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# AUSTRALASIA

Its Geography  
Resources, Commerce  
and Chronicle of  
Discovery

by

M. J. C. MEIKLEJOHN

B.A.

LONDON

PUBLISHED BY A. M. HOLDEN

23 PATERNOSTER ROW, E.C.

1897

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PRICE SIXPENCE.

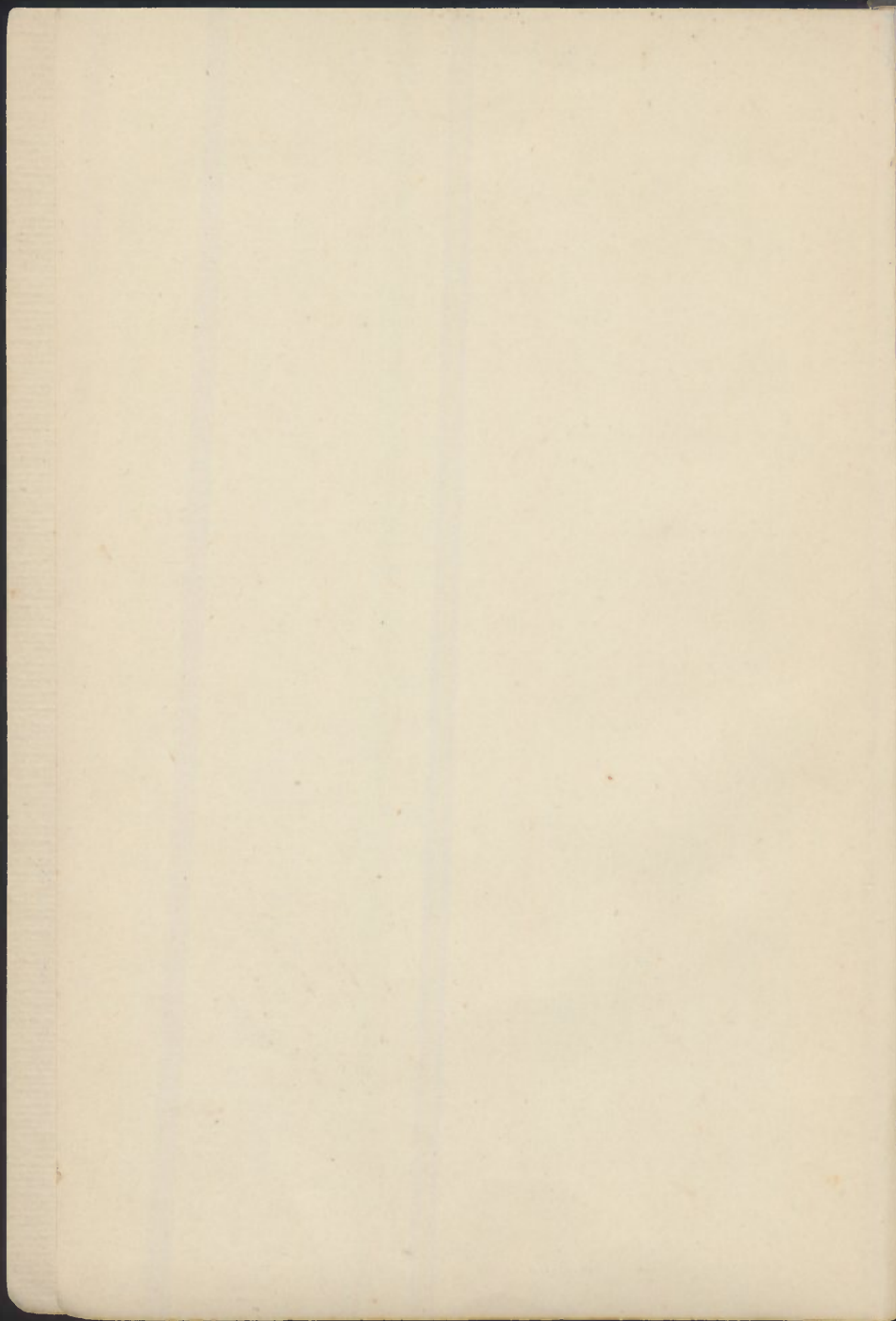
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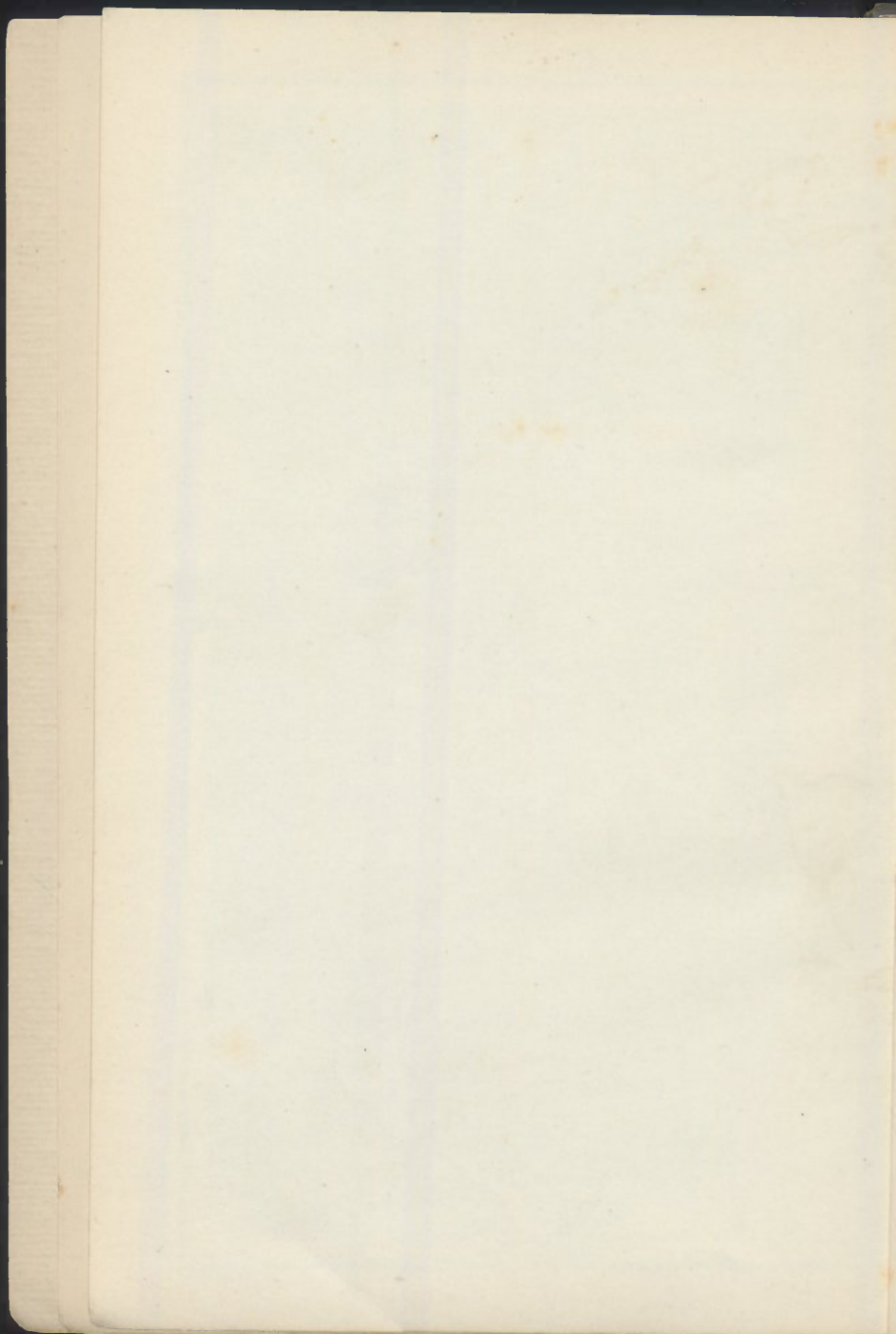






The Edinburgh Geographical Institute

J. G. B. Bartholomew





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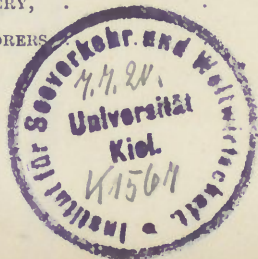
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S<sup>o</sup> A. M. HOLDEN  
AT TWENTY-THREE  
PATERNOSTER ROW  
LONDON, E.C. 1897

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## AUSTRALASIA

**Introductory.**—The name Australasia is now generally applied to the island-continent of **Australia** and the islands near it, the largest of which are **New Guinea**, **New Zealand**, and **Tasmania**.

(i) In addition to those mentioned above, the following islands or island-groups are included in Australasia: **New Caledonia**, **New Hebrides**, **New Ireland**, **New Britain**, the **Solomon Islands**, and **Fiji**.

(ii) The term Australasia means 'Southern Asia.' But the region has, in reality, nothing to do with Asia, as is clearly shown by the forms of its animal life, which are peculiar to itself.

(iii) 'Australasia' is a term popularly used in England to denote our colonies only, to the exclusion of the foreign possessions which ought to be included under the name.

## AUSTRALIA

**I. Extent and Area.**—Australia is the largest island, or the smallest continent, in the world. It lies between Lat. 10° and Lat. 40° South. The greatest breadth of the continent is measured along the line of Lat. 27°, and it is 2300 miles from east to west. The longest line that can run from north to south is drawn from Cape York to Wilson's Promontory, and measures about 2000 miles. **Torres Strait** separates the continent from New Guinea, and **Bass Strait** from Tasmania. The area of the continent amounts to close on 3,000,000 square miles.

(i) Australia is thus nearly equal in extent to the United States (without Alaska), or is considerably more than three-quarters the size of Europe.

(ii) In point of civilisation AUSTRALIA is the youngest of all continents. It has no buildings more than a hundred years old; no battle has ever been fought on its soil; nor does there exist in it the smallest trace of civilisation prior to its settlement by Europeans.

(iii) 'It was, indeed, a bewildering and difficult country to explore: almost everything in nature seemed to reverse the usual order of things. In this huge, wild land of the Antipodes, the compass pointed to the south; the sun travelled along the northern heavens; the mercury of the barometer rose with a southerly and fell with a northerly wind; the animals seemed disproportionately large in their lower extremities, carrying their young in a pouch; the swans were black, the eagles white; the moles laid eggs, the owls hooted in the daytime, the voice of the cuckoo was heard at night; the valleys were cool, the mountain-tops warm; the north winds were hot, the south winds cool; while the east winds were, curious to relate, the most healthy; the bees were without sting; the cherries grew with the stone outside; and some of the rivers were salt and flowed inland. Altogether, the first explorers must have found it a most singular and perplexing country.'

2. **Coast-line.**—The coast-line of Australia is, like that of Africa, short, compact, little indented, and with very few islands. There are in it very few inlets that can be made commercially useful; and those that do exist lie chiefly on the east and the south-east coasts. The chief features that strike the eye are the **Gulf of Carpentaria**, opposite to which is the deep in-running **Spencer Gulf** in the south; and the **Cape York Peninsula** in the north, which is balanced by the **Island of Tasmania**. The **Great Australian Bight** in the south is a shallow curve in the land, edged by a continuous stretch of sandy beach. The northern half of the east coast is edged, at varying distances from the shore, by the **Great Barrier Reef**.

(i) The larger part of the north and west coasts is featureless in contour. Part of the west coast is edged by ranges of low hills; while in the north-west the coast presents a considerable variety of outline, and contains many island-sheltered inlets. Much of the north shore is a dull stretch of sand and mud-swamp, in which the mangrove flourishes, even as far as low-water mark. **Melville Island** is the chief island on the north coast. In it a magnificent harbour has been discovered, with many striking points of resemblance to Sydney Harbour.



(ii) West of the Great Bight the only good harbour is **King George's Sound**. About 200 miles north-west of this is **Cape Leeuwin** (= *Lioness*), which is the first land sighted by ships as they approach Australia.

(iii) The **Great Barrier Reef** starts a little north of the Tropic of Capricorn, and runs along the coast of Queensland for about 1200 miles, till it nearly blocks up Torres Strait. It is a natural breakwater formed by the so-called coral 'insect,' or polyp, and inside it ships can navigate in perfectly smooth water. The navigation is, however, risky, owing to the presence of many sunken reefs that are detached from the main wall. Ships, therefore, generally use the passage by day only, and anchor at night. The Barrier is not continuous. It is broken into in many places by channels—some narrow, some as much as twelve miles wide. The widest is opposite the mouth of the Burdekin River, for the outflow of fresh water is hostile to the formation of coral. Near **Thursday Island**, north of Cape York, is one of the few safe channels by which ships may pass the reef-studded Torres Strait.

(iv) **Australia and Africa : a comparison of their coast-lines :**

- (a) Both have a comparatively short and regular coast-line.
- (b) Both have their best harbours on the east and south-east coasts.
- (c) The east coasts of both are protected : that of Australia by the Great Barrier Reef ; that of Africa by Madagascar, which is itself fringed on its eastern coasts by coral formations.
- (d) Off the east coast of both a strong current sets southwards.

3. **Build.**—The build of Australia is simple enough. It has been compared to 'a dish of irregular shape, being depressed towards the centre and raised along the edges.' Like Ireland and Africa, it is rimmed with mountains along its outer edge—the chief ranges lying in the east. Like Africa, its interior is a plateau ; but the plateau is a low one. Like Africa, again, it has a very narrow coast-plain between the mountains and the sea. The fourth factor in the build of Australia is the great plain of the Murray-Darling basin.

The resemblance to Africa may be continued still further :

- (a) Like the Nile, the Murray diminishes in volume as it nears the sea. Sands absorb its water, as the irrigation works absorb the waters of the Nile.
- (b) Both continents have extensive desert lands in the interior. Both the Sahara in Africa, and the central Australian desert contain low ranges of hills.
- (c) In both continents some of the rivers are highest in summer owing

to the melting of snow upon the mountains. The Nile is swollen from May to September for this reason. So also are some of the Australian rivers, which flow into the continental basin of the interior.

4. **Mountains.**—There is only one great mountain-range, or, more correctly, a series of highlands, in Australia. This is known as the **Dividing Range**: because it divides the fertile coast-plain from the hot and dry interior. It begins a little west of Melbourne, runs east, and sweeps north till it ends at Cape York. In the south-east this chain forms a nearly continuous cordillera; in the north it is often rather the steep outer edge of the interior plateau. The importance of this range to, and its influence on, Australia is very great. It is the most important factor in modifying the climate; it is the source of nearly all the great rivers; and in its deep valleys, that are turned towards the sea, is found the richest vegetation. It makes abundantly clear to us what would happen in South America if the Andes had been on the east, instead of on the west, coast.

(i) The main links in the great chain are, in their order: the **Gramians**; the **Australian Alps**; the **Blue Mountains**; the **Liverpool Range**; the **New England Range**; and the **Craig Range**.

(ii) Of these the longest range, which extends for a distance of nearly 400 miles, is the **Australian Alps**. The highest mountains in them belong to the Kosciusko group, of which **Mount Townsend** (7350 feet—or half Mont Blanc) is the highest mountain in the whole of Australia.

(iii) Other ranges, which are dissociated from the main chain and from each other, are: the **Macdonnell Range**, in the heart of the continent, which may be regarded as the parallel of the Tibesti Mountains in the African Sahara; the **Flinders Range**, which runs north from the head of Spencer Gulf; and the **Darling Range**, along the south-west coast of West Australia.

(iv) Australia possesses no active volcanoes. But **Mount Bogong** (6500 feet), which is the highest mountain in Victoria, rises out of a plateau built up out of materials which are entirely of volcanic origin. From this plateau the rich volcanic soil is washed down to fertilise the plains below.

5. **Plateaus and Plains.**—On either side of the Dividing

Range lie table-lands of varying breadth. At their widest point they are about 100 miles across; and they have an average elevation of 2500 feet. West of the table-lands stretch for hundreds of miles the **Upland Plains**, which have an average elevation of 500 feet, and which are mostly desert or 'scrub-land.' The **Lowland Plain** is the fertile basin of the Murray-Darling, and fills an area equal to more than twice that of the Austrian Empire.

(i) The Upland Plain is, as has been stated, mostly desert; but it contains here and there oases, and much of its surface is covered, in wet seasons, with abundant vegetation. The two largest deserts are the **Victoria Desert**, north of 30° South Lat., and the **Great Sandy Desert**, between 20° South Lat. and the Tropic of Capricorn.

(ii) Both the eastern and the western parts of the Great Plains suffer equally from want of water. But the eastern plains are the more productive of the two. Much of them is covered with the famous 'salt-bush'—a grey, stunted shrub, on which sheep thrive quite as well as on grass. The western plains, on the other hand, are a land of sandy desert and scrub. They are covered with a spiny grass that cuts like a knife, and furnishes no sustenance to any useful animal. The explorer that is bold enough to face this pitiless desert (incurring a danger more terrible than those endured at the hands of savage tribes or from ferocious wild beasts) has to cut his way, often foot by foot, through the scrub; and he must endure privations both of food and water, such as the traveller in no other continent in the world is called upon to encounter.

6. **Climate and Rainfall.**—The climate of Australia varies, of course, with latitude and elevation; but it is, on the whole, **warm** and **dry**. The rainfall is, for the whole continent, very scanty; but rain descends, in certain localities, in the form of mighty deluges. Thus the climate of many parts is one of alternate drought and torrential flood. The climate is also subject to sudden variations of temperature, so that the thermometer sometimes falls as much as 60° or 70° in a few hours. One of the most disagreeable features of the Australian climate is the hot winds—'bursters' or 'brick-dusters'—that now and then blow from the parched



and burning plains of the interior. The most important factor which tends to modify the climate of Australia is the Great Dividing Range.

(i) This range acts as a condenser of the prevailing wind that strikes the Australian continent—the South-East Trade. The result is that, while the coast-strip gets more rain than it needs, the rain-bearing clouds are arrested by the mountains, and compelled to drop their moisture before they are able to reach the interior. Thus a very large part of Australia receives practically no rain at all; and there is less and less rain the further west you go.

(ii) The amount of rain that falls on the coast-strip increases as we go from south to north,—that is, the nearer we get to the tropics. For there the seas are warmer, and therefore the evaporation from the sea-surface is greater. In the tropics, where the monsoon-winds prevail, the summer (November to April) is the rainy season. Outside the tropics the rainy season is generally in winter (May to October).

(iii) In climate, again, there is a likeness between Australia and South Africa. The following are the chief points:

- (a) Both countries have the same sort of surface; and both lie between two oceans and in about the same latitude.
- (b) In both the south and south-east coasts are the most abundantly watered.
- (c) In both countries the coast ranges on the east catch the rain; and the interior is left very dry. But South Africa is narrower than Australia, and therefore the desert regions are not so extensive, and are also less arid.
- (a) The greatest heat is met with in the desert interior. Here the explorer Sturt found the mercury burst the tube of his thermometer. 'Every screw came out of the boxes; the horn handles of instruments and the combs split up into fine laminæ; the lead dropped out of the pencils; the hair stopped growing; and the finger-nails became brittle as glass.'
- (b) Rain sometimes falls in terrible floods; and this heavy rain is alternated with long periods of complete drought. The Hawkesbury River (in New South Wales) once rose 93 feet above its ordinary level; and hundreds of people only saved their lives by climbing into the tops of high trees. In 1884 there was no rain; and 10,000,000 sheep died of thirst.
- (c) One of the most striking characteristics of the Australian climate is the abundance of sunshine. The grey days of our English climate are unknown; and clouds seldom obscure the sky for long.
- (d) A 'buster,' or hot wind, has been thus described: 'You may know when the terror is coming by various tokens. Sometimes it is by an ominous silence. Nature seems to listen with bated breath and hushed whisper; the distance darkens, a livid glow overspreads the blue-vaulted sky, closing in



rapidly, while blasts of heated air strike against the cheek as if just escaped from a fiery furnace. . . . Ere long a vast driving volume of dark clouds, densely opaque, draws nearer; there is a rush, a giddy whirl, a noise as of wings in the air, and then it leaps down on you like an avalanche, only not of pure white snow, but dust—loathsome, gritty, choking, spluttering, ear-filling, eye-blinding dust. It gets down your neck, up your coat sleeves, and into your boots and your pockets.'

While the 'burster' lasts, the whole atmosphere looks like pea-soup, murky brown as in a London winter fog. The streets are deserted; every window is tight closed; and the heat is suffocating. The wind goes on blowing for two or three days, and is in general followed by a soft rain. Then the bright Australian sunshine bursts out, and all nature smiles again.

7. **Rivers.**—Both the climate and the build of Australia help us to understand the nature of the rivers. The rainfall is scanty: therefore there are not many, or highly developed river-systems. In fact, Australia is practically a **one-river continent**. Secondly, the main watershed is near the east coast. Therefore the rivers running east from it are short but full. On the other hand, the rivers that flow west from it are long indeed, but poorly supplied with water, owing to the nature of the climate of the country through which they pass. Nearly all the rivers of Australia are also subject to two serious and opposite disadvantages: they are either swollen to overflowing, or dried up so as to be unnavigable; they are in a depressed or a swollen state—a state either of drought or of flood. The great river of Australia is the **Murray-Darling**, which, with its three chief tributaries, the Warrego, the Lachlan, and the Murrumbidgee, waters the fertile Lowland Plain

(i) Australia exhibits two main drainage slopes—one east of the Dividing Range, and the second west of it towards the interior.

(ii) The **Murray** (with the **Darling**—2345 miles) rises amongst the highest peaks of the Australian Alps. It flows westward; and in its course forms a great part of the boundary of Victoria and New South Wales. Shortly after entering South Australia, it turns nearly due south and discharges into the shallow **Lake Alexandrina**. This communicates with a long, shallow coast-lagoon, called the **Coorong**, which is separated from the sea by a line

of sand-dunes. The great river thus slowly soaks into the sea through a kind of sand-filter. Its largest tributaries—both on the left bank—are the **Darling** with the **Warrego**, and the **Murrumbidgee** with the **Lachlan**. Both the **Murray** and **Darling** are often 'on strike'—they do not flow at all; but dwindle down, in dry seasons, into a series of isolated waterholes.

(iii) The rivers running east from the Dividing Range—such as the **Fitzroy**, **Burdekin**, **Brisbane**, and **Hunter**—are all short, but have a more or less continuous supply of water throughout the year. They bring down immense quantities of sediment from the neighbouring highlands; and their mouths are therefore generally impeded by bars.

8. **Inland Rivers and Lakes.**—Apart from the lagoons, which occur most thickly along the south-east coast, Australia possesses many lakes, most of which are salt, and shrink in the summer into mere swamps. The chief are **Lake Amadeus**, in the centre of the continent; and **Lakes Torrens**, **Gairdner**, and **Eyre**, in the 'lake-district' of Australia, at the head of Spencer Gulf. The largest fresh-water lake is **Lake George**, in New South Wales, which is as big as **Loch Lomond**. **Lake Eyre** is the centre of the basin of inland drainage, and receives the large, but intermittent, rivers—the **Finke**, the **Diamantina**, and the **Barcoo**, or **Cooper's Creek**. Western Australia also possesses a 'lake-district.' The chief lakes are: **Austin**, **Barlee**, **Monger**, and **Lefroy**. But these are only one or two feet deep in the rainy season. At other times they are quite dry, and become salt-encrusted swamps.

(i) Both these, and other rivers of the desert interior, are capricious in their flow. At one time their course is marked only by the trees and grass that grow along their banks. At others, the **Diamantina**, for example, is 20 feet deep and 2 miles across.

(ii) Of the salt lakes the explorer **Eyre** writes: 'The refraction from these lakes was most extraordinary and deceptive. When away from the bed, a vast body of water seemed to intervene between them and the ranges, mock water seemed to be laving their bases, and reflecting the outlines of their rugged summits. The whole scene partook more of the nature of enchantment than reality; and, as the eye wandered over the unbroken crust of pure white salt, lit up by the glaring sun, the glittering effect was brilliant beyond description. Certainly all is not gold which glitters here.'

- (a) The remarkable changes and caprices of Australian drought and flood are well illustrated by the alterations which have taken place in Lake George. In 1824 it was 20 miles long, and 8 miles wide. In 1837 it was a grassy hollow. In 1865 its bed was again filled with water, 17 feet deep.
- (b) MAJOR WARBURTON, the explorer, thus illustrates the same phenomenon: 'To show you what changes are met with in Australia, I may mention that the bed of the OAKOVER (a river in Western Australia) at that point was three or four hundred yards in width; but there was not a drop of water in it, and probably there had not been for a long time. We went to bed one night, when the channel of the river was quite empty; but at three o'clock in the morning it was full to the bank, with plenty of ducks and large trees, borne along on the current, floating on its surface. It was then a splendid river.'

9. **River Navigation and Irrigation.**—The **Murray-Darling** system is the most important navigable waterway in Australia; and over it river-steamers of shallow draught penetrate far into the interior. Some other rivers on the east coast, such as the Hunter, Brisbane, and Fitzroy, are navigable in their lower courses. But the Murray and its tributaries are likely to be of even greater use for irrigation than they have ever been for navigation. What has been done in India can be done also in Australia. Already a beginning has been made at **Mildura** and **Renmark** on the Murray, where fruits of many sorts and excellent vegetables grow profusely on irrigated soil, on which, a few years ago, there was not enough food even for rabbits.

(i) The Murray is navigable as far as Albury, at which point the railway between Melbourne and Sydney crosses it. On the Murrumbidgee steamers can reach Wagga-Wagga, and on the Darling, Bourke. Both of these last two places are in communication with railways. In wet seasons navigation can be still further extended; but, on the other hand, in times of drought, it is stopped altogether. The great drawback to the navigation of the Murray is that the river has no useful outlet to the sea. Hence the cargoes of the steamers have to be discharged at Morgan in South Australia, just before the river begins to take its southern bend, and at different river-ports on the Victorian border. From the former place a short railway conveys goods to Adelaide.

(ii) Australia, with a thorough system of irrigation, such as is supplied in India by the Ganges and other rivers, could support a population ten times as large as it does at present. The gradual slope of the Murray-



Darling basin renders it probable that nearly the whole of this vast area, which is twice as big as the Austrian Empire, could be irrigated. In the colony of Victoria, the **Chinese** (those industrious and clever gardeners) have done much for the colony by irrigation on a small scale. They rented what every one considered to be useless barren wastes, and raised better crops on them than their English neighbours did on the richest of soils.

(iii) In addition to procuring water from the rivers, the Australians are busy tapping their underground water-supply by means of **artesian wells**. In the dry interior there is a vast supply of artesian water waiting to be tapped. The greatest advances in this direction have been made in Queensland. There the water from the artesian wells forms small lakes, which are of inestimable value for watering stock, as well as for agricultural purposes.

(a) A curious fact has been discovered in connection with the underground water-supply of Australia. It seems that there is a steady stream of water—a gigantic leakage—which flows underneath the geological strata and wells out into the sea at a great distance from land. Far out in the Gulf of Carpentaria (beyond the influence of flood-water from the rivers which enter that gulf), fresh water can be drawn up in a bucket. It is also stated that off the Victorian coast fresh water may be obtained from a so-called spring far out to sea.

(b) In connection with this fact, it may also be noticed that many Australian rivers often sink below the earth to form part of the underground drainage. The **Broughton River**, in South Australia, which flows into Spencer Gulf, sometimes does this. In the upper part of its course it is a fine stream; but Eyre, the explorer, found that towards its mouth it grew smaller and smaller, till it vanished altogether.

10. **Vegetation.**—The flora of Australia is very extensive as to the number of its species. It is also unique among the floras of the world. But the almost entire absence of fruit-bearing trees shows it to be of a low order. The three most characteristic groups of trees are the **eucalypti** (blue gum, red gum, stringy bark, iron bark, etc.); the **casuarinas**, trees with thread-like leaves, which the colonists absurdly call 'oaks'; and the **acacias** or wattles. Evergreen trees and shrubs are everywhere prevalent; and their deep green foliage presents a strong contrast, during the autumn, to the yellow dried-up grass.

Australian vegetation may be ranged under three heads: **brush**, **woodland**, and **scrub**—according as it flourishes



among the mountains, or on the table-land near the mountains, or on the interior plains. (a) The richest, the most tangled, and the most varied vegetation is to be found in those valleys and clefts of the Dividing Range that face the sea. (b) The table-land, and the neighbouring interior, is covered with an open park-like forest, which affords free passage for traffic, and plenty of pasture-ground for stock. (c) The far interior, where it is clothed at all, is beset with the nearly impenetrable **mallee scrub** (a dwarf species of eucalyptus) and the **mulga scrub** (composed of thorny acacias), or is overgrown with the low and prickly **spinifex**, the dreaded porcupine grass.

(i) The eucalypti are eminently suited to withstand the dry climate of Australia. They grow quickly; their long roots suck up water from great depths down in the ground; and their leaves, which hang vertically, and thus give little or no shade, are tough and leathery. Some species afford excellent timber—notably the **karri** and **jarrah** of West Australia, which are now largely used in London for wood-pavements. The planting of blue gums in marshy districts is an excellent preventive of malarial fever. One species, the peppermint tree, which grows in the mountain valleys of Victoria, is the tallest tree in the world, and sometimes reaches a height of 500 feet.

(ii) In the tangled valleys of the coast-range grow many beautiful and odd forms of vegetation. Such are: the **cabbage-palm**; the **giant fig-tree**; a poisonous **nettle**, fifty feet high; and the wonderful **flame-tree**, that makes the Illawarra Mountains of New South Wales conspicuous for miles out to sea, owing to their brilliant crimson patches. In the scrub-land flourishes the **grass-tree**. From the rugged stem springs a bushy tuft of drooping wiry foliage; out of the centre of this rises a long rod, not unlike a bulrush, covered with white stars.

(iii) Some of the native grasses and plants are very useful in grazing. The **kanagaroo-grass**, for instance, affords excellent pasture; and on the **salt-bush**, which seems to want hardly any rain and grows on saline soils, sheep both feed eagerly and yield the finest and densest wool.

**11. Animal Life.**—Australia is peculiar in its flora. But it is even more so in its fauna. Both of these facts go to show that for many ages it was isolated from all the rest of the world, and formed a zoological province by itself. The

group most characteristic of the island is the **marsupials**, or those creatures that shelter their young in a pouch. To this group every Australian quadruped, except some mice and rats, and the **dingo** or native dog, belongs. Secondly, Australia exhibits a very low—an almost reptilian—order of birds—the ‘**mound-builders**,’ that deposit their eggs in earth-mounds, and leave them to be hatched by the heat of the sun, or by fermentation. But the two most remarkable creatures in the continent are the **duckbill** or platypus, and the **echidna** or ant-eater, which are connecting-links between the bird, the reptile, and the quadruped. Both lay eggs, suckle their young, and have birdlike bills. **Insect life** is rich and varied. Most of the **snakes** of Australia are poisonous.

(i) The largest marsupial is the **kangaroo**, which affords both sport and meat to the colonists, and also does much damage by eating the grass off the sheep-runs. Some others are: the **wombat**, which lives in holes; the **koala** or ‘native bear,’ which creeps slowly about at night on trees in search of fruit and seeds; a smaller kangaroo, called the **wallaby**; and the **dasyures**, or ‘native cats.’ All the marsupials, with the exception of the kangaroos, are nocturnal in their habits. The **dingo**, or wild-dog, is a wolf-like creature, of a ruddy brown colour. He is the terror of the sheep-paddocks in the less settled districts.

(ii) **Bird-life** is extraordinarily plentiful. The birds are not songless, as is commonly stated: many sing both by day and by night. The **parrot tribe** (including the black and white cockatoos) is more prevalent in Australia than anywhere else. Other characteristic birds are: the **cassowary**; the **emu**, or the Australian ostrich; the **laughing jackass**, which is a species of kingfisher; the **black swan**; the **lyre-bird**; and the **bower-bird**, which builds itself a bower of twigs, and decorates it with feathers, bones, and shells.

(iii) On the coast the **crocodile** is found in all tropical rivers, and with it a vegetable-feeding water-mammal, called the **dugong**, which is valuable for the oil and fat it yields. **Oysters**, both edible and mother-o’-pearl, are abundant; while Chinese and Malay divers fish for **trepan**, or seaslug (a Chinese delicacy), on the Great Barrier Reef. The seas contain several varieties of **turtle**, and many edible fishes, which are preyed upon by the shark. The most important fresh-water fish is a kind of perch, known as the **Murray cod**, large consignments of which are shipped weekly to Melbourne, Adelaide, and Sydney.

12. **Native Inhabitants.**—Australia possesses no indigenous domestic animal that yields milk, nor any native fruits or food-plants, that could support even a moderate population. These two facts have made the Australian savage what he is—a hunter that moves about from place to place in search of game—a man that does not know the meaning of a settled life. The Australian race is a diminishing one—it has been dwindling ever since the appearance of the white man's face: it may now number about 200,000 individuals. Of these Queensland contains the largest number.

The native Australian is of average height, and sparely made. He has a broad and fleshy nose, a coffee-brown complexion, much curly hair, and bright, dark eyes. His head is long and narrow, and the forehead low. His open-air perceptive faculties or 'instincts' are matchless; and natives are often employed by the police as 'trackers' for discovering stolen cattle, or criminals who have taken to the bush. Some few also attach themselves to cattle-stations as stock-riders. The native displays great skill with the *boomerang*, and is a clever hunter and fisherman. He will eat, when game is scarce, nearly anything—snakes, lizards, grubs, and pine-cones—nothing comes amiss to him. His clothing is scanty, and his house often little more than a few strips of bark. In useful arts and in beliefs he is the most degraded of all savages: he has no weaving, no pottery, and no religion. His language enables him to count up to five—and no further. A curious superstition prevails amongst some tribes,—that white men are the ghosts, or reincarnations, of dead people of their own race. This belief has more than once saved the lives of Australian explorers. Sir George Grey, formerly Governor and Premier of New Zealand, was once told by a hideously ugly and old native woman that he was the ghost of her son, who had been killed by a spear-wound in the breast.

13. **Immigrants.**—The aboriginal inhabitants were totally incapable of developing their country. Australia, therefore, had to wait for the arrival of the white man to introduce domestic animals, to make the soil yield her proper increase, and to exploit the hitherto untouched stores of mineral wealth. The first settlement was made in 1788—little more than a hundred years ago—on the present site of Sydney. These settlers were convicts; then followed free immigrants,



till the various colonies were gradually built up. Most of the immigrants come from the British Isles; but Germany has also sent a good many. Latterly numbers of Chinese have flocked into the country (though their coming has been discouraged), to become gardeners, laundrymen, cooks, and general servants. Queensland has imported many Polynesians or Kanakas, nicknamed 'blackbirds,' to work in the sugar plantations; and the camel, introduced as a beast of burden, has brought along with it its Pathán (*Pātāhn*) drivers from Afghanistan.

With the first convict settlers, in 1788, were brought seven horses, five cattle, and twenty-nine sheep. To-day Australia possesses 1½ million horses, 10 million cattle, and 120 million sheep.

14. **Products.** (i) **Animal.**—By far the most useful animal introduced by the settlers is the **sheep**; and wool holds the first and most valuable place among all Australian products. New South Wales alone has as many sheep as the rest of Australia put together. The Riverina district, between the Murray and the Darling, is the best sheep-grazing ground in the continent. **Horses** and **cattle** are reared in all the colonies. Queensland possesses more than half of the cattle in the continent.

(i) The most important breed of sheep in Australia is the **merino**. Originally a Spanish breed, it spread all over Europe, and was introduced into South Africa, from whence it was first imported into Australia in 1797. The merino has always been noted for its firm, silky, and brilliant wool; but in Australia it produces a longer-stapled and heavier fleece than it has ever done before or elsewhere. Sheep are reared in enormous flocks—often as many as 50,000—on 'sheep runs'; and the largest of these runs or stations are in the hands of '**squatters**.' This was originally a contemptuous term applied to wandering sheep-masters who squatted with their flocks on any unoccupied land they could find. Now, however, the squatter class is one of the wealthiest and most influential in Australia; and the squatters either sit on their own freeholds, or lease their stations from the Government.

(ii) Both horses and oxen are used as draught-animals in the more fertile and settled districts. But in the interior, where water is scarce, the camel



has been introduced with great success. While in Asia it is only used as a pack-animal, it has been trained in Australia to draw wagons; and 'eight of them will draw four tons and travel fifteen miles a day.' Even the camel, however, has his limitations: for, except he be properly seasoned, he can go no more than three days without water. 'As to food he does better; for Providence has given him a hump, a protuberance of fat, on which he lives during fast days.'

(iii) A large **overland trade** is carried on between all the colonies in cattle and sheep. In the early days the 'overlanders' were exposed to great dangers, from want of water, attacks of the natives, and exposure to the weather; but they pluckily overcame them all. Two of the most dashing overlanders were the great Australian explorers, Captain Sturt, and Eyre (who was afterwards Governor of New Zealand and Jamaica).

(iv) Two other imported creatures have proved to the Australians an un-mixed curse. These are the **rabbit** and the **sparrow**. These plagues were introduced by settlers who were anxious to have their surroundings look as English-like as possible. The same motive induced some patriotic Scotsmen to import the thistle, with the result that different governments have had to spend large sums in attempts to exterminate it. Rabbits have increased so enormously that they have nearly swept the sheep off some of the runs by eating up all the grass; and millions of pounds have been spent in the endeavour to destroy them, or in fencing them out from the sheep-walks. In some districts the rabbits, having eaten all the grass, are learning to climb trees.

15. **Products.** (ii) **Vegetable.**—Agriculture is not of the same value to Australia as the pastoral industry; but the growing population, and the development of irrigation, will in no long time give it greater importance. At present, however, only an infinitesimal part of the surface of Australia is under cultivation. The principal agricultural products are: **wheat** in South Australia and Victoria; **oats** and **barley** in Victoria; **maize** in New South Wales and Queensland; and **sugar** in Queensland.

(i) 'Drought is the worst enemy in Australia, but rain falls sufficient for all necessities, and only asks to be taken care of' (FROUDE). With a properly regulated system of water-storage for purposes of irrigation, agriculture is bound to advance; and agriculture is one of the foremost necessities for the true prosperity of any country. The soil of many parts of Australia is marvellously fertile, and, like the virgin prairie soil of North America, it can be cropped year after year without the use of manure, and without showing any signs of exhaustion.

B

(ii) In addition to the cereals, Australia can grow all sorts of fruits. The **vine** is also largely cultivated, especially in Victoria and South Australia, for wine-making, for which both soil (much of it volcanic) and climate are eminently adapted. But at present only one-seventh of the yearly produce is exported.

(iii) Australia is hardly yet recognised as a timber-growing country. But the continent contains many valuable varieties. Already the **karri** and **jarrah** of Western Australia are in use for wood pavement both in London and Chicago. Many of the eucalypti of New South Wales (blue and red gum, iron bark, and messmate) yield admirable tough and hard timber. Queensland now imports little timber; but makes use of her own **Moreton Bay pine** and **red cedar**.

16. Products. (iii) **Mineral**.—Australia is very rich in mineral wealth. The most important mineral products are : **gold, silver, copper, tin, coal, and iron**. Gold is by far the most important of these; and, since its discovery in 1851, Australia has exported gold to the value of over £350,000,000. But, though gold may help to start a country, it will not fully develop it. A gold discovery is permanently valuable only in so far as it attracts people who will settle down to the more steady, and, in the long run, more profitable pursuits of farming and manufacture. Australia is the **third** gold-producing country in the world. South Africa is the first; the United States next.

(i) **Gold** is found in all the colonies, though to the smallest extent in South Australia. Victoria produces most; Queensland next. Gold is now chiefly produced from **quartz reefs**, and there is now no more excitement about gold-mining than there is about coal-mining. The stone is simply quarried out, then crushed, and thus made to yield its gold-dust. The old 'rushes' were made to the alluvial fields, where the metal was found loose in the soil, or in the sand of dried-up river-beds. The gold was then procured by 'panning out'—that is, by washing away the mud and gravel in a pan, in which the gold was by its own weight left behind.

(ii) The **silver-yield** of Australia was inconsiderable till the discovery of the famous Broken Hill Mines in New South Wales. This put Australia third after the United States and Mexico in the list of silver countries.

(iii) **Copper** is produced in South Australia and New South Wales; **tin** in New South Wales and Queensland.

(iv) **Iron** is found in almost all the colonies; but the expenses of product

tion and carriage are so great that it does not pay to work it. Further, it is not found near beds of coal. The coal-seams of New South Wales, near Newcastle, are at present the most valuable. Queensland has also large coal-fields, mostly undeveloped. The Ipswich field, near Brisbane, is the most important.

(v) Other important minerals are: **manganese, antimony, cinnabar**, and **precious stones** (such as the garnet, ruby, and sapphire).

**17. Commerce and External Communications.**—The commerce of Australia is, in proportion to its population, the largest in the world. The value of the imports and exports, per head of population, is nearly double that of England. Her commerce principally consists in the exchange of her **wool and gold** for **manufactures** of every sort and **luxuries** like tobacco, wine, and tea, for the Australians are the greatest tea-drinkers in the world.

(i) Every important port in the colonies is in direct and regular steam-communication with Europe; and some also with North America, China, and Japan. Most of the European lines use the Suez Canal route, such as the Peninsular and Oriental (P. and O.), the Orient, and the French Messageries Maritimes, Companies. Canada has a magnificent line of steamers running between Australia and Vancouver. These two colonies will also, in no very long time, be connected by a submarine cable. The first ship that reached Australia from England took three months and fifteen days, and was considered to have made a wonderfully quick passage. The great 'liners' now take six weeks, or even less.<sup>1</sup>

(ii) By **Submarine Cable**, Sydney, on the east, is connected with New Zealand; and Port Darwin, on the north, is joined to Java. The latter cable is a continuation of the **overland telegraph** line, which crosses the continent from Adelaide.

(iii) Nearly half of the whole Australian trade, which has an average yearly value of £126,000,000, is done with the United Kingdom. Most of the remainder is carried on between one colony and another.

It is important to notice that, in computing the value of the trade of Australia, many articles are counted several times over. Thus much of the New South Wales wool, which is shipped to Melbourne, is counted three times over. It appears as an export from New South Wales, and as an import to, and as an export from, Victoria.

**18. Communications. Internal.**—Australia, like many new countries, began to make railways before she had been able

<sup>1</sup> See, for further details of Steamship Lines, pp. 67-71.



to construct proper roads. All the colonial capitals are connected by rail or by telegraph. Indeed Australia, viewed from 'the population per mile of line' point, can justly boast of being better supplied with railways than any country in the world. Local traffic is served by the roads—(through the mountains well-made and well-kept, but through the bush, often mere tracks); and by navigation on the Murray-Darling (vide p. 11).

There are two **railway-systems** in Australia of first importance—the **Intercolonial Line** that connects the towns of Adelaide, Melbourne, Sydney, and Brisbane; and the projected and partially constructed **Transcontinental Line** from Adelaide, that is to follow the track of the great overland telegraph to Palmerston on Port Darwin.

(i) The **Intercolonial Line** leaves **Adelaide**, joins the Victorian system at Serviceton, and crosses the Grampians. Passing the gold-mining town of **Ballarat**, it enters **Melbourne**. From thence it travels north-east to Albury on the Murray; gathers up the leather of **Goulburn** and the tweeds of **Parramatta**; and drops down upon Sydney. From Sydney the line leads north to the coal-shipping town of **Newcastle**; crosses the Liverpool Range; and, running parallel to the New England Range, reaches the tin-mining town of Stanthorpe; and thence, *via* **Toowoomba** Junction and Ipswich, arrives in **Brisbane**. From Brisbane it continues north to Maryborough and Bundaberg.

(ii) The **Transcontinental Line** begins at **Gambierston** in the extreme south-east corner of South Australia, and continues north to **Adelaide**. It runs on to Kapunda, branching to Morgan to tap the navigation of the **Murray**. It then branches off higher up to collect the silver of **Broken Hill** in New South Wales. Thence it goes to Port Augusta at the head of Spencer Gulf, and on, through Beltana, to **Oodnadatta**, a little to the north-west of Lake Eyre. A beginning has been made, too, at the other end from Palmerston to Pine Creek. The total length of the South Australian railways is 2000 miles.

(iii) Other important lines are:

(a) The **Queensland Lines**, all of which run west. They run from Brisbane to the artesian wells of Charleville on the Warrego; from Rockhampton to Longreach; and from Townsville, through **Charters Towers** gold-fields, to Hughenden. The total length of these railways is 2400 miles.





### PRINCIPAL RAILWAYS SHOWN THUS:

- (b) In the **New South Wales System**, branches from the trunk line run to the sheep-farming centres of Hay on the Murrumbidgee, and Bourke on the Darling. The total length of these railways is 2500 miles.
- (c) The **Victorian Lines** radiate from **Melbourne**, and afford complete communication between all the large towns of the Colony, and with Deniliquin in the Riverina district of New South Wales. The total length of these lines (and Victoria is the smallest colony of all) is 3000 miles.
- (d) The **West Australian Lines** run from **Perth** north to **Geraldton**; south to the port of **Albany**; and east to **Coolgardie** gold-fields. From Geraldton a line runs east to the Murchison gold-fields. The total length of line is 1500 miles.
- (a) It has been thought better to give a connected account of Australian railways; as all of them, except the West Australian and Queensland lines, really form one system. Unfortunately, however, the different colonies have chosen to adopt different gauges for their lines. Thus the expense of carriage from one colony to another is greatly increased; for, at the border towns, goods have to be shifted into different sets of trucks.
- (b) The longest railway journey that can at present be made in Australia's from **CHARLEVILLE** in Queensland to **ODNADATTA** in South Australia—a distance of 3000 miles. On this route the passenger would pass through **BRISBANE**, **SYDNEY**, **MELBOURNE**, and **ADELAIDE**.

19. **Population and Divisions.**—The population numbers over 3,250,000. Victoria is the most densely peopled; West Australia the least. The white population is almost entirely of British descent.

NAME.	Area (in thousands of square miles).	Ratio to the United Kingdom.	Population (in thousands).		CAPITAL.
			1860.	1896 (estimated).	
New South Wales	310	$2\frac{1}{13}$	348	1268	Sydney
Victoria . . .	88	$3\frac{3}{10}$	537	1179	Melbourne
South Australia .	903	$7\frac{1}{12}$	124	347	Adelaide
Queensland . . .	668	$5\frac{1}{12}$	28	445	Brisbane
West Australia .	975	$8\frac{1}{6}$	15	82	Perth

(i) The population tends to draw into the cities. Melbourne, Sydney, and Adelaide each contain more than a third of the population of the colonies in which they lie.

(ii) 'The great bulk of the population of Australia is settled on the seaward slope of the Dividing Range. Broadly speaking, it may be said that the industrial and agricultural interests of the country lie on the seaward side of the range; and the pastoral interests on the landward side; while the gold-miner burrows in the gullies on both sides, or sends down shafts half a mile in depth from the plateaux above on to the quartz reefs beneath.'

20. **Government, etc.**—Each of the Australian Colonies enjoys responsible self-government. They are thus practically independent, though each is under a Governor, who is appointed by the British Government, is sent from home, and represents the authority of the Crown.

(i) Elementary education is good in all the colonies; while in two of them, Victoria and Queensland, it is practically free. There are universities, which have the power of granting degrees, in Melbourne, in Sydney, and in Adelaide.

(ii) Each of the colonies has a small military force of its own. That of New South Wales, in particular, is in a high state of efficiency; and a contingent from it gave assistance to the British forces in the Soudan expedition of 1885. For naval defence the Australian colonies agree to maintain a fleet of war-vessels, which are built by the British Government. Sydney is the headquarters of the Australian fleet, and is a first-class naval station—one of the largest and safest in the world.

(iii) **Federation.**—Sooner or later there is little doubt but that the Australasian Colonies will knit into a union resembling that of the Dominion of Canada. The first step was made by the passing, in 1885, of an Act in the Imperial Parliament, which authorised all the Australasian Colonies, including Fiji, to form a Federal Council. The principal power of this Council was to regulate the relations of Australasia with the islands of the Pacific, and to control the fisheries. So far, the only colonies which have taken advantage of this enabling Act are Victoria, Queensland, Tasmania, Western Australia, and Fiji. Since 1885 several conferences have been held between the Premiers of the different colonies, with a view of pressing on the final question of federation.

'The nationality of the Australian Colonies is at present English; and if they leave us it will be by the action of Great Britain herself, not by any action of their own. To the question, What political measures should be taken to preserve the union? they would answer generally, No measures at all, save in a better organisation of the navy. Let well alone. The ties which hold



us together are daily strengthening of themselves. The trade of England with the colonies grows far more rapidly than with any other part of the world. Intercourse is increasing. Melbourne and Sydney are as easy of access now as New York was fifty years ago. Steam and telegraph have made an end of distance.'—FROUDE.

21. **History.**—Australia is happy in having no history, or a history, merely, of peaceful settlement and diligent civilisation. No battle has ever been fought on her soil; nor are there any buildings more than a hundred years old. The mainland was discovered probably by the Dutch about 1606; and in 1642 another Dutchman, Tasman, discovered New Zealand and Tasmania. The voyages of the celebrated Captain Cook, between 1769 and 1774, led to the first English settlement in New South Wales in 1788. The only other notable date is the discovery of gold in Victoria in 1851.

(i) The dates at which the other colonies were formally constituted are: Tasmania, 1825; Western Australia, 1829; South Australia, 1835; Victoria, 1851; and Queensland, 1859.

(ii) Of the **first Convict Settlement** in 1788, Anthony Trollope says: 'Nearly all the food consumed for the first years had to be brought either from England, or from some other distant land, such as Batavia or Bengal. The land round Sydney, on which attempts were made to create farms, was found to be poor and barren. The few cattle which the settlers, or rather which the Governor possessed, strayed away or were killed by the blacks. For five years Governor Phillip fought his battle against convicts, black men, recusant settlers, famine, floods, and drought, and he fought it like a hero. If this vessel or that did not come at the expected time, there would not be even half-day's rations per day, either for convicts, freemen, or for the Governor.'

NOTE.—For further details as to History, see the **Chronicle of Discovery**.

#### MAP-PRACTICE FOR AUSTRALIA

1. Bays and Gulfs.—On the north: Gulf of Carpentaria, Van Diemen's Gulf, Cambridge Gulf, and King Sound; on the south: the Great Australian Bight, Spencer Gulf, Gulf of St. Vincent, Encounter Bay, Port Phillip; on the east: Botany Bay, Port Jackson, Moreton Bay, Hervey Bay, and Princess Charlotte Bay; on the west: Shark's Bay and Géographe Bay.

2. Straits.—Torres Strait, between Australia and New Guinea; Bass Strait, between Australia and Tasmania.

3. Capes.—Cape York, the most northerly; Cape Byron, the most easterly; Cape Howe, in the south-east; Wilson Promontory, the most southerly; Cape Naturaliste, and Cape Leeuwin, in the south-west; Steep Point, the most westerly; and North-West Cape.

4. Islands.—The chief are: Groote Eylandt (great island), in the Gulf of Carpentaria; Melville Island and Bathurst Island, off Van Diemen's Gulf; and Thursday Island in Torres Strait—all in the north; Great Sandy Island in the east; Kangaroo Island, King's Island, Furneaux Islands, and Tasmania—all in the south; Dirk Hartog Island, in the west.

5. Mountains.—The Dividing Range skirts the south-east and east coasts, including—(1) the Grampians; (2) the Australian Alps; (3) the Blue Mountains; (4) the Liverpool Range; (5) the New England Range; and (6) the Craig Range. The highest mountain is Mount Townsend (7350 feet—half Mont Blanc) in the Australian Alps. Other ranges are: the Darling Range in West Australia; the Flinders and Stuart Ranges in South Australia; and the Macdonnell Range in the heart of the continent.

6. Rivers.—(a) Murray, with Darling and Warrego, and with Murrumbidgee and Lachlan, to Lake Alexandrina. (b) Burdekin, Fitzroy, and Brisbane, flowing to the east. (c) Flinders and Victoria, flowing north. (d) Ashburton, Gascoyne, Murchison, and Swan, flowing west. (e) Finke, Diamantina, and Cooper's Creek, to Lake Eyre.

7. Lakes.—Eyre, Frome, Torrens, and Gairdner, in 'Lake District' of South Australia; Amadeus (centre); Alexandrina; Austin, in West Australia; George, south-west of Sydney. All are salt except Lake George.

## NEW SOUTH WALES

(Area, 310,000 square miles—Population, 1,268,000.)

1. Position and Coast-line.—New South Wales, the 'mother colony' of Australia, once comprised about half the continent. It now has an average length and breadth of 500 miles each way. Queensland and Victoria have hived off from New South Wales.

(i) The coast-line is little indented. Its bold, rocky headlands, separated by sandy bays, reminded its discoverer, Captain Cook, of Wales; and it was named by him accordingly. Lord Howe and Norfolk Islands, lying far out to sea on the east, are dependencies of New South Wales.

(ii) The boundaries of the colony are: Queensland on the north; the Pacific on the east; Victoria on the south; and South Australia on the west.

2. **Surface and Climate.**—The colony falls into three well-marked divisions: (a) the **coast-strip**, where the climate is hot and moist; (b) a mountainous **table-land**, with a temperate, but wet, climate; (c) the western **interior plains**, which are dry and hot.

A sea-breeze in summer tempers the climate; but the cool breeze is sometimes interrupted by a parching hot wind from the north-west, which blasts the vegetation like a furnace-flame.

(i) The **coast-strip** stretches from Sydney to the northern boundary of the colony. It is a rich, undulating country, crossed here and there by mountain-ranges. The valleys are thick-set with 'brushes.' The rivers of this region are all short. But three of them, the **Clarence**, **Hunter**, and **Hawkesbury**, are navigable in their lower courses, and have their banks covered with a most fertile alluvial soil.

(ii) The **table-land** rises abruptly from the coast-strip, but sinks down gradually into the western plains. Out of it the chief mountains of the colony rise. These are parts of the **Dividing Range**, including part of the Australian Alps (with Mount Townsend, 7350 feet); the **Gourock Range**, with its north-west offshoot the **Manero Range**; the **Blue Mountains** (so called from the blue haze which seems to hang about them); and the **Liverpool Range**, which is at right angles to the **New England Range**. The mountains are grassed to their summits; and much of the table-land is very suitable for wheat-growing. This chain forms the chief watershed, and from it the rivers sweep down to water the interior plains.

(iii) The **western plains** have a gradual slope towards the south-west, so gentle that some of the rivers have a fall of only six inches in the mile. The result is that the rivers, every now and then, flood the surrounding country. Nearly the whole of this region is drained by the **Darling** and its tributaries, the **Warrego**, **Culgoa**, and **Barwan**. The south-east is watered by the **Lachlan** and **Murrumbidgee**. Most of the soil is black and fertile, with grass sometimes twelve feet high, and trees dotted about in clusters. Here and there occur sandy ridges, covered with scrub or salt-bush. The plains are the pastoral region, and are known as the **Riverina**. Great attention is paid to the building of dams, so as to counteract the effects of the frequent droughts. Behind the plains, to the west, lie the **Barrier** and **Grey Ranges**.

The drought of 1895 in the plains killed 303,000 cattle, 26,000 horses, and 10,000,000 sheep. It was not an unmixed evil, however; for the rabbits died in millions.

3. **Products and Industries.**—The chief industries of New South Wales are: stock-farming, mining, and agriculture.



There are some small manufactures—such as boot-factories, flour-, saw-, and sugar-mills.

(i) The chief **pastoral products** are: wool, hides, skins, and tallow. New South Wales alone possesses about half the sheep in Australia (58 millions). Deniliquin, Hay, and Bourke, in the Riverina plains district, are the chief pastoral centres. Both on the table-lands and on the plains, dairying is actively carried on; and milk, butter, and cheese are supplied to Sydney.

(ii) **Gold, silver, copper, tin, coal, and oilshale** are the principal mineral products. Gold and oilshale are mined in the Blue Mountains, copper at Cobar (railway to Sydney) and Nymagee in the Riverina, tin in the north-east corner, and silver round **Silverton** (Broken Hill) in the Barrier Range. Nearly the whole of the coast-strip is a coalfield; but the principal mines are in the valley of the Hunter. **Newcastle** is the coal-shipping port. New South Wales is at present the principal coal-producing colony.

(iii) **Agriculture** is mainly confined to the coast-strip and the table-land. Wheat, oats, and temperate fruits are the principal products of the table-land. **Bathurst** is the wheat-growing centre. The coast-strip raises maize, sugar-cane, lucerne (for hay), oranges, grapes, and peaches.

4. **Commerce.**—The commerce of New South Wales is the largest in Australasia. It amounts annually to about £44,000,000. This sum is divided equally between exports and imports. The chief exports are: wool, silver, coal, tin, tallow, and skins. The chief imports are: apparel, drapery, iron and steel, timber, tea, and sugar.

(i) The ports are: **Sydney**, the first wool-port in Australia; **Newcastle** and **Wollongong** (coal); **Grafton**, on the Clarence (maize, wine, and sugar); **Ballina** (timber).

(ii) Wool is the staple export, averaging annually £10,000,000.

(iii) New South Wales is practically a free-trade colony, while the rest of Australia imposes duties on its imports. This difference is one of the main obstacles to Australian federation.

(a) 'PORT JACKSON, the harbour proper, is the largest and grandest in the world.

A passage about a mile wide has been cut by the ocean between the wall of sandstone cliffs which stretch along the south-east Australian shores. The two headlands stand out as gigantic piers, and the tide from without, and the fresh-water flood from within, have formed an inlet shaped like a starfish, with a great central basin, and long arms and estuaries, which pierce the land in all directions, and wind like veins between lofty sandstone banks.'—FROUDE.

(b) 'It is so inexpressibly lovely, that it makes a man ask himself whether it would not be worth his while to move his household gods to the eastern

coast of Australia, in order that he might look at it as long as he can look at anything.'—TROLLOPE.

(iv) **Railways.**—The gradients on the New South Wales lines are exceptionally steep; as rough and precipitous ranges have to be crossed, before the interior plains are reached. The northern line at Ben Lomond reaches a height of 4471 feet above sea-level. The most famous piece of engineering is the 'Zigzag,' which descends from the Blue Mountains into the Lithgow valley. The railways of this colony are now united, and **Sydney** is the centre of the railway system.

5. **Towns.**—**Sydney** (425), the capital of the colony, is the largest town in New South Wales, and contains a third of the whole population. All the other towns are under 20,000.

(i) **Towns on the coast-strip:** Sydney, which lies on the shores of that magnificent harbour, Port Jackson, was once a miserable convict settlement. The beauty of its situation, its noble buildings, its industry and commerce, have earned for it the title of 'Queen of the South.' It is not a modern town, mechanically built and laid out on a severe rectangular plan, but has grown up irregularly in the pleasant old English fashion. In the harbour the largest vessels can lie with safety; and Sydney is the Australian terminus of every great European steamship line, except the British India, which runs, through Torres Strait, to Brisbane. Further up Port Jackson, on the **Parramatta River**, lies the town of that name, famous for its oranges and for 'Parramatta tweeds.' Other lowland towns are **Newcastle**, and **Maitland**, an agricultural centre, both on the Hunter; **Richmond** and **Windsor**, on the rich alluvial soil brought down by the Hawkesbury; **Grafton**, **Ballina**, and **Wollongong**.

(ii) **Towns on the Table-land:** **Bathurst**, which is a wheat and gold centre. **Goulburn**, which lies south-west of Sydney, and makes leather and boots. **Lithgow**, which lies in a rocky glen of the Blue Mountains, where the 'Zigzag' railway ascends that range. It mines coal and smelts copper and iron.

(iii) **Towns on the Plains:** **Bourke**, **Wilcannia**, **Hay**, and **Deniliquin**, all of which are sheep-farming centres. At Bourke it is not uncommon for the thermometer to register 117° in the shade. **Silverton**, **Cobar**, and **Nymagee** are mining towns. **Albury**, on the Murray, stands at the point where the railway crosses into Victoria. **Wentworth** (named after a pioneer squatter), at the junction of the Darling and Murray, has a great future before it—both as a river-port, and because it is destined to be the junction of railways from Sydney by Hay, from Adelaide by Morgan, and from Melbourne by way of Sandhurst.

6. **Old Sydney.**—'I think it may be interesting to glance, in passing, at the town of Sydney, as it appeared in

1829. It contained 15,000 inhabitants. The streets were wide, well laid out, and clean. According to a traveller's account, "the houses were for the most part built in English style, and the shops well stocked. The cages with parrots and cockatoos, that hung from every shop-door, formed the first feature that reminded me that I was no longer in England. . . . Ground was not so valuable as it afterwards became, and commodious verandahed cottages, around which English roses clustered, with large gardens, were scattered through the town. Nothing met the stranger's eye to convey the notion that he was in the capital of a penal colony. The first impression of Sydney on a summer evening's visit was pleasant, and full of agreeable promise." Then follows another picture of convicts in chains, yoked to heavy wagons laden with gravel and stone, with a vivid description of the enclosed yard, where ten to twenty men were flogged daily, and filled the air with their groans, screams, and imprecations. Such was Sydney in 1829.'—A. F. CALVERT.

## VICTORIA

(Area, 88,000 square miles—Population, 1,179,000—increasing.)

1. **Position and Coast-line.**—Victoria lies in the extreme south-east of the continent. It is the smallest, but the most fertile, of the five colonies; and its gigantic neighbours allude to it contemptuously as the 'cabbage-garden.'

(i) Victoria is bounded by the Murray on the north, Bass Strait on the south, and South Australia on the west.

(ii) The **coast-line**, 600 miles in length, is irregular. The two chief inlets are **Port Phillip** and **Corner Inlet**. The coast ends, to the east, in a long stretch of sand, known as **Ninety Mile Beach**, which is fringed with lagoons.



2. **Surface, etc.**—The build of Victoria strongly resembles that of New South Wales. It consists of (a) a **coast-plain**; (b) a **mountainous table-land**; and (c) an inland **river-plain**. The **climate**, as in New South Wales, varies with the physical features and elevation of the land; but Victoria, owing to its southerly position, is on the whole more temperate than New South Wales. Victoria, however, has also its hot north wind.

(i) The **coast-plain** contains two groups of highlands on either side of Port Phillip, but is otherwise a rolling or even a flat country. It contains many rich, alluvial river-valleys, and, being well grassed, is better suited (especially in the district called **Gippsland**) for horses and cattle than for sheep. In it lies the largest Victorian lake, **Corangamite**. The **Yarra** is the only navigable river, and that only in its lower course. **Gippsland**, in the south-east, stretches between Wilson's Promontory and Cape Howe. The level parts of it are given over to stock and to cultivation, and the whole region is rich in minerals. Much of it is still covered with dense bush, which defied the efforts of the earlier explorers to penetrate. This district never runs short of water, but is always green, fresh, and lively.

(ii) The **table-land** region rises abruptly from the coast-plain. In it begins the Great Dividing Range with the **Grampians**, **Pyrenees**, and **Australian Alps** (Mount Bogong, 6500 feet). From either side the rivers run south, through 'brushes' and fern-clad gullies, to the Indian Ocean, and north to the Murray.

(iii) The **plains**, which comprise half of the Murray basin, slope gently away from the table-land. Much of the land is suitable for sheep-grazing, and much, with irrigation, for agriculture. But hundreds of square miles, in the **Wimmera** district of the north-west, are overrun with mallee scrub. Even this scrub-land, however, has been found suitable for wheat-growing; the scrub is crushed with a roller, then burnt, and excellent crops are the result. The **Murray** bounds the plains on the north; and its chief tributaries are the **Mitta Mitta**, **Ovens**, and **Goulburn**. It is proposed to make reservoir and storage dams on the upper courses of these rivers, by means of which very large areas could be brought under cultivation. The river-steamers on the Murray tow up barges with freights of stores, and take down large cargoes of wool.

3. **Industries and Products.**—The chief industries are similar to those of New South Wales. But Victoria takes the lead of Australia in **wine-making**, **gold-mining**, and **dairy-farming**. Of sheep there are over 12,000,000, and of

cattle over 2,000,000. **Gold** is the chief mineral, and Victoria produces more than any other Australian colony. **Wheat** is the most important crop; then come oats and hay. The **manufactures**, which are the most important in Australia, include distilling, wool-washing, and tanning.

(i) The fruit-raising colony of **Mildura** on the Murray is a wonderful example of what **irrigation** will do. The ground is now covered with orchards and vineyards, where a few years ago rabbits died by thousands on the burnt-up soil.

(ii) Victoria is paying great attention to the cultivation of tobacco, flax, and the sugar-beet.

(iii) Dairy-farming is managed on the 'creamery' system: that is—the farmers send their milk to a central depôt, or creamery, where it is made up into butter and cheese.

(iv) Victoria is now the first wheat-growing colony in Australia, having outstripped South Australia, which once held the first place for wheat.

4. **Commerce.**—The commerce of Victoria is extensive, and ranks next to that of New South Wales. It has a yearly average of £31,500,000. The chief **exports** (about 14 millions) are: gold, wheat, live-stock, and wool (above all). The chief **imports** (about 17½ millions) are: coal, textiles, sugar and tea, timber, iron, and steel. The largest **customer** is Great Britain; then comes India.

(i) The chief ports are **Port Melbourne**, **Williamstown**, on the opposite side of the Bay, and **Geelong**. The communications consist of railways and the navigation on the Murray, on which **Echuca** is a rising port.

(ii) The Government of Victoria is anxious that nothing shall leave the colony except of the very best; and steps are being taken to ensure that every export shall be inspected by Government officials.

(iii) **Railways.**—Victoria has the closest network of railways of any colony; and the lines are all connected at one central terminus—**Melbourne**. The Murray is tapped by railway at seven places; and these lines divert into Victoria much of the traffic of the Riverina district. The passenger traffic of Victoria is far above that of the other colonies, chiefly owing to the enormous suburban traffic about Melbourne.

5. **Towns.**—**Melbourne** (440) is the largest town, and there are three more with populations of over 20,000.

(i) **Towns on the coast-strip.**—Melbourne, on the Yarra-Yarra, is the capital of Victoria, and the largest city in Australia. Within the memory of living men some adventurous spirits from Tasmania built a few slab huts among the scrub on the Yarra banks. These huts have now grown into the most stately city in the southern hemisphere. The town is adorned by splendid public buildings, built of a lasting stone, known as 'blue-stone.' The harbour of Melbourne is Port Melbourne on Hobson's Bay. Melbourne is the chief railway centre of Victoria. Geelong (24), on the western arm of Port Phillip Bay, is a flourishing seaport, and makes tweeds. Portland and Belfast, west of Port Phillip Bay, export the produce of the surrounding agricultural districts.

(ii) **Towns on the Table-land.**—Ballarat (45) and Sandhurst (42), or Bendigo, which stand on either side of the Pyrenees. They are, next to Johannesburg in South Africa, the most famous gold-mining towns in the world. Ballarat is a town of magnificent hilly surroundings; but its beauty is somewhat spoiled by the numbers of deserted quarry-holes, and the mounds of quartz-powder, which lie about the mouths of the shafts of the gold-mines. The name signifies 'the place of rest.'

PROUDE thus describes a scene among the mountains of the Dividing Range:—

'As at Madeira, where the climate changes with the elevation, and an hour's ride will take you from sugar-canecropland into snow, so here (at Mount Macedon) we found the flora of temperate regions in full vigour, which refused to grow at all at the lower levels. We had still the gum-trees about us, shooting up freely, 200 feet or more; some magnificent in full foliage; others naked, bare, and skeleton-like, having been killed by bush fires; but round the house, oaks and elms, cypress and deodars, seemed at home and happy; albert-trees were bending with fruit, too abundant for them to ripen, while the grounds were blazing with roses and geraniums and gladiolus. The Australian plain spread out far below our feet, the horizon forty miles away; the reddish-green of the near eucalyptus softening off into the transparent blue of distance.'

(iii) **Towns on the Plains.**—The plains, being chiefly given over to farming, have no large towns. Echuca, at the junction of the Campaspe and the Murray, does a considerable trade. Craft, both ascending and descending the river, land their cargoes here, whence a railway carries them on to Melbourne.

6. **The Founding of Melbourne.**—One John Batman, a Tasmanian settler, informed the Governor of New South Wales that he had conceived a scheme for civilising the natives about Port Phillip. His scheme was to buy from the natives (who did not understand the nature of a sale), a tract of land, 750,000 acres in extent, and settle thereon. Batman



and a number of his friends sailed from Launceston in the year 1835, to take possession of this magnificent estate. The vendors of the land thus acquired were the aboriginal chiefs, bearing the high-sounding names of Cooloolook, Jagajaga, Bungaree, and some others; and for their grant they were to receive among them £200 a year. But the New South Wales Government would not permit the sale, and Batman had to be content with 20,000 instead of 750,000 acres. 'Still worse, one **John Fawkner**, and a few friends, sailed over to Port Phillip, and paying no regard whatever to their compact with the natives, coolly squatted himself down at a little distance from Batman's hut, on the so-called Batman's Hill, turned out his flocks where **Melbourne** now stands, and complacently began to plough up the meadow-land just on the eastern bank of the Yarra. From that location John Fawkner never budged, but successively opened an inn and a newspaper-office, whence he issued a manuscript newspaper; and continued to watch the growth of that extraordinary town, from his own single hut, to a population of more than one hundred thousand souls.'

## SOUTH AUSTRALIA

(Area, 903,000 square miles—Population, 347,000.)

1. **Position, etc.**—This colony fills up the middle of Australia; and stretches from the Southern Ocean to the Arafura Sea. You could set down in it Spain, France, Austria-Hungary, Germany, Denmark, and Holland; and there would still be a pretty broad rim left round the edge. But all this vast area contains fewer people than Leeds, and those nearly all in a small corner in the south. The name

C

'South Australia' is, of course, a misnomer. It is due to the fact that in 1836 only the southern portion was colonised; and then it was really South Australia, for Victoria had not yet been separated from New South Wales.

(i) **Coast-line.**—What little there is, is considerably indented. Port Darwin, Van Diemen's Gulf, and the Gulf of Carpentaria lie on the north; Spencer Gulf (with Kangaroo Island), the Gulf of St. Vincent, and Encounter Bay, on the south. The coast of Encounter Bay is edged by the long and narrow Coorong Lagoon, into which the Murray filters from Lake Alexandrina.

(ii) **Physical Features.**—The interior, so far from being wholly a desert, affords plenty of good grazing-ground. But want of water is here, as elsewhere in Australia, the great difficulty. The only interior river of note is Finke Creek from the Macdonnell Range; but that often dries up before it can reach Lake Eyre. Artesian wells are being sunk round that lake. In South Australia lie the 'Lakes' of Australia. The Flinders Range, the Macdonnell Range, and Mount Lofty Range, near Adelaide, are the chief mountain chains.

(iii) **The climate** of the south coast resembles that of southern Italy. The climate of the inland plain region is that of fierce, dry heat.

(iv) It is estimated that, out of the whole area of the colony, one-third is useless desert, covered with rock, sand, or scrub; one-third mountain and wood-land that might be used for grazing; and the remainder good agricultural and pastoral land.

**2. Industries and Products.**—The industries are the same as those of Victoria. **Wheat** is the chief agricultural product; and **copper** (especially from the mines of Wallaroo and Moonta) is the most important mineral. In **wine-making** South Australia comes next to Victoria: and also produces an excellent quality of **olive-oil**.

(i) The cultivated, and therefore the most populous, portion of the colony is included within an irregular line, known as **Goyder's Line of Rainfall**, so called after a Surveyor-General of the colony. This comprises: (a) a narrow mountainous strip to the east of Spencer and St. Vincent Gulfs; and (b) the southern part of Eyre's Peninsula to the west of Spencer Gulf. North of, or beyond, this line there is not enough rain to grow wheat.

(ii) South Australia, like Victoria, has also an irrigation colony on the Murray—**Renmark**. The water is pumped from the river; and grapes (for raisins) are the chief crop.

(iii) There is some ostrich-farming on the east shore of Spencer Gulf. Of

sheep there are only about 8,000,000, as the Government of the colony has always tried to promote agriculture at the expense of the pastoral interest.

3. **Commerce.**—The chief exports (£8,500,000), are : **wool, wheat, and copper.** South Australia also exports large quantities of **silver-ore** from the Broken Hill mines of New South Wales. The imports (£8,000,000) are similar to those of Victoria.

(i) The ports of the colony are Ports Adelaide, Augusta, Pirie (the chief wheat port), Wallaroo (copper), and Morgan (a river-port).

(ii) The camel is largely used in keeping up communication with the arid districts of the interior.

(iii) **Railways.**—The South Australian railways, with one small exception, are a united system. They are mainly confined to the south-east portion of the colony. From Adelaide to Melbourne is 483 miles, from Melbourne to Sydney 579, and from Sydney to Brisbane 723 miles. In travelling between these capitals the distance is thus 1785 miles; but during the journey three different gauges have to be passed over—that is, the passenger must change carriages thrice, and goods have to be handled six times.

4. **Towns, etc.**—There is only one large town, **Adelaide**, owing to the fact that most of the people are farmers, and therefore live in the country.

(i) **Adelaide** (140), on the River Torrens, is the capital of South Australia. It is entirely surrounded by a grand park that is never to be built over, and is backed by the Mount Lofty Range. Its seaport, **Port Adelaide**, is nine miles distant, on St. Vincent Gulf; and is connected with the capital by an unbroken series of villas.

(ii) Other towns are : **Gawler**, an agricultural centre, **Kapunda**, **Kooringa**, **Walleroo**, and **Moonta**, copper-mining towns; and **Palmerston**, on Port Darwin, which will one day be the terminus of the great transcontinental railway.

(iii) **The Northern Territory** (capital Palmerston) is as yet undeveloped. If the labour question can be settled by the introduction of coolies, agriculture should thrive with a soil and climate well suited for **sugar, cotton, and indigo.** **Gold** is worked, and there are good indications of the presence of tin, silver, and copper. A **railway** runs south from Palmerston to Pine Creek. This is part of the line which will one day stretch right across the continent (see p. 20). Port Darwin is occasionally attacked by severe hurricanes. In 1896 one nearly wrecked the town, and eleven inches of rain fell during the storm. The population of the Northern Territory consists chiefly of Chinese, who cultivate rice and sugar-cane.



- (a) The botanical gardens of Adelaide are celebrated even in Australia. 'The oleander towers and spreads in pale pink glory. The crimson hibiscus glows among the bananas; passion flowers—blue, purple, and scarlet—hang in careless festoons among the branches. The air is loaded with perfume from datura, orange-flowers, stephanotis, and endless varieties of jessamine. Araucarias, acacia trees, Norfolk Island pines, tulip-trees, etc., are dispersed over the lawns, grouped, not as science would order them, but as they would be arranged by a landscape painter.'—FROUDE.
- (b) It is one of the boasts of South Australia that she alone, among the Australian colonies, has never admitted convicts to her shores.

5. **A Drought in South Australia.**—'In 1864 very little rain fell in the districts north of Goyder's line, and in 1865 none fell. The records of this time are terrible to hear. It was not so much that the sheep were perishing from want of water. The wells did not run dry, and in that district no squatter trusts to surface water for his sheep to drink. But there was not a blade of grass, and the animals were starved. Hundreds of thousands of sheep were driven south in order that they might find pasturage as they wandered. . . . Mob after mob of wretched animals streamed down from the then barren plains, 300 miles north of Adelaide, to the southern districts near the sea, and round the lakes,—perishing by the way, or doomed to perish when they got there. . . . As they went along, the country was strewed with the bodies of the useless animals, and the only effort was to move on to some district giving still sufficient grass to keep the flock alive. Thousands were slaughtered to reduce the number in the scanty herbage, and I heard of one flock-owner who at last adopted the course of drowning a thousand in the sea.'—TROLLOPE.

## QUEENSLAND

(Area, 668,000 square miles—Population, 445,000—  
increasing.)

1. **Position and Coast-line.**—Queensland lies in the north-east of Australia, and stretches for about 1200 miles, from Point Danger to Cape York. The first settlement made in it was a convict-station at Moreton Bay. In 1859 Queensland was formally proclaimed as a colony, and christened, like Victoria, in honour of the Queen.

(i) The eastern **coast-line** is fringed with small islands, the largest of which is Great Sandy Island in the south; and protected, for the greater part of its length, by the **Great Barrier Reef**. Queensland includes the small islands in Torres Strait. The most important of these is **Thursday Island**, which is a calling-station for steamers, and the headquarters of the pearl-fishery.

(ii) Besides the large Gulf of Carpentaria on the north, the eastern coast has numerous inlets and excellent harbours, such as **Hervey**, **Moreton**, and **Princess Charlotte Bays**.

2. **Surface and Climate.**—The build of Queensland resembles, in its main features, that of the two other eastern colonies. We still find the **coast-strip**, the mountainous **table-land**, and the **interior plain**. The climate varies with the physical features and the elevation.

(i) The narrow **coast-strip** is bounded on the west by the slope of the table-land. The soil is very rich, largely alluvial, and well suited for sugar-planting. The two largest rivers are the **Fitzroy** and the **Burdekin**, both of which bring down great quantities of fertile soil. This sediment has formed round the mouth of the Burdekin a large delta, on which are situated many flourishing sugar-plantations.

(ii) The **table-land** is a continuation of the Dividing Range, which culminates, as a range, in the **Bellenden-Ker Hills** (5158 feet), in the north of the colony. From the table-land, the rivers flow east into the Pacific; and south-west (as the Barcoo) to Lake Eyre. The headwaters of the Darling, the Warrego, and the Condamine also rise here. The southern part of the table-land, especially the **Darling Downs**, is the best pastoral region in the colony.

(iii) The **interior plains** stretch behind the Dividing Range, from the

New South Wales border to the Gulf of Carpentaria. The principal river is the **Flinders**, which flows north into the Gulf of Carpentaria. The Queensland plains are in general hotter and drier than those of New South Wales; but they contain more of the fertile black soil, and in many parts are covered with the invaluable salt-bush. In the south-west there is a scrub-covered desert.

(iv) The **climate** varies from temperate on the southern table-lands to fierce, tropical heat in the north. The sea-coast is hot and moist; the inlands dry. Drought is the enemy of the Queensland flockmaster; but he is doing his best to conquer this by the help of artesian wells.

**3. Industries and Products.**—The industries are: **stock-farming, mining, and sugar-planting.** Queensland stands second in Australia for the production of gold; and she has more cattle than all the rest of the colonies put together. There are a number of sugar-factories, rum distilleries, and meat-freezing works in different parts of the colony.

(i) **Gold** is the chief mineral, and the richest mines are at **Charters Towers, Mount Morgan** near Rockhampton, and **Gympie** in the extreme south-east. **Tin** is found at Herberton and Stanthorpe (=Tin Town); and **copper** at Cloncurry, south of Carpentaria Gulf. There are also immense **coalfields**; but coal is, as yet, only worked in two places—on the Brisbane and on the Mary River.

**MOUNT MORGAN** is a mountain of iron-stone, seamed throughout with veins of the purest gold. It was originally bought by the Morgan Brothers from a farmer for £640, and it is now supposed to be worth about £16,000,000.

(ii) The **sugar-industry** is the most important branch of Queensland agriculture. The canes are cultivated in the hot and moist coast-lands; and the largest sugar-plantations lie between Mackay and Townsville. In some districts the juice, after having been crushed out of the canes, is, like the petroleum of Pennsylvania, run through pipes to central refining establishments. Besides sugar, **maize** is extensively grown; and the forests are rich in timber (eucalyptus and Queensland cedar).

(iii) The labour in the hot sugar-plantations is chiefly supplied by **Poly-nesi-ans**, or 'Kanakas.' These natives are collected among the Pacific islands by 'labour schooners' or 'blackbirders,' and contract to work in Queensland for a number of years, after which they return as (comparative) millionaires to their island homes. They alone make the sugar-industry a paying one; for the fierce climate of northern Queensland renders it nearly impossible for the white man to do more than superintend the labour on the plantations.

(iv) The **fisheries** of Queensland are of considerable importance. Native



divers are employed in the Torres Strait to collect mother-o'-pearl; and trepang and turtle are obtained off the Great Barrier Reef.

(v) **Railways.**—The Queensland railways, with two exceptions, all start from seaports, and thus enable the inland producers to bring their goods to the coast for shipment. It is proposed to run a line from the Gulf of Carpentaria, through the whole length of Queensland, to meet extensions from New South Wales and South Australia.

4. **Commerce and Towns.**—Queensland trade is, for the number of the population, considerable; and it is increasing. The chief exports (£9,000,000 yearly) are: wool, gold, sugar, frozen meat, hides, and tallow. There is a large overland trade with New South Wales in cattle. The imports (£4,500,000) are the same as those of the other Australian colonies, except that sugar is not imported, and flour is. The chief towns, which are also the chief seaports, are: Brisbane, the capital, Maryborough, Rockhampton, Mackay, and Townsville.

(i) **Brisbane** (with suburbs, 100) stands on the River Brisbane, which flows into Moreton Bay. It is the chief port of the colony, but it has not, like Sydney and Melbourne, the practical monopoly of the trade. The river is navigable. The climate and scenery of Brisbane are delightful. 'On the banks of its broad, sweeping river, the feathery palm, the pendulous banana, and the long, waving bamboo grow in almost tropical luxuriance.'

(ii) **Maryborough**, a seaport, is joined by railway to the gold-fields of Gympie. **Rockhampton**, on the Fitzroy, is the port for central Queensland. **Mackay** is the chief sugar-centre of Queensland. **Townsville**, in the north, is a great gold and sugar-port; near it are the famous gold-fields of **Charters Towers**. It is also the outlet of a vast pastoral district. **Ipswich** lies on a great, but as yet undeveloped, coalfield.

(iii) Brisbane is the terminus of, and Rockhampton, Mackay, and Townsville are calling-stations for, the Queensland Royal Mail steamers, which run to Europe by way of Torres Strait.

The Australian aborigines are more numerous in Queensland than in any other colony; they probably number about 70,000. The Queensland blacks live not only by hunting, but have their annual feasts on the fruit of the bunya-bunya pine, which it is forbidden to cut down for that reason. Even yet conflicts occur between them and the white settlers in the 'back-blocks'; and it is to keep down such disturbances that a force of black police has been organised. These black 'trackers' have generally shown the greatest ruthlessness against the people who are of their own blood.

## WESTERN AUSTRALIA

(Area, 975,000 square miles—Population, 82,000.)

1. **Position and Surface.**—Western Australia—‘the land of sand, sorrow, and sore eyes’—lies on the western side of the continent, and occupies more than a third of it. It is the largest of the Australian colonies, but the least populous. Much of it has never been traversed by the feet of white men. It is bounded on the east by South Australia; on all other sides by the ocean.

(i) **Coast-line.**—The coast-line is generally low and sandy, and edged throughout its length with many small islands. Along the Australian Bight the shore rises in grand cliffs to a plateau, two or three hundred feet above the sea. **King George's Sound**, in the south, is at present the best harbour, and can accommodate the largest vessels. The two chief openings in the north are **King Sound** and **Cambridge Gulf**, both of which places are served by regular lines of coasting steamers. Cape Leeuwin, in the south-west, is the first land sighted by vessels approaching Australia from the west.

(ii) **Surface.**—Most of the interior is a flat, waterless plain. Hence the rivers that find their way to the sea are few; and sometimes they do not flow at all. The **Darling Range** skirts the south-west coast. North of latitude 26° there is much ground well suited for agriculture or pasturage. In the south the surface is about equally divided between desert and forest. Here, too, large areas are covered with the ‘poison-plant,’ which is fatal to cattle and sheep. But the south-western coast-district is wonderfully fertile, and can grow anything in the shape of grain, fruit, or vegetables.

(iii) The chief deserts are: the **Great Sandy Desert**, in the north; the **Victoria Desert**, in the south; and the **Salt Lakes Desert**, in the west, which contains Lake Austin and many other salt lakes.

(iv) The **Climate** in the south and south-west is temperate and cool, with a good rainfall in the winter, brought by a north-west wind. Elsewhere it is hot and dry.

- (a) Drinking-water at the gold-fields was at first so scarce that it had to be distilled from the salt water of the lakes; and it was sold at fabulous prices per bucket.
- (b) In reference to the large quantities of sand to be found in Western Australia, a sarcastic Yankee once declared that it was the best country to run through an hour-glass he had ever seen.

2. **Industries and Commerce.**—The chief industries are: gold-mining, timber-getting, and sheep-farming. Western

Australia accordingly exports **gold** (a long way first), **wool**, and **timber**, to the yearly value of about £1,500,000. The imports (over £2,000,000) include **food-stuffs**, **apparel**, **railway plant**, **machinery**, **liquors**, **tea**, and **sugar**.

(i) The opening up of Western Australian gold-fields is of very recent date. It will probably give the colony the stimulus it greatly needs; and the 'prospectors,' who at present scour the country on camels in search of new mines, will, when the first fever of discovery and new wealth is over, remain to develop the other and more ordinary resources of Australia. Meantime the chief **gold-fields** are those of (a) **Kimberley**, in the north; (b) **Pilbarra**, round the De Grey River; (c) **Murchison**, south of the Murchison River; (d) **Yilgarn**, **Southern Cross**, and **Coolgardie**, east of Perth. Southern Cross and Coolgardie are joined by railway to Perth. It is proposed to extend this line to **Eucla**, a pastoral centre on the border of Western and South Australia.

(ii) Besides gold, which is exported to the yearly value of over £1,000,000, **tin**, **copper**, and **lead** are also mined, the last two at Northampton.

(iii) The principal timbers are: **sandalwood**, **karri**, and **jarrah**; which last, alone of all timbers, has been found most useful in India, as capable of resisting the attacks of the white ant. The great timber region is the well-watered district round Géographe Bay in the south-west. It is computed that the forest regions of Western Australia cover an area equal to that of Great Britain.

(iv) The most useful **sheep-grazing regions** lie: (a) on the banks of the Fitzroy River, which flows into King Sound; (b) in the Gascoyne division; (c) along the coast-ranges of the south-west.

(v) An old industry of Western Australia is the diving for **pearls** and **pearl-shell** on the northern coast. These form the fourth export of the colony.

Two famous pearling-centres are COSSACK and ROEBOURNE, which lie on the north-western coast, opposite Dampier's Archipelago. The pearling is conducted in small boats known as pearling luggers. The divers are either Europeans, who wear a regular diving dress, or Malays and Australian natives, who wear nothing. The native divers can, of course, only stay under the water for half a minute or so, during which time they clutch at any shell they see. Even the regular divers can only stand the pressure of deep water for about a quarter of an hour. The diving-trade is a well-paid one, but it has many risks. Sometimes the air-tubes of the diving-dress become entangled, and the crew on board the lugger haul up a corpse. Sharks attack the native divers; and one pearling ground on the north-west was deserted for years on account of the crocodiles which infested the place. In one season these fierce reptiles had torn to pieces three divers before the eyes of their horrified companions. The pressure of the water sooner or



later brings on paralysis of the limbs, which cripples the divers for the rest of their lives. Pearl-shell fetches from £100 to £130 a ton; and valuable pearls are often found in the shell-fish besides.

3. **Towns, etc.**—Perth (12), on the Swan River, is the capital. Fremantle, at the mouth of the river, is its port. The chief port is Albany, on King George's Sound, which is a touching-place for the great 'liners.' Northampton mines copper. Coolgardie (10), and Cue on the Murchison fields, are gold-centres.

(i) The old name of Western Australia (or Westralia as it is sometimes called) was the Swan River Settlement, which was established in 1829. In the year 1848 the free colonists, finding the population so scanty, and labour so scarce, took the extreme step of petitioning the British Government to send out convicts to them.

(ii) Western Australia has, so far, been the Cinderella of the Australian colonies; but her continually increasing output of gold will soon enable her to take rank with her more fortunate sisters.

COOLGARDIE has been thus described: 'The whole country is bare and dry. Hardly a scrap of vegetation is to be seen. Standing out alone, condensing-plant, canvas tents, frame-houses—all seem hideously ugly. Nature has not made Coolgardie picturesque, and man has not improved on it. The town, like all Australian pioneer mining-townships—consists of low buildings, and one-storied frame stores. Bayley Street, Coolgardie (named after one of the original discoverers of these gold-fields), I take to be one of the streets of the world. Not for its buildings, not for anything picturesque in its surrounding, but for the people who throng up and down this thoroughfare—men of all nations, whose very existence here is a romance. Camel-teams pass to and fro with AFGHAN leaders, bringing souvenirs as well as odours of Araby the Unblest. There are donkey-carts, which Costermonger Joe might drive on the Old Kent Road. There are cycles and cyclists. There are comparatively very few horse-teams, and the bullock-dray is entirely absent. I have not seen a bullock in West Australia. They drink too much.'

4. **Early condition.**—From the following extract from the Parliamentary emigration papers we can gain some idea of the hardships that beset the earliest Westralian pioneers. 'The ghastly spectacle of the town site of Clarence, its sole edifices—crowded, buried, and neglected tombs—its only inhabitants corpses, the victims of disease, starvation, and

despair—the sea-beach strewed with wrecks—the hills and borders of the rivers studded with deserted and half-finished buildings—speak of brave men, delicate women, and helpless children perishing by hundreds, on a desert coast, from want of food, of shelter, and even of water, and surrounded by armed hordes of angry savages. It were impossible to estimate the vast amount of property of every sort, buried for safety in the sands of the shore, and never again recovered; or the vast multitude of valuable and high-bred stock of all descriptions, whose skeletons whitened the beach, or filled the morasses they had been forced to enter in the desperate search for even fresh water. . . . Some demanded to be led to their lands; others gave way to despair; servants attacked the spirit-casks; masters followed their example. The means of the immigrants dissipated; their live-stock perished; many died; and numbers, as soon as practicable, fled from this scene of ruin, carrying with them the wreck of their fortunes.'

## TASMANIA

(Area, 26,000 square miles—Population, 155,000.)

1. **Position and Coast-line.**—The heart-shaped island of Tasmania (originally called Van Diemen's Land) is separated from Victoria by **Bass Strait**. The strait is 160 miles across at its narrowest point; and is named after Surgeon Bass, who, by circumnavigating Tasmania in a small boat, discovered it to be an island. Tasmania, which is a little smaller than Scotland, has an average length and breadth of 160 miles each way. The coast-line is picturesquely indented, and contains numerous good harbours.

(i) The chief islands, which belong to Tasmania, are: King's Island, Flinders, and Barren Islands, in the north; and Bruni in the south.

(ii) The principal inlets are: Emu Bay on the north; Macquarie Harbour on the west; Oyster Bay and Storm Bay on the east.

2. **Surface.**—Tasmania has been called 'the Switzerland of the South'; and, speaking generally, the island is hilly, well wooded, and well watered. A high table-land fills the middle of the island; and from this radiate four mountain spurs. The highest peaks are **Cradle Mountain** (5069 feet) and **Ben Lomond**. The rivers present a strong contrast to those of Australia; for they are clear; they have a constant flow of water all the year round; and they flow in all directions. The three largest are the **Derwent**, **Huon**, and **Tamar**. The lakes of Tasmania lie on the central table-land. The two largest are **Great Lake**—as large as Loch Lomond—and **Lake St. Clair**.

(i) The surface of the country is very irregular and broken. Mountain, table-land, valley, and gorge are spread about in most admired disorder. Of plain-land, properly so called, there is none at all.

(ii) Besides the two peaks mentioned, there are nineteen others with a height of over 4000 feet.

(iii) The Tamar is navigable to Launceston, a distance of 40 miles.

(iv) The whole island is more or less covered with timber. But the densest growth, both of timber and underwood, is found in the west; where the thickness of the scrub has prevented or hindered the progress of settlement.

'Even more than Britain, Tasmania presents in a small area the features which mark all the various parts of the globe: mountain and plain, forest and rolling prairie-land, rivers and grand capes, and the noblest harbour in the world,—all are contained in a country not so large as Ireland.'—DILKE.

3. **Climate, Vegetation, etc.**—The climate is equable and healthy, and the air much cooler than that of Australia. This is owing partly to the general elevation of the island, and partly to the proximity of the sea. The rainfall is fairly abundant; and severe droughts are quite unknown. The **vegetation** resembles that of Australia, the **eucalypti** being



the characteristic trees. The **Huon pine** of the south-west is also valuable for its timber.

(i) Tasmania is almost free from the hot north winds, which are so unpleasant a feature in the climate of Australia.

(ii) The healthiness of the climate is attested by the fact that *old age* is the most common cause of death in the island.

(iii) The **animals** of Tasmania are, like those of Australia, of the **marsupial** order. Tasmania possesses two large carnivorous marsupials, the 'tiger-wolf' and the 'Tasmanian devil.' These lurk among the fastnesses of the rocks and scrub; and issue forth at night to prey on the sheep of the colonists. Salmon and trout have been successfully introduced into the rivers.

(iv) 'The scenery of Tasmania is thoroughly English, and reminds one of the finest parts of Kent and Surrey. . . . Amid all this English outlook the new-comer is reminded that he is not at home by the appearance of gaudily coloured parrots and other birds unknown in the mother-country.'

'Somersetshire cannot surpass the orchards of Tasmania, nor Devon match its flowers.'—DILKE.

**4. Products and Industries.**—The chief industries are: horticulture (fruit, hops, and potatoes), mining, agriculture, and sheep-farming. The **manufactures**, for the size of the population, are extensive; and include those of jam, beer, soap, and saw-milling.

(i) Tasmanian farmers have been compelled, by the low prices of cereals throughout the markets of the world, to turn their attention to horticulture. Wheat and oats are the chief grain-crops. All the fruits of the Temperate Zone are raised; and Tasmanian apples and pears, especially, are famous for their excellent quality.

(ii) The chief **minerals** are: tin, gold, silver, and coal. Waratah, or Mount Bischoff, in the west, and Ringarooma in the east, mine tin. Beaconsfield, on the Tamar, is the chief gold-mining town.

(iii) Tasmania possesses very few sheep; but they are of a very pure breed.

**5. Commerce.**—The commerce of the island has a yearly value of about £3,000,000. It is carried on chiefly with New South Wales and Victoria; and, after them, with Great Britain. The chief **exports** are: wool, tin, gold, silver, and fresh fruit. In the last a large trade is done with England

by means of cool chambers in the steamers. The chief imports are : drapery, hardware, tea, and sugar.

(i) The two large ports are **Hobart** and **Launceston**, which do a nearly equal trade. These two towns are connected by a railway. Another line runs from Emu Bay to Waratah, in the north-west, to tap the tin-mines of Mount Bischoff. The progress of railways in Tasmania has been slow, as the mountainous character of the country presents great engineering difficulties.

(ii) The fruit trade with England has sprung up very recently. In 1890 there was no export of fruit at all. In 1894 England bought from Tasmania fresh fruit to the value of £64,000; and now Tasmanian apples are as familiar to the British greengrocer as Victorian butter is to the dairyman.

6. **Towns, etc.**—The three largest are : **Hobart**, the capital ; **Launceston** ; and **Beaconsfield**.

(i) **Hobart** (25) lies in the south-east of the island, on the side remote from Australia. It stands on the estuary of the Derwent, has an excellent harbour, and trades, chiefly in agricultural produce, with Sydney. The healthiness of its climate, and the picturesque mountain scenery round it, attract many visitors to the place. **Launceston**, its rival in trade, lies on the other side of the island, at the head of the navigation of the Tamar. It smelts tin, and trades with Melbourne.

(ii) **Government.**—Tasmania enjoys responsible government.

(iii) **History.**—A Dutch sailor, Abel Tasman, discovered the island in 1642; and he christened it, in honour of the Governor of Batavia, Van Diemen's Land. It was made an English convict settlement in 1803, and was formally declared a colony in the year 1825. Some years after that, on the granting of responsible government to the settlers, the name was formally changed to **TASMANIA**. The old name ('tainted, as it was, with the sound of the gaol, and harsh with the crack of the gaoler's whip') had become greatly detested on account of its hateful memories of crime, penal servitude, and misery; and the free settlers of Tasmania no longer wished to be associated with the convict 'Demons' of Van Diemen's Land. The convict labourers, however, did much for the young colony in the way of clearing out scrub, felling timber, erecting buildings, and making roads. The splendid road between Hobart and Launceston, 120 miles long, was made entirely by convict labour.

(iv) The **aborigines** of Tasmania have now entirely disappeared. They resembled, in appearance and habits, the Australian native, except that they had curly, and not straight hair. The 'Black War' between the natives and the settlers lasted a number of years, till at last in 1830 the whole native population was transported in a body to Flinders Island. From thence, in greatly diminished numbers, they were again removed to

Oyster Bay; where, through drink or disease, or both, they rapidly became extinct.

(v) The early history of the colony was a painful one—a story of hideous misery endured by the British convicts in the labour-gangs and gaols, and a record of equally hideous crimes committed by them, when they succeeded in gaining their freedom and fleeing into the bush. But now, 'with a splendid soil to allure the farmer; with magnificent prospects for the miner; with promising industries yet undeveloped; with a climate and people second to none in the world, and physical beauties that few countries can rival—Tasmania should have a great future in front of her.'

## NEW ZEALAND

(Area, 104,000 square miles = twice England—Population, 690,000.)

**1. Position and Extent.**—New Zealand lies about 1200 miles south-east of Australia, between 34° and 47° South Latitude. It is thus entirely within the Temperate Zone. The colony includes one main group of islands and several small outlying groups. The main group consists of **North, South, and Stewart Islands**. The chief outliers are the **Chatham, Auckland, and Kermadec Islands**.

(i) The main group is rather more than twice the size of England, and is about 1100 miles long by 150 broad.

(ii) **South Island** is the largest of the three, and has an area of 58,000 square miles—just equal to that of England and Wales. The area of **North Island** is 45,000 square miles. **Stewart Island** is a little larger than Hertfordshire.

(iii) **Chatham Islands** lie east of New Zealand. The few inhabitants are engaged in seal-fishing, and in rearing stock which they supply to passing whalers. The **Auckland Islands** to the south are uninhabited; and the **Kermadec Islands**, to the north-east of the main group, have only seven people living on them.

(iv) The following are the **divisions** or provinces of New Zealand:—

**North Island.**—Auckland, Taranaki, Hawke Bay, and Wellington.

**South Island.**—Nelson, Marlborough, Canterbury, Westland, and Otago.



2. **Coast-line.**—The shape of New Zealand is that of a topboot turned upside down. The toe is **Cape Maria Van Diemen**; the heel is **East Cape**. The coast-line is 3000 miles long, much indented (notably so in North Island), and with high, rocky shores. It is to this great and varied development of coast-line, and to the fact that no part of the island is more than 75 miles from the sea, that New Zealand owes her commercial prosperity. But, though there are many fine inlets on the west coast, of North Island especially, the drift-sand from the East Australian Current has generally blocked their mouths with a bar. One of the most striking features in the coast is the far-withdrawn **sounds** or **fjords** of the south-west. Some of these arms of the sea are twenty miles long—narrow salt-water canals which are walled in by gigantic precipices 7000 feet high.

'The smooth, still water is enclosed on every side with immense perpendicular walls of rock, banked by yet higher mountains. Islands of various size stud the surface, and the whole of the visible land is richly covered with vegetation, like a mantle of rich and varied green, except where the cliff is too hard and too smooth for even a fern to secure a hold. Over the cliff waterfalls are tumbling—some, from the melted snow on the mountains, dashing down at a leap, and others of smaller size winding like a sparkling thread through the dense green foliage.'—WILKINS.

(i) **Cook's Strait** separates the two larger islands; and **Foveaux (Fero) Strait**, South Island from Stewart Island.

(ii) **Capes.**—North Island: **Cape Maria Van Diemen**, **North Cape**, **East Cape**, **Cape Palliser**, **Cape Egmont**. In South and Stewart Islands: **Cape Farewell**, **South-west Cape**, **Cape Campbell**.

(iii) **Inlets.**—In North Island: **Bay of Islands**, **Hauraki Gulf**, **Bay of Plenty**, **Hawke Bay**, **Manukau Harbour**, **Kaipara Harbour**. In South Island: **Massacre or Golden Bay**, **Tasman Bay**, **Pegasus Bay**, **Canterbury Bight**.

(a) **CAPE MARIA VAN DIEMEN** was named by the discoverer of New Zealand, **TASMAN**, in honour of the daughter of the Governor of Batavia.

(b) **CAPE FAREWELL** was so named by Captain Cook, as it was the last point of New Zealand seen by him when he left the island at the end of his first voyage in 1770. A long spit of sand runs out east from Cape Farewell, and shelters Golden Bay.

- (c) Near the first of these two capes is a lofty wind-swept headland, whither the MAORI CHIEFS used to be carried, dying, so that they might, as it were, spring off from it into the unknown world.

3. **Surface.**—The surface of New Zealand presents a remarkable contrast to that of Australia, and a considerable likeness to Tasmania. No wide interior plain is to be found in New Zealand; but the surface is, as in Tasmania, endlessly diversified with mountain and table-land, valley and terraced plain. Here are no feebly flowing creeks or strings of muddy waterholes, as in Australia: the rushing torrents of New Zealand sweep grandly to the sea, 'usually half lost in their gigantic stony beds.' In New Zealand, too, the mountain peaks are generally a thousand feet higher than those of Australia.

The build of both North and South Islands possesses one feature in common. Both are highly mountainous, even rugged; and through both runs from end to end a great cordillera, or **mountain back-bone**. This chain, which is interrupted at Cook's Strait, is composed of the same kind of rocks, and runs in the same direction. But in South Island it is nearer to the west coast; in North Island to the east coast.

(i) North Island is highly volcanic, and is full both of active and extinct volcanoes, geysers, and boiling springs. South Island, on the other hand, displays no trace of recent volcanic activity.

(ii) North Island is the home of the **Hot Lakes**, which are fed by boiling springs. South Island is the region of the **Cold Lakes**, which are chilled by the melted snow and glacier water.

'New Zealand is the place for highlanders. They will find both mountains and valleys enough to satisfy them, with gloomy passes, deep lakes, lofty waterfalls, mist, rain, cool weather, and all that goes to make up their ideal of Paradise. It is as if all the titbits of Scotland, Cumberland, Wales, and the Emerald Isle had been carted off to a southern latitude and planted down there, with suggestions beside of the blue Danube, Switzerland, and the Rhine mysteries over all.'—HUME NISBET.

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4. **Surface.**—**South Island.** The build of this island consists of a long mountain chain running along the west coast, and a crescent-shaped lowland in the east. Isolated from the main chain lies the **Kaikoura Range** in the north-east, which is part of the cordillera system, and is continued in the mountains of North Island. The watershed of South Island runs west and south-east from the main mountain chain.

(i) In the middle of the west coast chain lies the highest range—the **Southern Alps**. These, like the Alps of Europe, rise above the level of perpetual snow; and their highest valleys are filled with immense glaciers, the lower with beautiful lakes. The highest peak in them is **Mount Cook** (12,350 feet)—more than two miles high—which is also the highest point in New Zealand. The Maories call this peak **Aorangi**, or ‘cloud-piercer.’ These mountains are very difficult to cross; and at one point, the **Otira Gorge**, there is the only practicable pass for a distance of a hundred miles.

(ii) The lowland country, which lies to the east of the mountains, is the **Canterbury Plains**. They are about a hundred miles long, and measure fifty miles across at their broadest part, where the volcanic mountain mass of **Banks Peninsula** juts out from the coast. The plains descend by terraces towards the sea, and are composed of a fertile soil, which has been ground off the mountains by the glaciers and washed down by the flooded rivers. The climate of the plains has been described as a mixture of the climate of the south of France and that of the Shetland Isles. They contain the best pastoral and agricultural ground in South Island.

(iii) The rivers, fed with water from the glaciers, have a ceaseless flow. The longest is the **Clutha** (150 miles) in the south. Others are the **Buller**, **Grey**, and **Hokitika**, on the west coast, all of which have harbours at their mouths. But these harbours are all more or less silted up with mud.

(iv) The lakes lie among the Alpine valleys. The biggest are **Te Anau**, **Wakatipu**,<sup>1</sup> **Wanaka**, and **Hawea**. The last three are drained by the River **Clutha**. **Wakatipu** is approached by a railway, and has steamers on it.

(a) ‘In New Zealand (South Island) everything is English. The scenery, the colour, and general appearance of the waters, and the shape of the hills, are very like that with which we are familiar in the west of Ireland and the Highlands of Scotland. The mountains are brown, and sharp, and serrated; the rivers are bright and rapid; the lakes are deep and blue, and bosomed among the mountains. If a long-sleeping Briton could be set down among the Otago Hills, and told on awakening that he was travelling in Galway, or in the west of Scotland, he might be easily deceived, though he knew those countries well.’—ANTHONY TROLLOPE.

<sup>1</sup> Pronounced *Wakatip*’.



- (b) Trollope thus describes a journey across the Canterbury Plains, from the Waitaki River to Christchurch: 'It is an uninteresting journey as far as scenery is concerned. To the left, the great range of mountains which runs throughout the island was always in sight with its snow-capped peaks,—somewhat relieving the dulness of the plain;—but they are not sufficiently near to create landscape beauty. We passed on from one squatter's run to another, through vast paddocks, containing perhaps 20,000 acres each, without a tree. The grass consisted of long coarse tussocks, brown in colour,—with nothing of green prettiness to relieve the monotony.'

5. Surface.—North Island. In this island the main mountain chain still continues; but it lies nearer to the east coast. The chief ranges in it are the **Tararua**, **Ruahine**, and **Kaimanawa**. The northern portion of North Island is comparatively level—in places even low and sandy; but the centre is occupied with a volcanic table-land. Out of this rise the extinct volcano of **Ruapehu** (9195 ft.), the highest peak in the north, and the still active **Tongariro**. On the table-land lies the largest lake in New Zealand, **Lake Taupo**, 200 square miles in extent. This lake is drained by the **Waikato River**, which is navigable by small steamers for fifty miles. West of the table-land stands the perfect snow-capped cone of **Mount Egmont** (8280 ft.), which rises out of a very fertile plain.

(i) Other navigable rivers in North Island are the **Wanganui** and the **Thames**; but neither is of much commercial importance.

(ii) North of Lake Taupo lie the Hot Lakes, of which **Roto-rua** is the largest. This is a region of high volcanic activity—a country of boiling springs, geysers, mud volcanoes, and solfataras. The boiling springs are continually bursting out in fresh places. 'You walk one day over firm ground, where the next you find a bubbling hole, into which, if you unwarily step, your foot will be of no further service to you.'—FROUDE.

The Agent-General for New Zealand thus humorously describes the geysers of the Hot Lakes: 'Geysers are divided into three classes—the dignified, the irritable, and the professional geyser. The first, and rarest, may be likened to a really great orator, who only eloquently bursts forth when stirred by passion or enthusiasm; the second to an ordinary Parliamentary debater, who, when things are thrown at him—mud for choice—begins to fume and splutter. This treatment, however, ultimately leads to the geyser getting

clogged, so that the Government has been compelled to forbid it, or the displays will altogether cease. The third, or professional geyser, is neither romantic nor wonderful,—a mere creature of routine that performs at regular intervals.'

(iii) The **Waikato**, about 25 miles from its outlet from the lake, passes through a most striking group of hot springs. 'Along its banks white clouds of steam ascend from hot cascades falling into the river, and from basins of boiling water shut in by white masses of stone. Steaming fountains rise at short intervals, sometimes two or more playing simultaneously.' The Waikato often overflows its banks, where they are low; and on the marshes thus formed excellent crops of New Zealand flax are produced.

(iv) At **Ohinemutu**, north of Lake Taupo, which is destined to become the 'Bath' of New Zealand, are some sulphur-springs of special medical value. The boiling springs in the same neighbourhood the native Maories put to various practical uses. 'They cook their cray-fish and white-fish, which they catch in the lake, in them; they boil their cabbage, they wash their clothes in them, and they wash themselves. They dig out baths, bring streams from cold springs to temper the hot, and pass half their time lounging in the tepid water. I heard a grunt as I passed one of these pools. I supposed it was a pig. Looking round, I beheld a copper-coloured face and shoulders, a white head, and a pipe sticking out of the mouth.'—FROUDE'S 'OCEANA.'

6. **Climate**.—New Zealand resembles Tasmania in the character of its surface; it resembles it also in its climate, except that it is not so hot. Speaking generally, the climate is much like that of England, only warmer and more equable. But, naturally, it is to be expected that, as the islands stretch through some 13° of latitude, the climate must vary considerably. The North Island being nearer the equator is the warmer of the two, and enjoys a climate similar to that of southern Europe. Stewart Island, on the south, has much the same climate as Scotland. Droughts are unknown; and scarcely any part of the colony goes a fortnight without rain.

(i) The prevailing rain-bearing winds blow from the north-west, just as they do in the south-west part of Australia. Hence the densest forests are found on the western side of the mountains of South Island; while the Canterbury Plains, on the other side, do not enjoy nearly so great a rainfall. In the North Island, on the other hand, the chief ranges lie further to the east. Hence the moisture, and consequently the forests, spread further eastwards.

(ii) 'New Zealand never suffers from drought. Its natural formation and its situation effectually prevent that. In seasons when the drought is most cruel to Australia, New Zealand is at its prime, the unbroken weather of a dry summer bringing to perfection the crops which have been well nourished by the unfailing rains of winter and spring.'

7. **Vegetation and Animal Life.**—Like Australia, New Zealand contains no native fruit nor grain. But there the resemblance between the colonies ceases. The prevailing tint of Australian vegetation is a grey-blue, from its blue-gums, casuarinas, etc. The prevailing tint in New Zealand is a glossy green; and its characteristic forms of vegetation are the **kauri pine**, **totara**, **red pine**, **phormium**, or New Zealand flax, and every variety of **fern**. The fauna of New Zealand is somewhat peculiar. It has no marsupials nor any snakes; and its native land mammals include one species of rat and two of bats. Among the many forms of bird-life, the two oddest are the **kea parrot** and the **apteryx** (=wingless). All domestic animals have been introduced.

(i) 'The great characteristic of New Zealand scenery, as dependent on vegetation, are the **forests**, the **ferns**, and the **grassy plains**. The forests chiefly clothe the mountain-ranges; the lower hills are covered with fern; while extensive tracts, chiefly on the west in the North Island, and on the east in the South, are covered with grass and bushes.'

(ii) New Zealand contains no acacias or eucalypti.

(iii) The **kauri pine**, which grows in Auckland province only, supplies an excellent quality of timber, and also **kauri gum**. This is a resin found either at the foot of the trees themselves, or, in a semi-fossilised state, on the site of old kauri forests. It is valuable for the making of fine varnishes. The timber of the **totara** is proof against the *teredo navalis*, a marine boring worm.

(iv) The **apteryx**, or kiwi, is the last descendant of a race of wingless running birds, of which the hugest species is the **moa**. From fossil remains that have been found of this creature it must have been about twelve feet high. The apteryx itself is about the size of a hen, with hair-like feathers, and a bill like a snipe's.

(v) The **kea** is an owl-like parrot that has acquired the mischievous habit of tearing at the kidney-fat of living sheep. These birds are not numerous; and they are destroyed as unremittingly as the dingo is in Australia.

(vi) The rivers of New Zealand have been stocked with trout, which grow



to a very large size. Hares, rabbits, red deer, pheasants, grouse, and quail have also been introduced into the islands.

- (a) As parts of Australia suffer from an introduced plague of thistles, so do large tracts in North Island from the sweet-briar. The missionaries introduced the bush; and it now grows in impenetrable thickets, which the farmer has to dig out with pick-axes, or tear out with cart-ropes and teams of horses.
- (b) In North Island there is little natural grass available for pasture. Fern grows instead of it. The fern is burnt off, and grass-seed is sown on the ashes.

**8. Industries and Products.**—The chief industries are stock-farming, agriculture, and mining. The chief manufactures are concerned with the preparation of frozen meat, wool, timber, and flax.

(i) The **pastoral industry** is not generally carried on on so large a scale as in Australia, but each farmer rears small herds. The colony owns about 18,000,000 sheep—chiefly merinoes—and nearly a million cattle. Great attention is paid to **dairy-farming**; and New Zealand has a good reputation, both for butter and cheese, in the London and Glasgow markets. New Zealand has an area fit for pasturage half as big again as England; and English grasses, such as Cocksfoot and White Clover, thrive very well. **Rabbits**, as in Australia, do much damage to the sheep-runs.

(ii) There is in the colony an area, equal to a third of England, which is suitable for **agriculture**. This industry is chiefly carried on in Canterbury and Otago provinces, where the principal crops are **wheat** and **oats**. All ordinary **fruits** of temperate climates flourish in New Zealand, but not in sufficient quantities to supply the needs of the people.

(iii) The chief **minerals** are **gold** and **coal**. **Gold** is mined in Otago, Westland, and the Thames Valley (Centre, Grahamstown). It is chiefly procured by 'sluicing'—that is, by washing the gold free of the gravel by powerful streams of water. The best **coal** is found in Nelson province. Brown coal is found in Auckland and Otago. The production of coal supplies two-thirds of the needs of the colony; and would supply all, were it not that New Zealand vessels come back from New South Wales with cargoes of coal, in exchange for agricultural produce.

(iv) Other minerals are **iron-sand** on the west coast of North Island, **petroleum** in Taranaki, and **sulphur** from the volcanoes and from the ever-smoking White Island in the Bay of Plenty.

(v) The **fisheries** are not much developed. The chief centre is at Thames at the mouth of the Thames River. The shark-fishery, conducted by the natives, is a flourishing industry. The natives eat the flesh, boil the livers for oil, and export the fins to China for making soup.

(a) New Zealand has been described as a workman's paradise. The four eights—

Eight hours to work, eight hours to play,

Eight hours to sleep, and eight shillings a day—

are here a realised fact.

(b) 'In New Zealand there are mountain-ranges grander than the giant bergs of Norway; there are glaciers and waterfalls for the hardy hill-men; there are sheep-walks for the future shepherd of Salisbury Plain; there are the rich farmlands for the peasant yeomen; and the coasts, with their inlets and infinite varieties, are a nursery for seamen who will carry forward into future ages the traditions of the old land.'—FROUDE.

9. Commerce.—New Zealand exports raw materials, and imports manufactured goods. The commerce has a yearly value of about £16,000,000, and is carried on with England first and then Australia. The chief exports (about £9,500,000) are: wool (beyond all the others), frozen meat, gold, kauri gum, hides and tallow, and butter and cheese. The chief imports (about £6,500,000) are: clothing, iron and steel goods, tea, sugar, and spirits.

(i) Minor exports are: grains, timber, and phormium.

(ii) The chief ports are: Auckland, Napier, and Wellington, in North Island; Lyttelton, Dunedin, and Nelson, in South Island. Lyttelton is the most important of these. All of them can accommodate the largest vessels except Dunedin, which can only be reached by vessels of moderate draught. Larger ships have to stop at Port Chalmers, nine miles further down Otago Harbour.

(iii) New Zealand has regular steam communication with London, Plymouth, San Francisco, and Sydney. A submarine cable connects Sydney with Nelson and Wellington.

(iv) English Trade.—New Zealand sends us, among other things, all her wool, and nearly all her frozen meat and wheat.

(v) Australian Trade.—'Not only grain and bread-stuffs, but potatoes, hay, chaff, roots, vegetables, butter, cheese, bacon, hams, even meat and fish, preserved or frozen, are sent over in immense quantities and eagerly bought at Sydney, Brisbane, and Melbourne, at highly remunerative prices. This trade is steadily growing, and there cannot be a doubt that in time a great part of Australia will be supplied entirely with food staples from New Zealand.

From AUCKLAND to LONDON is . . .	13,000 Miles.
" " to SAN FRANCISCO is . . .	6,000 "
" " to MELBOURNE is . . .	1,650 "
" WELLINGTON to MELBOURNE is . . .	1,400 "
" INVERCARGILL (Bluff) to MELBOURNE is . . .	987 "

10. **Communications.**—Nearly all the large towns in either island are connected by railway and telegraph; and in both islands there are good systems of coach-roads, one of which crosses the Otira Gorge in the southern Alps. Through the same gorge also goes the only railway line that crosses the Alps. The main railway systems are:

(a) The line from Auckland to Ohinemutu, and to Mokau in Taranaki, with a branch to the Thames gold-field.

(b) The system connecting New Plymouth, Wellington, and Napier.

(c) A long line along the south-east coast from Culverden, through Christchurch and Dunedin, to Invercargill (Bluff Harbour). This line has many short branches running inland to tap the agricultural and pastoral resources of the Canterbury Plains and Otago province.

(d) The line across the Alps from Christchurch to Greymouth. This line extends north-east to Nelson, passing through the coal-fields of Nelson province.

11. **Inhabitants, History, etc.**—The native race of New Zealand, which is confined mainly to the North Island, is that of the Maories. They are a brown-skinned, well-made, and intelligent Polynesian race, very fond of tattooing themselves. At first both warlike and given to cannibalism, they have now settled down to the peaceful arts of agriculture and stock-raising. In the North Island large districts belong exclusively to them; and they are now admitted to a share in the government of the colony. They number about 40,000 souls.

(i) **History.**—The first European, according to authentic records, to land in New Zealand, was Abel Jans Tasman, the discoverer of Tasmania. He named the country Staten Land, in honour of the States-General of Holland; but shortly afterwards a change was made to the present name. The country lay unvisited for more than 100 years, till Captain Cook landed in Poverty Bay in the year 1769. Cook found the natives had already attained to a high pitch of civilisation. They lived in well-made houses; wore garments woven out of the native flax; were governed under fixed laws; and, though they had no written language, were great and dignified orators, and had stores of national tradition and song. In his subsequent voyages Captain Cook introduced



domestic animals and English vegetables among them. Little was done, however, for the real settlement of the colony till the year 1839, when the New Zealand Company sent out a band of emigrants. They went out in a quick-sailing frigate, and formally took possession of the country just three days before a company of French emigrants had landed from a French man-o'-war at Banks Peninsula. New Zealand thus narrowly escaped becoming a French possession. The English Company secured their first stretch of territory round Wellington, for £320 worth of guns, tobacco, Jews' harps, sealing-wax, umbrellas, etc. etc. But much hard fighting with the natives had to be gone through before New Zealand became a peaceful colony. The Maories fortified themselves in their *pahs*—stockaded enclosures on the volcanic hills—and offered a long and stubborn resistance to further settlement. Since 1869, however, there has been no further disturbance from the natives; and the development of the resources of the colony has proceeded unchecked.

(ii) New Zealand, like all the Australian colonies, enjoys **responsible government**.

(iii) **Education** is free and compulsory for all children, except those of the Maories.

(iv) The **public debt** of New Zealand is enormous, and averages per head of population £58. About half of the whole amount (£38,000,000) has been spent on reproductive works, such as railways, roads, and the passage of immigrants. The public debt of the United Kingdom is little more than a quarter of that of New Zealand—it is only about £16 per head of population.

**12. Towns.**—The extent of the coast-line and its highly articulated indentations offered great facilities both for settlement and for commerce; and we therefore find the most important towns near the coast. The four largest with their suburbs are: **Auckland** (51), **Wellington** (33), the capital, both in North Island; and **Christchurch** (47) and **Dunedin** (45) in South Island. Two-fifths of the population live in towns.

'Dunedin,' says Anthony Trollope, 'is a Scotch town, and Christchurch an English town, here planted,—and Wellington is a chosen site for a parliament; but **Auckland** is redolent of New Zealand. Her streets are still traversed by Maories and half-castes, and the Pakeha Māori (a white man who has become a member of a native tribe) still wanders into town from his distant settlement in quest of tea, sugar, and brandy.'

(i) **North Island.**—Wellington stands on Cook's Strait, about 1200 miles from Sydney, and has a safe harbour in Port Nicholson. Being centrally situated, it is the port for much of the coasting trade.

**New Plymouth**, on the west coast, is the chief town of Taranaki. On the coast near it are large quantities of iron-sand, which is sent to **Onehunga** (near Auckland) to be smelted.

**Auckland** stands on the Gulf of Hauraki. A railway, six miles long, connects it with the shallow Manukau harbour on the west. Auckland enjoys the exquisite climate of the Riviera.

**Napier**, on Hawke Bay, is a pastoral centre, and exports wool and frozen meat.

**Russell**, on the Bay of Islands, exports timber and coal. It is also a whaling port—an industry, however, that is fast declining.

(ii) **South Island.**—**Christchurch**, the 'City of the Plains,' is the chief town of Canterbury province. It is connected by railway with its port, **Lyttelton**, the chief seaport in the colony.

**Dunedin**, the 'Edinburgh' of the Antipodes, is a well-situated and busy commercial city. It is the chief town in Otago province. Dunedin was founded by people belonging to the Free Church of Scotland, as Christchurch was by members of the Church of England. **Cromwell**, on the Clutha, is the principal gold-mining town in Otago.

**Invercargill** lies on Foveaux Strait (*Pövrö*). It does a large trade with Australia through its port of Bluff Harbour. The distance to Melbourne is only 987 miles. **Hokitika** and **Kumara**, on the west coast, are gold-mining towns.

**Greymouth** and **Westport** ship coal. Greymouth lies on the line of railway from Christchurch to Nelson.

**Nelson** stands on Tasman Bay. Round the town, which is beautifully situated, grow quantities of fruit, which is exported to Wellington. Nelson is the windiest spot in New Zealand.

(iii) **Stewart Island** is called by the natives **Rakiura**, which means 'Dry Weather Land.' As it is perpetually swept by rain and fog, this title is probably a Maori joke. The island is very mountainous, and covered with timber. On the largest of the **Auckland Islands** Government maintains a depôt of provisions and clothing for shipwrecked sailors.

### 13. New Zealand and Australia—a Contrast.

#### NEW ZEALAND

1. Highly indented coast-line.
2. Irregular shape—three islands.
3. Surface mountainous and broken.
4. Climate equable, with sufficient rainfall and no droughts.

#### AUSTRALIA

1. Regular coast-line.
2. Shape round and compact—one island.
3. Surface, on the whole, flat.
4. Climate dry and hot, with scanty rainfall and frequent droughts.

## NEW ZEALAND

5. Rivers always full.
6. Characteristic vegetation—fern, with green as the prevailing tint.
7. No marsupials.
8. The whole of the country excellently adapted for agriculture.
9. Native race intelligent; offered a brave and an organised resistance to settlement.
10. Colony started by free settlers.

## AUSTRALIA

5. Rivers sometimes over-full and sometimes not running at all.
6. Characteristic vegetation—eucalypti, with grey-blue as the prevailing tint.
7. The home of marsupials.
8. Comparatively small area fit for agriculture.
9. Natives degraded, and of a low type; offered no resistance to settlement except by occasional cattle-lifting and theft.
10. Colonies started by convicts.

'Physically, it may be said that there is absolutely no resemblance between New Zealand and Australia, except in the fact that gold and wool are produced in each. We find, of course, in New Zealand much that is common to New Zealand and Australia, but common also to these and the Canadian Dominion—much that is generally colonial: blackened stumps about the fields; the absorption of the community in agricultural or pastoral pursuits; good fellowship; the manliness of the men; the plentiful, perhaps exaggerated, use of tea; even the slang, descending as it does from the digger's tongue—just born in California about 1850: but nothing can be more complete than the contrast between Australia and New Zealand. Marcus Clarke has told us that weird melancholy is the dominant note of Australian scenery, which is true enough, for the Australian landscape is as lonely, as melancholy, and as solemn as the Roman Campagna, with the added weirdness of strange bark-shedding trees, and of uncouth beasts and birds. New Zealand is wholly different—severe and frowning in the south, open and alluring in the north, with a bright Polynesian loveliness. Australia is, in summer, a land of dry rivers, brown grass, yellow lurid glare, and brassy sun; and in the greater part of winter a land of blue sky and soft, smoky haze. New Zealand in summer may resemble parts of Australia in winter, but she has a real winter in her South Island, and a wet winter in her extreme north. The west coast of the Middle or South Island, whence come the New Zealand coal and gold, is a country of constant rain, of glaciers, and of tree-ferns, and chattering parroquets, inexpressibly distinct from the dried-up Australian gold-fields of Sandhurst. South Central Australia has the climate of Greece; while New Zealand, owing to its enormous length from north to south, has, like Japan, and for the same reason, all the climates of the world except the dry brilliancy of Australia or of Greece. New Zealand, which is all but tropical at the Bay of Islands, is Scotch at Invercargill.'—SIR C. DILKE.



## THE FIJI ISLANDS

(Area, 8000 square miles—Population, 125,000.)

1. **Position, Surface, etc.**—The Fiji Islands lie north of the Tropic of Capricorn, about 1600 miles east of Australia. They are a British crown colony. They consist of a group of some two hundred coral-fringed islands, of which the two largest are **Viti Levu** and **Vanua Levu**. The small island of Rotumah, to the north of the group, is included in the colony. The area of the whole is not quite equal to that of Wales.

The islands are of **volcanic origin**, very mountainous, well watered, and well wooded. There are many fine harbours, which are protected by a natural and indestructible breakwater of fringing coral-reef. Fiji possesses the most healthy tropical climate in the world; and the soil is rich, deep, and easily worked.

2. **Industries and Commerce.**—The chief industry is that of agriculture. Sugar, pineapples, bananas, and copra are produced, and exported to New South Wales and New Zealand. Labour is costly, for the native Fijians are unwilling to labour, and the plantations have to be worked under white supervision by imported Polynesian labourers, 'black-birds,' and Indian coolies.

(i) **Suva** is the chief port, and it has regular steam-communication with Sydney (1900 miles), and with Auckland (1200 miles).

(ii) Tea and tobacco are also cultivated by European planters. Cocoa-nut groves, which thrive best where the sea-breeze touches them, are systematically planted.

(iii) The natives grow for their own use yams, sweet potatoes, and maize, in which they pay their taxes. They irrigate their crops from the brawling mountain streams which come down from the interior.

(iv) The coasts abound in excellent fish and turtles; and the natives collect pearl-oysters and trepang (a species of edible sea-slug).

3. **Towns, etc.**—The European population is under 3000. The capital is **Suva** on Viti Levu. **Levuka**, on another island, is the second town and seaport, and was the old capital. It

is finely situated at the foot of a steep hill, with a wall of rock rising behind it.

(i) **History and Native Inhabitants.**—The islands were discovered by that great Pacific navigator, Tasman, in 1643; but were left unnoticed till Captain Cook visited them in 1769. The few white men that came to the islands after Cook's visit were some escaped convicts from Botany Bay. Most of these soon perished either through quarrels among themselves, or at the hands of the natives. The Fijians were inveterate cannibals, and, among other revolting customs, were in the habit of burying their old people alive. In the present day, thanks to the labour of devoted missionaries, they have become a peaceful, contented, and good-natured people. The colonists accuse them, truly enough, of laziness; but it may be urged in their defence that they have no incentive to, or need for, labour, when a month's work will supply them with a year's food. The Fijian native is of a dark olive colour, tall and strongly built, with regular features, and a huge mop of frizzy hair. The islands were ceded to England by the natives in 1874.

'It is interesting to sit on the broad verandah of the hotel and watch the stream of natives passing, all more or less dressed in Adam and Eve's summer attire, and here you can see specimens from almost every island in the South Seas. The lighter-coloured and better-looking have eastern blood in their veins, while the darker ones are of Papuan race.

'We walked along the shore through groves of cocoa-nut palms, bananas, and bread-fruit, where nestle the native huts, and through cool, dark woods whose heavy masses of foliage were noisy with birds overhead. At low tide the hard, ripple-marked sand is veined with shallow pools, full of little fish and shells, which girls, wading about, are picking up for food. On the dry sand above are small crabs darting about on tiptoe, so fast that at first they seem to be dead leaves swept before the breeze.'—*LOG LETTERS.*

## NEW GUINEA OR PAPUA

(Area, 300,000 square miles (?) = New South Wales.)

1. **Position, etc.**—This, the largest island in the world next to Australia, lies to the north of that continent. The western half belongs to Holland; the north-eastern portion, known as **Kaiser Wilhelm's Land**, to Germany; and the south-east is British. The island, except on the coast-line, is still practi-

cally unknown; and offers a fine field to the explorer, who is not afraid to struggle through the dense forest, with every leaf pouring a little bucket of water on him as he works his way through the mass of creepers and underwood. England is the only country that has done anything to develop its possessions in New Guinea; and there is some export of gold, sandalwood, and copra from the chief trading station, **Port Moresby**. The colony of Queensland is responsible for the administration of the British portion, which is as large as Great Britain itself.

(i) **Coast-line.**—New Guinea (in shape) looks like some grotesque monster of antediluvian ages, with a rounded peninsula for the head and another long and narrow one for the tail. The shores are high and rocky, except on the south, which is swampy and low. Though coral-reefs fringe the shores, yet there are many excellent harbours. The coast region is, in general, a waste of mangrove swamps, incessant rain, and sweltering heat.

(ii) **Surface.**—The country is mountainous and well wooded, containing giant forest trees lashed together by rattans and other climbing plants and creepers. It is probable that one great range of mountains runs through the island from west to east. At present the only known ranges are the **Charles Louis Mountains** in the west, and the **Owen Stanley Range** in the south-east, which contains the peak of **Victoria** (13,000 feet). The **Fly River**, in British territory, has been navigated by a steam-launch to a distance of 600 miles. The **Augusta River**, in Kaiser Wilhelm's Land, is also navigable, and has splendid land on both sides of it.

(iii) **Climate.**—The climate, on the coast at all events, is steamily hot and very wet. Travellers are bathed in perspiration from morning to night; and it has been found that a pair of boots, if laid aside for a day or two, become covered with mildew half an inch thick. In a climate such as this, we expect malarial fever; and malarial fever is very prevalent on the coast of the island.

(iv) **Vegetation and Animal Life.**—The forests of New Guinea are very rich in timber, and contain the eucalypti and acacias of Australia, ironwood, ebony, and palms. Food-producing plants, such as bananas, sago, bread-fruit, cocoa-nut, and sugar-cane, are very plentiful.—Papua resembles Australia in its mammals, which are mainly marsupial. The very rich bird-life includes the running cassowary, the great black cockatoo (whose bill alone—six inches long by two across—is as big as the pigmy parrot) and the various birds of paradise. The brilliant colouring of the males of this last species is well known; it is as brilliant as that of the females is dull and sober.



One of the many ways the natives employ to capture these birds is to discover their roosting trees. These once found, the hunter climbs the tree and puts a cloth over the head of his unsuspecting captive.

2. **Products and People.**—At present there is very little trade done in New Guinea. From Port Moresby some gold, sandalwood, and copra is exported; and elsewhere skins of the birds of paradise are collected by Dutch and Malay traders. But timber, sago, trepang, and pearl-shell will probably be exported in the future. The natives cultivate yams, sweet potatoes, bananas, etc., in their gardens.

**People.**—The Papuans derive their name from a Malay word which means 'woolly hair'; and the people of the island are distinguished by a huge frizzly mop, sometimes as big as a guardsman's bearskin. At night they use a wooden neck-rest for a pillow, to prevent their mops being disarranged. Their colour runs from dark to light brown or even yellow, and they are strongly enough built, though with slender legs. They are hunters as well as gardeners, and will eat anything from sago and fowls down to lizards and insects. The Papuan house, which is as often as not placed in the water, is always built on stakes. Cannibalism and 'head-hunting' are two of their favourite pursuits; and they have a bad reputation for treacherous dealing and murder.

- (a) The Papuans are not without their sense of humour, as the following anecdote will show. The captain of a Dutch gunboat had landed at a village in New Guinea, and, anxious to impress the natives, had dressed himself in full uniform. The native chief insisted on the captain's visiting his house, and the visit was so prolonged that the boat's crew of the Dutchman began to get anxious and to fear treachery. They accordingly marched up well armed into the village, where they met an excited crowd of natives. The crowd parted, and revealed in its midst the gallant captain stripped of his uniform and dressed in alternate stripes of red and blue paint.
- (b) A traveller in New Guinea gives the following account of the Papuan houses: 'They stand some fifty yards or more from the shore, and each house is connected by a bridge, of so sketchy and insecure a nature as to render its passage by a booted European almost impossible. Even more dilapidated still are the houses themselves, built as they are of rotten mats, bits of old boats, or anything that comes to hand. Inside, the house is unlighted probably, except for some accidental gap in the dilapidated wall; and the smoke of the fire, which is placed on a large flat stone, finds its way through the roof as best it can. The furniture is not extensive. A wooden drum, a few mats, some fish-spears, an abundance of bows and arrows, some native-made

pots and wooden bowls, and a couple of admirably carved head-rests or pillows, would be in nine cases out of ten a full inventory. The rain drips through the roof into the sea beneath; but the Papuan does not mind, for there is no carpet to damage, and he is satisfied as long as the holes in the floor are not so large as to permit of his disappearing in like fashion in his sleep.'

- (c) 'Woman is little more than the slave of the man among the Papuans. She has to make his sago and cook his food, to draw the water, make pottery and fibre baskets, and often to submit to ill-usage. On the death of her husband, the wife is confined to her house for some time, for if the ghost of the deceased individual were to see her going about, he would immediately strike down people with sickness. Among some tribes mourning widows are compelled to wear mats of a most peculiar cowl-like shape over the head and shoulders.'—GUILLEMARD'S 'CRUISE OF THE MARCHESA.'

### MINOR ISLANDS OF AUSTRALASIA

1. **Introductory.**—There are many groups of small islands included in Australasia. But the chief are the **Bismarck Archipelago** (New Britain and New Ireland), the **Solomon Islands**, **New Caledonia**, and the **Loyalty Islands**, and the **New Hebrides**. Most of them are of volcanic origin, fringed with coral reefs, and well-wooded, especially with palm-trees. They produce, among other things, trepang, copra, pearl-shell, and, in decreasing quantities, sandalwood. These products the natives barter with the island-traders for cotton-prints, tobacco, and knives. The Polynesian natives that inhabit the islands are a dwindling race. Ardent spirits, leprosy, consumption, and European dress are slowly killing them out.

(i) **New Britain** is called by the Germans **Neu Pommern**; **New Ireland**, **Neu Mecklenburg**. Both islands belong to **Germany**. Germany also owns the northern half of the **Solomon Islands**. The southern half belongs to **Great Britain**.

(ii) **France** owns **New Caledonia** and the **Loyalty Islands**, and exercises a joint protectorate with **Great Britain** over the **New Hebrides**.

(iii) The scenery of the Pacific Islands has been thus described by **Louis Becke**, a famous South Sea Island trader: 'A long, sweeping curve of coast,

fringed with tall plumed palms, casting wavering shadows on the yellow sand, as they sway and swish softly to the breath of the brave trade-wind that whistles through the thickly verdured hummocks on the weather side of the island, to die away into a soft breath as, after passing through the belt of cocoa-nuts, it faintly ripples the transparent depths of the lagoon—a broad sheet of blue and silver stretching away from the far distant line of reef to the smooth yellow beach at the foot of the palms.'

2. **New Ireland and New Britain** lie to the north-east of New Guinea. They produce copra and cocoa-nut fibre. The **Solomons**, to the south-east, yield sandalwood and tortoiseshell.

(i) The natives of both groups are ferocious, and treacherous in their dealings with the white traders; and cannibalism and head-hunting are still common among them. New Britain has a notoriously feverish climate; and its inhabitants are inveterate chewers of the betel-nut.

(ii) Part of the Solomon Islands was annexed by Great Britain in 1893. The method of annexation was a simple one. The man-o'-war hove-to off an island, and an armed boat's-crew pulled ashore. The principal chief was then sent for, and, through an interpreter, a proclamation was read to him, to the effect that his island belonged to Queen Victoria. If he agreed, the Union Jack was hoisted, the ship fired a salute, and a notice-board was fixed to a tree declaring the island English property. At the end of the ceremony the chief was made happy by a present of a bottle of rum.

(iii) Woodford, author of *A Naturalist among the Head-hunters*, thus describes the scenery on one of the **Solomon Islands**: 'Along the coast in both directions stretches the thick fringe of cocoa-nut palms; behind them the deep green of the virgin forest; on the shore, among the palm-trees, the villages of the natives, among which the large canoe-houses are conspicuous for their size among the smaller huts. At each village a neatly built jetty of coral stone, planted on the top with grass, projects for some distance into the sea. Around us is the pale blue water of the lagoon, where we are anchored in fifteen fathoms. To seaward, numerous small islands, each with its centre of tall forest trees and fringe of cocoa-nut palms. On one of them a little larger than the rest is the village whence the lagoon takes its name. Farther to seaward a white line of foam, whence at times the dull sound of

The league-long roller thundering on the reef falls upon the listening ear; and beyond, the deep sapphire blue of the open ocean.'

The inhabitants of the Solomons are keen hands at a bargain. 'The native,' says Mr. WOODFORD, 'knows how many cocoa-nuts make ten. As a general rule it is seven and a half, but I have known it to be as little as six. The kernels of the cocoa-nuts are cut in half and strung upon strings, in bunches of ten strings nominally supposed to consist of twenty half-nuts to each

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string, so that a bunch ought to consist of a hundred nuts. The price paid is a stick of tobacco for one string. These kernels have been dried by the aid of smoke (as the climate of the Solomons is too damp to allow of their being dried in the sun), and constitute what is known commercially as copra. This copra is shipped to Europe. The oil contained in it is expressed for soap and candle-making and other purposes, and the residue is made into oil-cake for feeding cattle.'

3. **New Caledonia**, the most important French possession in Australasia, lies midway between the Fijis and the eastern coast of Queensland. It is rather smaller than Wales; and on it live 63,000 people, of whom 700 are convicts, for it is a French penal settlement. It is rich in minerals, and produces coal, chrome, cobalt, and, above all, nickel. The capital, **Noumea** (4), does a trade turnover of nearly £1,000,000 a year, and is the collecting depôt for all the French possessions in the Western Pacific.

(i) The **Loyalty Islands** and the **New Hebrides**, both of which produce sandalwood, lie to the north-east of New Caledonia.

(ii) The **New Hebrides** are all more or less of volcanic formation. The eruption of one of them, **Ambrym**, was witnessed in 1894 by Captain Cust, of H.M.'s Ship *Dart*. 'Soon it was apparent that a lava stream was rapidly finding its way towards the sea; the course of the stream could be distinctly traced by the dense black smoke from the burning bush, as it wound its way through the hills like a great fiery serpent. Occasionally a puff of white steam would show where the water had been met with. As the head of the stream got nearer, bursts of flame could occasionally be seen, and the noise was most indescribable and awe-inspiring. Presently the head of the stream appeared—a red-hot, rapidly moving mass of molten lava, some thirty yards wide. In another moment it entered the sea; and then a most wonderful sight was seen: a dense pillar of steam rapidly rose straight up to a height afterwards measured by a sextant and found to be 4600 feet.' The morning after the water was still steaming, and upon its surface a great quantity of dead fish and turtles was floating about. During the eruption thick dust was falling continuously, and nothing could be seen that was more than a quarter of a mile away. 'The island changed from its natural hue of bright green tropical vegetation to one uniform light slate colour.'

#### 4. **The South Sea Islands.**

The mountain wooded to the peak, the lawns  
And winding glades high up, like ways to Heaven,

The slender coco's drooping crown of plumes,  
The lightning-flash of insect and of bird,  
The lustre of the long convolvuluses  
That coiled around the stately stems.

The league-long roller thundering on the reef,  
The moving whisper of huge trees that branched  
And blossomed in the zenith, or the sweep  
Of some precipitous rivulet to the wave.

TENNYSON.

#### TO AND FROM AUSTRALASIA

1. **Principal Lines from Europe.**—Some of the chief lines of steamers from Europe to Australia are: the Peninsular and Oriental (P. and O.), the Orient, the British India (B. I.), the French Messageries Maritimes (from Marseilles), and the North German Lloyd (from Bremen). All of these lines take the same route—through the Suez Canal, having first called at various ports on the north shore of the Mediterranean (Brindisi, Naples, and Genoa). The Orient Line (which calls at Plymouth) sometimes sends ships to Australia by way of the Cape; these touch at Capetown and then go straight on to Adelaide. After passing Suez, the route followed is the same for all lines, except for British India. It will therefore be sufficient to describe the voyage of a passenger in the chief of them, the **Peninsular and Oriental**.

(i) If the passenger does not choose to go overland as far as Brindisi and there catch the steamer, he will embark on one of the P. and O. Company's boats at Tilbury Dock, London. The steamer passes down the Channel to the north of the fertile Channel Islands, and, rounding the dangerous Cape of Ushant, heads across the celebrated 'Bay.' The presence of many cross-currents in the Bay of Biscay often makes the steaming through it an unpleasant experience, but it is not nearly so stormy as is generally supposed.

In four days from London (1300 miles), the ship touches at **Gibraltar**, where the 'Rock,' honeycombed with batteries and bristling with guns, frowns over the sea. The next halting-place is **Brindisi**, where the European mails are put on board, and the vessel proceeds to **Malta**. This 'little military hot-house' is a very important coaling-station, and its port, Valetta, is therefore strongly fortified. It was on Malta that St. Paul is supposed to have been shipwrecked: the island is now famed for its lace, fruit, and filigree-work. Four days more bring the vessel to **Port Said** (3500 miles from London), a dirty little coaling-town, at the Mediterranean entrance to the **Suez Canal**. The passage through the canal, which is eighty-two miles long, takes rather more than a day. Ships can now pass through at night, as the banks are lit up by the electric light. The run down the Red Sea to **Aden** is at all times of the year disagreeably hot. **Aden** is the Gibraltar of the East; and, as the ship lies at anchor in the harbour, little native boys throng round it, diving for the silver coins the passengers throw into the water. From Aden the ship heads straight for **Colombo** in Ceylon, and 3197 miles from that port the first glimpse of Australian soil is caught at **Cape Leeuwin**.

**Albany** is the first Australian port touched at; and from thence the news of the ship's arrival is flashed on by telegraph to Adelaide. A run of over 1000 miles brings the vessel to Port Adelaide, from which a railway runs to the capital of South Australia, a few miles away. From Adelaide the shore is hugged till '**Marvellous Melbourne**' is reached; and then the steamer, rounding Port Phillip Head, passes through Bass Strait, and enters, through Sydney Head, **Port Jackson**, the largest and grandest harbour in the world. On an arm of Port Jackson stands **Sydney**, 'one of those places,' says Anthony Trollope, 'which when a man leaves it knowing he will never return, he cannot leave without a pang or tear—such is its loveliness.'

(ii) The **British India Company's** steamers call at **Naples**, whose bay is overlooked by the great volcano Vesuvius, and after that follow the route of the other lines down to **Aden**.

From Aden the steamers hold right across the Indian Ocean to the Straits of Sunda between Java and Sumatra, through which they pass, and arrive at **Batavia**. It was in the Sunda Strait that the volcanic Island of **Krakatoa** was blown into the sea in the year 1883. The vessel proceeds through the island-studded Java and Banda Seas, dotted with Chinese trading-junks in search of birds'-nests, pearl-shell, and trepang, and first sights the Australian continent at **Cape York**. Before she passes Torres Strait, she stops at **Thursday Island**, where the pearling-luggers lie, and then makes her way inside the Great Barrier Reef down the Queensland coast. The navigation inside the reef is quiet, but full of sunken dangers, as the reef-building corals are constantly at work. On the reef itself the steamer passes groups of aborigines busy collecting trepang for the Chinese markets—the sea-slug that is so dear to the palate of the Flowery Land epicure. All the principal ports of Queensland are visited—**Townsville** for the gold of Charters



Towers, and **Mackay** for the sugar of the districts round it. The voyage ends at **Brisbane**, where the deep channel recently dredged in the **Brisbane River** allows the largest vessels to come up to the heart of the city.

2. **Principal Lines from Australia.**—The three chief lines connecting Australia with the West and the East are: the **Canadian-Australian**, which runs to **Vancouver** in Canada; the **Australian and American**, which runs to **San Francisco** in the United States; and the **Eastern and Australian**, which runs to **China** and **Japan**.

(i) The **Canadian-Australian Line** runs in connection with the great railway that crosses Canada. Its steamers leave **Sydney**, and run first to the land-locked harbour of **Suva** in the **Fiji Islands**. From those coral-begirt islands the steamer threads her way through countless coral islets, fringed with tall plumed palms, to **Honolulu**, the capital of **Hawaii**, and the half-way house to **America**. There the traveller may stop to revel for a while in the eternal summer and exquisite scenery of these islands, or to watch the smoke and flames that are for ever bursting forth from the great volcano of **Kilauea**. In seven days from **Honolulu**, **Victoria**, the capital of **British Columbia**, is reached; and five more hours' steaming lands the passengers at **Vancouver**, the terminus of the **Canadian Pacific Railway**. The railway runs past huge glaciers and through dark pine forests, till it crosses the **Rocky Mountains**, and then sweeps through what were once the hunting-grounds of the dreaded **Blackfoot Indians** to **Winnipeg**, the metropolis of **Western Canada**. After **Winnipeg**, the line continues north of the **Great Lakes**, through a thickly timbered rocky country, and reaches **Ottawa**, the capital of **Canada**. After a railway journey of five and a half days from **Vancouver**, the seaport of **Montreal**, on the **St. Lawrence**, is reached. Thence various lines of steamers carry the passenger on to **London** or **Liverpool** in about a week. Or the traveller may go on by train from **Montreal** to **Quebec**, the scene of **General Wolfe's** glorious victory and death in 1759, and take ship there. In the winter-time the **St. Lawrence** is blocked with ice, and the **Canadian steamers** run from **Halifax**, further south.

(ii) The **Australian and American Line** starts from **Sydney**, and calls first at the beautifully situated city of **Auckland**. Having called at **Apia** in **Samoa** (where **Louis Stevenson** died), the vessel holds on her way to **Honolulu**. In six days after that the **Golden Gate** is entered, and **San Francisco** is reached. The beautiful bay, lined with white cities and reflecting great mountain-ranges, is traversed by ocean-steamships, ferry-boats, and sailing-vessels, from the unwieldy junks of the **Chinese** shrimpers and the lateen-sailed feluccas of the **Maltese** and **Greek** fishermen to the towering white

canvas of the clipper-ships. From San Francisco the traveller can choose several railway routes across the continent.' The Central Pacific, which crosses the Rockies, is generally chosen. This line runs near the famous **Yellowstone National Park**, a district of immense geysers and a huge game preserve, and reaches **Salt Lake City**, the Mormon capital. There stands the stately Mormon Temple, built of polished granite, and large enough to hold 12,000 people. From Salt Lake City the 'cars' continue south to the silver-mining town of **Denver**, and through the rolling prairies of Nebraska to **Omaha**, the heart of the continent. From Omaha the train finally steams into **Chicago**, the city of wheat and pigs. From this 'porkopolis,' the traveller has a choice of several routes to New York. One of the most picturesque is that which takes him past the grand **Falls of Niagara**, and up the **Hudson River**, through the Catskill Mountains, amongst which Rip Van Winkle slept his long sleep of twenty years. From New York the 'Ocean Greyhounds'—the Cunarders and the White Stars—do the Atlantic passage to Queenstown in a few hours over five days, and in a few hours more are running up the Mersey to **Liverpool**.

(iii) The **Eastern and Australian Line** starts from Port Adelaide, and runs up the east coast of Australia, touching at all the principal ports to Thursday Island. From thence three days bring the ship to **Palmerston**, on Port Darwin, where the overland telegraph from Adelaide ends. From Port Darwin the course lies through the Arafura and Banda Seas to the Dutch island of **Amboyna**, the home of spices, and northwards, through a calm blue sea and with land in sight every day, past the **Philippines**. So still and oily is the sea that flying fish are visible, as little dark specks, a mile away. On entering the China Sea, the approach to **Hong-kong** is heralded by the crowds of clumsy Chinese fishing-junks. The capital, Victoria, is overlooked by a sombre forest-clad peak, high up on the sides of which peep out the houses of the wealthy Chinese and English merchants. The next port of call in China is **Shanghai**, where the filthy Chinese quarter, on the one side, presents a striking contrast to the orderly and well laid-out European settlement, with its streets patrolled by Sikh policemen. The steamer, after leaving China, runs up the narrow inland Sea of Japan, and finally anchors off the port of **Kobé**. From Kobé a railway runs to Osaka, the 'Manchester' of Japan, Yokohama, and to other towns in the country.

#### DISTANCES OF OCEAN ROUTES

	MILES		MILES
Sydney to Colombo, . . .	5465	Sydney to Malta, . . .	10,037
„ „ Aden, . . .	7559	„ „ Gibraltar, . . .	11,040
„ „ Sucz, . . .	8867	„ „ London, . . .	12,383
„ „ Port Said, . . .	8954		

## DISTANCES OF AUSTRALIAN PORTS

	MILES		MILES
Porth to King George's Sound		Maryborough to Rockham-	
(Albany), . . . . .	350	ton, . . . . .	367
King George's Sound to		Rockhampton to Mackay, .	190
Adelaide, . . . . .	1019	Mackay to Townsville, . .	211
Adelaide to Melbourne, . .	504	Townsville to Thursday	
Melbourne to Sydney, . . .	567	Island, . . . . .	745
Sydney to Brisbane, . . . .	503	Thursday Island to Port Dar-	
Brisbane to Maryborough, .	180	win, . . . . .	730

## HISTORY OF DISCOVERY IN AUSTRALASIA

1. Although it is believed that the Portuguese were the first Europeans to sight Australia, and although we know that the Spanish navigator TORRES in 1606 sailed through the straits that now bear his name, it is to the **Dutch** that the honour of first surveying a large part of the Australian coast really belongs. In 1606 a Dutch vessel sailed into the Gulf of Carpentaria, and first caught sight of Australian land, at Cape York Peninsula, early in the following year. These Dutchmen left a record of their presence in the gulf, by naming the largest island in it Groote Eylandt, or Great Island.

2. **Dutch Discovery.**—The different Dutch names round the coast—they are chiefly to be found on the west—attest the progress of Dutch Discovery. Cape Leeuwin (Lioness), in the south-west, was named after the Dutch vessel that discovered it in 1622. **Dirk Hartog**, who explored the west coast in 1610, left his name to an island a little further north. Van Diemen's Gulf, on the north coast, was discovered by three Dutch ships in 1705; while in the Gulf of Carpentaria we meet with the significant names of Cape Keer-weer (Cape Turn-again) and Water-plaats (Watering-place). The names of the ships in which the early Dutch explorers sailed are commemorated in the names of Mount Heemskirk and Mount Zeehaan (Sea-line) (which were the first points of land sighted in Tasmania by any European), in Arnhem Peninsula, and in Geelvink (Yellowfinch) Bay,



in New Guinea. The Swan River was visited by the Dutch captain van Vlaming, in 1696, and named from the abundance of black swans he found there. In his vessel, the *Geelvink*, he sailed up the river, and was thus the first European to penetrate any distance into the interior of Australia. The first Englishman on the west coast was the famous old buccaneer, **William Dampier**. In 1699 he discovered and named the Dampier Archipelago.

3. The most famous of the early Dutch explorers was **Abel Jans Tasman**. Starting from Batavia in August 1642, with his two ships, the *Heemskirk* and the *Zeehaan*, he sighted the Island of Tasmania on the 24th of November. He christened the island Van Diemen's Land, in honour of his patron, Antony Van Diemen, the Governor of Batavia, who had despatched the expedition. When Tasman's ship was lying off the island, the explorer himself put off in a boat to take formal possession. But the surf was too strong for the boat to come near the shore; whereupon the ship's carpenter, Peter Jacobs, leaped into the sea with the flag of the Stadtholder of Holland wrapped round him, and, swimming strongly through the breakers, planted it safely on shore. Tasman then sailed east, and in the same year (1642) cast anchor in Tasman Bay in New Zealand. In 1643 he discovered the Fiji Islands, and, a year later, explored a large part of the north-west coast of Australia, which was named in his honour, Tasmanland. Tasman kept a journal of his famous voyage, and, with the courageous piety that characterised all the early navigators, both Dutch and English, began his journal with the words, 'May God Almighty be pleased to give His blessing to this voyage! Amen!'

4. **French Discovery.**—In the year 1801 two French ships, the *Géographe* and the *Naturaliste*, under the command of Captain Baudin, were engaged in cruising off the west coast of Australia, and left behind them memorials of their presence there in *Géographe* Bay, Cape Naturaliste, and Cape Cuvier,—the last christened after the great French naturalist. Further up the coast we meet with Cape Gantheaume, Cape L'évêque (Bishop), and Cape Bougainville,

which bears the name of the first Frenchman who ever circumnavigated the world. Baudin also visited Tasmania, and discovered and named the Freycinet Peninsula, after two of his most zealous officers. But this island had already been visited in 1792 by two other Frenchmen, Admiral Bruni d'Entrecasteaux and Captain Huon, whose names still survive in a river, an island, and a channel.

5. **English Discovery.**—The English explorers confined their attention principally to the south and east coasts of Australia; and, if we look along the east coast of the continent, we shall hardly find a single name that is not English. The same remark holds true of the shores of New Zealand, except that there the native names are numerous, and are still used by white men; whereas, on the Australian coasts, it is very rare to find a native name at all. This fact illustrates the difference between the native races of the two countries: in New Zealand the natives were intelligent, poetical, and humorous, and christened their headlands and bays accordingly; whilst the natives of Australia, caring for little beyond the satisfaction of their appetites, and with no higher feelings than those of the stomach, gave themselves no trouble about place-names at all, or else employed a name for one month which they forgot the next. The shores of Australia teem with names which are records of baffled enterprise or disappointed hopes: Anxious Bay, Cape Catastrophe, Massacre Bay (where the Maories of New Zealand killed three of Tasman's sailors), Disaster Inlet in Carpentaria Gulf (so named by an explorer on account of the bursting of a fowling-piece on which he had relied to procure food), and Encounter Bay, where the Englishman, Flinders, met Baudin and his party in 1802.

6. **Cook's Voyages.**—We ought to notice, as frequently occurring on the map, such names as Endeavour, Resolution, Adventure, and Discovery. These are the names of the ships that were under the command of the great navigator **Captain Cook**, who gave us New Zealand, and did more than any other explorer to survey the eastern coast of Australia. He has truly been called the Columbus of the Southern Ocean; and of him it has been said: What the immortal

Genoese navigator accomplished in the Northern Hemisphere for Spain and Europe, Cook accomplished in the Southern Hemisphere for England and for mankind. Cook was the son of an agricultural labourer in Yorkshire, and, entering the navy as an able seaman, ultimately rose to the rank of captain. In his first voyage, 1768-1771, he circumnavigated New Zealand, and took possession of the east coast of Australia in the name of Great Britain. He landed, amongst many other places, at Botany Bay, which he so named, because four hundred new plants were found there by the naturalists of the expedition, during a stay of less than three weeks. In his second voyage, Cook cruised in the Southern Pacific, visiting Tahiti and exploring the New Hebrides; and on this voyage he also discovered New Caledonia. In 1779 Cook had landed on one of the Sandwich Islands to recover a boat, which had been stolen by the natives, when he was suddenly and treacherously attacked by the islanders. His own boat was lying near the shore, and he dashed into the water towards it; but being overtaken, he was clubbed and stabbed to death by the natives. Only a part of his body was recovered from the cannibal savages. Other famous names on the list of English explorers are those of **Vancouver**, who discovered and surveyed King George's Sound in 1791; of **Surgeon Bass**, who in 1798 demonstrated that Tasmania was an island by sailing round it in a small boat; and of **Flinders** (the companion of Bass in his 'Tasmanian voyage'), who circumnavigated the whole continent, and who bears the title of the 'Discoverer of South Australia.' But it was Cook who really started the process of colonisation in Australia. For in 1788 the British Government, being no longer able to ship convicts to the revolted American colonies, bethought themselves of Cook's discoveries, and fixed on Botany Bay as the site of the first convict settlement.

7. **Inland Discovery.**—It may be said, speaking roughly, that only a third of the Australian continent has been thoroughly explored and opened up for commercial enterprise. This area lies in the east of Australia; but even there,—even in the mother-colony of New South Wales—there are large stretches (as in the Riverina



district, and also in Cape York Peninsula), about which very little indeed is known. The remainder of the continent, except of course round the coast, still remains a sealed book : or, at all events, many of its pages are yet to be turned over. The Great Sandy Desert in the north, and the Victoria Desert in the south, are still nothing more than blank spaces of the unknown upon the map. Of the two the Victoria Desert will probably prove the hardest to penetrate (though it has been crossed once by GILES); for it lies below the southern limit of regular rainfall; and it is the want of water that has made Australian exploration so difficult and so deadly. Yet even into the wastes of Western Australia (on the edge of the desert), hardy gold-prospectors, mounted on camels, are daily pushing their way.

8. **The Overland Telegraph.**—The only tract—and it is a narrow one—of the desert interior of Australia that has been properly explored, lies on the track of the overland telegraph-line between the city of Adelaide and Port Darwin. This was not only a magnificent engineering feat, it was also a grand and important piece of exploration; for the continent had not been completely crossed many times before, nor has it been since. The laying of this line proved that a country, once considered to be little more than a howling waste of sand and scrub, was in many parts capable of supporting herds of cattle and sheep. It was for such industrial and commercial purposes—to spy out the capabilities of the land for stock-raising or for yielding minerals—that most exploring expeditions in Australia have been undertaken. The continent contained no large game to attract the sportsman; there were no great native kingdoms, as in Africa, with whom a profitable trade might be established; the aborigines were not an interesting study; and of antiquarian interest the continent had absolutely none. Exploration, for exploration's sake, was not a task in which the busy colonists were willing to engage—indeed, the difficulties of it were enough to daunt the most courageous. But to discover new runs for cattle or sheep, or in prospecting for gold, the Australian explorer has always been ready to face the most terrible dangers and the most cruel hardships. Some of the qualifications for an Australian explorer may be judged from

the following short catechism, to which the explorer Giles subjected a candidate for one of his expeditions: 'Can you shoe? Can you ride? Can you starve? Can you go without water? and, Are you afraid of being speared by the blacks?'

9. **Explorers.**—Apart from the earlier discoverers, who merely surveyed the coast-line, some of the greatest names on the list of Australian discovery are those of **Oxley, Hume, Sturt, Mitchell, Eyre, Leichardt, Stuart** (perhaps the most successful of them all), **Burke and Wills, Giles, Warburton, and Forrest** (now Sir John Forrest, the first Premier of Western Australia). Most of these men were explorers in the true sense of the word, and were actuated by a true love of discovery; but, as has been said, a large part of our knowledge of the Australian continent has been derived from men who have pioneered the different 'gold-rushes,' or who have moved further away from the settled districts in search of new pasture for their stock. The search for fresh pasture was a necessity; for, for twenty-five years after the arrival of the 'First Fleet' at Port Jackson in the year 1788, the settlers were confined to a strip of country only forty miles across. This strip was bounded on one side by the sea, and on the other by the Blue Mountains, which had hitherto proved an impassable barrier, and made, 'as it were, a prison for them on the shores of Port Jackson.'

#### 10. Exploration of the Murray-Darling basin.

(i) **Oxley**, in the year 1817, travelled down the banks of the Lachlan, till he found it end in an impenetrable marsh. This he took to be the shores of a vast inland sea. His most important journey was made in 1823, when he was the first white man to set foot in what is now Queensland, and when he discovered the Brisbane River. Of this river he got information from two runaway convicts, whom he met in the bush. Oxley's discoveries marked an important epoch in the history of the colonies; for from his time onwards the pioneer squatters kept pressing ever forward in search of new pasture for their stock.

(ii) **Hume**, a young man of colonial birth, and an experienced bushman, discovered the Murrumbidgee River in 1819. On a later

journey, in the year 1824, he came upon the Murray, which is sometimes known as the Hume River in honour of its discoverer. Crossing the Murray, he penetrated south to what proved to be the shores of Port Phillip, and was thus the real founder of Victoria.

(iii) **Sturt**, an officer stationed at Sydney, is the greatest of the southern explorers. With Hume for a guide, he discovered the Darling in 1828, and next year rowed down the Murrumbidgee into the Murray, and, down that river, into the shallow Lake Alexandrina. To this lake he gave one of the names of Queen Victoria. The river, spreading itself among bewildering sandbanks and shallows, has no outlet into the sea; and he and his party were forced to return by the way they came.

On the return voyage the hardships were terrific. The boat was leaky, and often sunk, soaking their provisions, and rendering their fire-arms useless; they were surrounded by hostile natives, and more than once ran the risk of being speared, or clubbed to death; and the arms of the rowers became nerveless, their persons cruelly emaciated, and their spirits wholly sunk. This expedition solved the problem of the drainage of New South Wales, and opened up a great and fertile country for future settlement.

In 1844-6 Sturt forced his way north-west from the Darling, over endless ridges of red sand, to the Grey Range, and thence, through wastes covered with the spiny porcupine grass, to a point within 150 miles of the centre of the continent. Captain Charles Sturt has been well called the Father of Australian Explorers. The Darling, the Murray, and Cooper's Creek all stand to his credit, as well as the glory of being the first man to come nearest the heart of the continent. Throughout all his journeys it was his pride that he never had occasion to take the life of a man.

A member of Sturt's 1844 expedition thus describes the barren ground west of the Darling: 'Suppose to yourself a great boundless, unlimited meadow, which has just been run over with the scythe, the swathes of grass now lying in pretty and parallel rows. Only there was no grass at all, not even a green thing; nothing but sand, sand, sand, arranged in interminable ridges. And all this on a most stupendous and Brobdingnagian scale. Thus the ridges are nearly as high as a man, about sixty feet broad at the base, narrowing to half that distance at the top. At the very shores of the lake



district these ridges were suddenly chopped off as with a clean cut; and we gazed down on a vast and level expanse of brine-pits and salty incrustation.'

(iv) **John Mitchell** was Sturt's great rival in discovery. In the year 1835 he discovered the country between the Loddon and Goulburn Rivers, and the country south of the Grampians. To this fertile and beautiful region he gave the name of Australia Felix; and, in a happy spirit of prophecy, wrote of it that 'we had at length discovered a country ready for the immediate reception of civilised man, and fit to become one of the greatest nations of the earth.' When Mitchell reached the coast at Portland Bay, he found some Tasmanians already settled there, who supplied sheep and cattle to passing whalers. In 1846 he explored some of the best pastoral districts in Western Queensland; the heat and drought he endured during that expedition were so great, that even his kangaroo hounds were killed by the sun. It was while accompanying Major Mitchell on one of his earlier expeditions that Mr. Cunningham, a botanist, was murdered by the blacks on the Bogan River, the first of the martyrs in the cause of Australian discovery.

#### II. Inland Exploration.

(i) **Eyre**, who was afterwards Governor of New Zealand and Jamaica, did much to open up South Australia, from 1839 to 1841. He discovered Lake Torrens, and made a marvellous journey of 1209 miles along the coast, from Adelaide to King George's Sound, with only a single native companion.

This journey was one of terrible hardships, which culminated in murder. When Eyre had reached the head of Spencer Gulf, he sent back some of the party, and pushed on with the others—Baxter, his station-overseer, a native servant of his own named Wylie, and two strange natives. His horses, which could only carry a few pounds' weight of stores, had frequently to go for days without water; and often all the moisture the whole party—men and animals—got, was collected from dew with sponges and rags. Sometimes Eyre would ride ahead by himself, and sink wells in the sea-sand. When the expedition was 650 miles from its destination, Baxter cried back; but Eyre was resolute to hold on. The two natives

then deserted, but soon returned, and begged to be allowed to join the party again. In the night they shot the overseer dead, and disappeared, never to be heard of again, with two guns and nearly all the ammunition. Eyre was left alone with his native servant; and six hundred miles of their journey still lay before them. Their whole stock of provisions was 40 lbs. of flour, four gallons of water, and part of a dead horse; and the last well had been left three days before. Still they struggled on for a month, existing on a little flour-paste, an occasional fish, and musty horse-flesh. Fortunately they fell in with a whaler, which had touched on the coast; and in the ship they were hospitably entertained for a fortnight, and so enabled to continue their journey. After more than a year of fearful hardship and difficulty, Eyre at last reached King George's Sound.

(ii) **Leichardt**, a great German explorer, in 1844-5 explored the country between Brisbane and the Gulf of Carpentaria, and thence travelled to Port Essington, to the north of Van Diemen's Gulf. In 1848 he started on another expedition, from which he never returned. His fate is wrapped in complete mystery, for not a single relic of his party has ever been recovered. It is conjectured that the party perished of thirst, and that afterwards a bush-fire destroyed every vestige of their remains. (For an account of an attack on Leichardt by the natives, see p. 82.)

(iii) To **Burke** and **Wills** belongs the honour of being the first men to cross the entire continent. They left Melbourne in the year 1860, and reached Cooper's Creek. There they left most of their companions, and pushed on with two other men to the Gulf of Carpentaria. On their way back they died miserably of starvation at Cooper's Creek. The rest of the party, with a reserve store of provisions, had been left behind on that river, and were to remain there till their leaders rejoined them. Contrary to instructions, they abandoned the depôt on April 21, 1861, with their camels and horses in good working condition. A few hours afterwards, on the same day, Burke and Wills arrived to find their friends gone. King, the sole survivor of the party, was rescued in 1861, 'a solitary figure,' as his rescuer describes him, 'apparently covered with some scare-crow rags and part of a hat.'

(iv) **Stuart**, who had been a comrade of Sturt in his 1844 expedition, made three unsuccessful attempts to cross the continent from Adelaide. Once he was stopped by attacks of the natives, and once by the invincible denseness of the scrub. In the year 1862 he was successful, and crossed the continent from Adelaide to Port Darwin, along the meridian that was afterwards followed by the overland telegraph line. He had long been under a promise to wash his face and hands in the Indian Ocean: on the 24th of July 1862 the promise was fulfilled, for, as he writes, 'I dipped my feet and washed my face and hands in the sea, as I had promised the late Governor, Sir Richard MacDonnell, I would do if I reached it.' He was the discoverer of the Finke River, the Ashburton and MacDonnell Ranges, etc.

(v) In 1873 **Colonel Warburton** started with camels from Alice Springs on the overland telegraph line, and in eight months reached the coast of Western Australia at Oakover River. In 1874 **Sir John Forrest**, with horses only, crossed from the Murchison River to the telegraph line. Next year **Giles** travelled 2500 miles, from the head of St. Vincent Gulf to Perth; and for a thousand miles of this distance his way led through nearly interminable scrub. These three expeditions showed that Australia, between the telegraph line and the hilly country on the west coast, is little better than a barren waste of scrub, porcupine grass, and sand.

**Warburton** gives the following account of the aborigines of Western Australia: 'They are the very lowest in the scale of humanity, and I cannot conceive how anything could fall much lower. They do not even take the trouble to put a few bushes up to shelter themselves from the sun or the rain—when it does rain, though I don't know when, for I didn't see it—but the sun is hot enough. They go on the shady side of a bush when the sun is too hot for them, and when it rains I suppose they go to the lee side. The gentlemen take the shank-bone, about nine inches long, of the wallaby, a kind of marsupial hare; and when it is lubricated nicely in the mouth, they pass it through the cartilage of the nose, and it sticks out; and having done this they are in full dress. I do not know anything more that is wanted.'



## CHRONICLE OF DISCOVERY

- 17th century The **Dutch** on the west and north coasts.
- Van Vlaming** in 1696 the first European to penetrate the continent up the Swan River.
- 1642 **Tasman** discovers Tasmania and New Zealand.
- 1769 **Captain Cook** lands at Poverty Bay in New Zealand.
- 1770 **Cook** at Botany Bay. He surveys a large part of the eastern coast.
- 1798 **Bass** sails round Tasmania.
- 19th century French discoverers on the west coast (*Géographie Bay, Cape Naturaliste, etc.*).
- 1813 **Wentworth, Blaxland, and Lawson** cross the Blue Mountains from Sydney, and discover the rich pastoral plains beyond the mountains.
- 1817 **Oxley** traces the course of the Lachlan.
- 1824 **Hume** discovers the Hume River, or Murray.
- 1829 **Sturt** rows down the Murrumbidgee and Murray to Lake Alexandrina.
- 1835 **Mitchell** opens up Australia Felix.
- 1840-1 **Eyre** travels along the sea-coast from Adelaide to King George's Sound.
- 1844-5 **Leichardt** travels from Brisbane to the Gulf of Carpentaria, and thence to Port Essington, in the extreme north of Australia.
- 1844-6 **Sturt** penetrates to within 150 miles of the centre of the continent (lat. 24° 30', long. 137° 58').
- 1848 **Kennedy** the first white man to reach the end of Cape York Peninsula. He was murdered by the natives.

F

1855-6	A. C. Gregory travels from the Victoria River in the north-west to Gladstone in Queensland.
1860-1	<b>Burke</b> and <b>Wills</b> the first men to cross the continent, from Melbourne to the Gulf of Carpentaria. They were starved to death at Cooper's Creek.
1862	<b>Stuart</b> the second man to cross the continent, from Adelaide to Port Darwin.
1872	<b>Overland telegraph</b> line opened.
1873-5	<b>Warburton</b> , <b>Forrest</b> , and <b>Giles</b> explore Western Australia between the telegraph line and the coast.
1878-84	<b>Winnecke</b> explores the centre of the continent, east of the telegraph line.
1896	The Hon. D. W. Carnegie travels from Coolgardie, north-north-east to Derby at the mouth of the Fitzroy River.
1897	The Calvert expedition is exploring Western Australia, east of long. 120°.

### ADVENTURES OF EXPLORERS

1. **Attack on Leichardt's Expedition.**—Leichardt, in the journal of his 1844-5 expedition, gives the following account of an attack made on his party by the natives of Cape York Peninsula:—

‘Our fireplace was made outside the trees on the banks. Brown had shot six whistling ducks and four teals, which gave us a good dinner, during which the principal topic of conversation was our probable distance from the sea-coast. About seven o'clock I stretched myself on the ground, as usual, at a little distance from the fire, and fell into a doze—from which I was suddenly roused by a loud noise and a call for help from Calvert and Roper. Natives had suddenly attacked us. Doubtless, they had watched our movements during the afternoon, and marked the position of the different tents. As

soon as it was dark they sneaked down upon us, and threw a shower of spears at the tents of Calvert, Roper, and Gilbert, and also one or two towards the fire. Charley and Brown called for percussion caps, which I hastened to find; and, as soon as they were provided, they discharged their guns into the crowd of natives, who instantly fled, leaving Roper and Calvert pierced with several spears, and severely beaten by their waddies (clubs). Several of these spears were barbed, and could not be extracted without difficulty. I had to force one through the arm of Roper to break off the barb, and cut another out of the leg of Mr. Calvert. John Murphy had succeeded in getting out of the tent, and concealed himself behind a tree, whence he fired at the natives, and severely wounded one of the blacks before Brown had discharged his gun. Not seeing Mr. Gilbert I asked for him, when Charlie told me that my unfortunate companion was no more. He had come out of his tent with his gun, shot, and powder, and handed them to him, when he instantly dropped down dead. Upon receiving this afflicting intelligence I hastened to the spot, and found Charlie's account too true. He was lying speared through the chest at a little distance from our fire, and, upon examining him, I soon found to my sorrow that every sign of life had disappeared. As soon as we had recovered from the panic into which we were thrown by this sad event, every precaution was taken to prevent another surprise. We watched through the night, and extinguished our fires to conceal our individual position from the natives. A strong wind blew from the southward, which made the night air distressingly cold; it seemed as if the wind blew through our bodies. We passed an anxious night, in a state of most painful suspense as to the fate of our still surviving companions.

'The dawning of the next morning was gladly welcomed, and I proceeded to examine and dress the wounds of my companions more carefully than I had been able to do in the darkness of the night.

'Very early in the morning we heard the *cooees* of the natives, who seemed wailing as if one of their number was either killed or severely wounded, for we found stains of blood on the tracks. They disappeared, however, very soon, for, on reconnoitring about the place, I saw nothing of them. I interred the body of our ill-fated companion



in the afternoon, and read the funeral service of the English Church over him. A large fire was afterwards made over the grave, to prevent the natives from detecting and disinterring the body. Our cattle and horses fortunately had not been molested.'

**2. Lieutenant Grey's Adventure.**—Lieutenant Grey is now Sir George Grey, once Governor of the Cape Colony, and once also Governor and Premier of New Zealand. As a young man, he did a good deal of exploring on the coasts of Western Australia, and in 1837 was travelling southwards from Shark Bay along the coast. As the young lieutenant and his party were struggling painfully along—their ponies sorely jaded and themselves tortured with thirst—they were suddenly menaced by a band of natives, two hundred strong. Their attack was invited by the cowardly action of one of Grey's two companions, who took to his heels, followed closely by a native with uplifted spear. Grey fired a shot over their heads, and with another hit a man in the arm; but they still advanced with fierce cries.

'I now,' writes Grey, 'made the two men retire behind some neighbouring rocks, which formed a kind of protecting parapet along our front and right flank, whilst I took post on the left. Both my barrels were now exhausted; and I desired the other two to fire separately, whilst I was re-loading; but, to my horror, Coles, who was armed with my rifle, reported hurriedly that the cloth case, with which he had covered it for protection against rain, had become entangled. His services were thus lost at a most critical moment, whilst trying to tear off the lock-cover; and the other man was so paralysed with fear that he could do nothing else but cry, 'O God! sir, look at them; look at them!'

In the meantime our opponents pressed more closely around; their spears kept whistling by us, and our fate seemed inevitable. A light-coloured man now seemed to direct their movements. He sprang forward to a rock, not more than thirty yards from us, and posting himself behind it, threw a spear with such deadly force and aim, that had I not drawn myself forward by a sudden jerk, it must have gone through my body; and, as it was, it touched my back in

flying by. Another well-directed spear from a different hand would have pierced me in the breast, but, in the motion I made to avoid it, it struck on the stock of my gun, of which it carried away a portion by its force.

‘All this took place in a few seconds of time, and no shot had been fired but by me. I now recognised in the light-coloured man an old enemy, who had led on a former attack against me. By his cries and gestures he now appeared to be urging the others to surround and press on us, which they were rapidly doing.

‘I saw that but one thing could be done to save our lives ; and, having received my rifle from Coles, I stepped out from behind our parapet, and advanced to the rock which covered our light-coloured opponent. I had not made two steps in advance, when three spears struck me nearly at the same moment, one of which was thrown by him. I felt severely wounded in the hip, but knew not exactly where the others had struck me. The force of all knocked me down and made me feel very giddy and faint ; but, as I fell, I heard the savage yells of the natives’ delight and triumph.

‘These recalled me to myself ; and, roused by momentary rage and indignation, I made a strong effort, rallied, and in a moment was on my legs ; the spear was wrenched from my wound, and my haversack drawn closely over it, so that neither my own party or the natives might see it ; and I advanced again steadily to the rock. The man became alarmed, and threatened me with his club, yelling most furiously. But, as I neared the rock, behind which all but his head and arm was covered, he fled towards an adjoining one, dodging dexterously, according to the native manner of confusing an assailant and avoiding the cast of his spear ; but he was scarcely uncovered in his flight, when my rifle-ball pierced him through the back, between the two shoulders, and he fell heavily on his face with a deep groan.

‘The effect was electrical. The tumult of the combat had ceased ; not another yell was uttered. Native after native dropped away, and noiselessly disappeared. I stood alone, with a wretched savage dying before me, and my two men close to me behind the rocks. . . . The natives had now all concealed themselves, but they were not far off. Presently the wounded man made an effort to raise himself

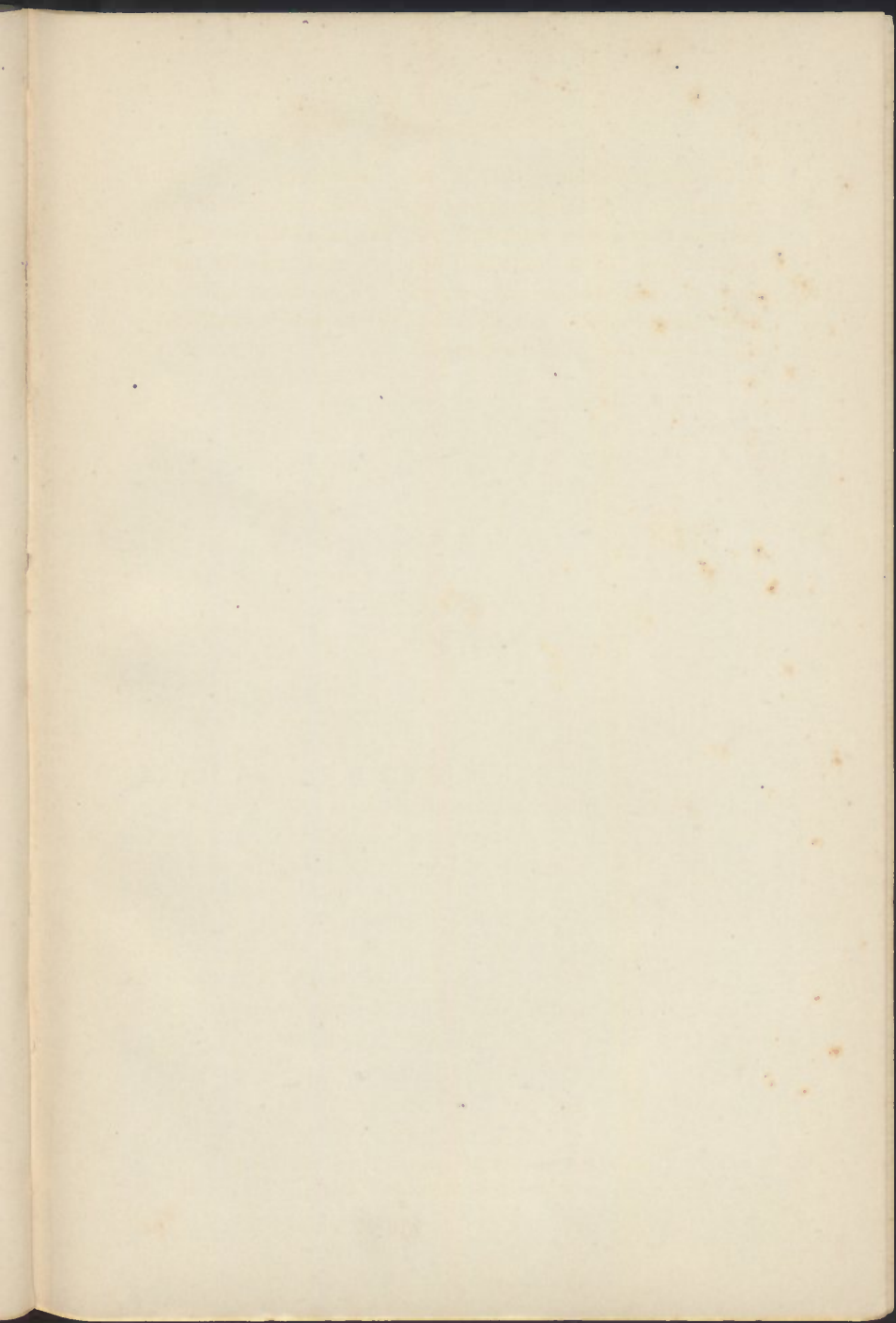
slowly from the ground ; some of them instantly came from behind the rocks and trees without their spears, crowding round him with the greatest tenderness and solicitude. Two passed their arms under him, his head dropped senselessly upon his chest, and with hurried steps the whole party wound their way into the forest, their black forms being scarcely distinguishable from the charred trunks of the trees, as they receded in the distance.'

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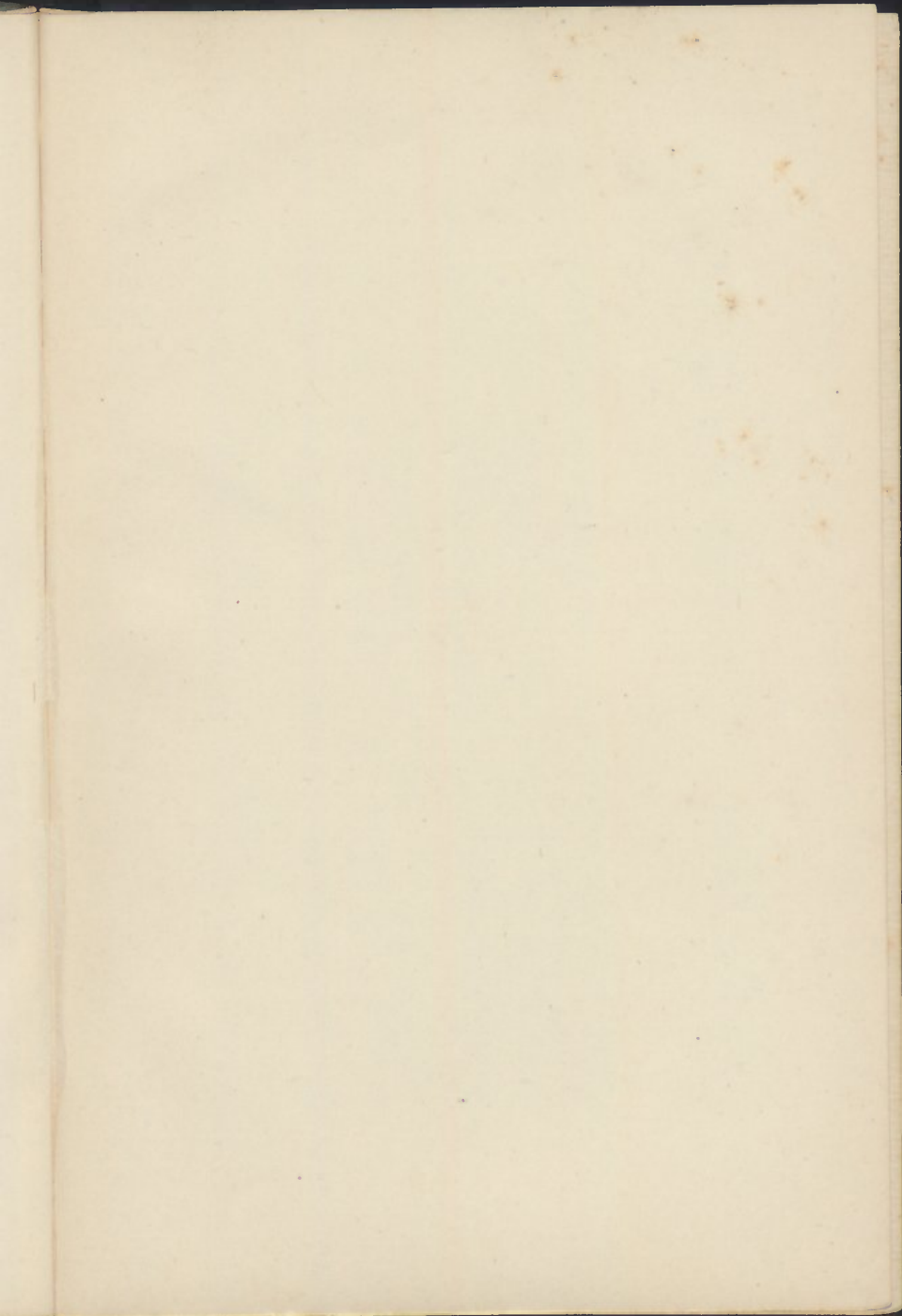
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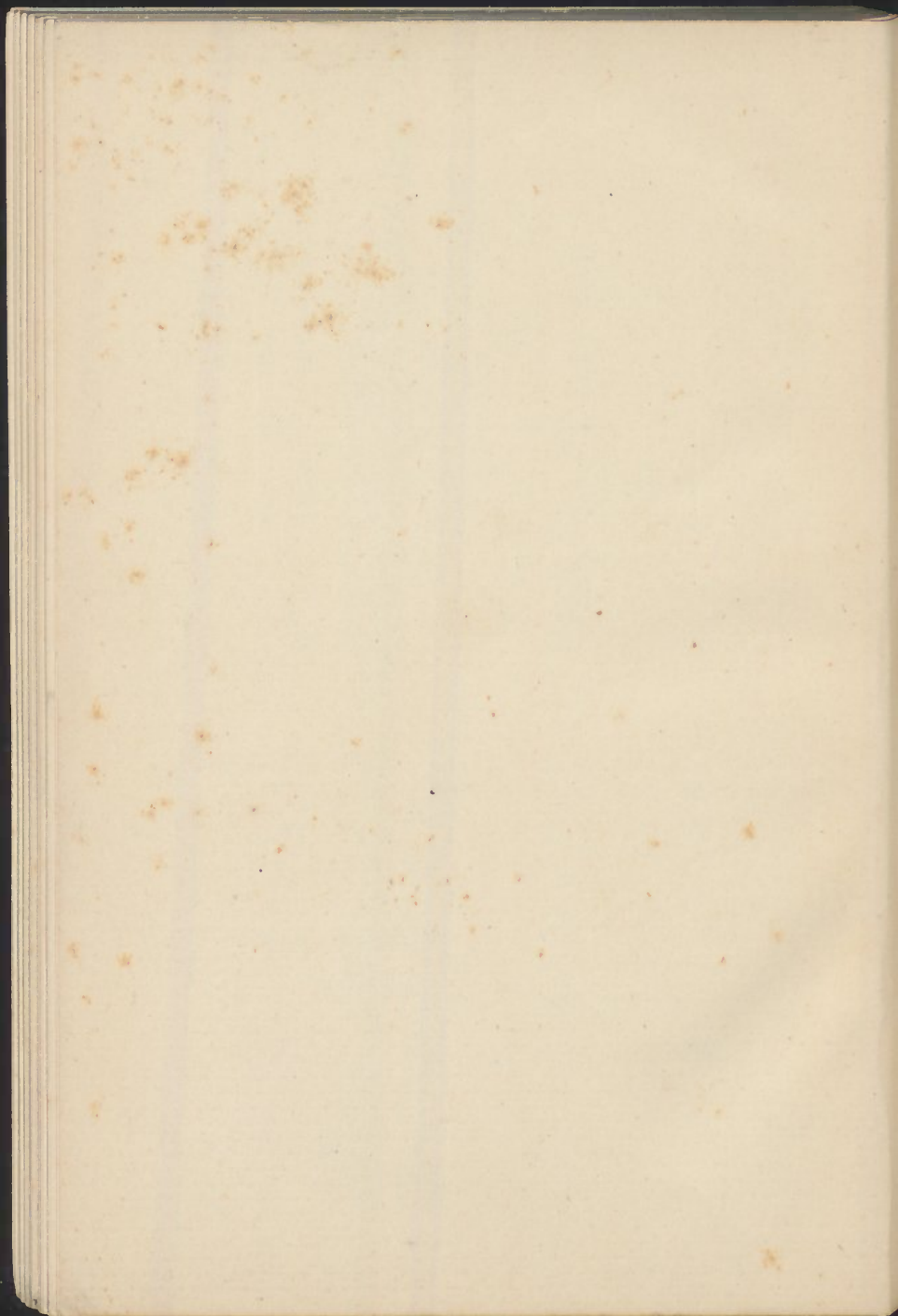












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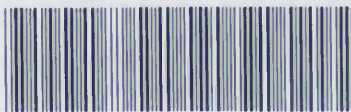
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