time, making reconnoitring journeys in various directions, and expecting Wright and his party to

arrive from Menindie. As a final excuse for further delay, this calamitous individual despatched W. O. Hodgkinson to Melbourne for more funds to buy horses and sheep. Hodgkinson went to Melbourne and back in twenty-one days, a journey of 1,000 miles. Had Hodgkinson been the leader of the party in place of Wright, the Burke and Wills expedition would have probably ended without the death of a single individual. He would have pushed on and overtaken Burke and Wills at Cooper's Creek, and been ready to follow on their tracks to the Gulf. But the incompetent general selected equally incompetent captains. Wright was no better qualified to lead one party than Burke to lead the other. Burke left Brahe with three men, six camels, and twelve horses at Cooper's Creek, to remain there three months, while he himself, with Wills, King, and Grey, six camels, one horse, and three months' provisions, started for the Gulf on 16th December, 1860. They crossed the track of Sturt in 1845, travelled parallel with that track along the edge of the Stony Desert, to the point reached by Sturt on 21st October, 1845, and then steered a fairly straight line across to the Flinders River, arriving near the mouth of that river on the Gulf of Carpentaria, on the 18th February, 1861. On the return journey Grey died from dysentery and starvation—a cruel death accelerated by ill-usage from Burke.

Burke, Wills, and King arrived at the Cooper's Creek depôt on the 21st April, after an absence of four and a-half months, to find Wright and Brahe had both gone, leaving about a fortnight's provisions buried under a tree. Brahe had actually left that morning, and was only seven hours ahead.

There had been no failure of duty on his part, as he stayed some weeks longer than instructed. Then Burke, with his usual fatalistic blundering, started to go by Mount Hopeless to Adelaide, an unknown road, instead of following on his own track after Brahe. They lost themselves, and returned to Cooper's Creek. Their last camel died, and they were reduced to living on nardoo seeds. The blacks were friendly and treated them kindly, but shifted camp and went elsewhere, leaving the three explorers dependent on nardoo. Burke and Wills died, and King found the blacks and lived with them until rescued by Howitt's search party. The body of Wills was found in the blacks' camp, where King had buried him with sand and rushes. Burke's body was discovered in long grass among box-trees, the rusty revolver, loaded and capped, still lying beside the fleshless hands.

In the party led by the calamitous Wright, there were four men died—Becker, Purcell, Stone, and Paton.

King was found sitting in a blacks' camp, wasted to a shadow. The friendly natives were delighted to see the rescue party, and they received graceful treatment from Howitt as a reward for the preservation of King.

The journey to the Gulf was comparatively barren of scientific results. Burke's notes are brief, and give no picture of any part of the trip, and those of Wills are not very lucid or instructive. The most important geographical feature to which they gave a name was the Cloncurry River. They travelled rapidly, and made few observations. The trip was described by William Howitt as a piece of splendid lunacy. And the fatal mistake of appointing Burke as

leader, followed by Burke's appointment of Wright, led to the miserable death of seven men, a transcontinental journey with little useful result, collapse of a costly expedition, and the despatch of four expensive search parties from various points of the Australian continent. The direct result of the deadly and irretrievable error of placing the incapable man in the responsible position! Carlyle's "unutterably fatal man put in the high places of men"! What has mankind suffered for this, one of the fatalest of mistakes! And how much more has it still to suffer?

### McKINLAY.

John McKinlay was leader of one of the expeditions sent out to search for Burke and Wills. He started from Adelaide on the 16th August, 1861, and reached the mouth of the Albert River at the Gulf on the 18th May, 1862. McKinlay was a competent bushman, cautious in his movements, possessed of great endurance, and with the firmness necessary in a leader. They started with 10 men, 4 camels, 24 horses, 12 bullocks, and 100 sheep. One of the members of this party, and second in command, was W. O. Hodgkinson. They arrived at Cooper's Creek on the 6th December, and on the 7th saw Burke's grave under the tree marked with his initials and the date 21-9-61. McKinlay then started northward for the Gulf of Carpentaria, Howitt having discovered the fate of Burke and Wills, and there being no necessity for further search. They passed away northwards towards the Lake region, Sturt's Ponds, and Lake Hodgkinson. While here McKinlay, accompanied by Hodgkinson and Wylde, went fifty-seven miles into the desert and saw nothing but dry lakes, dry creeks, red sandhills, and stones. The part of Sturt's desert crossed by this party was a scene of floods and mud, very different from the days of the terrible drought endured by Sturt. Their route was across the Cloncurry towards the Leichardt, which they reached on the 9th May, and the Albert River on the 13th. On the 21st May the party started for Port Denison, on the Queensland coast, across country more or less known by the previous explorations of Mitchell, Kennedy, Leichardt, and Gregory. They crossed the Burdekin on 28th and 29th July, two days being required to get men, goods, and animals over. Crocodiles were numerous in the river, and came unpleasantly near. On 30th July they killed their last camel, "Siva," who in this case was the "saver" instead of the "destroyer." They had more or less continuous sickness on the whole journey, the men suffering very much from fever and gastric troubles. On 2nd August they arrived at Harvey and Somers' station on the Bowen, and made a combined attack on roast beef and damper—a pleasant change from boiled camel and stewed packhorse. In his diary of this date McKinlay says—"The flour, during the night and for some days after, had the most astonishing effect on all of us, as our digestive organs could not digest the bread, being so accustomed to the easily digested meat. We were in great pain, and our legs and feet swelled very much."

They arrived at Bowen on the 8th August, 1862.

About a month after Landsborough landed in Melbourne from the Gulf of Carpentaria, in his search for Burke and Wills, news was received of McKinlay's safe arrival at Bowen, though nothing had been

heard concerning him since he found Grey's grave on Cooper's Creek. McKinlay and Landsborough were the recipients of a public demonstration by 3,000 people in the Melbourne Exhibition Building, the Hon. M. Hervey in the chair. Eulogistic speeches were made by the chairman and Dr. Cairns, the two explorers receiving a splendid reception.

## FREDERICK WALKER.

Frederick Walker was the leader of the party who went out from Rockhampton in search of Burke and Wills. He was a first-class bushman with considerable knowledge of the blacks, and all the energy and decision necessary for the position. Such a man could know nothing of what Mirabeau called "that blockhead of a word—impossible."

His expedition was arranged by the Victorian Government through the agency of Captain Mayne, of Sydney. He was to go from Rockhampton to the Albert River on the Gulf of Carpentaria. In his official report he says—"I received Captain Mayne's letter on the 6th of August (1861). Returned that day forty miles to Bauhinia Downs, and stopped there next day to arrange affairs with my friend C. B. Dutton; sent Patrick to collect my men, and gave directions to Jack Horsfeldt to cure the meat for the expedition." He started, fully equipped, from Dutton's station on the Dawson on the 7th September, 1861. On the 16th he was out on the Nogoa, went through Walker's Pass to the Neville, crossed to the Barcoo on the 27th, followed that river for three days, and on the 5th October found trees marked by Gregory and Leichardt. Leaving the Barcoo they steered north-west to the Alice, passing horse-tracks supposed to be those of Leichardt. Crossing the Downs between the Alice and Thomson they struck a branch of the latter and named it the Coreena.

On the 16th they named Mounts Macalister and Horsfeld, where they found blacks possessing iron tomahawks and a broadaxe.

Here and on the head of the Thomson they saw traces of Leichardt's camps. From the peak of Mount Macalister they saw plains so vast that one of Walker's blacks exclaimed, "Baal nother side this country!" Then they passed on to the head waters of the Barkly, crossed the Camlaroy and the Houghton, and named Mounts Gilbee, Castor, and Pollux. They struck a tributary of the Flinders and called it the Norman. In this course they crossed the Macadam, Dutton, Stawell, Woolgar, Patience, Grateful, and Despond Creeks. On 30th October they had a collision with hostile blacks, killing twelve and wounding several others. Possibly Walker's black troopers were the cause of his frequent strained relationship with the natives.

On the 25th they came to the junction of the Norman and the Flinders, and struck the trail of Burke and Wills. Next day one of the troopers found Burke's return track. On the 27th Walker picked up two leaves from Burke's memorandum book. On the 29th they reached Morning Inlet, on the Gulf. On the 1st December they were attacked by the natives, whom they "routed with considerable loss." On the 3rd they reached one of Gregory's camps on the Albert River.

On the 7th December Walker shook hands with Captain Norman at the depôt on the Albert, three months and twelve days after leaving Rockhampton.

Giving his party a rest, and starting with fresh provisions, Walker returned to the Flinders, and resumed the return tracks of Burke and Wills. They lost these tracks on the plains of the Flinders, where all were obliterated by floods or heavy rains. Believing Burke had gone eastward to Queensland, he went off in that direction. They named a river the Jardine, and also Mounts Barry, Pylades, and Orestes. On the 20th February they were on the tributaries of the Burdekin. On the 24th he arrived at a river his blacks called the Yananoa, running a north-east course. On the 8th March they reached the Burdekin. Thence they followed down to Wood and Robinson's station, and from there Walker went on to Port Denison for supplies to send back his people to collect horses he had been compelled to abandon. He arrived at Rockhampton on the 5th June, a total absence of about nine months, and the loss of only a few horses. He appears to have been a man content to perform his duty and retire to his former private life. Howitt says—"Perhaps none of the explorers of this period did their work more ably; certainly none received less commendation."

### J. G. MACDONALD.

This explorer travelled from Bowen, on the east coast of Queensland, to the junction of Beame's Brook with the Albert River, on the Gulf of Carpentaria. He started from Bowen on the 11th August, 1864, and arrived on the 24th at his own station of Carpentaria Downs, on the Einasleigh River, after a journey of 368 miles.

On the 21st he had passed the Cape York Peninsula expedition, led by the Jardine brothers. Macdonald left Carpentaria Downs on the 31st August, accompanied by G. Robertson, R. Bowman, and a Brisbane blackboy named Charlie, with seventeen horses and two months' provisions. On 13th September they were on a branch of the Gilbert, from which they crossed over to the Leichardt on the 20th, and arrived on the Gregory on the 29th. From there they went to the Albert, and followed that river down to the junction with the Beame's Brook of Leichardt. Then they turned on the homeward journey, reached Carpentaria Downs on 22nd October, and Bowen on 24th November, 1864, a total absence of fifty-three days from the Downs, and seventy-one from Bowen. The expedition only comprised three white men and one black, and they travelled at a pace probably unknown in the annals of Australian exploration. During one day of the return journey from the Downs to Bowen, Macdonald covered seventy-four miles. In the whole time of actual travel they must have averaged at least thirty miles per day. But no explorer has left less information concerning the incidents of the journey and the country traversed. His journal of the expedition, on account of the brevity and absence of observations, is practically useless for scientific or any other purpose. He proved, however, in a very conclusive manner, that a small lightly equipped party can travel vast distances in a far shorter time, and with far less risk, than large parties encumbered by heavy equipment and a large number of animals that are a source of constant anxiety, trouble, and delay.

## LANDSBOROUGH.

William Landsborough was the leader of one of the Burke and Wills relief expeditions, the result of a vote of £500 granted by Queensland and £1,500 by Victoria. Landsborough's party was supposed to represent "more immediately the contribution of Queensland." It was organised under the advice of A. C. Gregory. The party consisted altogether of eight white men and four blacks. They left Morton Bay on the 24th August, 1861, in the "Firefly," of 200 tons, accompanied by the steamer "Victoria" in command of Captain Norman, who was actually commander-in-chief of both the land and sea forces. Unfortunately, the "Firefly" ran on the reef off Sir Charles Hardy's Island, and five of the thirty horses were lost. Captain Norman came up with the "Victoria," repaired damages, re-embarked the whole consignment, and landed them all safely at the mouth of the Albert River on the Gulf, on the 1st October, 1861. The party consisted of Landsborough, G. Bourne, H. N. Campbell, W. Allison, W. Gleeson, and the four blackboys—Jemmy, Jacky, Fisherman, and Charlie. Before the final journey across the continent, Campbell, Allison, and Charlie returned south by the "Victoria."

Landsborough started away to the south-west for about 200 miles, following the Gregory River up to the O'Shanassy and Thornton branches—in fact, the whole of that journey was on the Gregory—returning to the Albert River depôt on 19th January, 1862. They left there again on 10th February, and, following up the Flinders, crossed over to the head of the Thomson; followed that river nearly to the junction with the Barcoo. Leaving Bowen Downs he passed along to the Warrego, which he followed down to Kennedy's No. 19 Camp, at the station of Neilson and Williams, where he first heard of the fate of Burke and Wills. Their date of arrival here was the 21st May. From Neilson and Williams' station he followed the Warrego down to Menindie, on the Darling.

Landsborough was present at a meeting of the Royal Society of Victoria on the 18th August, 1862, on the occasion of a gold watch being presented to John King, of Burke and Wills' expedition, by Sir Henry Barkly, the President, who also referred in complimentary terms to Landsborough. In reply Landsborough described the magnificent country he saw out on the Gulf waters, the watersheds of the Flinders, the Thomson, and the Barcoo, and offered some explanation of his want of success in discovering traces of Burke and Wills. He was directly accused of having ignored the chief object of his journey —a search for Burke and Wills—and devoted himself entirely to the discovery of good pastoral country for Queensland squatters, the Queensland Government, and himself. The Melbourne Press criticised his expedition severely, and we find Howitt, in his work on Australian explorers, quoting one hostile article with approval. In his defence, expressed in a letter to Captain Norman, Landsborough wrote—"My opinion was that Burke and Wills had gone from their depôt by Bowen Downs towards Carpentaria. I therefore came overland that way, and as I did not learn anything about them from the blacks, I proceeded to the settled country. I think we took the most probable route for finding Burke's party, as we always followed the watercourses, and went over more ground than I deemed possible with our small shipwrecked equipment. I never imagined that Burke and Wills

would have been able to walk straight from Cooper's Creek across a desert to Carpentaria. When I wrote my letter to you on my arrival at the Darling River, we had learned the fate of Burke's party, and the time was past for saying much about our want of success."

The suspicion that he neglected his primary object arose chiefly from the apparent delays, the journey towards the south-west, crossing Burke's tracks without seeing them, and leaving the Cloncurry and Burke's line of march to travel away out towards the head of the Thomson, and thence across to the head of the Warrego, diverging about 250 miles to the eastward of Burke's route to the Gulf of Carpentaria.

But these suspicions came from people who knew nothing of Landsborough, and the veteran explorer has gone from this world leaving behind him the reputation of an honourable man who did valuable work for the Australian people. He discovered much rich pastoral country before his Burke and Wills expedition, and a great deal afterwards. Nor were his services overlooked. A service of plate, valued at £500, was presented to him in Victoria by Governor Bowen, and a public dinner given in Sydney. He was presented with a gold watch by the Royal Geographical Society for finding a practicable route from North to South Australia. The Queensland Parliament gave him £2,000, and the Government appointed him to a seat in the Upper House, which he resigned to become Crown Lands Commissioner. At his death he held the position of Inspector of Brands for East Morton. The demonstration in his honour at Melbourne is mentioned in the notice of McKinlay.

In one of his works Dr. Lang says—"Landsborough is one of the three sons of the Rev. Dr. David Landsborough, of Ardrossan, in the West of Scotland, well known in natural history and poetry, as well as in connection with the ecclesiastical struggles of his native land."

## F. AND A. JARDINE.

When Sir George Bowen returned from his North Coast and Cape York trip in 1862, he recommended Port Albany as a suitable site for a settlement. This suggestion was adopted, and Jardine, then Police Magistrate at Rockhampton, was chosen to superintend the establishment. He proposed to the Government to send his two sons overland with cattle and horses, and to this the Government agreed. These two sons were then young men of twenty and twenty-two years of age. A party of ten persons, with thirty horses, left Rockhampton on 14th May, 1864, in charge of Alexander Jardine, and proceeded by easy stages to Bowen, where they were joined in the middle of July by Frank Jardine and surveyor A. J. Richardson. Pleuro was then prevalent among the stock, and created at first some difficulty in obtaining the right sort of cattle. At starting the party were divided, A. Jardine moving on with the packhorses and equipment, leaving the leader to follow with the stock. This advance guard arrived on the 30th August at J. G. Macdonald's Carpentaria Downs Station, about 368 miles from Bowen, on the Einasleigh River, then erroneously believed to be the Lynd of Leichardt. After a few days at the station, A. Jardine started on to ascertain the nature of the country ahead. He was accompanied by his own blackboy "old Fulah," Mr. Bode, and a second blackboy. They left on the 3rd September, and returned to Carpentaria Downs, after an exploring

journey of 300 miles. On the 6th October, Frank Jardine arrived from Bowen with 250 bullocks and cows, and 42 horses. The whole party started from Macdonald's station on the 11th October, 1864. They included Frank and Alex Jardine, A. J. Richardson, C. Scrutton, R. N. Binney, and A. Cowdery, besides four blackboys, Eulah, Peter, Sambo, and Barney, natives of Rockhampton and Wide Bay. They took 1,200 lb. flour, 3 cwt. sugar, 35 lb. tea, 40 lb. currants and raisins, 20 lb. peas, 20 lb. jams, besides salt and pepper, &c. The four troopers were armed with police carbines, and the white men carried Terry breechloaders and Tranter revolvers. They followed down the Einasleigh until it turned west to the Gilbert, of which it is a tributary, and then they bore away north to the Staaten River, which they followed down until near the coast, then turned north again along the peninsula, parallel with the sea at no great distance from the coast, especially between the Mitchell and the Kendall, where they bore away to the Archer, and thence diagonally across the peninsula to the Richardson Ranges, thence due north to the head of the Jardine River, then down that river, and thence north to the new settlement on the coast at Somerset, a total journey of 1,600 miles across strange country, many swamps, creeks, and rivers, through dense scrubs and tracts of detestable country, plagued by flies and mosquitoes, constantly followed and frequently attacked by the blacks. They had more trouble with the blacks than all other Australian explorers. They say they were first compelled to fire on the natives on the 20th November, and again on the 22nd.

This shooting arose, they said, from stern necessity. In all cases the party were said to have made friendly overtures to the blacks, who appear to have been continually and uncompromisingly hostile.

It was a long, dreary, dangerous journey, during which they lost three-fourths of their horses and one-fifth of their cattle. On the 9th November they had the bulk of their stores, equipment, and ammunition destroyed by a grass fire, having unaccountably neglected the precaution of burning off before forming the camp.

On 19th October they surprised a party of natives roasting a newly killed blackfellow intended for a grand feast. They saw one lot of blacks in possession of what an Irishman would describe as "about thirty tame wild dogs." Another detachment were roasting a lot of the beautiful bee-eaters, *Merops ornatus*, which they called "Burrumburrong."

In many places they found abundance of game, bustards, wallabies, grey duck, wood ducks, teal, pigmy geese, harlequin bronze-wings, native companions, scrub turkeys, black and white cockatoos, many parrots, quails, pelicans, whistlers, ibis, and nearly all other Queensland waterfowl. In some of the rivers they caught very fine barramundi (*Osteoglossum*), but, as a rule, the fishing was not particularly good. Several of their horses and cattle were poisoned and some were drowned. On 11th January they were on the Batavia River. The two brothers reached their father's place at Somerset on 2nd March, 1865, having pushed on ahead of the party with the cattle and horses, who all came in afterwards, the leader going back with some native guides to pilot the rear-guard home.

## WILLIAM HANN.

William Hann was the leader of an exploring and prospecting expedition sent out by the Queensland Government in 1872. The party consisted of William Hann, leader; Taylor, geologist; Tate, botanist; Warner, surveyor; Stewart, Nation, and a blackboy called "Jerry," with 25 pack and saddle horses, 20 sheep, and five months' supply of provisions. They left Fossilbrook Station on 26th June, 1872, following Fossilbrook Creek to the Lynd, thence to the Kirchner Range, where the leader lost his prismatic compass. Tate prospected everywhere for gold, and after five days on the Lynd they left on 5th July; two days afterwards they reached a river which Hann named the Tate, after the doctor. On the 9th he discovered and named the Walsh River after the Hon. W. H. Walsh, then Minister for Works. On the bank of this river he found, in a limestone formation, a large bed of fossils, many beautifully perfect, and enough to load a dray. Among them were several vertebræ of a large animal (Diprotodon). Crossing and naming Elizabeth and Louisa Creeks, tributaries of the Walsh, they went down to the junction of the Lynd and Mitchell.

Found the Mitchell a strong running stream, the bed showing large quantities of drift slate, quartz, agates, cornelians, and rocks; fish plentiful, and many tracks of crocodiles. Numerous camps of natives, and heaps of mussel-shells, this freshwater bivalve being a favourite food.

On the 27th July, followed up the Mitchell, crossed eight miles of basalt (source of the agates), two miles of limestone, three miles of slate, naming Taylor's Carboniferous Range, Warner's Range, Warner's Peaks, and Mount Lilley. After following up the Mitchell for forty-five miles they turned north, naming Mount Mulgrave, Garnet Creek, and Mount Daintree. "From the summit a large river was seen to the north about three miles from the camp, which I believe to be Kennedy's (1848) Ninety Yards Wide Creek. This I have named the Palmer, after the Chief Secretary of Queensland."

This was the river destined, in the following year, to be the scene of a great goldfield, and to provide many nameless graves for the victims of that first year's gold rush. Here Warner found light scaly gold of a rich colour, in a granite formation, and claimed the reward of ½-lb. tobacco offered by Hann for the first gold discovered.

The site of the gold prospect was at once named Warner's Gully. They followed the river for forty-five miles, carrying gold indications all the way, and then returned to Warner's Gully. The last seven sheep had strayed, but the unerring eyesight and instinct of the blackboy followed their tracks for fifteen miles, over rough country, until they were found on the slopes of Mount Mulgrave, making straight home for Mount Surprise. No results followed further prospecting; but Hann believed there was payable gold somewhere in that country, though he would "caution any but experienced, well-provided bushmen coming there to prospect." On 19th August he started for his first Palmer camp, passing a native village, whence the men all fled and the gins and children did nothing but howl dismally until Hann gave them some fish-hooks, and left. On the 21st he again started north, and found and named the Coleman River, which he followed up for seventeen miles. Had a friendly interview with some

good-looking natives, and gave them fish-hooks. Guided by Mount Newberry, he reached the divide of the eastern and western waters in latitude 14 degrees 134 minutes, and followed down the Stewart River to Princess Charlotte's Bay. "So far the trip had been one of pleasure, as the travelling had been easy; our larder well supplied with kangaroos and fish, 'nondas,' and wild honey." Hann makes some severely sarcastic references to two or three of his party, whose thoughts were divided entirely between sleeping and eating. On 6th September they left the Stewart for the Kennedy on a north-east course. Found the Kennedy 100 yards wide; the channel crossed by many sandstone bars; the country on each side open forest and poor soil flooded plains. Killed their two last sheep here; heard crocodiles roaring; saw beautiful clumps of palms. On the 12th arrived at a fine running river, and named it the Normanby. Had crossed a vast extent of wretched flooded country, and three miles from the Normanby passed a swamp covered with geese and wildfowl. Many natives, and all friendly; but Tate having picked up a little blackboy, and brought him into camp, next day a large mob of blacks made a hostile demonstration, and serious trouble was averted by restoring the boy to his friends. Even then a couple of warning shots had to be fired, presumably over their heads, to disperse them.

On the 21st, Hann reached a creek where he saw the first oaks (*Casuarina*) since leaving Fossilbrook, and called it Oakey Creek.

Went from this creek to the Endeavour River, and reached the coast on the present site of Cooktown.

On 25th September started up the Endeavour for thirty miles, then turned south, and, after some rough experience among lawyer scrub and rocky hills, emerged on the sea-beach at the Blomfield River on 2nd October, 1872. Followed up the river to find a crossing, and became entangled in tropical scrub, in which they were struggling for ten days, finally emerging to the eastward and reaching their sixty-fourth camp on the 12th. Shot a carpet snake 16 feet in length.

On 18th October they were on a "wretched country of bare slate ridges" on a branch of the Normanby, where Hann named Andrew's Range after Tate's friend lost in the "Maria" on Bramble Reef, on the way to New Guinea. On the 28th they were back on the Palmer, the Mitchell on the 31st, the Tate on 6th November, the Lynd on the 9th, and on the 12th arrived at Junction Creek, all well, and their journey ended.

## DALRYMPLE.

George Elphinstone Dalrymple was the leader of the Queensland Government North-east Coast Expedition of 1873. He left Cardwell on the 20th September, with the cutters "Flying Fish" and "Coquette," and a party of thirteen white men and thirteen native police troopers, the latter in charge of Sub-Inspector Robt. Johnstone.

The crews were armed with smooth-bore muzzle-loaders, the officers and boatmen with Westley-Richards double-barrel pin-fire carbines. The "Flying Fish," 12 tons, drew 4 feet 6 inches; the "Coquette," 10 tons, 3 feet 6 inches. There was also a native police whaleboat, a dingy, and a scow, with complete outfit of provisions and scientific instruments. Walter Hill acted as botanist. After lying weather-bound for nine days beside Goold Island, the expedition started north along the coast and anchored at Dunk Island, nine miles

in circumference, and rising 860 feet, the formation clay slates and schists. Next day Dalrymple named Mount Bartle Frere, after the president of the Royal Geographical Society of that date. He also named Esmeralda Hill and Mount Julia, near Mourilyan Harbour, where Captain Moresby, of H.M.S. "Basilisk," had named Georgia, Hilda, and Ethel Hills when surveying on the coast. On 2nd October he went up the Moresby with Johnstone and five troopers, Walter Hill following in a boat of Nind, a Logan River man looking for sugar land. On the 4th he went to examine the Johnstone River, previously found by Johnstone when looking for the lost men of the wrecked "Maria." He named the Moresby and Seymour Ranges, after Captain Moresby and Commissioner of Police Seymour, also the Johnstone River and Glady's Inlet, where nine of the crew of the "Maria" were murdered by the blacks. He named Mounts Arthur, Maria, and Annie in the Seymour Range after members of Johnstone's family. They explored the Johnstone River, finding splendid cedar, one tree 10 feet in diameter, and good fire-brick clay and slates. He reported half-a-million acres of good land, 300,000 of that fit for sugar. Hill thought it "the most valuable discovery in Australia." He named the Basilisk and Walter Hill Ranges, while camped on the Johnstone. Abundant evidence of many blacks, a huge bora-ground, and scores of catamarans of lightwood and banana stems. Vegetation magnificent, gorgeous in its tropical luxuriance. Big mob of blacks attempted a surprise, but failed and fled, leaving many swords, shields, and spears.

On the 11th October were again threatened, and the leader of the blacks, a very big man, in swimming across the river was taken by a crocodile. Got gold colours, waterworn and shotty.

Dalrymple went to the Frankland Islands, where the party got cocoanuts, fish, and many Straits pigeons.

Here he named Graham's and Malbon Thompson Ranges after two Queenslanders, and the Bell Peaks, 3,357 feet and 3,033 feet, all on the adjoining mainland. These peaks were named after Sir Joshua Peter Bell. On the 16th October Dalrymple named the Walsh Pyramid, 3,016 feet, on the Mulgrave, after the Hon. W. H. Walsh. He also named Mounts Sheridan, Williams, and Whitfield after the police magistrate, the commissioner, and a merchant, of Cardwell—Brinsley Sheridan, F. Y. Williams, and E. Whitfield. Dalrymple noticed that the blacks on the coast about Trinity Bay "had colour and hair like Papuans." [Their hair is not different from that of other Australian tribes.]

On the 18th October he fell on one of the hatches and broke a rib over the heart.

On the 20th he named Mounts Garioch, Mar, Formantine, and Buchan after four districts in Aberdeenshire. The Macalister Range he named after the Hon. A. Macalister. On shore the party were attacked by a mob of very savage blacks, and had to shoot. "In every camp along the beach for two miles were unmistakable evidence of wholesale cannibalism; heaps of human bones and skulls were found in each camp, and in some, roasted and partially eaten bodies were found beside the fires at which they had been cooked. Lumps of

half-eaten human flesh were found in the gin's dillybags. These people are of most ferocious expression, and are large and powerful men." Such is Dalrymple's report.

On the way to Schnapper Island he named Harris Peak, Mount Beaufort, the Heights of Dagmar and Alexandra, Thornton Peaks, and Palmer Range. On the 24th he named Cape Kimberley after the Earl of Kimberley. On the 25th October the party were in Cooktown Harbour, and saw the steamer "Leichardt," Captain Saunders, enter with seventy diggers, Howard St. George, A. McMillan, and all the rest of the official party for the new Palmer diggings.

On the 28th he went up the Endeavour River.

On the 31st the whole party left in the "Leichardt" for No. 11 Barnard Group to camp there until a better vessel was obtained from Cardwell, the "Coquette" and the "Flying Fish" being found too small and unsuitable. At Cardwell Dalrymple chartered the "Flirt," schooner, and on the 14th November anchored near Johnstone's Camp on Dunk Island. On the 17th the party again started north, the "Coquette" returning to Cardwell.

The party now contained twenty people—ten whites and ten troopers. On the 18th November they entered the mouth of the Russell and Mulgrave Rivers, both named by Dalrymple on that date. He ascended the Russell for eight miles, and named Harvey's Creek. On the 21st November he started in the whaleboat with Johnstone, Walter Hill, Perry, and eight troopers, to ascend the Mulgrave. The boats of the "Rattlesnake" had been into the Russell and Mulgrave in 1848. Dalrymple sent Hill, Johnstone, and eight troopers to try the ascent of Bellenden-Ker.

They landed on the 25th, on the right bank of the Mulgrave about fourteen miles up, and on the 26th and 27th Dalrymple saw the signal fires on the north spur of Bellenden-Ker. On the 28th a smoke was seen on the same spur half-way down, and the same day the party returned in the whaleboat after four days' absence.

On the 6th December they were at Island Point, and the same day Dalrymple entered and named the Mosman River. He also entered and named the Daintree River, which possessed the most magnificent scenery. He named Wyanbeel Point, the local blacks' name for a canoe. Crocodiles were numerous, and Johnstone shot several. They had a friendly interview with the blacks.

On the 12th December Dalrymple, at the Johnstone, sent Hill and Johnstone up the river in the whaleboat. The blacks appeared on Coquette Point, painted white to look like white men, except from the waist to the knee, as if the trousers were rolled up, and also imitating white men's voices to induce the "Flirt" people to go ashore. The blacks also dug up the corpse of one of the "Maria" people, and rehearsed the killing process in derision, making insulting gestures at Dalrymple's party at the same time. On the 20th December, while near one of the Barnard Islands, Dalrymple sent Johnstone and his troopers to meet a small steamer coming from the south, the "Annie," from Adelaide for Port Darwin. The captain and crew took Johnstone and his troopers to be a lot of hostile blacks, sheered off for a quarter of a mile, and ran in beside the "Flirt," with all firearms loaded to give them a rough reception.

A few days afterwards the party were disbanded, and Dalrymple returned to Brisbane in the "Boomerang."

W. O. HODGKINSON.

This explorer was a member of the Burke and Wills Expedition, 1860-61, and crossed Australia as second in command of McKinlay's party in 1862, arriving in Bowen on the 8th August. Howitt and other writers believe that if Hodgkinson had been in charge of Burke and Wills' rear party, instead of Wright, all the subsequent disasters would have been avoided, and the continent would have been crossed and recrossed without the loss of Burke, Wills, or Grey. He displayed remarkable energy on the McKinlay expedition, and was charged with some of the hardest work from start to finish.

In the year 1876 he was the leader of an expedition sent out by the Queensland Government to explore the north-west country of Queensland from the Cloncurry to the South Australian boundary. The party included W. Carr Boyd, Kayser, Norman McLeod, and a black trooper named Larry. They went from the Cloncurry Copper Mine to Lake Coongi in South Australia, thence by the western boundary of Queensland to the Gulf of Carpentaria, returning to Brisbane *viâ* Normanton, the Cloncurry, and the Flinders. No Australian explorer, except Sir Thomas Mitchell, or Sir George Grey, has given equally graphic and interesting pictures of the country passed over and the scenes witnessed. Take the following illustration from page 22 of his diary. He is describing a lonely waterhole on Manner's Creek during a period of drought. The picture is perfect: —"A naturalist might here procure specimens of the whole animal kingdom in the locality. Thirst, which conquers fear, brings them all together. These two daily lessening pools are the resort of every living creature for miles around. The timid emu and plain turkey, the stealthy native dog, await their opportunity. A passing pelican pauses to see if a fish is left; a couple of herons and a spoonbill stand motionless for hours, while four or five shags actively search every square foot, most of the water so shallow that one laughs at their ludicrous efforts to dive. Cockatoos, galahs, and other noisy members of the parrot family scream loudly in the adjoining trees, while countless finches and parroquects chirp and twitter from dawn to sunset. Birds of prey sweep down upon the flights at the water, pursuer and pursued, impelled by hunger and terror, dashing wildly into the thick poligonum around. Grave but active, the ubiquitous crow walks warily about, now seizing some morsel from the camp, again securing some unfortunate wounded bird, disabled, but not clutched, by the swooping falcon. Night, too, has its active nocturnal army, for then the smaller marsupials travel their well-worn tracks; nightjars sweep with noiseless wing, and strange cries rise above the ceaseless murmur of the foliage. The very timber bordering the creek reveals the nature of the climate. Warped in all fantastic shapes, thick of bark and meagre in foliage, it is formed equally to resist the rushing torrents of floods or the burning sun and scorching winds of droughts. All is in extremes—fiery heat or chilling cold."

The party started from the Cloncurry River in April, 1876. On the 12th May they crossed the rolling downs in sight of the mountains named Birnie, Aplin, Bruce, Murray, and Merlin, by Robert O'Hara Burke. Blacks were numerous, and strict watch was kept all night. The men on Cargoola Creek are described as tall, robust, in good condition; the women "unusually repulsive and emaciated." This

expedition is honourably distinguished by never firing a shot at a native from start to finish, the tact and humanity of the leader being responsible for establishing friendly relations along the entire route. And yet the provocation to hostility was occasionally serious enough.

On the 16th May they were on Diamintina waters, crossed "rolling plains of open, sun-cracked, calcareous soil, tesselated with patches of trappean rocks and ironstone pebbles." Emus and bustards numerous. Passed mountains of red sand, through gidya scrubs, and over undulating downs. Began on the 17th to eat portulac, or "pigface," a weed which was found to be an excellent anti-scorbutic, and a useful vegetable food. On the 19th, heavy rains, game plentiful, black duck, wood duck, teal and crested pigeons. Many native dogs howling all night. On the 21st, at Diamintina, the channels deep and cut clean through the plain, with vertical banks, like huge drains; wildfowl and crows and hawks in great abundance. Low grounds green with portulac; poligonum all out in handsome white flowers. Range like a tableland, "every few miles throwing out headlands forming considerable bays, the whole scene like a beach at low tide, here covered by round clay cemented pebbles, there spread into broad expanses of baked sands." On 31st caught many splendid fish called Uldera by the blacks, and a sort of rock-cod named Cooeeya. Natives here called the Diamintina "Gnappera," and said it ran into a lake called "Thirda." Party suffered a good deal from cold and hunger, being short of rations. On 6th June a tribe of friendly blacks placed at their disposal a couple of clay ovens full of a roasted root called Wanti, shaped like a radish and tasting like a sweet potato. Blacks also went into a very cold lagoon and caught some bony bream.

And so the party journey on across spinifex-covered sandhills, flooded creeks and rivers, claypan flats, open downs, through scrubs of mulga, gidya, and poligonum; past lagoons full of wildfowl, cork-trees covered by nests of Java sparrows; through numerous tribes of blacks, living on portulac, fish, ducks, pelicans, pigeons, and salt beef, enjoying food in abundance, suffering from famine or scarcity, drenched by heavy rains, or weak with the pangs of thirst.

On the 2nd July they are in the midst of those weird interior lakes discovered by the Burke relief party in 1861. Among them is Lake Hodgkinson, named by McKinlay—"Gnappanbarra" of the natives. These lakes are beautiful sheets of water, full of fish and wildfowl, set in a margin of most lovely emerald clover, encircled by a border of box-gums, and surrounded by sandhills. In droughts the small lakes dry up and become meadows of very fattening pasture; others become coated with a noxious slime which kills the fish and makes the water undrinkable.

Saw huge native graves, one 18 feet long, 10 feet wide, and 4 feet high, oval in shape, made of sand, boughs, and logs. Saw the first swan—on Lake Hodgkinson. On 23rd July thermometer 24, and thick ice on the water. On 25th camped on a lagoon, Tarung, on a branch of the Mulligan; ducks, swans, pelicans, and fish in abundance.

Mulligan River from 200 to 600 yards wide. Natives friendly, polite, and hospitable. On 17th August found their first specimens of the narcotic plant pituri, a bush 4 to 5 feet high, on the Mulligan River. On the 20th were crossing Sturt's Stony Desert, which in fair seasons is good grazing country.

On the 21st, crossing gidya flats, spinifex ridges, through picturesque sandstone gorges, full of rock wallabies, suffering much in the next few days from bad water, or no water at all. On 28th surprised a band of natives, who fled and left a heap of 1,218 dead birds they had caught in nets, shell parrots and Java sparrows. Thence onward, suffering much from want of water, insufficient food, and heavy travelling over rat-hole and crab-hole country, poligonum and bluebush swamps. On the 11th September, in grand well-watered country on the Mulligan, which they followed upwards, reaching Mary Lake on the Georgina River on the 26th, having successfully traced the Diamintina to the border, and travelled from the Cloncurry mine to Lake Coongi, in South Australia, the journey extending from the 13th April to the 27th September, 1876. The leader accomplished his work without the loss of a man or a conflict with the natives.

## QUEENSLAND SCENERY.

### SCENE FROM THE SUMMIT OF BELLENDEN-KER.

All was distinctly visible, in the perfectly clear atmosphere, in a radius of at least 100 miles in all directions. We were silent in the awful presence of that tremendous picture that had lain there unaltered since Chaos and the Earthquake painted it in smoke and flame and terror in the dark morning of the world! It was a hall of the Genii of the Universe, the Odeon of the gods, with its immortal floor paved with the green mosaic of land and ocean, and overhead the arched blue roof flashing in diamonds and prismatic radiance to the far sky-line on the edge of the dim horizon. Eastward rolled the calm Pacific, visible from the Palm Islands in the south to the vicinity of Cooktown in the north. The white surf breaking on the Barrier Reef was a long white line on the lovely azure of the slumbering ocean. The towering peaks of Hinchinbrook looked down on the cone-shaped islands of Rockingham Bay and the valley of the Herbert; behind them the dark-blue serrated ridges of the Cardwell Range. To the north Cairns nestled in calm seclusion on the shores of the beautiful bay, a white oasis in the desert of blue haze. Green Island, Fitzroy, High Island, and the Franklyns were as emeralds set in the *lapis lazuli* of unruffled ocean, the bleached coral beaches girdling them with a white zone on which the dying waves expired in long ripples of snowy foam. Between us and the ocean was the valley of the Russell, with its reed-covered plains and mysterious lakes, and the river winding in sinuous curves like a vast silvery serpent through the dense dark-green tropical jungle, down to where it joined the Mulgrave, and the united waters rushed together into the sea. North-east was the valley of the Mulgrave ending in the plains beneath the long evening shadows of the cone-peaked Walsh Pyramid. From where the range dipped into the sea at Double Island, north of Cairns, away west to the hills on the head of the Gulf waters, and south to where the eye lost itself in distance, was a vast indescribable panorama of hills and valleys and mountains of every conceivable shape, and to the west the wavy sea of magnificent country on the Herberton tablelands, the future garden of North-east Australia, with its regular rainfall, rich scrub soil, and glorious climate. This site of the volcanic lakes was marked by their covering sheets of snow-white mist. In all the ravines along the face of the coast range were blocks of beautiful amber cloud, reposing there like white-winged

birds weary of tossing to and fro in the combat of warring winds. Mount Sophia and the dark north peaks of the Bellenden-Ker stood facing us in gloomy grandeur, in that dread silence which is more terrible to the soul than the crash of thunder, the roar of breakers, or the diapason of the cannonade. South-west, immediately in front, stood the majestic form of Bartle Frere, divided from us by a chasm 4,000 feet in depth, and two miles across from peak to peak, a wild and dismal solitude peopled by the storms alone. Deep abysmal gorges, gloomy ravines, and caverned mountains, dark as the realms of Pluto; grim rocks in unimaginable shapes; far down through the immeasurable grey void the subdued rush of falling water; weird echoes rising from the depths below—"a march as of the earth-born Forms arrayed against the ever-living gods!" and around and over all, in one dark green wide-spreading mantle, the wonderful tropical jungle, infinite in its shapes and hues, the robe of Nature woven with rainbow colours in the looms of God! From behind Bartle Frere there came slowly drifting a vast white sulphurous storm-cloud charged with thunder and lightning. It entered the abyss between us and Bartle Frere, hung suspended there at least 2,000 feet *below*, and we looked down from our lone treetops in voiceless amazement at a thunderstorm raging in uncontrolled madness far beneath. Lightning shot out in awful flashes downward and upward, followed by appalling thunder. Detached fragments of spectral cloud came drifting up from the storm and shot athwart the mountain top. And then the winds from the south-east turned the storm away along the valley to the north, and the Lion of the Skies vanished slowly in the distance, his deep-toned voice making the mountains tremble, his fierce eyes flashing electric fire. We camped all night on the summit. What wonder that in such a place, "obscurely through the brain swept awful thoughts,"

> Which through the deep and labyrinthine soul,
> Like echoes through long caverns, wind and roll!

We were denizens of the upper air. With Goethe we knew the "Stars silent above us; Graves silent below." The fauna and flora of this strange mountain are the oldest on the Australian continent. It is the Ararat of the Pacific. Here are plants found hitherto only on the summits of the Himalayas. Ah Heaven! why cannot some fossil relate to us the story of the vanished Ages from the death silence of his stone mausoleum? I gazed on the storm, and in imagination saw "a Spirit with a dreadful countenance check his dark chariot by the craggy gulf," and some Idæan Ganymede pour out his celestial rain of wine from an exhaustless urn upon the grateful earth! Round the base of this mountain once roamed the great Diprotodon and the colossal Nototherium. Giant lizards crawled through the primeval vegetation on the plains below, and the marsupial lion, Thylacoleo, crushed the bones of his herbivorous victims in the dark secluded caves. Around us was the silence of departed Time, of voiceless Eternities, of worlds beyond the morning stars! The shadows of the unborn Centuries reflected on the azure mirror of the night; shadows of the past vanishing like misty spectres in the impenetrable gloom. In the tree-tops we heard the wailing of the "huge winds that sweep from Ursa Major to the tropics and equator, dancing their giant waltz through the kingdoms of Chaos and Immensity." And they played wild Memnonian music on the mountain's grand old Æolian harp of pines!

SCENE FROM THE SUMMIT OF BARTLE FRERE.

Human voice or pen can give but a faint idea of the abysmal gloom of that tremendous solitude. We were surrounded by a world of clouds, even the rocks within a hundred yards above and below us but faintly seen like tombstones in the morning mists. Never before did I experience the same sensations. Rising over all was man's sense of his own unspeakable insignificance. It seemed as if I had been suddenly ushered, like Ulysses, into the realms of death,

> Where side by side along the dreary coast,
> Advanced Achilles' and Patroclus' ghost.

In fancy the spectral clouds assumed the shape of some Tiresias rising from the awful shades. The lighter mists were driven by the winds swiftly along dismal avenues of enormous vapours, moving slowly onward, black as night and silent as the voiceless grave. Imagination pictured the solemn phantoms of departed ages stalking gloomily along through long colonnades of majestic clouds. The pale kingdoms marshalled their mournful ghosts. Once only, and for a few brief seconds, did we behold the dark form of Wooroonooran, through a wind-divided chasm of rolling clouds, apparently far above us, a vast black shape revealing itself, and disappearing again in the realms of gloom. And once only did the clouds lift like a mighty curtain from the mountains to the north, displaying gigantic shadows resting in the umbrage of the peaks, and myriad columns of snow-white vapours shooting upwards from the ravines below, as if we stood over the abode of Lucifer, and in the nether depths

> All Hell unloosed
> Its mounded oceans of tempestuous fire.

And then the sunlight came with all the varied glories of the dawn, and clouds became "red, yellow, or ethereally pale," and radiant rainbows spanned with their curving splendours the many-hued abyss; and for a few moments we stood the centre of a hundred sunsets, lost in the magnificence of all the splendid shapes and colours of the wondrous God-created dome which overarches this mysterious earth.

SCENE FROM THE CENTRE PEAK OF BELLENDEN-KER.

How unspeakably poor and mean in comparison with that sublime reality are all the most gorgeous fancies of even the finest imaginations! You dare not speak or cherish an ignoble thought, standing there in the presence of that transcendent picture suddenly unfolded before you by the hand of the Almighty Artist. One vast waste ocean of magnificent clouds—purple and blue and white and red and golden—stretching away to the edge of the remote horizon, all rippled into fantastic, motionless waves; here and there a dense mass like some solitary island in the eternal sea, and to the right the dark lone crest of Chooreechillum rising from the surrounding cumuli into the over-arching blue. Eastward the cloud-ocean stretched away in long low waves with rippled crests, until it ended in a border of gorgeous purple; above that, a long straight amber-edged billow of snowy white, and over and above all, "through the abyss of the immense concave, radiant with million constellations," the calm, clear, blue, immeasurable azure—the pathway to Eternity.

Northward, beneath the sunlight, clouds rose in gigantic shadowy shapes, like hills torn from their foundations and hurled in wild confusion from the skies in some empyrean combat of the gods and demons—

> Mountains toppling evermore
> Into seas without a shore;
> Seas that restlessly aspire,
> Surging into skies of fire.

And slowly two of these enormous vapours rolled apart, disclosing far away a long avenue with descending streams of soft grey light, like rivers from the Sulphur Throne of Pluto, spanned by myriad rainbows, and falling silently into bottomless ravines of purple snow. And from the many-coloured abyss, driven upwards by sub-vaporous winds, there drifted multitudes of small white clouds, rising from the red depths like birds from the funeral pyre of some celestial Memnon, around whose last couch all the mourning Cherubim and Seraphim had spread the dazzling glories of God's everlasting Universe.

Three hundred feet below us, down the green face of the mountain, across the slopes strewed with flowers and living leaves, the waves of that cloud-ocean rippled, noiseless, on the echoless shore. And around and over all was the silence of the grave, save the sad Æolian melody played by the wailing winds on the harp of beautiful trees that bowed their green heads gracefully as if in speechless adoration of the scene. Out in that silent sea it seemed as if one could float away, like the dead Balder, the Sun God of Norse mythology, in some magic fireship, drifting away into the Deep of Time, to silence and oblivion, the sole refuge for all those sick and weary of the crime and misery of the earth. Here, indeed, on this lonely peak was a suitable habitation for the souls who commune with the wrecked heart like a musician with his broken harp. Souls in whom no wind from Heaven shall again waken the Lydian melody of the vanished years. The mournful memories of the loved and lost, side by side with dead hopes and baffled aspirations, drifting slowly, like spectral icebergs, across the frozen ocean of the heart, through dark shadows deepening in the gloom of the Arctic winter towards the eternal night.

### THE BARRON RIVER FALLS IN FLOOD-TIME.

Before me was a torrent of water 300 yards wide and about 40 feet deep, rushing resistlessly along at the rate of twenty miles an hour, tumbling in a solid wall suddenly over the edge of the enormous precipice, launched clear out into space, and descending for 700 feet into the "waste wide anarchy of Chaos, dark and deep," yawning abysmal in the depths below. I look up the river, and see it come sweeping round the bend, divided by small islands into three streams that rush together like wild horses as they enter the straight in the dread finish of their last race. They come with the sound of a tempestuous ocean dashing its surges through dark passages in the caverned rock. Weird Fancy pictures them as the rivers that roll through the gloomy realms of Pluto. Imagination hears the sorrowful wail of Acheron, the lamentation of sad Cocytus, and the hoarse roaring of infernal Phlegethon, "whose waves of torrent fire inflame with rage." They roll over the cliff, strike the first ledge of rock, and the water is dashed into foam and mist, rolling billows of vapour projected with terrific force in vast fantastic forms down the entrance of the Titanic avenue

of the river beneath, and clouds of spray float away upward for a thousand feet, and condense, and drip in showers of emerald dew-drops from the trees on the slopes of the mountains.

The currents of air created by the cataract waved the branches of trees hundreds of feet overhead as if swaying in the contending winds of a storm.

The thunder of the water was awful. The rock shook like a mighty steamer trembling with the vibrations of the screw. The soul recoils appalled before the inconceivable grandeur of that tremendous scene. Those falls stand alone among cataracts, like Everest among the mountains.

Eternity is throned there on those dark rocks among the wild whirlwind of waters, and speaks to you in solemn tones, of the Past, the Present, and the Evermore. You stand voiceless, "mute, motionless, aghast," in that immortal Presence.

The tongue has no utterance for the thoughts within you. They are not dead those black rocks, those vast columns of descending waters! They tell you of

> Vastness and Age and Memories of Eld
> Darkness and Desolation and dim Night.

Once only in each year do the flood waters of the tropic rains sweep the surface of the bed-rock. The wear of that brief period on the adamantine formation is imperceptible. How long, therefore, has the river occupied in cutting a thousand feet into the solid rock? You must look back through the shadowy vista of countless ages that bridge the period of time intervening between us and that dim morning of the world! The Night of time hides for ever the birthday of that cataract. Empires have risen and fallen, barbarisms become civilisations, races of men flourished and died, religions triumphed and disappeared into eternal oblivion, thousands of plants and animals vanished for ever, the face of Nature changed its aspect in the long wear and waste of centuries, and still those waters rolled down that precipice with a wail of lamentation over the dead Past; like the voice of a lone spirit in the agony of unspeakable despair.

The gulf has a weird and fearful fascination. You feel a mad impulse to leap into vacancy—to launch out, like Lucifer into the "vast void of uncreated Night," and disappear for ever into the yawning chasm, from the vast depths of which rise the sheeted columns of vapour—

> White and sulphury,
> Like foam from the roused ocean of deep hell,
> Whose every wave breaks on a living shore.

At intervals there are deafening explosions, like the discharge of enormous cannon, and the waves of spray roll out like cannon smoke, and recoil upon themselves with the force of the impetus, to be swallowed up in the downward driven current, and finally swept into the abyss. Imagine some Titanic race battling with the demons! The rock fortress 700 feet high, with huge cannon projecting from a hundred embrasures, discharging a continuous shower of projectiles, "winged with red lightning and impetuous rage," into the ranks of the advancing foe! Terrible beyond conception is the diapason of that cannonade!

On the left of the main falls is the circular pool 200 feet in depth, whose sides slope inward from the top, with a narrow outlet not 20 feet wide below. Into this frightful cauldron poured a vast body of

water from the main river. It fell clear down, struck the surface of the pool as if solid rock, dashed itself into vapour, and threw a dense shower of spray far up the face of the opposite rock, from whence it descended in a thousand little rivulets of silver that sparkled like a flood of moonlight on the dark surges of the midnight main. On the left came down a torrent that poured itself out from the dense scrub overhead. That fell clear on the pool below in a sheet of glorious spray. Around the face of the rocks grew beautiful orchids, and ferns, and innumerable little plants looking serenely down with their green faces into the awful maelstrom underneath, indescribably beautiful, amid the war of winds and waters—

> Resembling, mid the torture of the scene,
> Hope watching Madness with unalterable mien.

And gorgeous blue-winged butterflies emerged from the crevices of the rocks, fluttered slowly down until the spray caught them, and vanished like a flash of light into the vortex of remorseless waters, like lost spirits drawn in where the firmanent of the Miltonian Hell spouted its cataracts of fire, until caught in the descending flames and swept down into the Infinite Abyss, "nameless in dark oblivion there to dwell." From the still pools up the river came magnificent blue and pink and scarlet lilies, with superb fan-like green leaves attached. On one of them was a splendid butterfly, floating along like the Indian Cupid in the Nelumbo flower, down the clear current of the Sacred River.

Swift and painless death for all life once closed in the pitiless embrace of that deadly surge, cleaving the azure with the rapidity of light! One step from where you now stand and you have passed the confluence of the two Infinitudes—Eternity before you, and this world, with all its madness, is behind. You are dashed pitilessly on those jagged and savage rocks; the spectral winds play your death march on their Æolian harp of pines; the stone cannons fire in volleying thunder their last salute; the cataract wraps its white foam shroud around you; and the mighty mountains, throned on the primal rocks, stand there aloft in the majesty of eternal silence and immensity, as your everlasting monuments! What was the pyramid-piled grave of the Egyptian kings compared to this? A tomb here more worthy of divine Cleora than the old Leucadian steep? This is the home of Poesy, first-born of the gods, and Romance, the parent of golden dreams. Alas! that the cold hand of Science has dragged the Naiads from the waters, and hurled the Dryads and Hamadryads from the woods!

Twilight is descending, and I gaze once more into that awful realm of swimming shadows and enormous shapes, with fearful chasms, rolling billows of foam, vast cloud-vapours, descending columns of yellow water like liquid gold, opalescent and iridescent; fantastic rocks scarred and rent by Æons of ages, towering mountains crowned by mournful pines, showers of spray and wandering mist, mingled with the roar and rush and howl of immeasurable waters plunging in their death agonies into the "fathomless and thundering abyss," in unutterable sublimity of illimitable madness. Alas! How impotent is language to give more than a shadowy outline of that mighty picture hung there on the silent rocks among the grand old mountains, as a presentation picture to Australia from the Art Gallery of the Eternal!

## HINCHINBROOK ISLAND.

On the right, abruptly from the water's edge, rises the majestic range of Hinchinbrook,

> Over whose palms and crags and caverns sail
> Swift clouds, shadows, and sunbeams,

and down the face of gigantic precipices leap long white cascades, falling a thousand feet, and sparkling in the sunlight like a shower of diamonds, while the dark-green of the gorgeous tropical foliage, embosomed in deep and shadowy ravines, contrasts in wild beauty of light and shade with the white-stemmed eucalypts on the grey ridges far overhead. Weirdly fantastic are these strange ranges standing there in gloomy and lonely isolation. One can fancy them carved into colossal shapes by some old-time Titanic sculptor, striving vainly to fashion some enormous form conceived in an ambition worthy of him who was to transform Mount Athos into a statue of the Emathian conqueror. Cone-shaped peaks and beautiful green tabletops, ending in terrific precipices, and—

> Unfathomable deeps,
> Blue as the overhanging heaven, that spread
> And wind among the accumulated steeps.

And along the slopes, down to the water's edge, stood the glorious trees like a procession of Naiads, in sea-green dresses, returning from some festival among the Dryads of the pine-clad peaks. On the left hand rose the mainland range, vast cliff-faced rocks looming darkly from beneath jungle-clad summits, or outlined in sullen silence against the blue sky, and far away in front, piercing the clear air, rise jagged and savage peaks, like monuments commemorating Colossi of days gone by, far back in the morning of the world. During the tropic rains the cliffs and ravines of Hinchinbrook are white with foaming torrents, descending in narrow streams, spread out wide over the black rocks, or as spray-clouds waving in wind-created undulations, beautiful gem-spangled bridal veils at the marriage festival of some fair spirits of the earth and heaven.

## SCENES IN WESTERN QUEENSLAND.

Blue cone-shaped hills rising from the treetops far off on the edge of the horizon, beautiful park-like slopes dipping into green meadows, meadow beyond meadow, variegated by blue, white, and yellow flowers, intervening ridges crested by weeping myall, turrets of trees outlined against the horizon; long sinuous watercourses winding away like vast serpents, descending into the vales below, fringed with bordering trees, and terminating in soft green fields, in which the flocks of motionless sheep resemble a shower of brown-grey rocks; and over all are the argent and the azure of glorious bright blue sky flecked with fleecy clouds.

Across the magnificent Victoria Downs, rolling far away in vast silent undulating waves, like some beautiful green field floating in mid-air, and rising and falling above the pressure of subterranean winds bordered by the blue hills on the heads of the Warrego, Maranoa, and Angellala, lovely in the purple gloom of sunset, grey in the sombre noon of night, or "radiant with the glory of the dawn."

Then on through the measureless level ocean of mulga, myall, and brigalow scrubs, silent and shadowy, and "lone as incarnate death," through avenues of tall grey bendee, the train descending long slopes, or climbing weary ascents, the two lines of rail converging in the

remote distance like the sides of an attenuated pyramid, the apex dipping into infinite vacuity or rising into the sky-line, separated from the base by the sky descending in the intervening vale.

SCENES IN DUGANDAN SCRUB.

The journey through this district has a special charm of its own. The scenery is peculiar to itself. Magnificent pictures reveal themselves at intervals, where the farmer's clearing enables you to look far out into the scene beyond. It is an ever-changing panorama, sudden in the transformations, beautiful in the diversity. At one moment surrounded by fields, cottages, and gardens looking down on you from the crest of the green slopes, the whole forming neat squares cut out of the solid scrub; then you come unexpectedly on the summit of a ridge cleared on both sides, and gaze down in rapt admiration on far-off valleys, where the farms and houses look like green islands and white rocks in that sombre dark-grey sea, and beyond are low hills, rising ever higher, hills beyond hills, until they terminate in the towering mountains of the Main Range, sweeping round from right to left in all fantastic shapes—towers, peaks, table-tops, rock turrets, and superb cloud-capped palaces of nature, standing in serene immobility against the clear blue sky, a wild, storm-tossed ocean of mountains piled in earthquake confusion, as if some Otus and Ephialtes had attempted there to scale the temple of the gods, as in the days when—

Heaved on Olympus tottering Ossa stood;
On Ossa, Pelion nods with all his wood.

Then the magician waves his wand, and, shutting out that splendid scene, ushers you into little valleys, where you pass through fields of maize, cottages on both sides, fields sloping to the railway line, gardens on the hills between you and the sky-line, and surrounding all is the grey brigalow scrub stretching away right and left to the ranges. Far away on the hilltops and hillsides you behold the houses and clearings of the settlers, the hardy pioneers of the second stage of civilisation.

GLASSHOUSE MOUNTAINS.

Each stands in gloomy isolation, silent and alone. One mighty mass of rock faces the railway line, cliff-fronted, savage, defiant, towering majestically into the clear blue sky, the wild rough stone face all scarred and caverned by the rains and tempests of ten thousand years. Through the treetops you behold transitory gleams of Beearburrum's lone companions, vast pillars of rock and broken columns, standing there as ruined fragments surviving the merciless wreck of "gray annihilation," looking out far over the treetops upon the vast ocean beyond, unspeakably weird in their mournful solitude, unutterably sad in their voiceless silence and irremediable decay. So they stand there, as Cook saw them from the deck of his vessel, off Cape Morton, 124 years ago; as Flinders saw them beyond a period of 95 years; as the wild sons of the pathless woods beheld them far back across the old dim centuries in times long buried in oblivion; and as the stars alone shall see them far hence when—

Sheer to the lowest gulf each peak is hurled
The last sad wreck of a devoted world.

The wild savages who roamed the pathless forest and sang their peace-songs and war-songs beneath the shadows of those grey trachyte rocks, cores of the old volcanoes, have vanished for ever, bequeathing

to us, as their last legacy, only the names of those immortal rock sculptures from the studio of mighty Nature: Beearwah and Beearburrum, Coonowarran, Toomboomboolla, Neuroom, Teeborcaggan, and Diangdarrajin.

HOME OF THE RIVERS.

In North and South Queensland there are two magnificent scenes which eclipse all others. For far-reaching splendour and wild sublimity the views seen from Bellenden-Ker, in calm and storm, stand unrivalled and alone.

For the quiet beauty which fascinates, and appeals to every noble instinct in the poet, the artist, and all lovers of the beautiful, we shall go to one of the mountains where the Main Range divides the eastern and western waters on the head of the Nogoa. This is the home of the rivers. The summit of one of the peaks overlooks the birthplace of a thousand streams that unite to form the great rivers which go hence to four points of the compass. Here is the baptismal font of the Nogoa and the Comet, flowing to the Fitzroy and Keppel Bay. Here is the starting point of the Warrego whose waters flow to the Darling, and thence to the Murray, and the ocean at Adelaide. Here rise the waters of the mighty Bareoo to begin their lone journey towards annihilation in the lakes and sandhills of Central Australia. Behind Mount Howard the great Belyando starts on its way to the Burdekin and the Pacific near Cape Cleveland. There is no more romantic spot in Australia. Why wonder that it fascinated Mitchell in 1846, when he named the Claude and Lake Salvator after the immortal landscape painters! Glorious ranges rise in all directions, and of every conceivable and fantastic shape; domes and spires, obelisks, pyramids, and tabletops, blue ravines moist with delightful springs, and

> "Across the vales
> Beside the winding and crystalline pools
> Where ever lie, on unerasing waves,
> The images of temples built above,
> Distinct with column, arch, and architrave,
> And palmlike capitals, and overwrought
> And populous most with living imagery;
> Praxitelean shapes whose marble smiles
> Fill the hushed air with everlasting love."

Here indeed we behold a perfect realisation of the poet's

> "Grey mountains, and old woods and haunted springs,
> Prophetic caves, and stream-surrounded isles."

Beneath lies Lake Salvator, cradled in unimagined beauty of surrounding hills, and fed by myriad springs and streamlets rushing between loose boulders or falling in cascades to the valley. Beautiful lake on whose serene surface float countless joyous birds, and in whose banks the weird platypus tunnels her deep and secret nest. It lies there, "a bath of azure light among dark rocks," where stand the sentinel woods, dense, luxuriant, endless in variety, gorgeous in colouring, home of stately palms and splendid ferns and beautiful orchids, the air in Spring time heavy and sensuous with their rival perfumes. In the gloomy basalt caves the myalls made their cemeteries for countless ages, fit mausoleum for the old dead race. It is a land of enchantment, of romance—the parent of golden dreams—a Paradise of hills and streams, of rocks and caves, of birds and flowers, of lake and vale; and overhead the bright azure sky, or "homeless clouds driven from steep to steep, and vanishing among the viewless gales." Scenes such as no human eye could behold, or heart regard, unmoved.

BRISBANE RIVER (Pre-historic).

We must behold an uninhabited river in North Queensland to realise to-day the picture seen by Oxley when he went up the Brisbane in his whaleboat on 2nd, 3rd, and 4th December, 1823. Along both shores rose the beautiful primeval forest untouched by the hand of man. Tall dark araucarias towered above the surrounding vegetation. Splendid elkhorn and staghorn ferns clung to the stems and branches. Perfumed orchids flowered on the trees and rocks. The air was heavy with the odour of many flowers. Ten thousand joyous parrots held high festival among the honey in the yellow wattle and scarlet bean-tree blossoms. Stately emus and solemn kangaroos gazed in astonishment at the strange boat with its long rhythmically moving oars. The wild children of nature—men, women, and children—spoke to each other in low tones of awe and wonder, of the mysterious white men and the big canoe (Goondool). Groups of pelicans stood on the sandbanks or fished in crescent lines. Ducks rose in flocks before the strangers, and a swift-winged hawk, issuing from a treetop, singled out one bird and struck him dead into the river. Noble swans uttered their departing trumpet-note, and left a four-fold track with feet and pinions on the sounding surface of the stream. The mangroves bent with the weight of countless red-billed porphyrios.

In the belts of dark scrub the turkey watched for her young ones' birth from the womb of the mounded nest. Grey old bears, sleepy and stupid, sat unconcerned in the forks of the towering gums. The wild women dived for lily-bulbs in the lagoons, dug yams in the scrubs, or pulled the edible fern-roots from the marshes.

With a vine and a stone tomahawk an active hunter climbs the blue gum for an opossum. A band of dark fishermen with the heart-shaped towrow net surround a shoal of mullet off the sand-beach of Mooroo-Mooroolbin. A tall myall stands in his canoe like a black marble statue, poising the four-prong spear, waiting for passing fish. At the mouth of Breakfast Creek, on the point, "Garranbinbilla," a band of boys are practising with small spears and nullas at a whirling disc of bark. Young warriors amuse themselves with the return boomerang; the women weave diagonal stripe baskets from the pink and white rushes of the swamps, or bathe in laughing bands in the river.

Everywhere life; joyous, wild, free life. Man and beast and bird and tree in primeval innocence; man himself in the midst of peace and plenty, radiant with the physical health and vigour which made the mere act of living a perennial source of joy.

Little did the wild Stone Age children of the woods think what that whaleboat meant for them, or that behind it there would come a vampire civilisation to drain the life-blood of their race without even pretending to soothe them with the flapping of its deadly wings.

TROPICAL RAINS—CAIRNS DISTRICT.

On approaching the site of our old camp we came suddenly on a most extraordinary scene. There had been terrific landslips on the eastern slopes of Mount Harold, ravines of varying width and length torn out of the mountain from base to summit, and millions of tons of granite rock swept down into the valley below. The whole basin of Triugilburra Creek was a gray wilderness of granite, with here and there huge terraces of granite gravel run out like railway

embankments. With some difficulty we arrived within half-a-mile of our old camp, and were stopped unexpectedly by a wide granite creek that had no existence two years ago. From here to the foot of Barnard's Spur, half-a-mile away, was covered by enormous masses of granite piled up in wild confusion. From up the sides of the mountain to 3,000 feet the rocks had descended in torrents, sweeping everything before them. The site of our old camp was covered by rocks 10 to 40 feet in height. The forest spurs and green flats of 1890 were a granite desert. Showers of granite had filled up the gorge of the creek where it emerged from the mountains, and then the flood waters of Tringilburra, the result of a rainfall of 20 inches for *one night* on Bellenden-Ker, Mount Massie Range, and north side of Bartle Frere, came down with resistless force 100 feet deep, falling 1,000 feet in a mile, and swept the gigantic granite embankment far down the valley, filling up the old channel and tearing out two new creeks, leaving three strongly running torrents in place of the solitary stream on whose green banks we camped in 1889. The whole locality was entirely changed. Never before had I seen so awful an illustration of the tremendous power of water. Rocks weighing hundreds of tons were tossed about and piled one above the other like billet-wood. From our camp to Barnard's Spur we walked on nothing but huge bare granite rocks for over half-a-mile. It appeared as if 10,000 tons of dynamite had exploded in the heart of the mountain and blown the whole side out into space, filling up

> The ripe green valley with destruction's splinters,
> Damming the rivers with a sudden dash,
> Which crushed the waters into mist, and made
> Their fountains find another channel.

No eye had seen, no ear had heard, the unimaginable sights and sounds of those appalling granite avalanches, descending from the lonely mountain on that fearful night of rain and storm, and black darkness and raging torrents, as if some long-quiescent earthquake had awakened in sudden madness to repeat that lost story of Nature's agony in the birth-pangs of the World.

## SCENES IN CENTRAL AUSTRALIA.

A journey across Central Australia; the "wild lone land"; the "Great Central Desert"; the site of the mythical "Vast Inland Sea" of the early settlers! Through savage solitudes where we meet the wild men covering their bare feet with skilfully woven opossum hair and gum sandals to protect them from the sharp points of the young spinifex springing from the ashes of recent fires. Through stunted bloodwood; from green grass into dreary claypans, by salt springs, through dismal mulga scrubs, over basaltic hills covered by spinifex, across sandflats and past pools of clear water in the granite rocks. More belts of meadow-like grass and low saltbush, over undulations covered by loose stones, wave-washed by the ancient ocean; ascending low granite hills, crossing weary spinifex flats and red sandhills running east and west. More mulga scrub and saltbush, more ridges of red sand, then spinifex, black oaks, tea-tree, and wattles, with tea-tree flats between the sandhills. Leichardt trees, dense spinifex, and parallel east and west red sand-ridges; dry salt lakes, fresh waterholes, and sandhills timbered by stunted gums and acacias. Mulga scrub, spinifex flats, and native wells 10 to 20 feet in depth, into which the wild birds dive to quench their burning thirst. Blacksoil springs, stony tablelands,

ridges and hills of Desert Sandstone, dry claypans, open flats with Leichardt trees, and salt lagoons between sand-ridges, fringed by belts of scrub. Tea-tree flats and giant anthills; strong soda springs, and pools of fresh water in the limestone rock. Scrubs of tea-tree and acacia; high, steep red sandhills, separated by barren stony flats and undulating gravelly country timbered by dwarf box-gums.

## CHURCH STATISTICS.

### CATHOLIC CHURCH.

Archdiocese of Brisbane, established on 10th May, 1887. The first Bishop was the Right Rev. J. O'Quinn, consecrated on 29th June, 1859; died on 18th August, 1881.

The Archdiocese of Brisbane is divided into thirty-one districts, with 58 churches, 45 clergy, 20 religious brothers, and 186 nuns.

Education is provided by 2 high schools and 41 primary schools, taught by 31 male and 95 female teachers.

There are four charitable institutions.

### Diocese of Rockhampton.

First Bishop, Right Rev. J. Cani, consecrated on 21st May, 1882.

This diocese contains 11 churches, 17 schools, and 8 religious brothers, with 16 priests and 57 nuns.

### Cooktown.

The Vicariate Apostolic of Cooktown is divided into six districts, with 9 churches and 18 stations, 3 schools, 9 priests, and 13 nuns.

The Catholics in the Brisbane Archdiocese for 1894 were estimated at 60,000, and in Cooktown division at 3,500.

The Rockhampton diocese Catholics are not recorded.

### PRESBYTERIAN CHURCH.

In 1894 the Presbyterians had 49 churches in Queensland: 27 in the Presbytery of Brisbane, 3 in that of Maryborough, 4 in Rockhampton, 12 in Toowoomba, and 3 in Townsville.

Manses are attached to 18 of these churches. There are also 83 preaching stations.

The members on the roll were 3,810, with 160 elders, 44 deacons, and 342 managers.

There are 67 Sabbath schools, with 520 male and female teachers and an attendance of 1,403 boys and 1,750 girls. The Bands of Hope are attended by 1,470 members. Bible classes, temperance societies, Christian Endeavour and Fellowship Associations are among the educational institutions of the Presbyterian Church.

There are also missions to the kanakas and aboriginals.

### WESLEYAN CHURCH.

The Queensland Wesleyans possess 82 churches, with 13,100 sittings, 92 preaching places, 33 ministers, and 134 local preachers.

There are 90 Sunday schools, with 832 teachers and 7,700 scholars, besides 54 Bands of Hope with 5,100 members.

The church attendance for 1894 was about 16,100.

### CHURCH OF ENGLAND.

The colony is divided into three dioceses—Brisbane, Rockhampton, and Townsville.

In 1859 the Rev. Edward Wyndham Tufnell was consecrated first Bishop of Brisbane, arriving in September of 1860, and remaining until 1874. On his arrival the Church of England had only three clergymen—the Revs. B. Glennie, W. Creyke, and J. Mosely. Bishop Tufnell was succeeded by Bishop Matthew Blagden Hale, who arrived in 1875, and remained to 1885, when he was succeeded by Bishop William Thomas Thornhill Webber.

The diocese of North Queensland was formed in Bishop Hale's time, and Dr. Staunton appointed first bishop.

On St. Andrew's Day, 1892, Rockhampton became a separate diocese, and the Rev. Nathaniel Dawes first bishop.

There are 50 clergymen in the Brisbane diocese, and 25 lay readers; churches equal to seating 16,500 people; and Sunday schools with an average attendance of 1,850 boys and 2,250 girls.

BAPTISTS.

The Rev. Charles Stuart was the first Baptist minister in Brisbane, and he preached in 1849 in an "Evangelical Church," jointly owned by Baptists, Congregationalists, and Presbyterians, in William street. This building still survives. On the 5th August, 1855, the year after Mr. Stuart's departure for England, seven brethren and six sisters met to form the first distinct "Baptist Church holding Calvinistic doctrines," Baptists only to be eligible for membership. The first minister under the new order of things was the Rev. Charles Smith, who held service in the old Police Court.

The old "Evangelical Church" property was sold, the Baptists receiving £454 as their proportionate share, and they began the erection of a church in Wharf street.

On Sunday, the 12th September, 1858, the Rev. B. G. Wilson arrived from Bradford, and conducted service in the Court House and Supreme Court. The church was opened on the 6th February, 1859. Mr. Wilson died on 11th February, 1878. On the 5th October, 1885, the Rev. William Whale, the present pastor, arrived, and began service on the 11th.

The Wharf-street property was sold for £16,000, and in July, 1889, plans of a new church and manse were accepted. The "City Tabernacle" stands on Wickham terrace, and cost, with seats, £11,266; the adjoining manse, £973.

The Baptists have churches, Sunday schools, and Bands of Hope throughout the colony. The Church members at the end of 1894 were about 2,000.

HEBREW CHURCH.

The Brisbane Hebrews' first meeting to arrange for erecting a synagogue was held in B. Benjamin's office, in Queen-street, on 5th March, 1865. The preliminary committee elected B. B. Marks president, B. Benjamin treasurer, and J. B. Simmons secretary.

After service was conducted for a few months by J. E. Myers, he was succeeded by J. M. Myers, who arrived in October, 1865, and held the position of acting minister gratuitously for twelve years, being succeeded by the Rabbi A. P. Phillips, after whom came the present Rabbi, A. J. Chodowski, in February, 1895.

The first synagogue was erected in Margaret street, Brisbane, in 1886, at a total cost of £5,300.

The first Congregation Fund was created by J. M. Myers, who bought a piece of land in George street from M. Goggs for £200 and sold it for £4,000. He bought another piece for £800 and sold it for £2,000. There is also a synagogue in Toowoomba.

## HISTORICAL EVENTS.

Tasman sighted Tasmania, 24th November, 1642.
Tasman sighted New Zealand, 12th December, 1642.
Cook landed in New Zealand, 5th October, 1768.
Cook sighted Australia, 19th April, 1770.
Cook arrived off Cape Morton, 17th May, 1770.
Cook took formal possession, New South Wales, 21st August, 1770.
Cook killed at Hawai, 14th February, 1779.
First Australian settlers, H. Schaffer and James Ruse, got their land, 1791.
First leasehold settler, Philip Schaffer, February, 1792.
First Australian aboriginals to England, with Governor Phillip, "Bennilong" and "Yemerrawannie," 1792.
First play performed, 1796.
First merchant, Robert Campbell, arrived 1798.
First Australian newspaper, the *Gazette*, 1803.
First Australian vessel, "King George," built by Underwood, 1805.
First Australian census of people and stock, 1810.
First Australian burial grounds consecrated, 1811.
First Australian-grown hops, 5 acres, Kissing Point, by Squires, 1812.
Flinders died 14th July, 1814, London.
Allan Cunningham at Cooktown, 2nd August, 1820.
Influenza fatal to blacks and whites, 1820.
First arrival of Dr. Lang, May, 1823.
Oxley entered the Boyne River, 9th November, 1823.
Oxley entered the Brisbane River, 2nd December, 1823.
First convicts arrived, Redcliffe Point, September, 1824.
First Australian Supreme Court, 1824.
First Australian Legislative Council, 1824.
Last convicts removed from Redcliffe to Brisbane River, February, 1825.
A. A. Company formed, capital £1,000,000, 1825.
First Australian book, "Busby on Vineyards," 1825.
First Australian breach of promise case, Cox *versus* Payne, 1825.
Governor Brisbane and family left for England by "Mary Hope," December, 1825.
First Australian public concert, 1826.
Convict plantation on Stradbroke Island, 1827.
First whooping-cough in Sydney, brought by ship "Morley," March, 1828; many died, including a son of Governor Darling.
Captain Rous of "Rainbow" found Clarence and Richmond, August, 1828.
Oxley died at Sydney, 25th May, 1828.
First Australian Post Office, 1828.
Robt. Howe, of *Gazette*, first Australian editor, drowned off Pinchgut, Sydney, 11th January, 1829.
Captain Logan killed, 16th October, 1830.
First Australian-built steamboat, the "Surprise," launched 31st March, 1831.

Myall and cypress pine first seen by Mitchell on Peel River, 1831.
"Stirling Castle" arrived with Dr. Lang's fifty-nine mechanics, October, 1831.
First *Government Gazette*, 7th March, 1832.
Lady Burke died at Parramatta, 7th May, 1832.
First Australian vote for emigration, in 1832, £3,600; Imperial Government to give double the amount.
Charles Fraser, botanist, died in 1832.
First Sydney meeting to petition for representative assembly, 1833.
Death for cattle-stealing, robbery of £5 from dwelling, and forgery, ceased, 1st August, 1833.
First stone, St. Andrew's Church, Sydney, laid by Colonel Snodgrass, 30th November, 1833.
First Sydney regatta, 8th January, 1834.
First Australian Commercial Banking Company of Sydney, November, 1834.
First catarrh in sheep at Burrowa, 1834.
First common use of the word "squatter," 1834.
Richard Cunningham killed by Bogan blacks, April, 1835.
First Australian Bank of Australasia, 14th December, 1835.
First Australian Oddfellows, 24th February, 1836.
First School of Arts, Sydney, 6th February, 1837.
First marriage in Melbourne, 30th April, 1837.
First steamer, Sydney to Brisbane, "James Watts," 1837.
First typhus fever, by the emigrant ship "Minerva," 23rd January, 1838.
Sydney Botanic Gardens thrown open to the public, on Sunday, 30th April, 1838.
Brisbane abandoned as penal settlement, 20th May, 1839.
Allan Cunningham died in Sydney Botanic Gardens, 27th June, 1839.
Flood in Melbourne, 1839.
Mrs. Caroline Chisholm arrived in Sydney, 1839.
First squatter on the Darling Downs, March, 1840.
First Australian daily newspaper, *Sydney Herald*, 2nd September, 1840.
First drays through Cunningham's Gap, October, 1840.
First Governor arrived in New Zealand, 1840.
First Sydney tobacco manufactory, 1840.
Last convict ship to Sydney, "Eden," 1840.
First Australian gas (Sydney lighted), 24th May, 1841.
First scarlatina in Sydney, 1841.
Fossils of Diprotodon found in Gowrie Creek, 28th July, 1842.
Earthquake on the Hunter and Macleay, 20th October, 1842.
Foundation stone Australian Library, Sydney, 14th February, 1843.
Governor Gipps visited Brisbane, March, 1843.
John McArthur died at Camden, New South Wales, 11th April, 1843.
First Sydney Parliament met, 1st August, 1843.
First Ipswich land sold, 11th October, 1843.
Campbell's first boiling-down, Kangaroo Point, 1843.
First peal of bells, St. Mary's, Sydney, 1st January, 1844.
First synagogue consecrated, Sydney, 2nd April, 1844.

First Bethel chapel opened by Captain Charles Hope, 24th April, 1844.
First official assignees in insolvency, 1844.
Exports first exceeded imports, 1844.
Dr. Lang first visited Brisbane, November, 1845.
First teetotal demonstration, thousand members, Sydney, 1845.
Gilbert, the naturalist, killed on the Nassau, 28th June, 1845.
Opening first Congregational church, Pitt street, 1st January, 1846.
The warship "Driver," of four guns, arrived Sydney, 7th January, 1846, for the Australian station.
First mailman, Drayton to Brisbane, James Powers, January, 1846.
First newspaper in Brisbane, 20th June, 1846.
First steamer, Brisbane to Ipswich, the "Experiment," 29th June, 1846.
Mitchell named the Belyando, 10th August, 1846.
First agitation for separation, at Brisbane and Drayton, 1846.
Andrew Gregor and Mary Shannon killed by Pine River blacks, 1846.
First camels in Australia, at Adelaide, 1846.
First settlement at Port Curtis, January, 1847.
Steamer "Sovereign" wrecked at Amity Point, 11th March, 1847.
First vessel built in Brisbane, schooner "St. Helena," left for Sydney, 15th May, 1847; lost with all hands.
Leichardt's last letter, 4th April, 1848.
Kennedy's party landed Rockingham Bay, 24th May, 1848.
First public attention to silk culture, 1848.
Remains of Kennedy's party buried on Albany Island, 13th May, 1849.
Captain Owen Stanley died at Sydney, March, 1850.
Victoria separated from New South Wales, 1st July, 1850.
First bank in Brisbane (New South Wales), 14th November, 1850.
First gold commissioner, Hardy, arrived Summerhill Creek, 2nd June, 1851.
First Cumberland disease, Cumberland, New South Wales, 1851.
First Bathurst burr, on the Murrumbidgee, 1851.
Hovendon Hely in search of Leichardt, 1851-52.
Two tons of gold shipped by one vessel from Sydney, January, 1852.
First mail steamer to Sydney, "Chusan" (79 days), August, 1852.
"Great Britain," 3,500 tons, Sydney, November, 1852.
J. T. Bidwill died at Tinana Creek, March, 1853.
Dowse and son wounded by blacks at Sandgate, 3rd December, 1853.
Sydney Council voted £100 pension for Leichardt's mother, 1853.
Surveyor Burnett died, Brisbane, 18th July, 1854.
F. Strange, the naturalist, killed at Percy Islands, 18th November, 1854.
Maurice O'Connell sent to found Gladstone, 1854.
Fitzroy first navigated, 1855.
Pitcairn Islanders landed at Norfolk Island, 8th June, 1856.
First Brisbane Supreme Court, Judge Milford, 15th April, 1857.
Melbourne first lighted by gas, 10th August, 1857.
Sydney University inaugurated, October, 1857.
First Victorian Parliament, 11th November, 1857.
Fraser family, eleven people, murdered on the Dawson, 1857.

First Queensland goldfield, Fitzroy River, September, 1858.
Gregory's search for Leichardt, 1858.
Governor Bowen arrived Brisbane, 10th December, 1859.
Ipswich Supreme Court opened 6th February, 1860.
First Queensland elections, 27th April, 1860.
First Queensland Parliament, 22nd May, 1860.
Burke and Wills left Melbourne, 20th August, 1860.
Captain Mackay discovered Pioneer River, 1860.
First telegram in Brisbane, 10th April, 1861.
Walker's Leichardt search party started 7th September, 1861.
Nineteen people killed by blacks on Wills' station, Comet River, 17th October, 1861.
First Queensland editor, Arthur Sidney Lyon, died at Cleveland, Morton Bay, 22nd October, 1861.
Earthquake at Brisbane, 14th December, 1861.
Landsborough's search for Burke and Wills, 1861.
Burke and Wills died at Cooper's Creek, December, 1861.
First Queensland sugar made by John Buhôt in Botanic Gardens, 24th April, 1862.
First iron casting in Brisbane by A. Cameron, 3rd July, 1862.
McKinlay's party arrived at Bowen, 8th August, 1862.
Acclimatisation Society founded at Brisbane, 12th August, 1862.
Ipswich Grammar School opened, 25th September, 1863.
Bishop O'Quinn laid foundation stone of St. Stephen's, Brisbane, 26th September, 1863.
First stone, Brisbane Town Hall, 26th January, 1864.
McDonald crossed from Bowen to the Gulf, 11th August to 24th November, 1864.
Brisbane waterworks started, 18th August, 1864.
Foundation stone, Brisbane Bridge, 22nd August, 1864.
Captain Coley, first Queensland Sergeant-at-Arms, died, 12th September, 1864.
Brisbane School of Arts founded, 20th September, 1864.
Hon. Thomas de Lacy Moffatt died at Ipswich, 2nd October, 1864.
First gold found at Enoggera, November, 1864.
First ton of sugar made at Cleveland, 1864.
Brisbane Jews first met to arrange for a synagogue, March, 1865.
St. Mary's Cathedral burned at Sydney, 29th June, 1865.
"Fiery Star" burned on Good Friday, 1865.
First Queensland sugar publicly sold, 6th January, 1866.
Riots in Brisbane by railway navvies, 11th September, 1866.
Stevens, the botanist, killed at Maroochie, 1866.
St. Helena, Morton Bay, gazetted penal settlement, 14th May, 1867.
Prince Alfred laid first stone, Brisbane Grammar School, 29th February, 1868.
Prince Alfred shot by O'Farrell, 12th March, 1868.
Melbourne and Tasmania connected by cable, April, 1869.
Sturt, the explorer, died 1869.
Governor Blackall died 3rd January, 1871.
Brisbane Grammar School opened, 1st February, 1871.
Foundation, Brisbane Masonic Hall, 10th July, 1871.
Aboriginal threw a cricket ball at Clermont, 146 yards, 2nd January, 1872.

King (of Burke and Wills) died, 15th January, 1872.
Harry Williams and Sam Black killed by Georgetown blacks, 24th April, 1872.
Welford, of Isis Downs, and the stockman, killed by blacks, 24th April, 1872.
Queensland National Bank opened, 4th June, 1872.
First cablegram, Adelaide to London, 22nd October, 1872.
Beef riots, Charters Towers, 2nd November, 1872.
First election by ballot in England, 1872.
First axis and fallow deer on Darling Downs, 1872.
Hann's Northern Expedition, 1872.
Opal discovered in West Queensland, 26th April, 1873.
First hares arrived by "City of Brisbane," 1st September, 1873.
Dalrymple's North Coast Expedition started, 27th September, 1873.
First locomotive engine made in Queensland (at Maryborough), 1873.
First red deer, 1873.
McKinlay died at Gawler, South Australia, December, 1874.
Steamer "Gothenburg" lost off Bowen, 105 drowned, 24th February, 1875.
Telegraph, Adelaide to Perth, 1877.
Sir Maurice O'Connell died 23rd March, 1879.
Silvester Diggles, naturalist, died 21st March, 1880.
Justice Lutwyche died 12th June, 1880.
Governor Sir Arthur Kennedy died 3rd June, 1883.
Governor Sir Anthony Musgrave died 9th October, 1888.

FIRST QUEENSLAND NEWSPAPERS.

*Morton Bay Courier*, 20th June, 1846.
*Free Press*, 1849.
Ipswich *North Australian*, 2nd October, 1855.
*Darling Downs Gazette*, 11th June, 1858.
*Ipswich Herald*, 4th July, 1859.
*Wide Bay and Burnett Times* (now *Wide Bay News*), 6th March, 1860.
*Queensland Guardian*, 31st March, 1860.
*Maryborough Chronicle*, 21st November, 1860.
First daily paper, *Courier*, 16th May, 1861.
Rockhampton *Bulletin*, 18th July, 1861.
Rockhampton *Argus*, 3rd January, 1863.
*Port Denison Times*, 5th March, 1864.
*Peak Downs Telegram*, 14th October, 1864.
*Dalby Herald*, 21st September, 1865.
*Warwick Argus*, 2nd November, 1865.
*Queenslander*, February, 1866.
*Warwick Examiner*, 1866.
*Stanthorpe Post*, 20th July, 1872.
Brisbane *Telegraph*, 1st October, 1872.

By Authority: Edmund Gregory, Government Printer, William street, Brisbane.