

MANUAL

OF

NEW ZEALAND GEOGRAPHY,

WITH MAPS AND EXAMINATION QUESTIONS ;

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In Two Parts.

PART I.—CONTAINING THE GENERAL GEOGRAPHY OF THE COLONY, WITH A
SKETCH OF ITS HISTORY AND PRODUCTIONS.

PART II.—CONTAINING A DESCRIPTIVE ACCOUNT OF EACH PROVINCE OR
PRINCIPAL DIVISION.

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P R E F A C E .

The Manual now presented to the public is the offspring of an imperative want rather than of any literary ambition. Children in the Colony are growing up wholly ignorant of the geography of the country in which they live, whilst mistakes not unfrequently occur in English publications referring to the country which are ludicrous to the Colonist. As School Inspector, the Author found a prevailing and unanswerable reason and excuse for neglect in teaching New Zealand Geography in New Zealand Schools, in the non-existence of any manual or any suitable school-map. He has done his best to supply these wants, and if his work is imperfect, the design is laudable. This remark, however, is not made as a refuge for incompetency. He does not decline fair and friendly criticism, but rather looks to it for aid in further perfecting the work in future editions. Nor will he blush if errors are discovered and pointed out. His task as a pioneer has not been an easy one, and he frankly confesses that if he had not met with kind and ready assistance from every quarter, private and official, to which he has applied for information, the completion of it would have been well

nigh impossible. To enumerate the friends to whom the Author has become indebted whilst preparing the sheets for publication would savour of vanity rather than of gratitude; but it is due to the public to refer to the valuable aid afforded to the Author by Dr. Hector, F.R.S., which has mainly encouraged him to prosecute and complete the undertaking, and who, though not responsible for the accuracy of the work, has done very much to ensure it. A tribute of acknowledgment is also due to the well-known and spirited Publishers, who have enabled the Author to present the volume in so convenient and perfect a form, and who have also undertaken to produce, as a valuable companion to the Manual, a well-developed large-scale Map of the Colony, corresponding with their excellent and popular series of School-room Wall-Maps, at a price to the public which can scarcely be remunerative to themselves.

The plan of the Manual can be explained in few words. It consists of Two Parts. Part I., containing the elements, should be committed to memory so far as to secure correct and intelligent answers to the elaborate sets of Examination Questions which are appended to each section. If these are carefully used, the subject will be thoroughly mastered. Part II. contains a descriptive account of each province and distinct division of the Colony, with a general synopsis of its geographical details prefixed to each section. These schedules should be well digested by the student, and the sketch maps copied, until the outline is quite familiar to the mind, whilst the

descriptive part is read over from time to time with constant reference to the large Map, which the Author assumes to be always before the pupil. Such a course of study will amply repay the labour, as New Zealand presents to the Geographer an excellent anatomical subject, of convenient size, comprehending nearly every feature of geographical interest to be found in any part of our globe, and will prepare the pupil for geographical studies upon a large scale.

Some difficulty has occurred in fixing the orthography of native names. As might have been expected in connection with a language till recently unwritten, the settlers have frequently adopted, and usage has confirmed, an inaccurate mode of spelling such words. When inconvenience has been thought likely to arise from an attempt to change the incorrect to a correct form, or where legal enactment has stamped the former with seeming authority, it has been left unaltered; in other cases, the correct spelling has generally been substituted.

CONTENTS.

—:—

PART FIRST.

GENERAL GEOGRAPHY OF THE COLONY.

	PAGE
SECTION 1. DISCOVERY AND EARLY HISTORY . . .	1
„ 2. SIZE AND POSITION OF THE ISLANDS . . .	3
„ 3. THE COAST AND COAST FEATURES . . .	6
„ 4. THE MOUNTAINS AND PLAINS, NORTH ISLAND.	8
„ 5. Do., Do. SOUTH ISLAND .	10
„ 6. THE RIVERS, NORTH ISLAND . . .	13
„ 7. Do. SOUTH ISLAND . . .	15
„ 8. THE LAKES	18
„ 9. GEOGRAPHICAL FEATURES GENERALLY. . .	20
„ 10. GEOLOGY AND MINERALS	23
„ 11. METEOROLOGY AND CLIMATE	27
„ 12. NATURAL HISTORY	29
„ 13. NATIVE INHABITANTS.	33
„ 14. POLITICAL HISTORY	36
„ 15. STATISTICS	40
„ 16. AUSTRALASIA	43

LIST OF MAPS.

—:0:—

	PAGE
COLONY OF NEW ZEALAND, INCLUDING THE OFF-ISLANDS	. 1
THE NORTH ISLAND. 8
THE SOUTH ISLAND, WITH STEWART ISLAND 10
AUSTRALASIA 43

PART SECOND.

—:0:—

	PAGE
INTRODUCTORY CHAPTER ON THE GEOLOGICAL STRUCTURE OF	
NEW ZEALAND	49
SECTION 1. THE PROVINCE OF AUCKLAND	57
" 2. " TARANAKI	70
" 3. " HAWKE BAY	74
" 4. " WELLINGTON	79
" 5. " NELSON	89
" 6. " MARLBOROUGH	100
" 7. " CANTERBURY	105
" 8. THE COUNTY OF WESTLAND	115
" 9. THE PROVINCE OF OTAGO	121
" 10. " SOUTHLAND	130
" 11. STEWART ISLAND	134
" 12. THE OFF-ISLANDS:—VIZ. THE CHATHAM ISLANDS, THE AUCKLAND ISLANDS, CAMPBELL ISLAND, THE BOUNTY ISLETS, AND THE ANTIPODES ISLETS	136

LIST OF MAPS.

—:0:—

	PAGE
PROVINCE OF AUCKLAND	57
„ WELLINGTON, HAWKE BAY, AND TARANAKI	79
„ NELSON AND MARLBOROUGH	89
„ CANTERBURY, WITH THE COUNTY OF WESTLAND	105
„ OTAGO AND SOUTHLAND, WITH STEWART ISLAND	121
THE OFF-ISLANDS:—VIZ. THE CHATHAM ISLANDS, THE AUCKLAND ISLANDS, AND CAMPBELL ISLAND	136

MANUAL OF NEW ZEALAND GEOGRAPHY.

PART I. GENERAL GEOGRAPHY OF THE COLONY.

SECTION I. DISCOVERY AND EARLY HISTORY.

The country of NEW ZEALAND derives its name from the southernmost province of HOLLAND in Europe, having been discovered in the year 1642 by the celebrated Dutch Navigator ABEL TASMAN, who also discovered Tasmania or Van Diemen Land, as well as other islands in Australasia and Polynesia.

The New Zealand group comprises two large islands known as the *North* and *South Islands*, with one of smaller size called *Stewart Island*, and numerous islets. They are situated in the South Pacific Ocean, nearly at the antipodes to Great Britain, so that a line drawn from Greenwich in England through the centre of the globe, and continued to the surface upon the opposite side, would reappear near *Antipodes Islets*, at a point only distant a few hundred miles in a south-easterly direction from South Cape in Stewart Island.

These islands were first surveyed by CAPTAIN COOK, the

British Explorer of the Pacific Ocean, and circumnavigator of the world, in 1769; and after a short time they became a favourite resort for British, French, and American whalers, who established extensive and profitable fisheries upon their coasts, and whose land stations were scattered along the southern shores, and on both sides of the straits which divide the islands.

Australian traders soon began to visit New Zealand, and the commerce which sprang up, together with the occasional appearance, at Sydney, of a Chief of the Maori race which inhabited the islands, on board a trading vessel, attracted public attention to the country, which led, in the year 1814, to the establishment of an English Church Mission in the northern part of the North Island, under the direction of the Rev. Samuel Marsden, the Colonial Chaplain of New South Wales. Similar missions also in the northern parts of the country were established by the Roman Catholic and Wesleyan Churches.

In the year 1840, New Zealand became a *British Colony*, the sovereignty of the British Crown being formally proclaimed by CAPTAIN HOBSON, the first Governor, and the native rights ceded to the Sovereign of Great Britain by the "*Treaty of Waitangi*," which was concluded between Governor Hobson and the Maori chiefs at the native settlement of Waitangi, in the Bay of Islands, on the north-eastern shore of New Zealand.

In addition to the group of islands which constitute New Zealand, some other small groups have been annexed to the Colony by Act of the British Parliament, namely the Chatham and Auckland Isles, Campbell Island, and the Bounty and Antipodes Islets.

The Chatham Islands were discovered in the year 1791 by Lieutenant Broughton, Commander of the Brig 'Chatham,' and are situated about 360 miles to the east of New Zealand. The Auckland Isles are a small group, situated about 180 miles to the south of New Zealand, and were discovered by Captain Bristow in the year 1806.

QUESTIONS FOR EXAMINATION.

1. Who discovered New Zealand? 2. In what year? 3. Why was it so named? 4. What other discoveries did Tasman make? 5. What does New Zealand consist of? 6. Where is it situated? 7. Explain its position with respect to Greenwich. 8. What are the Antipodes Islands? 9. Who first surveyed New Zealand? 10. In what year? 11. What people then began to frequent its shores? 12. What commerce soon sprang up? 13. What drew attention to New Zealand in Sydney? 14. When was the first Church Mission established? 15. When did New Zealand become a British Colony? 16. Who was first Governor? 17. What treaty was concluded with the natives? 18. Where is Waitangi? 19. What other groups of islands belong to New Zealand? 20. When were they united to it? 21. When were the Chatham Islands discovered? 22. Where are they? 23. When were the Auckland Isles discovered? 24. Where are they?

SECTION II.

THE ISLANDS (THEIR SIZE AND POSITION).

The main islands of New Zealand are known by the names of "*The North Island*," "*The South Island*," and "*Stewart Island*." The native name of the North Island signified "The Fish of Maui" (a native hero or deity); and that of the South Island "The Land of Greenstone," greenstone or jade—the substance from which their weapons of offence, as well as their symbols of authority, were made—being to the natives as valuable as metal is to ourselves.*

These islands form one extended line for a distance of nearly 1200 miles, their general direction being towards the south-west, excepting that of a northern portion, which bends in a rectangular direction towards the north-west; but a straight line from the North Cape to the South Cape would not exceed 900 miles in length. Their breadth is extremely variable, ranging from a few miles to

* *Note.* The native names were, North Island, Te Ika a Maui; South Island, Te Wahi Pounamu; Stewart Island, Rakiura.

nearly 300, the average of the whole being 120. Their area is nearly 100,000 square miles, or rather less than that of Great Britain and Ireland. They are situated between the parallel circles of $34\frac{1}{2}$ and $47\frac{1}{2}$ degrees of south latitude; and between the meridian lines of $166\frac{1}{2}$ and $178\frac{3}{4}$ degrees of east longitude. Their distance from Great Britain, in a direct line, is about 12,000 miles; from the Isthmus of Panama, in the centre of America, about 6,000; from the Equator about 3,000; from the South Pole about 3,000; and from the nearest part of Australia about 1,200.

The *North Island* is about 500 miles long, and its extreme breadth about 250 miles. Its area is about 44,000 square miles, or rather less than that of England, which is 50,000. It is separated from the South Island by *Cook Strait*, a channel running almost north and south, and which, at its narrowest part, is only 13 miles across. It is so named after the great navigator, who established a rendezvous upon its south shore, during his several visits to the islands.

The *South Island* is also about 500 miles in length, and its greatest breadth about 200. Its area is about 55,000 square miles, or rather less than that of England and Wales together, which is 57,813. It is separated from Stewart Island (so named after the mariner who first discovered it to be an island) by the *Foveaux Strait*, 15 miles across at the nearest points, and so named by the French navigator D'Urville, after Admiral Foveaux.

Stewart Island is about 40 miles long and 25 broad. Its area is less than 1,000 square miles, and about equal to that of all the minor islands around the coasts of England.

The *Chatham Islands* are situated on the 44th degree of south latitude, and on the 177th degree of west longitude, their latitude nearly corresponding with that of the central portion of the South Island of New Zealand. They comprise several low hilly islands, and their total area is about 500 square miles.

The *Auckland Isles* are situated between the degrees of 50 and 51 south latitude, and on the meridian line of 166° East longitude, which nearly corresponds with the longitude of the south-west coast of New Zealand. Their area is about 300 square miles.

In addition to the main islands, there are also in New Zealand a considerable number of islets upon the coast, of which the principal are—the Three Kings, Great and Little Barrier, Kawai, Rangitoto, Waiheke, Great Mercury, Whakaari or White Island, and Kapiti, on the coast of the North Island; and D'Urville Island, Arapawa, Secretary, Resolution, and Ruapuke, on the coast of the South Island. About 60 miles to the south of Stewart Island are some small rocky islets called the Snares; and at a distance of some hundred miles to the south-east, in addition to the larger groups of the Chatham and Auckland Islands, are Bounty Island, the Antipodes Islands, and Campbell Island.

QUESTIONS FOR EXAMINATION.

1. What are the British names of the principal Islands?
2. What did the native name of the North Island signify?
3. What that of the South Island?
4. What is the length of the main group?
5. What its direction?
6. What is its breadth?
7. What is its area?
8. Between what parallel circles is it situated?
9. Between what meridians?
10. What is its direct distance from Great Britain?
11. What from the Isthmus of Panama?
12. What from the Equator.
13. What from the South Pole?
14. What from Australia?
15. What are the length and breadth of the North Island?
16. What is its area?
17. What separates it from the South Island?
18. What are the length and breadth of the South Island?
19. What is its area?
20. What separates it from Stewart Island?
21. What are the length and breadth of Stewart Island?
22. What is its area?
23. Where are the Chatham Islands situated?
24. Where are the Auckland Isles situated?
25. Name the principal islets on the coasts of the North Island.
26. Name those on the coasts of the South Island.
27. Name other islands which belong to New Zealand.

SECTION III.

THE COAST AND COAST FEATURES.

The coast-line of New Zealand is much broken and very irregular. It is large compared with the actual length and breadth of the country, and nearly equals in extent the coast-line of Great Britain; but New Zealand possesses fewer harbours than Great Britain, and these are very unequally distributed.

BAYS, &c. In the North Island the principal bays and gulfs are the *Hauraki Gulf* between the two northern peninsulas, the *Bay of Plenty* on the north-east, *Hawke Bay* on the south-east, and *Palliser Bay* on the south. The West Coast comprehends two extensive bights divided by Cape Egmont, forming the *North* and *South Taranaki Bights*.

In the South Island the principal bays are *Golden Bay* and *Tasman* or *Blind Bay* on the north, *Cloudy Bay* and *Pegasus Bay* on the north-east, *Molyneux Bay* on the south-east, *Tewaewae Bay* on the south, and *Karamea Bay* on the north-west; whilst in the middle section of the island each coast contains an extensive bight, *Canterbury Bight* on the east, and *Westland Bight* on the west.

HARBOURS. The principal harbours in the North Island are the *Bay of Islands* on the north-east, *Waitemata* or *Auckland Harbour* in the *Hauraki Gulf*, *Napier Harbour* in *Hawke Bay*, *Wellington Harbour* or *Port Nicholson* on the south, and *Hokianga*, *Kaipara*, *Manukau*, and *Kawhia* Harbours, together with the *estuary* of the *Waikato* river on the north-west.

The principal harbours in the South Island are *Nelson Haven* in *Tasman Bay*, *Queen Charlotte Sound*, with *Picton*

Harbour, in Cook Strait, *Port Lyttelton* in Pegasus Bay, *Dunedin Harbour*, with *Port Chalmers* on the south-east, and *Bluff Harbour* and *Invercargill Harbour*, both in Foveaux Strait. The north-western coast is destitute of any good harbours, but on the south-west are *Chalky Bay*, *Dusky Bay*, and *Milford Haven*.

In Stewart Island are *Port Pegasus* and *Puterson Inlet*.

STRAITS. *Cook Strait*, between the North and South Islands; *Foveaux Strait*, between the South Island and Stewart Island; *Tamaki Strait*, between Waiheke Island and the mainland in the Hauraki Gulf; *Coromandel Channel*, between Great Barrier Island and the northern extremity of Coromandel peninsula; *French Pass*, between D'Urville Island and the north coast of the South Island; and *Tory Channel*, between the same coast and Arapawa Island.

CAPIES. The principal capes in the North Island are *Cape Maria Van Diemen*, the most westerly point of the island, and *North Cape*, its most northerly point, both on the north; *Capes Brett* and *Colville*, *East Cape*, *Table Cape*, and *Kidnappers' Point* on the east; *Cape Palliser*, *Taourakira Head*, and *Cape Terawhiti* on the south; *Cape Egmont* and *Reef Point* on the west.

The principal capes in the South Island are *Francis Head* and *Cape Jackson* on the north; *Cape Campbell*, *East Head*, *Cape Saunders*, and *Nugget Point* on the east; the *Bluff* and *Windsor Point* on the south; and *West Cape*, *Cascade Point*, *Cape Foulwind*, *Rock Point*, and *Cape Farewell* on the west, with *Cape Stephen* in D'Urville Island.

At the south of Stewart Island is *South Cape*.

QUESTIONS FOR EXAMINATION.

1. Describe the nature of the coast-line of New Zealand.
2. Name and describe the principal bays, &c. in the North Island.
3. Name

and describe the principal bays, &c. in the South Island. 4. Name and describe the principal harbours in the North Island. 5. Name and describe the principal harbours in the South Island. 6. Name the principal harbours in Stewart Island. 7. Where is Cook Strait? 8. Where is Foveaux Strait? 9. Where is the Tamaki Strait? 10. Where is Coromandel Channel? 11. Where is the French Pass? 12. Where is Tory Channel? 13. Name and describe the principal capes in the North Island? 14. Name and describe the principal capes in the South Island. 15. Name the principal cape in Stewart Island.

SECTION IV.

MOUNTAINS AND PLAINS OF THE NORTH ISLAND.

The country of New Zealand is very mountainous, the main ranges lying generally in the direction of the greater axis of each island, namely, from north-east to south-west.

In the northern half of the North Island the mountains do not occupy so much of the land as in other parts, nor do they reach any great height, seldom exceeding an elevation of 1500 feet, with the exception of a few lofty peaks, which are generally isolated in position, and present the features of extinct volcanoes. The most remarkable of these peaks are *Mounts Edgecumbe* and *Ikurangi* in the east, and *Mount Kurehoe* on the western coast.

The most extensive range in this part of the island is the *Coromandel range*, which forms the north-eastern peninsula of the island. This range averages 1500 feet in height, and contains rocks which are richly impregnated with gold.

The numerous islands in the seas adjacent to this part of the island indicate a submarine continuation of this range, the loftier peaks of which still emerge above the level of the ocean, though some of them may be regarded as the summits of isolated volcanic cones similar in character to those enumerated above, but whose bases are at the bottom of the ocean: of these, *Rangitoto*, near the entrance





of the Waitemata Harbour in the Hauraki Gulf, shows traces of eruption at no very distant period; and *Whakaari*, or *White Island*, in the Bay of Plenty, still emits columns of vapour, its summit reaching an elevation of nearly 1000 feet above the sea level.

Towards the middle part of the island, and a little to the south of the 39th parallel of latitude, are three remarkable and very lofty volcanic peaks, *Mount Egmont* or *Taranaki*, isolated on the west coast, and *Tongariro* and *Ruapehu*, both near the centre of the island. *Tongariro* is 6500 feet in height, and still manifests occasional symptoms of activity. *Ruapehu*, which is an extinct volcano, attains to 9195 feet, and *Taranaki*, also long extinct, is 8280 feet above the sea level. The two latter reach above the limit of perpetual snow, which may here be estimated at about 8000 feet above the sea.

To the eastward of these central peaks lies the *main range* in the North Island, which extends to its southern extremity, and again from thence, broken only by the Straits and by occasional passes, to the extreme south of New Zealand.

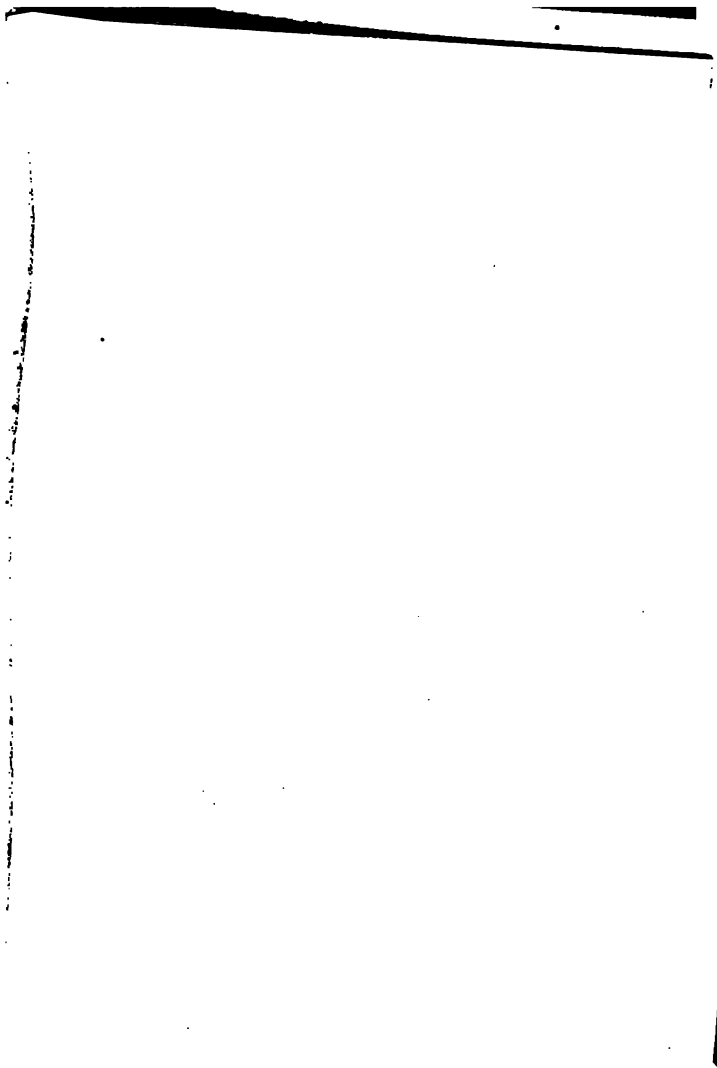
The principal portion of this range in the North Island is the *Kuakine chain*, which extends in an unbroken length for a distance of about 80 miles, having an average elevation of about 4000 feet. At its southern limit the range is cleft by the *Manawatu gorge*, through which the Manawatu river flows. To the south of this river the main range continues under the name of the *Tararua* mountains in the same direction for a distance of about 50 miles, after which it assumes a more easterly direction and the designation of the *Rimutaka* range, which it retains until it reaches Cook Strait at Taourakira Head, the western promontory of Palliser Bay. Spurs from the Tararua continue towards the western coast, which they reach at the cliff formed by the Paikakariki Hills, at Terawhiti, the south-west point of the island, and at intermediate headlands.

Parallel with the Ruahine range, but extending considerably further towards the north, is another range called the *Kaimanawha*; and along the south-east coast, at some distance inland, are a series of chains extending in an irregular line from Cape Kidnappers, the southern headland of Hawke Bay, to Cape Palliser, the south-eastern extremity of the island, and bearing the names of the *Puketoi*, *Maungaraki*, and *Haurangi* Mountains.

The principal *Plains* in the North Island are the *Kirikiri* plains, near the Bay of Islands; the *Thames Valley*; the lower, middle, and upper *Waikato plains* along the river of that name; the *Kaingaroa* and *Tauupo* plains in the interior; the *Rua Taniwha* and *Wairarapa* plains in the east; and an extensive tract of undulating country lying west of the central range of mountains towards Mount Egmont, bordering the South Taranaki Bight, covered with forest, and intersected by the Whanganui and other rivers.

QUESTIONS FOR EXAMINATION.

1. What is the common direction of the mountain ranges?
2. Describe the surface of the northern half of the North Island.
3. Name the principal peaks in this part.
4. Name the principal range in this part.
5. Describe it.
6. What do the neighbouring islets show?
7. Name some islets which still bear traces of late volcanic eruption.
8. Name the principal peaks in the central part of the island.
9. State the height of these peaks.
10. Describe the main range of mountains.
11. What is the Ruahine chain?
12. Describe it.
13. How is it divided from the Tararua mountains.
14. Describe the Tararua mountains.
15. Describe the Rimutaka range.
16. At what points do spurs from the Tararua reach the coast?
17. Describe the Kaimanawha range.
18. Describe the ranges on the south-east coast.
19. Mention the principal plains in the north of the island.
20. Name those in the interior.
21. Name those in the east.
22. Name those in the west.



SECTION V.

MOUNTAINS AND PLAINS OF THE SOUTH ISLAND.

The *main range* appears again in the South Island, and extends through its whole length, keeping, however, much nearer to its western than to its eastern coast.

Towards the north of the island the principal ranges diverge like the legs of a compass, forming an eastern branch, which terminates at the promontory of Jackson Head, and a western branch, called the *Tasman Mountains*, terminating at Cape Farewell. Each of these main branches also sends out spurs or offsets, which strike the coast at Separation and Rock Points on the west, and at the numerous headlands dividing the sounds and inlets which intersect the country lying between Blind Bay and Cloudy Bay, on the east.

Above the fork, whence the two principal chains diverge, stands the lofty *Peak* of *Mount Franklin*, 10,000 feet in height, clothed in dazzling snow, and surmounting, like a watch-tower, all the northern region of the island. In the western branch are the noticeable peaks of *Mount Arthur*, *Mount Snowdon*, and *Mount Peel*, the latter being 6000 feet in height; and in the eastern branch are *Ben Nevis*, *Mount Rintoul*, and *Mount Richmond*.

On the west of *Mount Franklin* is a detached chain, parallel with and near the coast, called the *Paparoa Mountains*, between the Buller and Grey Rivers, whilst on the eastern side of the said mountain are three lateral and nearly parallel branches, starting from the main range and directed towards the north-east. One of these branches reaches the coast at the White Bluff, a second at Cape Campbell, and the third at Lookers-on Point. The range terminating at Cape Campbell is called the *Kaikoura*, and

attains an elevation of 9,700 feet in *Mount Tapuaenuka*. The most southern branch is generally known as the *Seaward Kaikoura* range, though named by Captain Cook the Lookers-on from a number of natives whom he observed watching his ships. Its highest peak is *Mount Kaitarau*, 8,700 feet above the sea level.

From Mount Franklin the main range continues towards the south, under the general designation of the *Southern Alps*, for upwards of 200 miles, forming a well defined mountain chain which culminates towards the centre in the massive peak, the highest elevation in the islands, well named in honour of the British Discoverer of New Zealand, *Mount Cook*. It is 13,200 feet in height, being no mean rival to Mont Blanc, the monarch of the European Alps, 15,810 feet.

The higher portions of this region are covered with perpetual snow (the elevation of the snow line being about 7,500 feet), and, like the Alpine regions of Europe, contain valleys filled with glaciers or masses of sliding ice, derived from the snow-fields, which form the source and feeders of most of the rivers which flow through the central districts of the island.

The *Plains* of the South Island lie principally along the valleys of the great rivers, and, for the most part, assume their names; such are the *Waimea*, *Wairau*, *Awatere*, *Hurunui*, and *Waiaru Plains*, together with the *Maruia* and *Karamea Plains* in the north. The *Canterbury Plains*, on the eastern side of the island, extend for nearly 100 miles between Banks Peninsula and the Southern Alps, whilst wooded plains of a similar character also extend along the western side of the mountains, in which gold is obtained in large quantities.

The upper and lower *Taiari*, the *Manuherikia* and *Clutha Plains*, with the *Oamaru*, *Moeraki*, and *Southland Downs* (resembling in their character the downs of England), constitute the principal plains in the south of the island.

Stewart Island is also mountainous. Its highest peak, *Mount Anglem*, is 3,200 feet high. There is a plain of some extent nearly in the centre of the island.

QUESTIONS FOR EXAMINATION.

1. Describe the main range in the South Island.
2. Describe the branch chains at its northern extremity.
3. Where does the eastern branch end?
4. What is the name of the western branch?
5. Where does it terminate?
6. Where do the spurs terminate on the west coast?
7. Where upon the east coast?
8. Describe Mount Franklin.
9. Name the principal peaks in the western branch.
10. Name those in the eastern branch.
11. Describe the Paparua chain.
12. Name the points at which the three parallel lateral chains strike the east coast.
13. What is the name of the loftiest of these chains?
14. Give the name and elevation of its highest peak.
15. Name the most southerly of these chains and its highest peak.
16. Describe the Southern Alps.
17. Describe Mount Cook.
18. Give the elevation of the snow-line in this part of New Zealand.
19. Describe the glaciers.
20. Name the principal plains in the north of the South Island.
21. Name those on the east.
22. Name those on the west.
23. Name those on the south.
24. Describe Stewart Island.

SECTION VI.

RIVERS OF THE NORTH ISLAND.

Whilst the mountains of New Zealand vie in grandeur, number, and magnitude with those of other regions of the globe renowned for magnificent or picturesque mountain scenery, its *rivers*, owing to the narrow breadth of the islands and the direction of the principal mountain ranges, are comparatively small, though usually rapid in their course.

In the North Island the largest river lies to the north-west of the Ruahine Mountains, where the country is less intersected by mountain-chains than in any other part. The *Waikato*, which is by far the largest river in the North Island, rises on the northern slopes of Mount Ruapehu, and after helping to form the great Taupo Lake

in the centre of the island, flows northwards for the greater part of its course for a distance of 100 miles, when, passing through a gorge in the hills along the coast, it turns sharply to the west, forming a rectangular bend, and makes its way to the west coast. This river is navigable by small steamers for 50 miles, and its estuary can be entered by full-sized vessels. It empties itself into the North Taranaki Bight.

The *Waipa* is an important tributary to the Waikato, which river it joins on its left bank after a course of 40 miles, about 20 miles above the rectangular bend already mentioned of the principal stream.

The *Waiho* or *Thames*, and the *Waitoa*, with its tributary the *Piako*, are two rivers which rise on the high table-land between the Waikato River and the Bay of Plenty, and flow in parallel courses towards the north, emptying themselves into the Frith of Thames at the bottom of the Hauraki Gulf. These rivers are only navigable by small vessels.

The *Whanganui* rises near the centre of the island on the slopes of Mount Tongariro, and flows first in a northerly and afterwards in a south-westerly direction, falling into the South Taranaki Bight near the 40th parallel of latitude. It is navigable at its mouth by vessels of medium size, and by canoes almost to its source.

The *Whangaihu*, the *Turakina*, and the *Rangitikei*, are smaller rivers flowing nearly parallel with the Whanganui, but further towards the south.

The *Manawatu* rises much further towards the south, and on the east of the Ruahine range, through which it passes by the Manawatu gorge, from which it flows, nearly due west, into the South Taranaki Bight.

The *Whakatane* rises from the plains on the east side of Lake Taupo, and flows north-east into the Bay of Plenty. The *Wairoa* in the north, and another river of the same name in the east, flowing into Hawke Bay, with the *Ruamahanga* in the south, are other considerable

streams in this island. The latter rises on the southern slopes of the Puketoi Mountains, and flows southward in the valley formed between the Tararua range and the east coast chains of mountains, which is called the Wairarapa Valley. Towards the termination of its course it forms the Wairarapa and Onoke Lakes, from the latter of which its waters find their way through a swampy channel into Palliser Bay.

QUESTIONS FOR EXAMINATION.

1. What is the general character of the New Zealand rivers?
2. Where is the largest river in the North Island situated?
3. Mention its name and describe its course.
4. To what extent is it navigable?
5. What is the Waipa?
6. Describe its course.
7. Describe the courses of the Waiho and Waitoa.
8. What is the Piako?
9. To what extent are these rivers navigable?
10. Where does the Whanganui rise?
11. Describe its course.
12. To what extent is it navigable?
13. What are the Whangaihu, Turakina, and Rangitikei?
14. Where does the Manawatu rise?
15. Describe its course.
16. Describe the course of the Whakatane.
17. Name some other considerable streams in the North Island.
18. Where does the Ruamahanga rise?
19. Describe its course.
20. What lakes are formed by it?

SECTION VII.

RIVERS OF THE SOUTH ISLAND.

The *rivers* of the South Island may be geographically divided into *three groups*; the first group comprehending those rivers which have their sources in the elevated mass of the central chain, near Mount Franklin; the second group consisting of those which are fed by the glaciers which descend from the lofty Alpine region near Mount Cook; and the third, which includes nearly all the southern rivers, consisting of streams connected with the many large and elevated lakes which stud the southern and south-eastern slopes of the Southern Alps.

In the *first* or northern *group*, are the *Motueka* flowing north, the *Buller* and the *Grey* flowing west, and the *Wairau*, the *Waiiau-toa* or *Clarence*, and the *Waiiau-ua* or *Dillon*, flowing east. The *Motueka* empties itself into Tasman Bay, and the *Wairau* discharges into Cloudy Bay. Between the *Wairau* and the *Clarence* is a smaller stream, the *Awatere*, flowing parallel with them both, rising in the Fairfield Downs, and separated from the *Clarence* by the Kaikoura Mountains. All of these rivers rise in the neighbourhood of Mount Franklin, and none of them, except the *Buller* and *Grey*, are navigable to any considerable extent. In the valleys of these two rivers there are extensive gold-fields and coal mines, which support a large population.

The principal rivers of the *second* or central *group* are the *Waimakariri*, emptying itself into Pegasus Bay on the east coast, a little to the north of Banks Peninsula; the *Rakaia*, *Ashburton*, and *Rangitata*, flowing by parallel courses into the Canterbury Bight; and the *Teremakau*, *Hokitika*, *Wairau*, *Haast*, *Arahatta*, and *Katuka*, flowing into the Westland Bight. All of these rivers rise among the glaciers of the Southern Alps, and none of them are navigable by vessels of any size, being generally of the usual character of mountain streams, often swollen into rapid torrents, but at other times expanded over broad shingly beds.

The *third* or southern *group* contains the comparatively large river, the *Waitaki*, the sources of which flow through the lakes Tekapo, Pukaki, and Ohau; and the *Clutha*, which is the largest river in the South Island, and which rises from several sources, flowing through the lakes Wakatipu, Wanaka, and Hawea, and falls into the sea in Molyneux Bay. These rivers rise almost on the western shores of the island, and flow nearly across its entire breadth, to the eastern coast. The course of the *Clutha* is about 150 miles, and the volume of water flowing into the Ocean through its channel has been estimated at a

million and a half cubic feet per minute. Its water power, together with that of many neighbouring streams, is extensively used for supplying the sluices used in working the valuable gold-fields which abound throughout their valleys.

The *Mataura*, rising near Lake Wakatipu, but not now connected with it, is an exception to this class of rivers. It flows into Toetoe Bay in the Foveaux Strait.

The *Waiau*, flowing through the lakes Te Anau and Manipori into Tewaewae Bay, is, however, another river of the group, none of which, except the Clutha, are navigable.

The principal river in Stewart Island is *Lords River*, which is navigable for a few miles only.

QUESTIONS FOR EXAMINATION.

1. How may the rivers of the South Island be distributed?
2. What kind of rivers are included in the first group?
3. Of what kind does the second group consist?
4. What kind of rivers form the third group?
5. Name the principal rivers of the northern group.
6. Where do the Motueka and Wairau discharge themselves?
7. Describe the Awatere.
8. Whence do all these rivers derive their sources?
9. To what extent are they navigable?
10. What minerals are found in the valleys of the Buller and the Grey?
11. Name the principal rivers of the central group.
12. Where does the Waimakariri empty itself?
13. What rivers flow into the Canterbury Bight?
14. What rivers flow into the Westland Bight? From what sources are all these rivers derived?
16. To what extent are they navigable?
17. What is their general character?
18. Name the principal rivers of the southern group.
19. Through what lakes do the sources of the Waitaki flow?
20. Through what lakes do the sources of the Clutha flow?
21. Describe the course of that river.
22. To what purpose is the water power of the Clutha extensively applied?
23. Describe the Mataura.
24. Describe the Waiau.
25. What is the chief river in Stewart Island?

SECTION VIII.

LAKES.

The *Lakes* of New Zealand are numerous, and some of them are of considerable extent.

The largest lake in the North Island is Taupo, situated near the centre of the island, and containing an area of about 200 square miles; being nearly equal in size to the Lake of Geneva, in Switzerland. This lake is fed by the river Waikato, which rises a little to the south of the lake, and flows through it in a northerly direction. In the vicinity of Lake Taupo are numerous hot springs, many of which are of an extremely high temperature, and some actually boiling.

Between this lake and the north-east coast, but to the west of the Ruahine and Kai Manawha ranges, is a belt of country about 30 miles in width, which may be properly described as the *northern lake country* of New Zealand.

This region constitutes one of the physical wonders of the world, being occupied by a succession of hot lakes, mud volcanoes, and springs, throwing up jets of boiling water which can only be compared, for their size, number, and remarkable phenomena, to the long celebrated Geysers of Iceland.

Among the numerous lakes which occur in this district the most considerable are *Tarawera*, *Rotorua*, and *Rotoiti*, of which Tarawera has an area larger than that of Windermere in England.

At the southern extremity of the island, a short distance only from the southern shore, are the *Wairarapa* and *Onoke* lakes. They are both fed by the river Ruamahanga, and the area of the Wairarapa Lake is 16 square miles. This lake is very little above the sea level, whilst Lake Taupo is elevated 1250 feet above it.

In the South Island there are a number of large lakes, which are remarkable for their elevation and depth, as well as for the great height of the mountains which surround them.

The greater number of these are situated to the south of Mount Cook, amidst the ranges which form the steep southern slopes of the Southern Alps. The largest are Lakes *Wakatipu*, *Wanaka*, *Hauea*, *Te Anau*, *Manipori*, *Tekapo*, *Pukaki*, and *Ohau*. The area of Lake *Wakatipu* is about 114 square miles, and its elevation upwards of 800 feet above the sea level.

There are also several lakes to the north of Mount Cook, of inferior size to those already mentioned. Of these the most remarkable for size or position are Lakes *Rotoroa*, *Rotoiti*, and *Tennyson*, near Mount Franklin; *Lake Sumner* on the north-eastern, and *Lake Brunner* on the north-western, slopes of the Southern Alps; and *Lake Ellesmere*, an extensive sheet of fresh water, on the eastern coast, south of Banks Peninsula, and which is only separated from the sea by a long and narrow strip of shingly beach, through which its waters occasionally burst.

Besides these fresh-water lakes, there are several inlets of the sea so nearly enclosed by land as to form salt-water lakes or lochs. Such in the North Island are the *Hokianga Estuary*, and the *Kaipara*, *Manukau*, and *Kawhia* harbours on the west; the *Waitemata* or Auckland Harbour on the east; and *Port Nicholson* or Wellington Harbour on the south. And in the South Island, also, are *Pelorus* and *Queen Charlotte Sounds* on the north, whilst the numerous sounds on the south-west coast of the island may be included in this class. So also may be *Paterson Inlet* and *Port Pegasus*, in Stewart Island.

QUESTIONS FOR EXAMINATION.

1. Are there many large lakes in New Zealand? 2. Where is Lake Taupo? 3. Describe it. 4. By what river is it fed? 5. What

remarkable phenomena are in its neighbourhood? 6. Where is the northern lake country? 7. Describe it. 8. Name the most considerable of its lakes. 9. What is the size of Lake Tarawera? 10. Where are the Wairarapa and Onoke lakes? 11. How are they supplied? 12. How large is the Wairarapa? 13. Describe the lakes of the South Island. 14. Where are they mostly situated? 15. Name the largest. 16. What is the size and elevation of Lake Wakatipu? 17. What lakes exist to the north of Mount Cook? 18. Describe Lake Ellesmere. 19. What other class of lakes are there? 20. Name the lochs of the North Island. 21. Name those of the South Island. 22. Name those of Stewart Island.

SECTION IX.

GENERAL GEOGRAPHICAL FEATURES.

New Zealand furnishes to the student of geography examples illustrative of almost every term used to distinguish the various forms both of land and water. This will be seen by the following classification.

OCEAN.—The coasts of New Zealand are washed by the waters of the South Pacific Ocean.

SEA.—Though not so named, the wide expanse between the islands which is terminated by Cook Strait, is really a sea.

GULF.—The Hauraki Gulf.

BAY.—Bay of Plenty, Hawke Bay, Palliser Bay, North and South Taranaki Bights, Golden Bay, Tasman Bay, Cloudy Bay, Pegasus Bay, Canterbury Bight, Molyneux Bay, Tewaewae Bay, Westland Bight, Karamea Bay.

HARBOUR.—Bay of Islands, Waitemata or Auckland Harbour, Napier Harbour, Wellington Harbour, Hokianga Harbour, Kaipara Harbour, Manukau Harbour, Kawhia Harbour, Nelson Haven, Picton Harbour, Port Lyttelton, Dunedin Harbour, Bluff Harbour, Invercargill Harbour, Port Pegasus, and Paterson Inlet.

CREEK, INLET, OR SOUND.—Queen Charlotte and Pelorus Sounds, Chalky Bay, Dusky Bay, and Milford Haven.

ROADSTEAD.—Ahuriri and Astrolabe Roads.

STRAIT OR CHANNEL.—Cook Strait, Foveaux Strait, Tamaki Strait, Coromandel Channel, French Pass, Tory Channel.

LAKE.—Taupo, Tarawera, Rotorua, Rotoiti, Wairarapa, Onoke, Wakatipu, Wanaka, Hawea, Te Anau, Manipori, Tekapo, Pukaki, Ohau, Rotoroa, Tennyson, Sumner, Brunner, Ellesmere.

LOCH.—Hokianga, Kaipara, Manukau, Kawhia, Waitemata, and Wellington Harbours, Pelorus and Queen Charlotte Sounds, and many inlets on the south-west coast, with Paterson Inlet and Port Pegasus.

FRITH OR ESTUARY.—Frith of Thames, Estuary of Hokianga, and Waikato.

RIVER.—Waikato, Waipa, Waiho or Thames, Piako, Whanganui, Whangaihu, Turakina, Rangitikei, Manawatu, Whakatane, Wairoa, and Ruamahanga, in the North Island. Clutha, Waiau, Mataura, Waitaki, Rangitata, Ashburton, Rakaia, Waimakariri, Teremakau, Hokitika, Wairau, Haast, Arawhatta, Katuka, Grey, Buller, Motueka, Wairau, Waiau-toa or Clarence, Waiau-ua or Dillon, and Awatere, in the South Island.

ARCHIPELAGO.—Bay of Islands, and Hauraki Gulf.

CONTINENT.—This term cannot be properly applied to any part of New Zealand, but is well illustrated by Australia.

ISLAND.—North and South, Stewart, Chatham, Auckland, Campbell, Bounty, Antipodes, Three Kings, Great and Little Barrier, Kawau, Rangitoto, Motutapu, Waiheke, Mercury, White or Whakaari, Kapiti, D'Urville, Arapawa, Secretary, Resolution, Ruapuke islands, and the Snares.

PENINSULA.—Auckland, Coromandel, Mahia, Banks, and Otago peninsulas.

ISTHMUS.—Auckland isthmus.

DELTA.—Wairau delta.

PROMONTORY.—Pelorus and Farewell promontories.

CAPE, POINT, AND HEADLAND.—Maria Van Diemen, North, Brett, Colville, East, Table, Palliser, Terawhiti, and Egmont capes; Kidnapper and Reef points, and Taourakira Head, in the North Island. Francis and East heads; Jackson, Campbell, Saunders, West, Foul-wind, and Farewell capes; Nugget, Windsor, Cascade, and Rock points, and the Bluff, in the South Island;—with South Cape in Stewart Island, and Cape Stephen in D'Urville Island.

MOUNTAIN CHAIN.—Ruahine, Tararua, Rimutaka, Kaimanawha, Puketoi, Maungaraki, Haurangi, in the North Island. Southern Alps, Spencer, Tasman, Paparoa, Kaikoura, Lookers-on.

MOUNTAIN PEAK.—Edgumbe, Ikurangi, Karehoe, Egmont or Taranaki, Tongariro, Ruapehu, Franklin, Arthur, Snowdon, Ben Nevis, Rintoul, Richmond, Tapuaenuka, Kaitarau, Cook, Aspiring, and Earnslaw, with Mount Anglem in Stewart Island.

PLAIN OR LOWLAND.—Kirikiri Plains, Thames and Waikato Valleys, Rua Taniwha and Wairarapa Plains, in the North Island; Waimea, Wairau, Awatere, Hurunui, Waiiau, Maruia, Karamea, Canterbury, Taieri, Manuherikia, and Clutha Plains, in the South Island.

PLATEAU, TABLE-LAND, OR HIGHLAND.—Kaingaroa and Taupo Plains, Timaru, Oamaru, Moeraki and Southland downs.

VALLEY.—Waikato, Thames, Rangitikei, Wairarapa, Wairau, Amuri, Waitaki, Clutha, Grey, Buller.

VOLCANO.—Tongariro, Whakaari.

GLACIER.—Godley Glacier, and others in the Southern Alps.

GEYSER.—In the northern lake district.

DESERT AND OASIS.—None in New Zealand.

QUESTIONS FOR EXAMINATION.

1. What examples does New Zealand furnish? 2. Mention an ocean washing New Zealand. 3. A sea. 4. A gulf. 5. Name the bays. 6. The harbours. 7. The creeks, inlets, and sounds. 8. The roadsteads. 9. The straits and channels. 10. The lakes. 11. The lochs. 12. The friths and estuaries. 13. The rivers in the North Island. 14. The rivers in the South Island. 15. The Archipelagos. 16. A continent, if any. 17. The islands. 18. The peninsulas. 19. An isthmus. 20. A delta. 21. The promontories. 22. The capes, points, and headlands in the North Island. 23. The same in the South Island. 24. The mountain chains in the North Island. 25. The same in the South. 26. The mountain peaks in the North Island. 27. The same in the South. 28. The plains or lowlands. 29. The plateaus, table-lands, or highlands. 30. The valleys. 31. The volcanoes. 32. The glaciers. 33. The geysers. 34. The deserts and oases, if any.

SECTION X.

GEOLOGY AND MINERALS.

The *Geology* of a country is a subject of much interest and importance, as it helps to explain the causes which have occasioned its physical configuration, and assists in the discovery of the mineral treasures which it contains. The *crust* of the globe is that portion of it which we are able to examine, or concerning the nature of which we can form a judgment from observations made at or near the surface. It is found to consist of a variety of rocks, which differ from one another, and are classed according to the following characteristics:—

First.—The most common and numerous rocks are those called *Aqueous* or *Sedimentary*, such as limestones, sandstones, marls, and clays, which form layers or strata, and appear to have been deposited under water, like mud and sand are now; or formed like beds of shells or shingle, or reefs of coral. These often contain fossils, *i. e.*, remains or traces of animal or vegetable bodies, embedded in them.

Second.—*Volcanic Rocks*, such as lava, ashes, basalt, tuff, &c., which have been produced at or near the earth's surface, not by the agency of water, but by the action of fire or subterranean heat. These are generally unstratified and without fossils, and are more partially distributed.

Third.—*Plutonic Rocks*, such as granite, porphyry, &c., also produced by fire, but at a considerable depth in the earth, under great pressure, and which, having cooled slowly, are more crystalline in texture than volcanic rock, and without the pores or little cells which the expansion of enclosed gases occasions in ordinary lava.

And *lastly*, there are the *Metamorphic* or stratified crystalline rocks, such as marbles, gneiss, mica-schist, and clay-slate, which differ from the aqueous rocks in retaining no trace of fossils, or of pebbles, sand, scorïæ, or fragments of other rocks embedded in them; and though often equally crystalline with granite, they differ from the Plutonic rocks by their division into beds, which correspond in form and arrangement with those of sedimentary formations. These seem to have been originally deposited from water, in the actual form of sediment, but to have been subsequently so altered by subterranean heat as to have assumed a new texture.

In New Zealand the two latter classes of rocks are confined to the South Island, and to its southern and western parts, whilst the Volcanic rocks are limited to certain areas which are most extensive in the North Island; and the aqueous rocks are distributed alike throughout both.

It is among the rocks of the first and last of the above classes that the most valuable minerals of the country have been originally deposited, the metamorphic rocks furnishing a large proportion of the gold that has been discovered, and the sedimentary strata of different ages containing extensive fields of coal, of various degrees of excellence.

The *mineral* resources of the colony, which are contained amidst its extensive and varied geological deposits, remain at present very imperfectly explored. Sufficient, however, have been discovered to indicate the existence of mineral wealth, unsurpassed, if not unequalled, by any other region of the globe of equal extent. What is already known upon this subject, has been summed up by the Commissioners of the New Zealand Exhibition, held at Dunedin in 1865, of whose report upon the subject the following is, in part, an abstract:—

GOLD, the most precious metal, is found in gold-fields of almost unequalled richness, in Auckland, Nelson, Westland, and Otago; and in smaller quantities in Marlborough and Southland.

COAL, a mineral of equal, if not superior, national importance, is found of an excellent quality, at Grey River, Buller River, Pakawau, Aorere, Wangapeka, and Kawakawa; whilst brown coal and lignite are found in numerous localities in both islands.

SILVER has been found, alloyed with other metals, both in Nelson and Otago; and at Coromandel, the gold often contains 30 per cent of silver.

COPPER mines have been worked to a limited extent in Auckland and Nelson.

IRON.—Extensive deposits of magnetic iron-sand are found on the west coast of the north, and on the east coast of the south island, but most abundantly at Taranaki. Other ores of iron, such as clay iron ore, carbonate of iron, iron pyrites, and red hematite, have also been met with in various parts of the colony.

LEAD has been found in rolled fragments, both in Nelson and Otago.

CHROME ORE exists in large quantities in Nelson.

MERCURY, in the form of Cinnabar, has been found in Otago.

PLUMBAGO, on the shores of Golden Bay.

SULPHUR, in White Island, and in the northern lake district.
ALUM, in Otago.

GYPNUM, in Otago.

ASBESTOS, in Otago.

KAOLIN, in Otago.

SCHEELITE, in Otago.

MANGANESE, in Otago.

JADE (the greenstone or pounamu of the natives), in Otago and Westland.

SERPENTINE, in Otago and Nelson.

PLATINUM, in Nelson.

PUMICE STONE, on the banks of the large rivers of the North Island.

RESIN, or fossil Kauri gum, in Auckland and Otago.

BUILDING STONES are also found in considerable variety.

GRANITE, and other crystalline stones, in the west of Otago, and Canterbury, in Westland; at the Bluff in Southland, and in Stewart Island.

FREESTONE, in Auckland, Nelson, Canterbury, and Otago.

LIMESTONES, in Auckland, Nelson, Canterbury, Westland, and Otago.

MAGNESIAN ROCKS, in Nelson and Otago.

QUESTIONS FOR EXAMINATION.

1. Why is the geology of a country interesting?
2. What is meant by the crust of the globe, and of what does it consist?
3. Describe the aqueous rocks.
4. Describe volcanic rocks.
5. Describe plutonic rocks.
6. Describe metamorphic rocks.
7. In what part of New Zealand are there plutonic and metamorphic rocks?
8. Where are volcanic rocks most abundant?
9. From which class of rocks is most of the New Zealand gold produced?
10. In which class are the deposits of coal found?
11. Name the provinces in which gold is found.
12. Name those in which coal exists.
13. Where has silver been found?
14. Where copper?
15. Where iron.
16. Where lead?
17. Where chrome ore?
18. Where mercury?
19. Where plumbago?
20. Where sulphur?
21. Where alum, gypsum, asbestos, kaolin, scheelite, and manganese?
22. Where jade?
23. Where serpentine?
24. Where platinum?
25. Where pumice stone?
26. Where resin?
27. Where granite building stone?
28. Where freestones?
29. Where limestones?
30. Where magnesian rocks?

SECTION XL

METEOROLOGY AND CLIMATE.

The *climate* of New Zealand is remarkable for the rapidity with which its various changes succeed each other; calms and gales, rain and sunshine, heat and cold, often alternating so frequently and suddenly as to defy previous calculation, so that there cannot be said to be any uniformly *wet or dry season* in the year. But although these changes are sudden and frequent, they are confined within very narrow limits, the extremes of daily temperature only varying, throughout the year, by an average of 20 degrees, whilst in Europe, at Rome, Milan, and Montpellier, places of corresponding latitude with New Zealand, the same variation amounts to or exceeds 30 degrees; and New York and Quebec in America, which correspond in latitude with Wellington and Dunedin, experience tropical heats in summer, and intense colds in winter.

In respect to *temperature*, New Zealand may be compared either with England or with Italy, but London is seven degrees colder than the North, and two degrees colder than the South Island of New Zealand, and is less moist. It perhaps more closely resembles Italy in this respect, but does not suffer from such extreme heat and drought as that to which Italy is liable in the midst of summer. In *latitude*, Auckland nearly corresponds with Gibraltar; Wellington and Nelson with Rome; Christchurch with Montpellier, and Dunedin with Milan. The mean annual temperature of the North Island is 57° Fahr.; and that of the South Island 52°. January and February—which *months* correspond to July and August in England—are the warmest months in New Zealand, and June and July are the coldest. At *Auckland* the solar rays are at times very powerful, the *thermometer rising*

occasionally to upwards of 120°. At *Taranaki* the climate is remarkably equable, and snow rarely falls near the coast. At *Wellington* it is very variable, and subject to frequent high winds. *Nelson* enjoys a sheltered position and clear sky. In *Canterbury* the seasons are more distinctly marked, the frost in winter being occasionally severe (though it never freezes all day near the coast), and the heat in summer often very great. *Otago* is sensibly colder, and severe frosts, with deep snow upon the upland plains, are common in the winter. *Stewart Island* is subject to violent winds and frequent fogs.

Strong *winds* are prevalent throughout the colony, and particularly in the Straits. From these *Nelson* is most exempt; whilst *Canterbury* suffers at times from a *hot and dry north-west wind*, resembling, in a minor degree, the sirocco of Australia. It melts the snow on the high ranges, occasions floods in the rivers fed from them, and raises the temperature throughout the country.

Rain falls frequently, but seldom in such excessive quantity, or for periods of so great length, as in Australia; the heaviest rain seldom exceeding three days' duration, whilst it is rare for a fortnight to elapse without a shower. The plains of *Canterbury* and *Marlborough* are occasionally visited by droughts, whilst in *Westland* the rainfall is extremely heavy. More rain is supposed to fall generally upon the *North Island* than upon the *South*; and more upon the western than the eastern coast.

Storms of thunder and lightning are extremely rare upon the plains.

The central portion of the colony is subject to frequent, though seldom to severe, *earthquake shocks*, from which the extreme north and south are exempt; the earthquake region extending only from *Banks Peninsula* northwards to *White Island*, in the *Bay of Plenty*,—a distance of about 500 miles. In 1848, and again in 1855, more severe shocks occurred, occasioning some damage to *property*, especially at *Wellington*,—but no loss of life.

The *Aurora Australis* is occasionally visible, and has been observed with great brilliancy from the Auckland Isles.

QUESTIONS FOR EXAMINATION.

1. Mention the peculiar character of the New Zealand climate.
2. What is said about a wet and dry season? 3. To what extent does the average daily temperature vary through out the year?
4. What is the corresponding variation at Rome and Milan?
5. What at New York and Quebec? 6. With what countries may New Zealand be compared as to temperature? 7. In what respects does it differ from England? 8. In what from Italy? 9. With what European city does Auckland correspond in latitude? 10. With what city do Wellington and Nelson correspond? 11. With what cities do Christchurch and Dunedin? 12. State the mean annual temperature of the North Island. 13. State that of the South Island. 14. Name the warmest and the coldest months in New Zealand. 15. What is stated of the climate of Auckland and Taranaki? 16. What of that of Wellington and Nelson? 17. What of Canterbury, Otago, and Stewart Island? 18. Where are strong winds most frequent? 19. What sometimes occurs at Canterbury? 20. Compare the rainfall in New Zealand with that of Australia. 21. In what parts of the Colony does most rain fall? 22. Do storms often occur? 23. In what part of the Colony are earthquakes sometimes felt? 24. When did the most severe shocks occur? 25. What other phenomenon is sometimes visible?

SECTION XII.

NATURAL HISTORY.

On comparing the *animal life* and *vegetable productions* of New Zealand with those of other countries and climates, we observe that there are a remarkably small number of species which are common also to other parts of the world, and an unusual number which are peculiar to itself. It forms in this respect almost a little world of its own. In the *animal kingdom* there is, moreover, a remarkable scarcity in the number of individuals, as well as in the variety of species, of those classes which are

indigenous to the islands. Among the *Mammalia*, in addition to the human race, the only native species known consist of one variety of the *dog*, one of the *rat*, and two of the *bat*; and the two former of these are now extinct, the English rat, which accompanied the colonists, having exterminated the aboriginal one; and there is some reason to think that the dog was introduced by some very early Spanish navigator. The bats are neither large nor numerous. *Marine Mammalia*, however, exist in the neighbouring ocean in greater variety, and were till lately very numerous; eight varieties of *whale* being known, two of the *dolphin*, and three of the *seal*.

The existing varieties of *birds* also afford but little to interest the observer, being remarkable neither for size, plumage, nor song. Omitting all notice of the smaller tribes, with the exception of the *Tui* or *Parson Bird*, and the *Korimako* or *Bell Bird*, whose rich and varied notes are in some parts frequently heard,—the *land birds* consist chiefly of parrots, pigeons, and a peculiar class of wingless or ground birds. The *parrots* are neither large nor beautiful; but the *Kakapo*, a species of night parrot, is a singular variety: the *pigeons* are particularly fine, but mute: the *wingless or ground birds* are interesting from their peculiar form, as well as from their constituting a characteristic type of New Zealand animal life, as the various marsupial species do of that of Australia. The *Kiwi*, a small specimen of this class, the size of the domestic fowl, is now very scarce, whilst the *Moa* is quite extinct, although perfect skeletons are not unfrequently found, varying from five to the extraordinary height of twelve or fifteen feet, attained by the variety called by naturalists the *Dinornis Maximus*, or *Gigantic Moa*. These probably furnished the staple food of the natives until they were exterminated. The *Weka*, or wood-hen, a smaller bird than the *Kiwi*, is numerous in many parts. *Ducks* and *waterfowl* are found in considerable numbers, and the *Paradise Duck* is a bird of rare size and beauty. Many

of the sea birds of the Pacific, from the majestic *Albatross* to the smaller *Procellariæ*, known as Mother Carey's Chicken, are frequent visitors to the coasts; and a species of Puffin, called the *Mutton Bird*, is cured by the natives in the oil which its own body plentifully produces.

Of *reptiles* no species of a noxious kind has been found; and of others, only a few varieties of the *lizard* are known to exist, most of which are small, although the *Hatteria punctata* sometimes exceeds eighteen inches. No *toads* have been found, and *frogs* are very scarce, and restricted to one or two very limited districts. *Fish* are seldom found in any number in the rivers, with the exception of *eels*, which are numerous and large, *lampreys*, and *Inanga* or whitebait; but the neighbouring seas teem with fish, and a large species of *lobster* is not uncommon upon the coasts. *Insects* are very numerous, and some of them very peculiar. The largest is the *Weta*, which lives in decayed trees, hideous in form, and measuring in extreme length (including its long feelers) as much as fourteen inches. The grub of this insect is eaten by the natives. Another singular insect is the *Vegetating Caterpillar*, from the head of which a parasitical fungus (*Sphaeria Robertsii*) some inches in length grows out, destroying the insect, but retaining its outward form, and presenting the singular appearance of a union of animal with vegetable life. This insect is also eaten by the natives.

A great proportion of the *vegetable kingdom* in New Zealand consists of the cryptogamic or flowerless class of plants, comprehending no less than 130 species of ferns, of which 42 are peculiar to New Zealand. Of these several are *tree ferns* of great size and beauty, such as are characteristic of tropical climates now, as well as of the carboniferous geological period; others are parasites, and add largely to the abundance of the forest vegetation. The *edible fern*, the staple food of the Aborigines after the extermination of the *moa*, covers much of the uncultivated land, like the *Bracken fern* in Europe, and grows

to the height of six feet on fertile soil. The *Ti* or *Cabbage Tree*, and the *Nikau Palm*, both indigenous plants, together with the tree ferns, occasionally exceed 30 feet in height. Shrubs are scarce, and annuals are very seldom met with. Many, however, of the trees and shrubs bear flowers, among which there are some of great beauty, although generally they are neither large nor brilliant.

A common characteristic of the country is found in the *Phormium tenax*, or *New Zealand Flax*, a plant with long sword-like leaves, often 10 feet in length, having a strong fibre extending throughout, which is used by the natives for the manufacture of baskets, mats, cloaks, &c., and by the settlers as a material or substitute for cordage.

Among the forest trees, of which there are more than 100 different species, several varieties of the pine tribe form an important feature, especially the *Kauri* pine, a gigantic tree, occasionally exceeding 15 feet in diameter, and 150 feet in height, which furnishes excellent timber as well as a valuable gum or resin. It is confined, however, to the northern part of the colony, as it does not grow southward of 37° 30'. The other principal varieties of the pine are the *Rimu*, *Totara*, *Kahikatea*, *Matai*, *Miro*, and *Tanekaha*.

The *Rata*, which begins life as a creeper, but ultimately attains the figure and standard of a large tree, the *Puriri*, *Hinau*, *Towhai*, *Maire*, *Kohekohe*, *Rewarewa*, and *Pohutukaua* are other large and common occupants of the forest in the northern and middle parts of the colony; whilst in the south are extensive forests composed almost solely of species of *Fagus* or Beech trees, called Birches by the settlers, on account of their resemblance to the Birch trees of the northern hemisphere.

QUESTIONS FOR EXAMINATION.

1. What peculiarity is observed by the Natural History of New Zealand?
2. Enumerate the various species of Mammalia.
3. Mention the marine Mammalia.
4. Describe the land birds.

5. What was the Moa? 6. What is observed of the waterfowl? 7. What of the sea birds? 8. Describe the Mutton bird. 9. What is said of reptiles? 10. What of the river fish? 11. What of salt-water fish? 12. Describe the Weta. 13. Describe the Vegetating Caterpillar. 14. What class is most abundant in the vegetable kingdom? 15. Describe the ferns. 16. Name some other trees of this class. 17. What is said of flowering plants? 18. Describe the Phormium tenax. 19. Name the principal class of timber trees. 20. Describe the Kauri. 21. Name other varieties of Pine. 22. Describe the Rata. 23. Name other forest trees of the northern parts. 24. What tree constitutes the forests of the south.

SECTION XIII.

THE NATIVE INHABITANTS.

(*Extracted principally from "A Sketch of the Maori races,"*
by Ed. Shortland, 1865.

The *native inhabitants* of New Zealand call themselves *Maori*, and are a dark race, but athletic, brave, and intelligent. Their traditions, as well as language and other national characteristics, indicate that they have immigrated from some common centre among the Polynesian islands, but at successive periods; the earliest migration probably not dating further back than 500 years. These traditions speak of the country in which their ancestors resided by the name of *Hawaiki*, and it is conjectured that this name may either denote Hawaii, the principal island of the Sandwich group, or Savoi, one of the Navigator Islands, both of which names would be pronounced by a Maori as *Hawaiki*.* Whilst the native inhabitants of those islands resemble the Maori in physiognomy, their languages have a close affinity, and their superstitions, customs, and manners possess a general similarity.

* The word *Hawaiki* is however by many supposed to have only a mythical signification and reference.

There appear to have been six successive migrations of the Maori race to New Zealand, which have given rise to as many separate tribes, subdivided into minor tribes and hapus or families, but each retaining as a common tribal designation the name assumed by their ancestors when they first settled in the country; and which, whilst possessing the same national name, language, and general characteristics, are yet so far distinguished in appearance, dialect, and customs as to enable any one of their own race to declare at sight the principal tribe to which any individual Maori may belong. All the original settlements of the Maori were probably made upon the shores of the North Island; the South Island, together with Stewart Island and the islets, being peopled by migration from thence, and by subsequent conquest.

The six principal divisions of the native race consist of—
1st. The *Ngapuhi*, who established themselves in the north, and whose descendants are still numerous about Hokianga Bay. *2nd.* The *Ngatitai*, who settled at first on the shores of the Bay of Plenty, but a large portion of whom migrated northwards to Waitemata, crossed the Auckland isthmus, and finally settled on the west coast, spreading into the interior, and who are now generally known as the powerful Waikato tribe. *3rd.* The *Arawa*, who settled also in the Bay of Plenty, and spread through the lake districts as far as Taupo and the Whanganui river, forming one of the most numerous tribes in the island. *4th.* The *Ngatiawa*, who, after settling in the Bay of Plenty between the Ngatitai and the Arawa, spread eastwards and westwards, and from whom the Urewera, in the interior, are descended. *5th.* The *Te Atiawa*, who settled in the neighbourhood of Taranaki, but were afterwards driven southward towards Cook Strait. And *6th.* The *Whanganui*, who occupied the country about the river of that name, and one branch of which tribe was called the *Ngatimamoe*.

The first important migration of the Maori race to the

South Island which is recorded in their traditions was that of the *Ngatimamoe* branch of the Whanganui tribe, who took possession of all the country to the south of Waipapa Point, at the mouth of the River Clarence, whilst the northern part of the island was held by several different bodies who had migrated from various northern tribes. The fame, however, of the *Pounamu* greenstone or jade, which was found upon the western coast of this island, stimulated large bodies of the Ngatikahuhunu, the powerful southern branch of the Arawa, to make war upon the Ngatimamoe, whom they defeated and dispossessed of their territory. Subsequently, also, the renowned chief, *Te Rauparaha*, with an army composed of various septs of the northern tribes, over-ran the southern shores of Cook Strait, destroying most of the inhabitants, and carried his arms against the Ngatikahuhunu. The present natives inhabiting the South Island consist, in the southern parts, of the descendants of the Ngatikahuhunu, and of the tribes conquered by them; and in the northern parts, of the descendants of the various tribes congregated under the banner of *Te Rauparaha*.

The Maori race belong to that branch of the Polynesian Islanders which are of *Malay* or Indian origin, having a brown or copper-coloured skin, black hair (sometimes sandy), straight, wavy, or curling, and a well formed nose, sometimes aquiline; but occasional traces are visible among them of the Negro or Papuan element, in a darker skin, black crisp hair, and nose and lips of the flat, thick, negro cast. Their *language* is a dialect of the Polynesian, and intelligible to most of the Polynesian Islanders. It is of simple construction, with a limited alphabet and vocabulary, the only sounds employed being the five vowel sounds, the three mutes *k*, *p*, and *t*, the liquids *m*, *n*, *r*, the nasal *ng*, the aspirate *h*, a peculiar sound resembling that of *w* or *wh*, with occasionally an imperfect *s*. Their present number does not exceed 40,000,

and they are nearly all in the North Islands, and a very large proportion in the Auckland province.*

QUESTIONS FOR EXAMINATION.

1. Describe the native inhabitants. 2. Whence are they supposed to have come? 3. In how many successive migrations? 4. What is the number of principal tribes? 5. In what order were the islands peopled? 6. Name the 1st division, and state where they are settled. 7. The 2nd division. 8. The 3rd division. 9. The 4th division. 10. The 5th division. 11. The 6th division. 12. What tribe first migrated to the South Island? 13. What part did they occupy? 14. What drew others thither? 15. Which were victorious? 16. What chief afterwards overran the island? 17. Of what tribes are the present natives in that island principally composed? 18. To what class of the human race do the Maoris belong? 19. Describe their physiognomy. 20. Describe their language. 21. What is their present numbers? How are they distributed?

SECTION XIV.

POLITICAL HISTORY.

The settlement of New Zealand as a *British Colony* was mainly brought about by an English association, incorporated by charter from the British crown, and styled

* The most populous tribes and sub-tribes now are the *Ngapuhi*, with the *Rarewa* and *Ngatiwhatua*, north of Auckland, numbering about 7,500; the *Waikato*, with the *Ngatimaniapoto*, *Ngatipaoa*, and *Ngatitai*, in the Waikato and Thames valleys, and on the adjoining coasts, numbering about 12,000; the *Ngatiawa*, with the *Ngatitao*, *Ngatiapa*, *Muapoko*, and *Rangitane*, on the Bay of Plenty, and different parts of the south-west coast, from the *Mokau* River to *Cape Palliser*, numbering about 4,000; the *Arawa*, with the *Ngatipouri*, *Ngatikahuhunu*, and *Te Whakatohea*, extending along all the south-east coast, from *Cape Runaway* to *Cape Palliser*, numbering about 7,500; the *Whanganui*, with the *Ngatihau*, *Ngatiraukawa*, *Ngatituwharetoa*, and other central tribes on the *Whanganui* River and in the *Taupo* Country, numbering about 5,000; the *Taranaki*, with the *Ngatiruanui*, on the coast north and south of *Cape Egmont*, numbering about 1,500; the *Urewera*, a fierce and warlike tribe, occupying the interior on the north-eastern side of the island, but whose numbers are not accurately known.

the *New Zealand Company*. In the years 1840, 1841, it established the settlements of Wellington, Nelson, and New Plymouth: Wellington, on the shores of Port Nicholson, at the southern extremity of the North Island; New Plymouth, upon its western coast, near Mount Egmont or Taranaki; and Nelson, at the bottom of Blind Bay, now called Tasman Bay, on the north shore of the South Island.

The British Government about the same time appointed CAPTAIN HOBSON, R.N., as "Consul to and eventual *Lieutenant-Governor* of the colony of New Zealand," which was then described as "lying between the 34th degree 30 minutes north to the 47th degree 10 minutes south latitude, and the 166th degree 5 minutes to the 179th degree of east longitude, reckoning from the meridian of Greenwich."

By the treaty of *Waitangi* (a native settlement in the Bay of Islands), entered into by CAPTAIN HOBSON on behalf of the British crown with the native chiefs, all sovereign rights were surrendered by the latter, and the supremacy of Great Britain formally proclaimed; after which CAPTAIN HOBSON entered upon his duties as Lieutenant-Governor under the Governor of New South Wales, and selected a site for the capital of the Colony upon the isthmus named from the *City of Auckland*, to which he gave that name.

The Colony continued as a dependency of New South Wales for about a year, but at the close of 1840 it was erected into a separate colony, under an independent Governor; and in 1842 letters-patent were issued from the Crown, extending the boundaries of the Colony so as to include all lands "lying between 33 and 53 degrees of south latitude and between 162 degrees of east longitude, reckoning from the meridian of Greenwich, and 173 degrees of west longitude, reckoning from the same meridian," which extension has been since confirmed by Act of Parliament in 1863.

Governor Hobson died at Auckland in 1842, and was succeeded by CAPTAIN FITZROY, R.N., subsequently Rear-Admiral and Director of the Meteorological Department of the Board of Trade, who was recalled in 1845, when CAPTAIN GREY (now Sir George Grey), Governor of South Australia, was appointed in his place.

In 1846, the Queen, under authority of an Act of Parliament, granted a *Charter* conferring representative institutions upon New Zealand, which was for that purpose divided into two provinces,—each to have a Lieutenant-Governor, a House of Representatives, and a Legislative Council, and the whole Colony to have a Governor-in-Chief and a House of Representatives. This charter was however suspended by Act of Parliament for five years, and no change took place in the government of the Colony before 1852, beyond the appointment of Lieutenant-Governor Eyre (afterwards Governor of Jamaica) as Lieutenant-Governor of the Cook Strait Settlements, which office he held until 1852.

In 1847, an association of the Scotch Free Kirk, in connection with the New Zealand Company, founded the settlement of *Otago* in the south-east of the South Island; and in 1848 the *Canterbury Settlement* was in like manner founded by the Canterbury Church of England Association, in the central division of that island.

In 1850, the New Zealand Company, being unable to carry out its designs for the colonization of the country, surrendered its charter to the British crown.

The form of government established in the Colony previous to 1852, consisted of a Governor and Commander-in-Chief, with an Executive Council formed by three public officers appointed by the Governor, and a Legislative Council, comprising the same three officers and the three senior Justices of the Peace. The "*New Zealand Constitution Act*," passed by the British Parliament in 1852, conferred upon the Colony the privileges of Representative Government under a Governor-in-Chief; and provided for

the establishment of a *General Assembly*, to consist of two Houses of Parliament,—an Upper House, called the Legislative Council, consisting of members appointed by the Governor for life ; and a Lower House, called the House of Representatives, consisting of members elected by the people for a term of five years. This Act also constituted the *provinces* of *Auckland*, *New Plymouth* (now Taranaki), *Wellington*, *Canterbury*, and *Otago*, and provided for the establishment of a *Provincial Government* in each, to consist of a Superintendent and Provincial Council, both elected for four years.

In the year 1858, an Act was passed by the General Assembly of New Zealand, changing the name of the province of New Plymouth to that of Taranaki, as well as an Act providing for the creation of new provinces in New Zealand, which led to the immediate separation of *Hawke Bay Province* from that of Wellington, of which it previously formed a part ; and in 1859 the *Province of Marlborough* was in like manner separated from that of Nelson, of which it had constituted the north-eastern portion. In 1861, also, the *Province of Southland* was constituted at the south of the South Island, being taken out of the province of Otago. In 1863, an Act was passed by which Stewart Island was annexed to the Province of Southland ; and in 1867, another Act by which the western portion of the Canterbury Province was formed into the *County of Westland*, with a separate local government.

The seat of government remained at Auckland, where it was established by Governor Hobson, until 1864, when it was removed by the colonial legislature to the City of Wellington, which is now the *Capital* of the Colony.

Sir George Grey, after having governed the Colony for eight years, was transferred in 1854 to the Governorship of Cape Colony, and was succeeded in New Zealand by *Captain Gore Browne*, previously Governor of St. Helena. In 1861, however, Governor Browne being appointed to the government of Tasmania, Sir George Grey again became

Governor of New Zealand, but was succeeded in 1868 by *Sir George Ferguson Bowen*, who was previously Governor of Queensland in Australia.

QUESTIONS FOR EXAMINATION.

1. How was the colonization of New Zealand commenced?
2. What settlements were established in 1840 and 1841?
3. Where were they situated?
4. What further took place about the same time?
5. What change occurred in 1840?
6. When were the territories of the Colony extended, and how far?
7. Who succeeded Governor Hobson?
8. Who was appointed in 1845?
9. What settlement was established in 1847?
10. What settlement in 1848?
11. What occurred in 1850?
12. What was the form of government previous to 1852?
13. What occurred in 1852?
14. What were the principal provisions of the New Zealand Constitution Act?
15. What Acts were passed in 1858?
16. When was Hawke Bay Province created?
17. When was Marlborough?
18. When was Southland?
19. When was Stewart Island annexed to the province of Southland?
20. When was the County of Westland formed?
21. When was the seat of government removed to Wellington?
22. What change in the government of the Colony took place in 1854?
23. What in 1861?
24. What in 1868?

SECTION XV.

STATISTICS.

The Colony of New Zealand extends from the 33rd to the 53rd degree of south latitude, and from the 162nd degree of east to the 173rd degree of west longitude, and comprises twelve principal divisions.

1st. *The Province of Auckland*, occupying the northern portion of the North Island. *Area*,—about 17,000,000 acres. *Population*,—British, about 50,000; Native, about 25,000. *Principal towns*,—City of Auckland, 11,000; Parnell, 3,500; Newton, 3,500; Onehunga, 2,000; Shortland, 1,000 (?); Otahuhu, 500; Howick, 500.

2nd. *The Province of Wellington*, occupying most of the southern portion of the North Island. *Area*,—about

7,000,000 acres. *Population*,—British, about 22,000 ; Native, about 4,000. *Principal towns*,—City of Wellington, 7,500 ; Whanganui, 2,000.

3rd. The Province of Hawke Bay, on the east side of the North Island. *Area*,—about 3,000,000 acres. *Population*,—British, about 5,000 ; Native, about 3,000. *Principal town*,—Napier, 2,000.

4th. The Province of Taranaki, on the west side of the North Island. *Area*,—about 2,500,000 acres. *Population*,—British, about 4,500 ; Native, about 3,000. *Principal town*,—New Plymouth, 2,000.

5th. The Province of Nelson, occupying the north-west portion of the South Island. *Area*,—about 7,000,000 acres. *Population*,—British, about 24,000. *Principal towns*,—City of Nelson, 5,500 ; Westport, 1,500 ; Cobden, 750 ; Charleston, 2,000 ; Brighton, 1,250.

6th. The Province of Marlborough, on the north-east of the South Island. *Area*,—about 2,500,000 acres. *Population*,—British, about 4,500. *Principal towns*,—Blenheim, 500 ; Picton, 500.

7th. The Province of Canterbury, occupying the eastern portion of the central division of the South Island. *Area*,—about 8,500,000 acres. *Population*,—British, about 35,000. *Principal towns*,—City of Christchurch, 6,500 ; Lyttelton, 2,500 ; Kaiapoi, 750 ; Rangiora, 1,000 ; Timaru, 1,000.

8th. The County of Westland, occupying the western portion of the central division of the South Island. *Area*,—about 3,000,000 acres. *Population*,—British, about 15,500. *Principal towns*,—Hokitika, 5,000 ; Grey-mouth, 1,500.

9th. The Province of Otago, occupying most of the southern portion of the South Island. *Area*,—about 14,000,000 acres. *Population*,—British, about 48,500. *Principal towns*,—City of Dunedin, 13,000 ; Port Chalmers, 1,500 ; Oamaru, 1,500.

10th. *The Province of Southland*, occupying the remaining portion of the southern division of the South Island, together with Stewart Island. *Area*,—about 3,000,000 acres. *Population*,—British, about 8,000. *Principal town*,—Invercargill, 2,000.

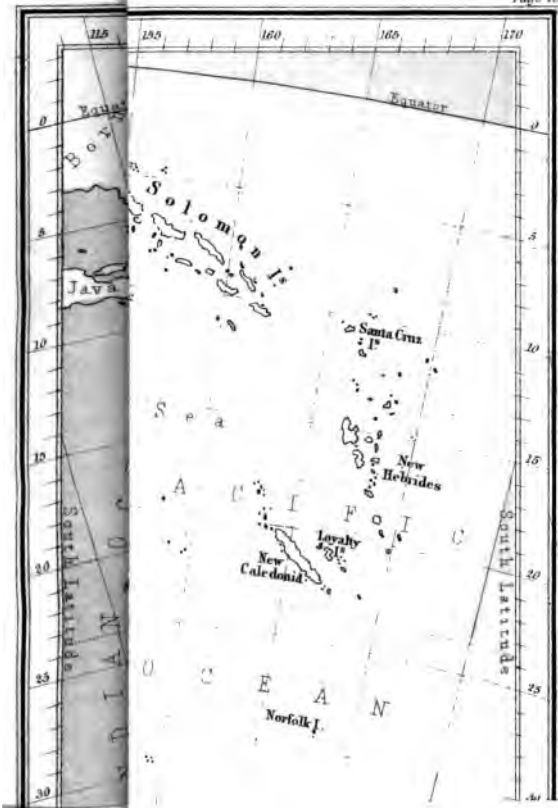
11th. *The Chatham Islands*. *Area*,—about 300,000 acres. *Population*,—British, about 150; Native, about 450.

12th. *The Uninhabited Islands*,—Auckland Isles, Campbell Island, Bounty and Antipodes Islets. *Area*,—about 300,000 acres.

The *area* of the entire Colony of New Zealand is about 100,000 square miles, and its entire *British Population* (as returned by the census of 1867), 220,000. The *Native Population* is estimated at 40,000. The imports for the year 1867 amounted to the value of £5,344,607, and the exports to £4,644,678.

QUESTIONS FOR EXAMINATION.

1. State the extent of the New Zealand Colony.
2. How many principal divisions does it comprise?
3. Where is the Auckland Province?
4. State its area and population.
5. Name its principal towns.
6. Where is the Province of Wellington?
7. State its area and population.
8. Name its principal towns.
9. Where is Hawke Bay Province?
10. Give its area, population, and chief town.
11. Where is the Taranaki Province?
12. Give its area, population, and chief town.
13. Where is the Nelson Province?
14. State its area and population.
15. Name its principal towns.
16. Where is the Marlborough Province?
17. Give its area, population, and chief town.
18. Where is the Canterbury Province?
19. State its area and population.
20. Name its principal towns.
21. Where is the County of Westland?
22. Give its area, population, and principal towns.
23. Where is the Otago Province?
24. State its area and population.
25. Name its principal towns.
26. Where is Southland Province?
27. Give its area, population, and chief town.
28. Give the area and population of the Chatham Islands.
29. Give the names and area of the uninhabited islands.
30. What is the land area of the whole Colony?
31. What the British population?
32. What the Native population?
33. What is the annual value of the exports?
34. What of the imports?





SECTION XVI.

A U S T R A L A S I A .

New Zealand forms a part of that extensive and important division of the world's surface situated in the South Pacific Ocean, and called *Australasia*, which consists of the large island or continent of *Australia*, with the island of *Tasmania* immediately to the south, and a belt of islands and island groups encircling it on its northern and eastern sides.

The most northerly island of this belt, which is included within the Australasian division, is the large island called *Papua*, or *New Guinea*, and the most southerly portion is the *New Zealand group*.

The other most considerable islands and groups, commencing with Papua, are the *Admiralty Islands*, *New Britain*, *New Ireland*, the *Salomon Islands*, the *Louisiade Archipelago*, the *Santa Cruz group*, the *New Hebrides*, the *Loyalty Islands*, and *New Caledonia*.

Of these islands Australia, Tasmania, New Zealand, and the small Norfolk Island, lying between New Zealand and New Caledonia, and attached to the government of New South Wales, form portions of the British Empire, whilst New Caledonia belongs to the French. The remaining islands are still in the possession of native tribes, some of whom are Malay, but the greater part are negro races.

Australia is a very large and important country, not much inferior in size to Europe. It possesses a healthy climate, fertile soil, and valuable minerals.

As the northern extremity of Australia stretches to within eleven degrees of the equator, its climate and temperature are very various in different parts of its continent. The temperature in the north is tropical, and

that in the southern parts, where most of the British colonies are situated, is similar to that of the southern countries of Europe. It suffers, however, occasionally from a dry, hot wind (the Australian sirocco), blowing from the interior during the extreme heats of summer.

It comprises five British Colonies,—*New South Wales*, the oldest settlement, occupying the central portion of its eastern division; above this, *Queensland*, extending to the northern coast, and containing extensive tracts of fertile land, adapted for the cultivation of tobacco, cotton, and sugar cane; and below it, *Victoria*, the El Dorado of the East, with the smallest extent of territory, but the largest population, of any of the Australian colonies. *South Australia* occupies the southern portion of the central division, the northern part of which, named *Alexandra Land*, is still uncolonized, though several attempts at settlement have been made, and a site for a town called *Palmerston* lately selected on the northern coast.

The remaining portion of the country is called *Western Australia*, and though possessing a territory equal to one third of the whole island, contains at present a very limited population.

The greater portion of the interior of Australia remains still unexplored, and is sparsely inhabited by a black race called the Australian Negroes. The colonial settlements seldom extend beyond 200 miles from the coast.

The principal cities and towns are—in *New South Wales*, *Sydney*, *Paramatta*, *Liverpool*, *Campbelltown*, *Goulburn*, *Newcastle*, and *Maitland*, near the coast, with *Windsor* and *Bathurst* in the interior; in *Victoria*—*Melbourne*, *Williamstown*, *Belfast*, *Alberton*, *Geelong*, and *Portland* on the coast, with *Ballarat* and *Castlemaine* in the interior; in *Queensland*—*Brisbane*, *Ipswich*, and *Maryborough*; in *South Australia*—*Adelaide*, *Port Adelaide*, *Glenelg*, *Macclesfield*, *Kooringa*, *Gawler*, *Hansdorf*, *Port Lincoln*, and *Kingscote*; and in *Western Australia*—*Perth*, *Fremantle*, *Guilford*, *York*, and *Albany*.

Tasmania is a large island, immediately to the south of Australia, and only separated from it by Bass Strait. It is nearly as large as the North Island of New Zealand, and contains a flourishing British Colony. Its chief towns are *Hobart Town*, Launceston, George Town, Port Arthur, Campbell Town, Oatlands, Green Pond, and Richmond.

Papua, or *New Guinea*, is one of the largest islands in the world after Australia. It has a tropical climate, and very fertile soil, but its inhabitants are uncivilized and very barbarous. They belong mostly to the Papuan race, which also inhabits the other islands of the belt, with the exception of New Zealand, and, from their resemblance to the black tribes of interior Africa, are called Negroes, but are more savage and less intelligent than the African Negroes.

New Caledonia is a large island, 200 miles long and 26 miles in breadth, and is traversed throughout its length by a mountain range. It belongs to the French, who have established a permanent settlement upon its coasts.

QUESTIONS FOR EXAMINATION.

1. Of what large division does New Zealand form a part?
2. What does that division consist of?
3. Name the extreme northern and southern islands of the belt?
4. Name the other most considerable islands and groups.
5. Which of the Australian islands belong to the British Empire?
6. To whom does New Caledonia belong?
7. Who possess the other islands?
8. Describe Australia.
9. Describe its climate and temperature.
10. From what wind does it peculiarly suffer?
11. How many British Colonies does it contain?
12. Describe the position of each.
13. What is known of the interior?
14. Name the principal towns of New South Wales.
15. Name those of Victoria.
16. Name those of Queensland.
17. Name those of South Australia.
18. Name those of Western Australia.
19. Describe Tasmania.
20. Name its chief towns.
21. Describe Papua.
22. By what race is it inhabited?
23. Describe New Caledonia.

PART II.

GEOGRAPHICAL DESCRIPTION

OF THE

PROVINCES OF NEW ZEALAND.

INTRODUCTORY CHAPTER
ON THE
GEOLOGICAL STRUCTURE
OF
NEW ZEALAND.

(COMMUNICATED BY JAMES HECTOR, Esq., M.D., F.R.S.)

THE geological structure of New Zealand is very complicated; the principal formations which have been distinguished in other parts of the world being represented among the rocks which occur in these islands.

A large proportion of the surface is occupied by mountain ranges, extending generally in the direction of the length of the island, those composed of granitic and schistose rocks being principally confined to the south-west district; while highly inclined and altered sedimentary rocks, belonging to the palæozoic and lower mesozoic formations, occur in the northern district.

Surrounding these mountains, and occupying valleys which radiate from them, are horizontal and comparatively undisturbed sedimentary formations, belonging to the upper mesozoic and tertiary periods.

And lastly, certain areas, most extensive in the North

Island, are occupied by volcanic rocks, the eruption of which commenced with the middle tertiary period, and was continued almost to recent times. Intrusive, igneous, and plutonic rocks, marking the period when the older formations were upheaved to form the mountain masses, are also exposed at the surface, and give rise to peculiar features, in certain limited districts characterised by the presence of metalliferous veins.

In describing the above formations we must consider,—*first*, the granitic rocks, in which group is included a variety of crystalline rocks, such as granite, gneiss, and porphyry, characterized by extreme hardness, and power of resisting mechanical degradation.

On the west coast of Otago these rocks form massive mountains, having an altitude of from 6,000 to 7,000 feet, containing profound valleys which afford the most impressive scenery in New Zealand. The valleys which open to the western side of the great mountain-chain are occupied by fiords or sounds, remarkable for their great depth and precipitous sides; while those valleys on the east or interior side of the range are occupied in a similar manner by the ramifying arms of great fresh-water lakes, the depth of which is generally found to exceed the altitude of the surface of the lake above the sea-level.

This district is the most ancient part of New Zealand, the crystalline rocks of which it is composed having received their present mineral structure when buried at a great depth in the earth's crust, and being afterwards exposed at the surface by the denudation of an enormous thickness of overlying formations, as they were gradually upheaved to the position which they at present occupy with respect to the level of the ocean.

Granitic rocks also occupy the greater part of Stewart Island, and occur at intervals along the west coast as far north as Cook Strait, but are wholly wanting in the North Island.

Secondly :—Schistose rocks, in which the same minerals occur as in granite, and which are arranged in very distinct layers, presenting a soft and yielding structure, occupy a very large area in the central and eastern districts of the Otago Province, and extend as a narrow strip northwards along the western slope of the South Island, lying in contact with, and to the eastward of, the crystalline rocks. It is from this formation that a large proportion of the gold found in New Zealand is supposed to be derived.

Thirdly :—Overlying the schistose rocks, and rising as highly inclined strata to form the highest mountain peaks which occur in these islands, is a vast thickness of slates, shales, and sandstones, principally of palæozoic age, as proved by the fossils of Silurian, Devonian, and Carboniferous age, which they have been found to contain in a few localities. In the North Island these are the oldest rocks which have been found in the mountain ranges, neither the schistose nor crystalline rocks reaching the surface. Sandstones, shales, and limestones, equally disturbed with the foregoing, but containing fossils which have referred to the Triassic period, are also found in several localities to form parts of the mountain chains.

The principal development of this group of rocks is found in that portion of the Southern Alps which culminates in Mount Cook, and may be considered as extending from the north-east part of the Province of Otago, where they are represented by the Kakanui Mountains, in a

curved direction to Cook Strait, terminating in the rugged district between Blind Bay and the Wairau Valley. The newer portion of the series is found largely represented in the north part of the province of Southland, where it forms the Takatimo, and Dome and Eyre mountains. The same formation occupies the district west of the Wakatipu Lake, forming a narrow band intervening between the schistose and crystalline rocks. On the eastward slope of the New Zealand Alps, this newer slate series forms subordinate ranges, skirting the great Canterbury Plains, and reaching their greatest altitude in the Kaikorai Mountains. In the North Island the older rocks are found principally in the eastern districts, forming the Rimutaka, Tararua, Ruahine, Kaimanawha, and Kaingaroa ranges, which are all portions of that great geological range or axis. Parallel to these ranges, but farther to the north-west, are a succession of ridges, each formed by an axis of the older rocks, terminating in Capes Colville, Brett, Karakara, and North Cape. And, lastly, an axis occurs, dividing the volcanic district of the Waikato from the west coast, which extends as far south as between the Waikato and the Mokau Rivers.

These ridges are composed partly of old, partly of newer portions of the series, the latter predominating.

The above-mentioned rocks in all parts of New Zealand constitute the framework of the country, on which the newer and less disturbed formations rest, indicating that a break in the geological series must have taken place at the close of the Triassic period on this part of the earth's surface.

The newer formations which are represented in New

Zealand since that period may be enumerated as follows:— At Kawhia, on the western coast of the North Island, and at various places in the South Island, both on the east and west coasts, there occur patches of greensands and clays, containing fossils belonging to the Jurassic period, and resting on strata containing small seams of coal and impressions of vegetation.

Secondly:—A group of strata, consisting at the base of sandstones and shales,—associated with thick and valuable coal-seams, overlaid by *Septaria* clays abounding with iron, which again pass into calcareous marls and pure limestones,—constitutes a formation, the fossils in which are partly mesozoic and partly tertiary; in their character corresponding to the formations in the northern hemisphere which occur between the Wealden and the close of the Eocene period.

The coal formations on the Buller and Grey rivers, on the western coast of the South Island, and the south of Otago, also on the Waikato, and rivers at the Bay of Islands, belong to this series of strata; and indications exist of its occurrence in many other parts of the island.

Thirdly:—In almost every part of New Zealand depressions in the framework rocks which have already been described are occupied by sands and clays of fluviatile and sometimes estuarine origin, containing seams of brown coal of very considerable thickness and value. In the interior districts of the South Island this brown coal formation is covered directly by great deposits of rolled alluvium; but round the seaboard, and especially on the eastern coast of the South Island, and on the west coast of the North Island, the succeeding formation comprises a series of limestones and sandstones, abounding in fossils

belonging to the Miocene period, constituting what is termed the Ototara or Waingaroa series, from localities where they have been particularly described.

A still newer tertiary formation, only slightly developed in the South Island as the Awatere series, but occupying more than a fourth of the area of the North Island, where it is known as the Hawke Bay and Whanganui series, represents in New Zealand the formations belonging to the Pliocene period.

Fourthly:—Post-tertiary sands and gravels, forming terraces along the courses of the rivers, and fringing the coast. Occasionally these gravels cover ancient forests, which in some cases are shown by sections on the sea coast to be submerged below the present sea level.

Associated with these are the remains of the M^oa, and other gigantic birds of New Zealand, which did not exist in the country previous to the period during which these formations were deposited, and the bones of which are found mixed in the latest beds with works of human art.

The igneous rocks of New Zealand belong to three distinct groups.

First:—Those which are termed plutonic, and which were injected among the strata when deeply buried in the earth's crust,—comprising Sienites, Diorites, and Felstones, with many subordinate varieties of these rocks, distinguished by their chemical composition,—are found principally along the west coast of the South Island; and especially in what is termed the mineral belt, the best known development of which occurs at the Dan Mountain, in the vicinity of Nelson, where indications of a great *variety* of metalliferous ores and other minerals of

interest and value have been discovered. The rocks of this series have been exposed along the eastern base of the mountains, and especially on the Kaikorai ranges, and in the North Island at several localities, of which Colville Peninsula and the Great Barrier Island are best known, from their having yielded a considerable quantity of valuable minerals and ores.

Secondly:—The volcanic rocks proper are divided into two groups, namely:—

(a.) The doleritic series, which in several instances, such as the Otago and Banks Peninsulas, appear to have been the result of submarine volcanic eruptions.

(b.) The newer volcanic formations, consisting of basalt, trachytic lava, obsidian, pumice, &c., the products of eruptions from cones with opened and unopened tops, and distinct lava streams. This series is extensively developed in the North Island, where are two active volcanoes, Tongariro, 6,500 feet high, and Whakari, or White Island, 863 feet, with numerous extinct volcanoes,—among them the highest peak of North Island, Ruapehu, capped with perpetual snow, being about 10,000 feet high.

Near Mount Tongariro, and around Lake Taupo, are numerous hot springs, boiling mud-pools, solfataras, and fumaroles; with deposits of silicious incrustations, alum, gypsum, and sulphur.

Besides this district, termed the Taupo zone, there are several others in the North Island belonging to this formation. The Taranaki District, with Mount Egmont (8270 feet), an extinct trachytic volcano;—Auckland zone, of basaltic lava formation, upon the Isthmus of Auckland, with 63 points of eruption, all extinct;—Bay of Islands zone, between Hokianga Harbour and Bay of Islands,

basaltic lava formation, as on the Isthmus of Auckland ; and a number of small extinct cinder-cones, from which basaltic lava streams have issued.

Upon the South Island :—Basaltic and doleritic cones, with lava streams, at the eastern foot of the Southern Alps, among the Malvern Hills—province of Canterbury. Palagonite tuff at the foot of Mount Somers. Portions of the volcanic system of Banks Peninsula, for example, the basalt eruptions of Quail Island.

Like all islands in the south seas, New Zealand is occasionally visited by earthquakes, but there is no proof that they are of local origin, it being more probable that they are merely shocks produced by more or less distant eruptions in the bed of the Pacific Ocean ; and manifested indirectly by encountering fractured and dislocated portions of the earth's crust, where the more deep-seated strata have been thrust to the surface.



Taranga, Great Barrier, Little Barrier, Selwyn, Broken, Kawau, Rangitoto, Rakino, Waiheke, Ponui, Cuvier, Great Mercury, Red Mercury, Kawitihu, Korapuki, Aldermen, Shoe, Mayor, Motiti, Whale and White Island, or Whakaari.

MOUNTAINS. *Ranges*,—Kai Manawha, Te Whaiti, Coromandel, Wairoa, Pateroa, Pakaroa.

PEAKS. Maungataniwha, 2,150 feet; Mangonui, 2,046; Edgumbe, 2,575; Hardy, 3,700; Ikurangi, 5,535; Karehoe, 2,370; Pironghia, 2,800; Whariorino, 2,074; Rangitoto, 2,600; Tahataakiri, 3,500; Pihanga, 3,200; Kakaramea, 2,900; Kuharua, 2,800; Karangahape, 2,200; Tauhara, 3,000.

PLAINS. Upper and Lower Waikato basins, Thames Valley, Auckland district, Albertland, Kaingaroa, Patetere and Taupo plateaux.

LAKES. Taupo, Tarawera, Rotomahana, Rotorua, Rotoiti, Waikari, Wangape, Wahi.

RIVERS. Mokau, Waikato with its tributary Waipa, Wairoa, Piako with its tributary Waitoa, Waiho or Thames, Whakatane, and Waikari.

STATISTICS.

Area,—17,000,000 acres.

Population of Province (British) 48,321

 " " (Native) 25,000

Total 73,321

Population of City of Auckland..... 11,153

 " Parnell 3,226

 " Newton 3,227

 " Onehunga 2,177

 " Shortland 1,000?

 " Howick 640

 " Otahuhu 552

THE PROVINCE OF AUCKLAND.

The Province of Auckland contains that portion of the North Island of New Zealand in which British colonists first effected a settlement, the missionaries and their followers having obtained possession of tracts of country in the neighbourhood of the Bay of Islands as early as the year 1820.

The City of Auckland, situated on the Waitemata Harbour, on the eastern coast, became the seat of government and military capital of the colony in the year 1840, being named by the first governor, Captain Hobson, in honour of Lord Auckland. But the boundaries of the province were first defined—together with those of the provinces of New Plymouth, Wellington, Nelson, Canterbury, and Otago—under the New Zealand Constitution Act, in the year 1852, when a representative political constitution was bestowed upon the colony by the British Parliament, and the entire territory was divided into six provinces.

The Province of Auckland occupies about one half of the northern island, including all that lies north of the three provinces of Wellington, Taranaki, and Hawke Bay, and is separated from Wellington and Hawke Bay by the 39th parallel of latitude, and from Taranaki by the Mokau River and by that portion of the Whanganui which is north of the 39th parallel of latitude.

This tract of country is nearly severed about the middle of its length into two very unequal portions, by the near approach of the Waitemata Harbour on the east, and the Manukau Harbour on the west, the inner waters of which harbours leave only a narrow strip of land, called "The Isthmus of Auckland," between them, which in some places is less than half a mile in width, and sufficiently low for the easy portage and transhipment of goods from one of these harbours to the other, and which was frequently used by the natives for the more rapid transfer of their canoes from one coast of the island to the other.

For the purpose of geographical description, this province may be conveniently divided into four principal portions:—1. The long and narrow peninsula to the north of the Isthmus of Auckland. 2. The Isthmus of Auckland, with the country immediately to the south, as far as the mouths or estuaries of the two large rivers Waikato on the western coast, and Waiho or Thames on the eastern. 3. The basins of the Waikato and Thames rivers, together with the Coromandel Peninsula, a projection commencing on the eastern side of the Thames estuary, and stretching parallel with the large peninsula already mentioned towards the north, but not so long; and also a tract known as the Lake District, lying to the east of the Thames Valley, and bounded itself on the east by the Kaimanawha and Te Whaiti ranges. 4. The country to the east of these ranges. Each of these portions will be briefly described, but we will first make a hasty survey of the entire coast-line of the province.

Commencing from the mouth of the river Mokau, its south-western boundary, which empties itself into the North Taranaki Bight, and directing our course towards the north, we observe about half way to Kawhia harbour a bold promontory called Te Rua Point, 400 feet in height. On approaching Kawhia Bay, in which are situated the two harbours of Kawhia and Aotea, Albatross Point, the southern headland of that bay, stretches out a long distance into the sea. Passing these harbours, and rounding Waipapa Point at the foot of Mount Karehoe, an extinct crater, 2,372 feet in height, we reach the harbour of Whaingaroa, with the town of Raglan on its southern shore; and pursuing our course northwards for the most part along a hilly coast, consisting of sandstone cliffs of moderate height, a straight reach of some 30 miles brings us to the Waikato Heads, where is a town and port at which vessels can anchor within half a cable's length of the beach.

After another similar but shorter reach, we arrive at

the Manukau Harbour, the entrance to which is narrow, but the harbour itself occupies a very considerable area, generally shallow, but with deep channels, upon one of which the town of Onehunga is built. From Manukau our course lies along a sandy beach until we reach Kaipara Harbour, which is bordered by fine forests of Kauri pine. There is no other break in the coast until we reach the entrance to Hokianga Harbour, but Mount Mangonui is visible on the coast; and shortly after passing this we reach Reef Point, the southern headland of Ahaipara Bay, which is a bold projecting promontory, affording considerable shelter to vessels, although no harbour exists upon this part of the coast. The distance from this point to Cape Maria Van Diemen, the north-western cape of the Island, is about 60 miles. The twin cape to Maria Van Diemen, a little more to the north, is Cape Reinga, the native name for the nether regions, or place of departed spirits, who were supposed by the natives to plunge from this cliff into the boiling surge below. About 40 miles to the north-west of Cape Maria Van Diemen are three rocky islets called the 'Three Kings' Islands, which are the most northerly land of the colony.

North Cape is situated at the eastern extremity of the short north coast, which does not exceed 30 miles in length. From North Cape our course is towards the south-east until we reach Cape Brett, and we pass in succession the harbours of Parengarenga, Rangaounou, Doubtless Harbour, Whangaroa, and the Bay of Islands. About midway in this course is the promontory of Cape Kara-kara, and about halfway between Cape Kara-kara and Cape Brett, are the Cavalli Islands, near the coast; whilst on the mainland may be seen the mountain Maungataniwha, upwards of 2000 feet in height. From Cape Brett our course is nearly south, and we pass Whangarei Harbour, in the northern corner of Bream Bay; of which bay the northern and southern head-lands are named respectively Bream Head and Bream Tail, and to the

south of which is the Maugawai harbour and settlement. Leaving the islets called the Poor Knights on our left, and passing through a little archipelago of islands, our course takes us between Little Barrier Island and Cape Rodney, and we enter the Hauraki Gulf. Near the coast, at some little distance further south, lies the isle of Kawau, the property and favourite retreat of the late Governor of New Zealand, Sir George Grey.

A little further south is the singular peninsula or promontory of Whangaparaoa; and yet further south, at the entrance to the Waitemata harbour, the volcanic isle of Rangitoto, the first of a chain of islands extending as far as the entrance to the Frith of Thames, the largest of which is named Waiheke, and the last of the series Ponui. At the bottom of the Frith of Thames we find the mouths of two rivers, the Waitoa and Thames, near which are rich gold-fields; and then changing the direction of our course towards the north, we coast along the Coromandel Peninsula,—pass Shortland, a large though lately founded gold-field town, to the north of which also is Tapu, another offspring of the gold-fields, situated about half way to Coromandel harbour, where much fine Kauri timber still exists,—and bending round between Great Barrier Island and Cape Colville, we arrive at Mercury Island, so called by Captain Cook because of the observations there taken of the transit of the planet Mercury across the sun,—which expected event, together with that of a transit of Venus, led indirectly to Cook's visit to the New Zealand Islands.

Then we again turn to the south, pass Mercury Bay, and entering the Bay of Plenty, leave the Aldermen islets and Mayor's Island on our left, and reach Tauranga Harbour;—the two last-named harbours being the last capacious harbours which we shall find upon this eastern side of the island. From hence our course is south, until having passed the island of Motiti and Whale Island, we arrive at the mouth of the river Whakatane, not far from

which is Opotiki, rendered sadly memorable by the cruel murder of the Rev. Mr. Volkner by the natives in 1865. Opposite this, at about twenty-five miles from the coast, is Whakaari or White Island, containing a still active volcano, and the north-eastern extremity of the Kaimanawa and Te Whaiti chains, which extend in nearly a direct line from Mount Tongariro, in the middle of the island, to the coast. We have now in view the three remarkable peaks of Mount Edgecumbe, Mount Hardy, and Mount Ikurangi, the two latter of which are situated at a short distance from Cape Runaway and East Cape, between which lies the small Hicks Bay; after passing which we again turn to the south, and coast along an extensive tract of country at present very imperfectly explored, and nearly all of which remains in the hands of native tribes. Passing in succession, Open, Tokomarua, and Tolago Bays, together with Gable-end Foreland, we reach the settlement of Turanga, upon the Turanga-nui river, in Poverty Bay, about twenty miles north of the 39th parallel of latitude, where the province terminates.

Proceeding with a description of the several divisions of the country previously made:—

1st. The great northern peninsula, extending from the Isthmus of Auckland to the extreme north of the island, is about 200 miles in length, by an average of 35 or 40 in width, which latter however varies from 6 to 60 miles.

Its coast-line is very irregular, and is indented both on the east and west by a succession of deep inlets, forming several capacious harbours, the most important of which are the Bay of Islands and Rangaounou Bay on the east, and Hokianga and Kaipara Harbours on the west coast. The interior of this peninsula consists of broken and undulating country, of moderate height, seldom exceeding five or six hundred feet, with a few scattered summits of greater elevation, the principal of which are the Maungataniwha and Whangaruru Hills towards the eastern coast,

and the Mangonui Bluff on the western coast, which attains an elevation of about 2,000 feet.

The largest river in this part is the Wairoa, rising in the Whangaruru Hills, and flowing across the island, until it empties itself into the Kaipara Harbour, forming the waters of the northern half of its basin, whilst the Kaipara River forms the southern portion. The country around the harbour is covered with dense bush, consisting in a great measure of the noble Kauri pine. The country further north is less thickly wooded, but contains patches of fine timber and others of fertile land, the most important of which are in the neighbourhood of Hokianga Harbour and the Bay of Islands. In the neighbourhood of Kaipara Harbour is the newly settled district of Albert Land, with the town and port of Alberton. The neighbourhood of the Bay of Islands is worthy of notice, as being the earliest settled portion of the colony. The principal British towns in this part of the island are Mangonui on Doubtless Bay, Russell on the Bay of Islands, and Whangarei on the harbour of that name.

2nd. The belt of land forming the portion of the peninsula to the south of the Isthmus of Auckland, including the site of the City of Auckland, is settled entirely by British colonists. Its natural advantages for settlement and commerce, with capacious and safe harbours equally accessible on both sides (in which respect it has been compared with ancient Corinth), induced the British Government to select it, in the early days of New Zealand colonization, for the seat of government. The land in this part is broken and undulating, scattered over with conical hills, the craters of extinct volcanoes, the debris of which adds greatly to the fertility of the soil.

The City of Auckland is situated immediately upon the isthmus on the south shore of the Waitemata Harbour; and the villages of Parnell, Newmarket, and Newton, once distinct settlements, now form suburbs contiguous to the city. About six miles from Auckland, but on the

opposite coast, and on the northern shore of Manukau Harbour, are Onehunga and Otahuhu, whilst on the southern shore of the same harbour is situated the smaller town or village of Drury.

3rd. The basins of the Waikato and Thames rivers comprise probably the most extensive and fertile tracts of agricultural country in the island, extending in length from the southern boundary of the province to the Frith of Thames, and being about 50 miles wide. The valley of the Waikato is formed by a range of hills running parallel with the west coast, at a distance from that coast of from 10 to 20 miles, and on the east by the Pakeroa Mountains, which divide its basin from that of the Piako, and towards its source by the Te Whaiti and Kaimanawha ranges. The river takes its rise in the Wellington province, on the slopes of Mount Ruapehu; it flows through and supplies the waters of the remarkable lake Taupo, near the centre of the island, which is 25 miles long, and 20 miles in its greatest breadth,—its elevation above the sea level being 1,250 feet. Twenty miles south-west of this lake stands the active volcano Tongariro, and in the surrounding country are numerous hot springs and geysers,—remarkable features in this beautiful and interesting district; whilst round about it stand a number of remarkable peaks, among which we may enumerate Pihanga, Kakaramea, Kuharua, Karangahape, Tauhara, and Tahataakiri. The Waikato river flows out of the north-eastern corner of this lake, and runs in a northerly direction through a very fertile valley for about 100 miles, when it is joined by the Waipa, which is also a considerable stream rising in the Rangitoto Mountains, and having a course almost due north of about 50 miles. From its junction with the Waipa to the sea coast, a course of about 50 miles, the Waikato is navigable for small vessels. After its junction, it flows due north for a distance of about 20 miles, when, its course being obstructed by the southern extremity of the Waikato

ranges, it suddenly makes a rectangular bend towards the west, at about the same distance from its outlet on that coast. The valley of the Waikato has been long occupied by one of the most numerous and warlike of the native tribes, who possess several strong and well-selected posts upon its banks, and it was the site of the principal conflicts between General Cameron and the natives.

The strip of country lying between the western hills and the west coast is also of some importance, on account of the harbours of Aotea, Kawhia, and Whaingaroa; the cliffs of which harbours consist of limestone, and in the neighbourhood of which there is some extent of fertile land.

On Whaingaroa Harbour is situated the town of Raglan. Near Kawhia Harbour is Mount Pironghia, 2,300 feet in height; and near Te Rua Point is Mount Whariorino, 2,074 feet.

The valley of the Thames, including the valley of the Waitoa, which, with its tributary the Piako, flows in a parallel course at a distance of only five or ten miles, consists entirely of native territory, and occupies an area of fine country, much of which is heavily timbered. These rivers take their rise in the middle Waikato basin, and their valleys are bounded on the western side by the Pakaroa range, and on the east by table-land, and by a southern continuation of the Coromandel Mountains. The Thames has a course of about 50 miles, and is navigable for some distance by small vessels. It empties itself, together with its neighbour the Waitoa, into the Frith of Thames, at the bottom of the Hauraki Gulf. Near the mouth of this river, on the sea coast, are the Thames gold diggings, which have lately risen into considerable importance, from the large quantity of gold extracted from the reefs. The principal town connected with these diggings is Shortland, but only a very small portion of the surrounding country is in the possession of the New Zealand Government.

The Coromandel peninsula is a continuation of the gold-

bearing range of hills which form the eastern boundary of the Thames Valley. The length of the peninsula is about 80 miles, and it is almost entirely occupied by the Coromandel Mountains. The harbours of Coromandel on the western side, and Mercury Bay on the east, afford good shelter for vessels of moderate size.

The "lake district," which extends from Lake Taupo to the coast, and from the Thames Valley to the Te Whaiti Mountains, is a country full of marvels, which will ever attract and repay the notice of adventurous travellers. It is thus referred to by Dr. Hochstetter in his "Geology of New Zealand:"—"The distance from Tongariro to the Whakaari volcano (White Island) is 120 nautical miles. Over this whole distance, almost on the very line between these two active craters, it seethes and bubbles and steams from more than a thousand crevices and fissures that channel the lava-beds of which the soil consists,—a sure prognostic of the still smouldering fire in the depths below; while numerous fresh-water lakes, of which Lake Taupo, 20 miles in diameter, is the largest, fill up the large depressions of the ground. *This is 'the lake district'* so famous for its boiling springs, its steaming fumaroles, solfataras and bubbling mud-basins, or, as the natives call them, the Ngawhas and Puiaas. Till now none but missionaries, government officers, and some few tourists have ventured by the narrow Maori paths through bush and swamps to visit this marvellous region; but all who have witnessed with their own eyes the wonders of nature displayed here were transported with amazement and delight. Only the natives have hitherto made practical use of these hot springs, which are the grandest in the world, and sought relief in them for their various complaints and diseases. But when once, with the progressive cultivation of New Zealand, these parts have become more accessible,—then thousands dwelling in the various countries of the Southern Hemisphere, in Australia, Tasmania, or New Zealand, will flock to these

parts, where nature not only exhibits such remarkable phenomena in the loveliest district, with the best and most genial climate, but has also created such an extraordinary number of healing springs."

The easiest approach to this interesting district is from Tauranga Harbour, an extensive and sheltered inlet in the Bay of Plenty; and although the whole line of country from Taupo to within a few miles of the coast is lined with springs emitting columns of steam and boiling water, the nearest of the larger lakes are situated within 40 miles of that harbour. Tarawera is the largest and most beautiful of these lakes, lying at the foot of Mount Tarawera (2000 feet high); but the most marvellous lake is Rotomahana, or "Hot Lake," fed by boiling siliceous springs which keep the whole of its water at a high temperature, and deposit an enamel-like white siliceous crust or coating over the whole margin of the lake, giving the whole region a fantastic and fairyland-like appearance. These springs are generally intermittent, and the largest of them exceeds in extent and power the "Great Geyser" of Iceland. In the vicinity of the hot springs food is ordinarily cooked, without fire, by placing it in one of the numerous open fissures from which steam is escaping. Rotorua and Rotoiti are two other neighbouring lakes of singular interest and beauty, and towards the north east of the district stands the well developed cone of Mount Edgecumbe. Similar phenomena to those of the lake district are also found in the neighbouring islands, called Whale Island and White Island, in the adjacent bay.

4th. The remaining division is that of the country lying east of the Te Whaiti and Kai Manawha ranges, and comprises that portion of the island of which least is at present known. It is called the East Cape country, and consists of rugged land with high mountains in the interior, and some considerable streams. At its northern extremity are a group of conical peaks, of which Mounts

Hardy and Ikurangi are particularly prominent. The interior is occupied by a warlike and hostile mountain tribe, the Uriwera; and the coast by more friendly tribes, the Arawa and Ngatipouri. Church Mission stations have been established in several parts, and the see of the Native Bishopric is at Waiapu, on the north-east coast. There are numerous bays and small harbours upon the coast; and small settlements have been effected at Opotiki in the Bay of Plenty, as well as at Turanga in Poverty Bay, which is the principal harbour on the coast, and was the first land visited by Captain Cook,—Young Nick's Head, its southern headland, being so named by Cook after Nicholas Young, the sailor lad who first descried the land. In the interior is Lake Waikari, from which a river of the same name and of considerable magnitude flows into Hawke Bay.

The province of Auckland, from its great extent and varied resources, no less than from its early settlement and large population, forms one of the most important divisions of the colony. The city occupies a position admirably adapted for an extensive commerce, and the great length of coast, with the numerous harbours of the province, have furnished sites for a greater number of thriving towns than any other part of the colony. The area of the province is about 17,000,000 acres, and its population (British) 48,321. The population of the City of Auckland is 11,153; that of its suburbs, Parnell and Newton, 3,226 and 3,227 respectively. Onehunga contains 2,177, Howick 640, and Otahuhu 552, whilst the goldfield town of Shortland contains probably upwards of 1000. The natives in the province number about 25,000, and belong chiefly to the Ngapuhi, Waikato, Arawa, Ngatipouri, and Uriwera tribes.

SECTION II.

PROVINCE OF TARANAKI.

SYNOPSIS.

TOWNS. *Chief*,—New Plymouth. *Secondary*,—Patea (Carlyle), Waitara (Raleigh).

VILLAGES AND DISTRICTS. Hua, Urenui, Oakura, Tataraimaka, Okato, Pukearuhi, Tikorangi, Huirangi.

BAYS. North and South Taranaki Bight, Opunake.

HARBOURS. Taranaki Roadstead.

CAPIES. Cape Egmont, Parininihi or White Bluff.

ISLANDS. Sugar Loaf Islands.

MOUNTAINS. *Ranges*,—Ponakai, Patua. *Peaks*,—Mount Egmont or Taranaki, 8280 feet.

RIVERS. Mokau, Patea, Waitara, Urenui.

PLAINS. Waimate.

STATISTICS.

Area of Province,—2,137,000 acres,

Population of Province (British) 4,359

 " " (Native) 3,000

Total..... 7,359

Population of chief town, New Plymouth 2,180

THE PROVINCE OF TARANAKI.

This province originated in the settlement of New Plymouth, which was founded by the "Plymouth Company of New Zealand," in conjunction with the "New Zealand Company," in the year 1841; and the town of New Plymouth, then founded (and which until quite recently has continued to be the only centre of population in the province), still forms its chief town.

The boundaries of the province were defined by proclamation, under the Constitution Act of the colony, in the year 1852; but it was at that time described as the province of "New Plymouth," which name was changed to "Taranaki" by act of the General Assembly of New Zealand, in the year 1858.

The province of Taranaki consists of the western projection of the North Island, and is divided at the coast from the Auckland province to the north by the River Mokau, and from the Wellington province to the south by the River Patea. The River Mokau also forms its northern boundary line; its eastern boundary consisting, in part, of the north-easterly bend of the River Whanganui, and in part of two lines,—one of which unites this river to the River Mokau at its source, and the other to the River Patea at its mouth. In all other parts it faces the ocean.

The coast-line of this province is nearly unbroken by any considerable indentation. Starting from the mouth of the Patea and following the shore, which runs at first nearly in the direction of the snow-clad summit of Mount Egmont (the native name of which is Taranaki), we make a circuit towards the north-west, following, as we go round, the mountain's base,—the lava streams radiating from which have more effectually resisted the erosive action, or washing of the sea (so powerful on western coasts), than the softer clay cliffs to the north and south of the promontory, which are rapidly yielding to its force.

Having reached the extreme westerly point of the province, Cape Egmont, distant about 55 miles in a direct line from the mouth of the Patea, the direction of the coast-line gradually turns until it assumes a general direction of E.N.E., which it preserves with slight deviations as far as Parininihi or White Bluff, a remarkable cliff, 850 feet in height, distant about 45 miles in a straight line from Cape Egmont.

From White Bluff, the general direction of the coast as far as Whaingaroa Harbour, in the province of Auckland, is only a little to the eastward of north.

The town of New Plymouth is on the coast, almost half-way between Cape Egmont and White Bluff; and its position is well marked from the sea by a remarkable group of rocks lying within two miles of the shore, known as the Sugar Loaves. These rocks rise abruptly from the sea, but Paritutu, or the Sugar Loaf, a small rock, stands on a point of the mainland, and reaches a height of 504 feet. Several of these rocks are more or less peaked or dome-shaped, but Paritutu is particularly conical, and affords an unmistakeable land-mark for seamen.

The symmetrical cone of Mount Egmont, an extinct volcano (8280 feet), is a striking feature in the landscape from almost all parts of the province. This noble mountain stands in solitary grandeur in the centre of the rounded promontory before described, which forms the most westerly portion of the province. On all sides, for a distance of 15 miles or more, the general slope of the land is away from Mount Egmont, so that the courses of the numerous rapid rivers which reach the sea at different points on the coast-line of this promontory radiate from the mountain as a centre; and its sides curve off so gently and gracefully into the general slope of the country, that, viewed from a little distance from the shore, it appears to rise from the sea, whilst the inclination of the land is scarcely perceptible in travelling over it (except by the courses of the rivers) until within about five miles from the summit of the mountain.

On its north-west side this regular formation of the country is broken by two ranges, lying between Mount Egmont and the sea, called the Ponakai and Patua Ranges, about 4,000 and 5,000 feet in height respectively.

The greatest extent of level open land is in the south-eastern part of the province, comprehending what are called the Waimate Plains, and this is separated by the

south-eastern boundary line of the province from a similar tract of land in the province of Wellington.

Almost the whole of the open country in the province of Taranaki lies along the coast, forming a belt from the White Bluff to Patea River of an average width of four or five miles, and containing a number of thinly-peopled villages and districts, besides the town of New Plymouth. The remainder of the province is for the most part covered with forest, and large tracts are still quite unexplored; but most of the land is known to be level, and of good quality.

The soil of the whole district for many miles round Mount Egmont is of a very uniform character, the subsoil being derived from decomposed volcanic rocks, and the surface soil being of the same substance mixed with loam. This soil is well adapted for grapes and root crops, but is rather too light for wheat. In the Patea and Urenui districts, however, where marly beds reach the surface, a much stronger soil is obtained.

This province is destitute of any good harbour, a general characteristic of the south-west coast of the island. The safest anchorage for large vessels is in the roadstead of New Plymouth, which is partly sheltered from the prevailing winds by the Sugar Loaf Islands. There are other shipping places upon the coast, the best of which is in the small Bay of Opunake, half-way between New Plymouth and Patea.

At New Plymouth itself, the sandy beach, which consists chiefly of ironsand, furnishes a convenient landing place for the large cargo boats, by means of which all goods have to be landed and shipped. There are also four rivers in the province capable of receiving small vessels and steamers of light draught, namely, the Mokau, the Waitara, the Patea, and the Urenui, of which the Patea rises from Mount Egmont, and the Waitara and Urenui from the wooded slopes behind it, whilst the Mokau rises in the Rangitoto Mountains, near the source of the Waipa.

The principal town is New Plymouth, situated on the Huatoki, a small and shallow mountain stream. Townships are also being formed at the mouths of the Patea and Waitara rivers, and there are several villages established in the blocks of land which have been given to military settlers; such are Hua, Urenui, Oakura, Tataraimaka, Okato, Pukearuhi, Tikorangi, and Huirangi. The township at the mouth of the river Patea has received the name of Carlyle, and that at the mouth of the Waitara the name of Raleigh, but they are still generally known by those of Patea and Waitara.

The Province of Taranaki has suffered more than any other portion of the colony by the late long-protracted native war; but from the general fertility of the soil, it is likely, sooner or later, to become one of the most populous districts of New Zealand. It also possesses a probable source of future wealth in the iron-sand which abounds upon its coast, and springs of petroleum have been found near the Sugar Loaves.

The area of the province is 2,187,000 acres, of which 150,000 belong to British settlers, 973,000 to Native tribes, and 1,014,000 to the Government.

The population in 1867 amounted to 4,359 British, and about 3,000 Maoris. The population of its chief town, New Plymouth, is 2,180.

The natives of Taranaki belong mostly to the Ngatiawa, Taranaki, and Ngatiruanui tribes.

SECTION III.

PROVINCE OF HAWKE BAY.

SYNOPSIS.

TOWNS. *Chief*,—Napier. *Secondary*,—Clive, Havlock, Hampden, Waipawa, Wallingford, and Porongahau.

VILLAGES AND DISTRICTS. Waipukerau, Meanee, Wairoa, Te Aute, Wainui, and Blackhead.

- BAYS.** Hawke Bay.
HARBOURS. Napier, Wairoa, and Porongahau.
CAPES. Table Cape, Portland Head, Cape Kidnappers, Paoanui Head, Black Head, and Cape Turnagain.
ISLANDS. Portland Island and Bare Island.
PENINSULAS. Napier Peninsula or Scinde Island, and Mahia Peninsula.
LAKES. Roto a Taro, Whatimu, and Tutira.
MOUNTAINS. *Ranges*,—Ruahine, Kaweka, Mangaharuru, and Puketoi. *Peaks*,—Te Waka and Cook's Tooth.
RIVERS. Nuhaka, Wairoa, Mohaka, Esk, Tutaikuri, Ngaruroro, Tukituki, and Porongahau.
PLAINS. Ahuriri and Ruataniwha.

STATISTICS.

<i>Area</i> of Province,—2,840,000 acres.	
<i>Population</i> of Province (British)	5,283
" " (Native)	3,000
	8,283
<i>Population</i> of chief town, Napier	1,827

THE PROVINCE OF HAWKE BAY.

The present province of Hawke Bay was included within the original boundaries of the Wellington province, as proclaimed under the New Zealand Constitution Act; but was created a distinct province, under an Act of the General Assembly of New Zealand, in the year 1858.

It occupies, on the east of the North Island, an area only slightly exceeding that of Taranaki on the west, and is comprised within nearly the same parallels of latitude, a portion only of Hawke Bay province lying to the southward of Taranaki. In place, however, of the coast projection maintained by the solid mass of Mount Egmont, its coast forms a deep bay, which was named Hawke Bay by Captain Cook, after Sir Edward Hawke, who was then First Lord of the Admiralty.

This province is defined from that of Auckland, towards the north, by the 39th parallel of latitude; and from that of Wellington, to the south, by the Waimata stream, and by a line drawn from its source in a north-westerly direction,—crossing the Puketoi mountains to the Manawatu gorge, at the southern end of the Ruahine range. Its western boundary is the crest of the Ruahine and Kaweka ranges, and an irregular line continued northwards to the 39th parallel of latitude.

The configuration of the coast-line of this province is irregular, and its general character rough and broken from Mahia peninsula to the neighbourhood of Napier. From thence to Cape Kidnappers it is open, but broken again from that cape to the river Waimata. Commencing at the south-eastern boundary, the mouth of the River Waimata, a little to the south of Cape Turnagain,—which is a bold headland, presenting lofty cliffs of impure chalk,—the direction of the coast is north-east, until it has rounded that promontory; and it then turns in a more northerly direction for a distance of 70 miles, passing the sandy bay which receives the Porongahau River, and a succession of steep cliffs, broken headlands, and small bays, to Cape Kidnappers, the southern headland of the bay from which the province takes its name.

Cape Kidnappers is a conspicuous limestone promontory, 900 feet in height, and a few miles to the south of the cape lies Bare Island.

From this point the coast curves in the form of a semi-circle, following which our course carries us past the mouths of several rivers which pour their waters into the bay, such as the Tukituki, Ngaruroro, Tutaikuri, and Esk, in the more southern part, and the Mohaka, Wairoa, and Nuhaka, towards the north.

In the southern part of the bay is the roadstead of Ahuriri, with the harbour of Napier, on which is situated Napier, the chief town of the province.

The northern headland of Hawke Bay is formed by the

Mahia peninsula, a triangular-shaped piece of land, rather rough to seaward, but containing some rich and moderately level land. It is about 1,100 feet in height, projecting towards the south, and having at a short distance from its southern extremity the small and rocky islet of Portland. From thence the coast takes a northerly direction, and consists of table-land and wooded slopes up to the 39th parallel of latitude, the northern boundary of the province.

The general geographical character of the country of Hawke Bay province is indicated by the position of the Ruahine Mountains, its western boundary, a lofty range averaging from 3,000 to 4,000 feet in height. From this range the land slopes towards the eastern coast of the island, in a tolerably regular and gradual decline, broken into valleys and low mountain-chains, drained by streams which have their sources among the Ruahine Mountains. The peaks most prominently presenting themselves to notice are Te Waka in the north-west, and Cook's Tooth in the south-east of the province. The rivers are of inconsiderable size, though some of them can be entered by vessels of small tonnage.

The most important of these are the Tutaikuri, discharging itself into Napier Harbour, on the mouth of which the town of Napier is built; the Ngaruroro, on which stands the town of Havelock, about six miles inland; the Tukituki, with the town of Clive at its mouth, and Hampden upon one of its branches; and the Porongahau, rising among the Puketoi Mountains in the south, and having on its banks the towns of Porongahau and Wallingford.

In the northern part of the province are the Wairoa, Mohaka, and Nuhaka, of which the Wairoa is a navigable river.

On the right bank of the Tukituki, about midway between the coast and the summit of the mountains, is the Lake Whatimu, near the village of Waipukerau, and on the opposite side of the river are the Lake Roto a Taro,

and some smaller lakes in the Te Aute district, not far from the town of Waipawa. On the upper part of the course of the same river is a considerable extent of flat land called the Rustaniwha plains, on which the town of Hampden is situated. And again, inland of Napier Harbour, at the back of the town, and on both banks of the Ngaruroro stream, are plains known as the Ahuriri plains, the south-eastern portion of which is occupied by the Meanee villages, which form suburbs to the town of Napier.

The town of Napier itself is situated on a remarkable little peninsula called Scinde Island, one square mile in extent, presenting limestone cliffs on three sides, and connected with the mainland by a long spit of shingle, enclosing large salt-water lagoons and swamps. Wainui and Blackhead are two small towns upon the coast, in the southern part of the province.

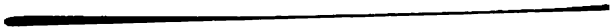
The climate of Hawke Bay may be characterised as dry; its geographical position, and the shelter afforded by the adjacent ranges, securing it from the excessive moisture which prevails in the western parts of the island. It possesses a large proportion of good pastoral and agricultural land, which is well watered, and on which vegetation flourishes in a remarkable degree to the sea shore,—in this respect affording a contrast to the western shore of the island, which is in general fringed with a belt of drifted sand-hills, two or three miles in width.

The character of the climate, and the favourable exposure afforded by the numerous terrace-like slopes, adapt this province for the future cultivation of the grape vine.

The hills abound in limestone, but no minerals of any value have as yet been discovered in the province. Its exports consist of wool, sheep, and cattle.

The area of the province is about 2,840,000 acres, of which 1,090,000 are the property of British settlers, and 1,300,000 belonging to the Native tribes, whilst 450,000 acres are in the hands of the Government for sale.





The population in 1867 amounted to 5,283 British and about 3,000 natives. The population of Napier, the chief town, 1,827.

The natives of Hawke Bay province belong to the Arawa tribe; and, notwithstanding having parted with much of their land, are well provided for, and receive annually a large rental for lands leased to sheep farmers.

SECTION IV.

PROVINCE OF WELLINGTON.

SYNOPSIS.

TOWNS. *Chief*,—Wellington, Whanganui. *Secondary*,—(including villages and districts) Hutt, Porirua, Pahautanui, Featherston, Greyton, Carterton, Masterton, Alfredton, Turakina, Tutaenui, Rangitikei, Foxton, Palmerston, Otaki, Waitara.

BAYS. Palliser Bay, Porirua Bay, Fitzroy Bay, and South Taranaki Bight.

HARBOURS. Port Nicholson or Wellington Harbour, Whanganui River, Porirua Harbour.

CAPIES. Terawhiti, Sinclair Head, Baring Head, Taourakira Head, Cape Palliser, Castle Point, Flat Point.

ISLANDS. Kapiti, Mana, Somes.

LAKES. Wairarapa, Onoke, Horowhenua, Westmere.

MOUNTAINS. *Ranges*,—Ruahine, Tararua, Rimutaka, Kai Manawha, Puketoi, Maungaraki, Haurangi. *Peaks*,—Tongariro (6,500), Ruapehu (9,195), Rangitumu Hill.

PLAINS. Wairarapa, Patea, Murimutu, Rangipo, and extensive undulating country bordering the South Taranaki Bight.

RIVERS. Whanganui, Rangitikei, Manawatu (with its tributaries Tokumaru, Oroua, Pohangina, Mongohao, Mahakahi, and Teraumea), Ruamahanga (with its tributaries Waiohine, Waingawa, and Taneru), Whareama,

Patea, Waitotara, Whangaihu, Turakina, Otaki, Waikanae, Hutt, Pahoa, Whakataki, Mataekona, Aohanga, Ahitio, Waimata.

STATISTICS.

<i>Area of Province</i> ,—7,000,000 acres.	
<i>Population of Province</i> (British)	21,950
" " (Native)	4,000
	Total
	25,950
 <i>Population of chief towns</i> , Wellington	
" " Whanganui	7,460
	2,157

THE PROVINCE OF WELLINGTON.

The Wellington province originated in a settlement established by the New Zealand Company in the year 1841, as the first and chief of their intended settlements in New Zealand. In 1852 it was proclaimed a province under the New Zealand Constitution Act, and its boundaries were at the same time defined. These boundaries originally included the present Hawke Bay province, which, however, was proclaimed a separate province, under an Act of the General Assembly of New Zealand, in the year 1858.

The province of Wellington, therefore, may be now described as comprehending all that portion of the North Island which is not included within the provinces of Auckland, Taranaki, or Hawke Bay, and is separated from Auckland, on the north, by the 39th parallel of south latitude; from Taranaki, on the north-west, by the north-easterly bend of the Whanganui River, and by a line reaching from the southern angle of that bend to the mouth of the River Patea; and from Hawke Bay, on the east, by a line in the direction of the crest of the Ruahine Mountains, reaching from the 39th parallel of *latitude* to their southern extremity at the Manawatu

gorge; and from the same province on the south by a line from the same point to the mouth of the Waimata River, crossing on its way the Puketoi Hills. The southern extremity of the province is separated by Cook Strait from the north-eastern portions of the Marlborough province, in the South Island.

The coast-line of this province consists of three principal portions:—*First*, the west coast-line, extending from the Patea River on the north to Cape Terawhiti on the south; *secondly*, the south coast-line, extending from Cape Terawhiti eastwards to Cape Palliser; and *thirdly*, the east coast-line, extending from Cape Palliser northwards to the Waimata River. The eastern and western coast-lines are generally unbroken by any considerable irregularity; whilst that on the south is occupied by the fine harbour of Port Nicholson, and the extensive but less serviceable indentation of Palliser Bay. The western coast is bordered throughout by a fringe of sandy beach and drifted sand-hills, having a width in some parts of several miles; the beach affording an excellent natural road, which supplies for a distance of 100 miles a convenient means of communication between the city of Wellington and the important western districts of the province, whilst the shore on the south and east is generally rugged and rocky, and occasionally precipitous.

Commencing at the River Patea,—the southern boundary of the Taranaki province,—and following the coast-line towards the south, we find that it extends itself in a semi-circular bend to Cape Terawhiti, the south-western extremity of the island, forming the extensive South Taranaki Bight; in pursuing our course along which we pass a fertile belt of fine undulating country, averaging eight miles in width, containing the districts of Patea, Waitotara, and Kai Iwi, and extending along the coast for a distance of 30 miles, until we reach the mouth of the Whanganui River, the largest in the Wellington province, and navigable for vessels of light draught and about 30

tons burden for 60 miles. Near its mouth is the flourishing town and port of Whanganui, the river admitting thus far vessels of about 12 feet draught. The town is symmetrically and conveniently built on the right bank of the river, and carries on, as the emporium of extensive pastoral and agricultural districts, an active commerce with the other commercial towns of New Zealand, and also with those of Australia.

From the mouth of this river the coast continues in a southerly direction, along a belt of similar undulating country, stretching far into the interior, and watered by the rivers Whangaihu, Turakina, and Rangitikei, the latter of which can be entered by small vessels. This extends along the coast for a distance of 50 miles, to the mouth of the river Manawatu, a stream navigable by light craft for about 50 miles from its mouth, near which is the town of Foxton.

From the Manawatu to the Paikakariki Hills is one continuous stretch for about 30 miles of similar country, skirted by a low sandy beach, broken only by the shallow outlets of the rivers Ohau, Otaki, and Waikanae, which water the belt of fertile undulating land lying between the Tararua Mountains and the coast. To the north of the Ohau, a smaller stream also empties itself into the South Taranaki Bight, after flowing through the Horowhenua lake, a fresh-water basin of small extent.

Nearly opposite to the mouth of the Waikanae, and about three miles from the coast, is the island of Kapiti, a steep hilly island, once a famous native stronghold, and subsequently a great whaling station, but now converted into a sheep and cattle run. Its area is about eight square miles.

The Paikakarika Hills are a spur from the main Tararua range, which approach to, and overhang, the shore; and from this point to Cape Terawhiti the coast is very rough and broken by similar spurs,—the principal of which has an abrupt termination at that cape. About midway

between Kapiti and Cape Terawhiti lies the small bay and harbour of Porirua, with the village of Pahautanui; and off its entrance is the small island of Mana, on which a lighthouse has been erected.

The southern coast-line commences at Cape Terawhiti, and continues of the same rough and broken character round Sinclair Head,—the southern promontory of a steep, hilly peninsula, formed by the inlet to Wellington Harbour, and which affords it shelter from west and south-westerly gales. The opposite headland, on the eastern shore of the harbour, is Baring Head; a few miles from which is the bold cliff called Pencarrow Head, on the summit of which a lighthouse has been built, whilst another has been placed upon Somes Island, within the harbour. Port Nicholson, as this harbour is called, is about five square miles in extent, nearly land-locked, and securely sheltered on almost every side. The fine city of Wellington is built on the south-western shore of the inner bay, called Lambton Harbour.

Following the south coast-line from Baring Head, we continue along a steep and rugged shore, passing the mouths of the streams Wainuiomata and Orongorongo to Cape Taourakira,—the southern extremity of the great main range of mountains which, under the name of the Rimutaka chain, continue from the Tararua range to this headland. Rounding this cape, we enter Palliser Bay, a deep and extensive indentation, which receives on its northern shore, through the Wairarapa Lakes, the waters of a considerable stream—the Ruamahanga River—which drains the extensive and fertile valley of Wairarapa.

At Cape Palliser commences the east coast-line, which continues in a north-easterly direction along a line of rugged coast, with a hilly back country, for a distance of 88 miles; the most prominent point upon the coast being named Flat Point. We then pass the Whareama River, and reach Castle Point, a singular turret-like promontory, which affords a landing-place and convenient shelter for

vessels from north-west gales, and near which a village is situated.

The remaining portion of the eastern coast is generally of a similar character with that just described, as far as the Waimata River, the north-eastern extremity of the province; but it is broken in succession by the mouths of the Rivers Mataekura, Aohanga, and Akitio,—all of which are streams of some magnitude.

In describing the internal geography of the province of Wellington, it will also be convenient to consider it in three divisions, nearly corresponding with the threefold division of the coast-line already made. The first division will be the north-western part of the province, comprehending all that lies to the north and west of the Tararua and Ruahine ranges. The second, the tract between the eastern coast and the Tararua and Rimutaka ranges. And the third, the south-west portion of the province, lying on the south and west sides of the same ranges.

The north-western portion, having for its eastern boundary the Ruahine and Tararua mountains, has a coast-line extending from the River Patea southwards to the bluff termination of the Paikakariki hills. It contains a belt of fertile undulating country, extending its entire length, and having an average breadth of about 30 miles, but gradually widening towards the north; and which is well watered by the Rivers Whanganui, Whangaihu, Turakina, Rangitikei, Manawatu, and their tributaries, as well as by the smaller streams Waitotara, Otaki, and Waikanae. Within this belt, which contains about 2,688,000 acres of rich agricultural and pastoral land, are the settled districts of Patea, Waitotara, Whanganui, Turakina, Rangitikei, and Manawatu, with the populous town of Whanganui, and the smaller towns and villages of Turakina, Tutaenui, Rangitikei, Foxton, and Palmerston, together with the native village and extensive missionary station of Otaki.

To the back of this belt, in the northern part, and in

the angle formed by the southern boundary of Auckland with the western boundary of Hawke Bay province, is the extensive interior portion of the province, having for its eastern boundary the Ruahine Mountains,—a range averaging 4,000 feet in height,—which is flanked in its northern part by the southern portion of an inferior parallel range called the Kaimanawha. The character of this country is very various. In the extreme north are the remarkable and lofty twin volcanic peaks of Tongariro and Ruapehu, whose summits are often hid in the clouds, and whose sides are almost always clad with dazzling snow. Tongariro is occasionally active, and reaches an elevation of 6,500 feet; whilst Ruapehu, which is quite extinct, attains 9,195 feet in height. Towards the neighbourhood of Lake Taupo are extensive plains called the Murimutu Plains, admirably adapted for pastoral purposes; whilst to the south is good timber land, with some open land intermixed, fit for agriculture, but a large proportion consists of rugged wooded hills. The whole of this tract remains in the possession of native tribes.

The River Whanganui has its principal source at the base of Mount Tongariro, and flows to the north and north-west for a distance of 30 miles; when, having received the supplies of several tributaries, it turns to the south, and forms for some distance the boundary between the Auckland and Taranaki provinces, and subsequently between the provinces of Taranaki and Wellington. It then makes a circuit through the Wellington province, and its course, which in its upper portion is very confined and hilly, becomes gradually more open; and, after flowing through 20 miles of broken table-land, it finally reaches Cook Strait, a few miles below the town of Whanganui. On its left bank, about 20 miles distant in a direct line from the town, is a remarkable eminence, called Taupiri Hill.

The Whangaihu and Turakina rise in the hilly country to the south of Mount Ruapehu, and fall into the South Taranaki Bight, to the south of the Whanganui.

The Rangitikei has its rise on the western slopes of the Ruahine Mountains, and flows west into Cook Strait,—passing in the latter part of its course through a very extensive district of level or undulating country, admirably adapted for agriculture, and particularly for the cultivation of cereal crops. The Tutaenui is a small tributary on its right bank, on which are situated the district and town of Tutaenui.

The Manawatu,—though its source, consisting of several small streams, is on the eastern side of the Tararua Mountains, in the province of Hawke Bay,—has the principal part of its course on the west of those ranges, passing through the gorge which separates that range from the Ruahine at a point constituting the south-western extremity of the Hawke Bay province, and which is known as the Manawatu gorge, having previously received its tributaries, the Teraumea and the Mongohao, from the south. After passing through the gorge it receives also the Pohangina from the north, and then flows onwards through a large extent of flat swampy land till it empties itself on the western coast, having the town of Foxton about three miles from its mouth, and that of Palmerston laid out about two miles from its right bank, at a distance of twenty-five miles from the sea. The Oroua and Tokomaru are the other most considerable tributaries of this river.

The eastern division of the province consists of three detached portions, the first of which is the Wairarapa Valley, a district partly pastoral and partly agricultural, lying between the Tararua and Rimutaka ranges on the west, and the Maungaraki and Haurangi Mountains on the east. It is drained by the Ruamahanga River, which rises in the Tararua range, and after receiving the Waingawa and Waiohine on its right, and the Taneru on its left bank, passes through the Wairarapa and Onoke lakes into Palliser Bay. The Tauherenikau, rising near the southern extremity of the Tararua range, also flows across

the valley into the Wairarapa Lake. This lake is a large body of fresh water, covering an area of about sixteen square miles, very shallow, and on nearly the same level as the sea. It is connected with a smaller lake, called the lower lake or the Onoke,—which is again connected with the coast by a channel, called the Lower Ruamahanga River, which flows through extensive swamps to the sea. The area of the valley is about 800,000 acres, and the lower portion is almost entirely occupied by British settlers. The chief towns and villages in the valley are Greyton, Masterton, Featherston, Carterton, Tauherenikau, Moroa, and Alfredtown.

The second of these eastern portions is an extensive strip of coast country lying between the Haurangi, Maungaraki, and Puketoi ranges, and the eastern coastline. It extends the entire length of the coast, from Taourakira Head, on the west of Palliser Bay, to the north-eastern extremity of the province, and consists of open hilly country, affording good grazing land, watered by the rivers Pahoa, Whareama, Mataekona, Aohanga, and Akitio; and the greater part of it is occupied by settlers for sheep and cattle runs, but it is thinly populated.

The remaining portion of the eastern division is called the Forty-mile Bush Country, and is a continuation towards the north of the Wairarapa Valley, lying between the Puketoi range on the east and the Tararua range on the west. It consists chiefly of forest country still in the possession of the native tribes, and is watered by several considerable streams, chiefly draining into the Manawatu River.

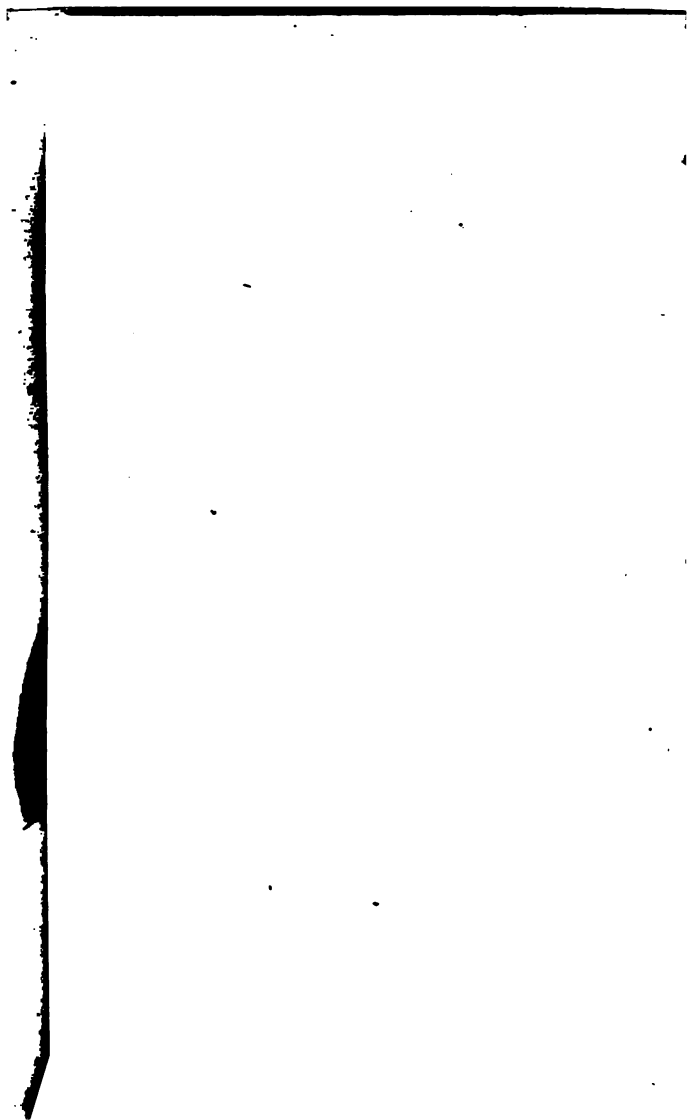
The third, or south-western division of the province, lies altogether to the west of the Tararua and Rimutaka ranges, and consists, for the most part, of steep wooded spurs from these ranges, and of valleys which are formed between them. By far the most considerable of these valleys is that of the Hutt, named after the river which

rises between the Tararua and Rimutaka ranges, and flows through nearly the centre of this portion of the province into the upper part of Wellington Harbour, and is named after Mr. William Hutt, a member of the New Zealand Company. This river, the native name of which is Eritonga, drains a narrow but exceedingly fertile valley of rich alluvial soil, the whole of which is thickly peopled, the principal villages being known as the Lower and Upper Hutt, and the Taita, which lies between them. The other valleys of most importance are the Porirua, drained by a stream of the same name into Porirua Bay in which valley are the villages of Johnsonville and Taw Flat; and the Wainuiomata Valley, drained by a small stream of the same name.

The province of Wellington possesses, in its excellent harbour and central position, combined facilities for commerce unsurpassed by any other portion of the colony, which have secured to its chief town—the City of Wellington—the advantage of being the colonial capital and the centre of the steam navigation with Great Britain and with the Australian colonies. It possesses also, in its extensive tracts of agricultural and pastoral land, all the elements of extensive and permanent prosperity.

The City of Wellington contains the Colonial House of Parliament, the Governor's official residence, Cathedrals of the English and Roman Catholic Churches, and many other fine buildings, and its extensive wharf admits the large Pacific Steamers to discharge alongside.

The town of Whanganui also possesses some fine public buildings, and a handsome marble monument erected in 1865, to commemorate "the brave men who died in the defence of law and order," in a chivalrous encounter known as the battle of Moutoa, fought between the loyal natives of Whanganui and a band of Hauhau fanatics, in which the former were victorious, and which encounter deserves a more lengthened notice than there is space for





here. The other principal towns and villages are Turakina, Rangitikei, and Tutaenui, on rivers of the same names; Foxton on the Manawatu; Greyton, Carterton, Masterton, and Featherston, in the Wairarapa Valley; with Pauhautanui on Porirua Bay.

The area of the province is about 7,000,000 acres; its population at the end of 1867 was 21,950 British, and about 4,000 Natives, mostly of the Ngatiawa, Ngatitōa, Ngatiraukawa, and Ngatikahuhunu tribes. The population of the City of Wellington amounted to 7,460, that of the town of Whanganui to 2,157.

SECTION V.

THE PROVINCE OF NELSON.

SYNOPSIS.

TOWNS. *Chief*,—Nelson, Cobden, Charleston, Brighton, Westport. *Secondary*,—(including villages and districts), Collingwood, Clifton, Richmond, Motueka, Riwaka, the Waimea villages, and the Amuri district.

BAYS. Tasman Bay (formerly Blind Bay), Golden Bay (formerly Massacre Bay), Karamea Bight, Admiralty Bay, Gore Bay.

HARBOURS. Nelson Haven, Croisilles, Port Hardy, West Whanganui, and the mouths of the Waimea, Karamea, Mohikinui, Buller, Grey, and Waiau-ua rivers.

STRAITS. Current Basin, French Pass, Astrolabe Road.

CAPIES. Foulwind, Farewell, Farewell Spit, Separation Point, Cape Soucis, Francis Head, and Taura-te-weka, or Rock Point.

ISLANDS. D'Urville Island, Stephen Island, Pepin Island, Rabbit Island, and Adele Island.

LAKES. Howick or Rotoroa, Arthur or Rotoiti, Hochstetter, Christabel, Tennyson, and Diamond lakes.

MOUNTAINS. *Ranges*.—Spencer, Tasman, Whakamarama, Anatoki, Marino, Lyell, Papahaua, St Arnaud, Paparoa, Brunner, Victoria, and Mytholin. *Peaks*.—Haidinger, 3,990 feet; Olympus, 5,400; Domett, 5,400; Snowdon, 5,800; Peel, 6,000; Arthur, 5,800; Owen, Frederick, 3,500; Rochfort, 3,572; William, 3,611; Newton; Mantell, 6,000; Murchison, 4,850; Robert, 6,140; Travers, 7,000; Mackay, 7,500; Franklin, 10,000; Humboldt; Una, 8,000; Mueller; Miromiro, 6,550; Tekoa, 5,370; Skiddaw, 5,740; Hochstetter, Gore, Buckland Peaks, Faraday, Davy, and the Dun Mountain.

RIVERS. Grey, Buller, Aorere, Takaka, Motueka, Waimea, Waimangaroa, Mohikinui, Whanganui, Karamea, Heaphy, Fox, Nill, Waiau-ua, Maruia, Thackeray, Abaura, Arnould, Hurunui, and Conway.

PLAINS. Waiau-ua, Hanmer, Waimea, Maruia, Ohinetakitaki.

STATISTICS.

Area.—7,000,000 acres.

Population of Province 23,814

Population of chief towns :—

Nelson	5,652
Westport	1,500
Charleston	2,235
Brighton	1,293
Cobden	727

THE PROVINCE OF NELSON.

This province constituted originally one of the New Zealand Company's Cook Strait Settlements, founded in the year 1841. It was proclaimed a province under the New Zealand Constitution Act in 1852, when its boundaries were defined. At that time, however, its boundaries included the present province of Marlborough, which was subsequently constituted a separate province, being proclaimed under an Act of the General Assembly of New Zealand in 1859.

The present province of Nelson, therefore, consists principally of the north-western portion of the South Island, and is separated from the Canterbury province and the newly constituted County of Westland by the River Hurunui to its source, thence by a line to Lake Brunner, and by the rivers Arnould and Grey to the western coast. From the Marlborough province it is separated by an irregular line, commencing near Cape Francis, in Cook Strait, and terminating south of the Amuri Bluff, at the mouth of the River Conway.

The coast line of this province consists of three portions, —*first*, that on the west, extending from the mouth of the Grey northwards to Farewell Spit; *secondly*, that formed on the north by the deep indentations of Tasman and Golden Bay, extending from Farewell Spit eastwards to Francis Head; and *thirdly*, a detached strip on the eastern side, south of the Marlborough province, and lying between the mouths of the Rivers Conway and Hurunui.

Commencing with the first of these portions at its southern extremity, and starting from the mouth of the River Grey, on which is situated the town of Cobden (which can be reached by vessels drawing from 8 to 10 feet of water, and opposite to which is the town of Greymouth, on the southern or Westland side of the river), and directing our course towards the north-east, we pass along the rugged New Zealand Gold Coast, leaving behind us in succession the newly-built but populous towns of Brighton and Charleston, and approach the rocky promontory of Cape Foulwind, so named by Captain Cook.

Having rounded this promontory we soon arrive at the mouth of the River Buller, named after Mr. Charles Buller, President of the Board of Trade, and legal adviser to the New Zealand Company, which is accessible to vessels of light draught, and on which is situated the town of Westport, another thriving offspring of the gold-fields.

From the mouth of the Buller northwards to Cape Farewell, a promontory 630 feet in height, the coast is steep and rugged, and destitute of harbours, with the exception of the small ones at the mouths of the Mohikinui and Karamea rivers, which empty themselves into the Karamea Bight, an extensive bay stretching northwards from Cape Foulwind to Taura-te-weka Point, and West Whanganui Inlet, a little to the south of Cape Farewell. Along this coast, however, there are large deposits of excellent coal, which will hereafter become more extensively worked, and afford a staple article of export to the province.

At Cape Farewell the second or northern division of the coast begins, but we must first round a very long and narrow low sandy spit or bank, called Farewell Spit; and having done this we enter Golden Bay, called by Tasman Massacre Bay, on account of the murder of some of his crew by natives of the island. The bay derives its more pleasing name of *Golden* from the circumstance that the first New Zealand gold-field was discovered upon its shores. Its coast is in parts rough and mountainous, and in others low and sandy. The rivers Aorere and Takaka empty themselves into this bay, and can be entered by small vessels. The small town of Collingwood is situated at the mouth of the Aorere. This bay is divided from Tasman Bay by the rocky headland called Separation Point.

Tasman Bay was named Blind Bay by Captain Cook, but that name is not now in use. Turning to the south from Separation Point, along the western shore of Tasman Bay, we pass through the Astrolabe Sound, between Adele Island and the mainland, which furnishes a secure roadstead for vessels in almost all weathers. A little farther on is the mouth of the Motueka river, where is the Motueka village, with a considerable expanse of flat open country in its neighbourhood, and the districts of Riwaka and Moutere. Further south is Rabbit Island, opposite to

the mouth of the Waimea River, a well sheltered harbour accessible for small craft. The country bordering this part of the Bay is low and fertile to within a short distance of the shore. The entrance to the Waimea river is near the southernmost recess of the bay; and from thence the coast turns to the north-east, and passes Nelson Haven, a harbour of still water affording perfect security to vessels of a large size. The entrance to the harbour is very narrow,—between the rocky main coast and the extremity of a long bank of boulders, which forms a barrier to the harbour against the sea, and on which a lighthouse has been erected. The City of Nelson stands upon its shore.

Pursuing our course towards the north-east, we pass Pepin Island, and then, rounding Cape Soucis, enter the Croisilles Harbour, near which chrome and copper ores have been discovered and worked; and we then enter the Current Basin, and reach the French Pass or Strait, a narrow but sheltered and deep channel between D'Urville Island and a rocky point of the peninsula which terminates the mainland of the Nelson province at Francis Head, to the north of which lie the Chetwode Islands, which also form a part of the province. The wider channel into which the French Pass leads is called Admiralty Bay. D'Urville Island, with its satellites Stephen Island and the Rangitoto Islets, are also included within the province. D'Urville Island is rocky and precipitous; it has one excellent harbour at its northern extremity, Port Hardy, and there is a scanty and scattered population upon its shores. The small eastern portion of coast line belonging to this province lies to the south of the province of Marlborough, and extends only from the mouth of the River Conway to that of the Hurunui. It is generally rocky, but has beaches at intervals, and is divided about midway by the River Waiau-ua or Dillon, between which river and the mouth of the Hurunui is Gore Bay, where there is an anchorage and a shipping place for wool and other produce of the Amuri district.

A large proportion of the Nelson province consists of high and rugged mountain country, interspersed with valleys of considerable extent. "In the province of Nelson," says Dr. Hochstetter, "the Southern Alps consist of offshoots in the shape of mountain chains 5000 and 6000 feet high, covered in winter with deep snow, as far as the Tasman Strait."

The principal one of these branches occupies the central part of the province, and affords a watershed for the principal rivers both to the east and west coasts of the island. The southern portion of this range is called the Spencer Mountains, and extends from the southern boundary of the province northwards for a distance of 50 miles, where it culminates in Mount Franklin, the highest elevation in the province, named in honour of Sir John Franklin, the celebrated Arctic Explorer, and Governor of Tasmania, who took a lively interest in the early colonisation of New Zealand. It reaches 10,000 feet in height.

From Mount Franklin the main range continues, at a lower elevation, under the names of the St. Arnaud and Tasman Mountains, towards the north-western extremity of the province. Among many remarkable peaks in the main range both to the north and south of Mount Franklin, Mounts Humboldt and Una to the south, Mounts Mackay and Travers to the north, are particularly worthy of notice.

On either side of the main range numerous branch chains stretch in a north-east and north-west direction towards the coast, between which flow the principal rivers of the province. The lateral branches stretching towards the north-east will be generally described in the account of the province of Marlborough. The most important and chief, however, of these, constituting the principal barrier between that province and the province of Nelson, starts from a little north of Mount Franklin, and terminates in the rocky peninsulas which form the Pelorus Sound. This branch chain, together with the Spencer

Tasman Mountains, form the main watershed of this portion of the South Island. The peaks Ben Nevis, Mounts Rintoul and Richmond (known locally as the "Devil's Arm Chair," and the "Patriarch"), and the Dun Mountain, form striking features in its scenery, besides being important landmarks in the boundary line between the provinces.

This branch chain and the Tasman Mountains together form the two sides of an almost equilateral triangle, the base of which is occupied by the sea, being broken into by Tasman and Golden Bays; whilst a large part of the agricultural land of the province is contained within the narrower portion of this figure where the sea has ceased to encroach. The Motueka and Waimea rivers have their sources in the apex of this triangle, and flow into Tasman Bay. They both afford shelter for small vessels, and the villages of Motueka and Richmond are situated at their mouths, with some extent of fertile alluvial land around them.

Further towards the north-west, the two rivers Takaka and Aorere, rising in the Tasman Mountains, empty themselves into Golden Bay. Near the source of the former are the small but picturesque Diamond Lakes. The town of Collingwood is situated at the mouth of Aorere, and the village of Clifton not far from that of the Takaka. There is a small extent of good level land in the valleys of these rivers and on the coast between them, but they are principally supported by the gold diggings, which are scattered over the entire district to the north of the Motueka river. Coal and limestone also exist in considerable quantities, whilst plumbago and other minerals are also found.

From the opposite range on the east of the triangle no important rivers flow through this province, nor has any gold been discovered on its north-western slopes; but copper ore has been worked, though not very successfully, both on the Dun Mountain and near the Croisilles

Harbour, and chrome ore in the form of chromic iron is very abundant in both localities. At the Dun Mountains considerable works have been erected for the extraction of these ores, and a tramroad laid down from the neighbourhood of the copper lodes to the extremity of the commodious wharf in Nelson Haven, which passes through Nelson City, affording convenient means of transit for goods and passengers to the citizens.

There is a marked difference between the geological construction of these two ranges, the Tasman Mountains consisting of primary crystalline rocks, granite, and gneiss, whilst the eastern range is formed chiefly of sedimentary sandstones and chalk, corresponding with the composition of the ranges in the interior and eastern part of the North Island.

It will be observed that the angle already described as formed by these diverging chains, impresses a corresponding form upon the basins of the two bays, Golden and Tasman Bay. It is at the lower angle of Tasman Bay that Nelson Haven is formed, being enclosed to seaward, with the exception of an aperture of only 100 feet wide, by a remarkable boulder-bank, which forms the continuation of a rocky cliff, extending from Pepin Island in a south-westerly direction.

The lateral branches from the Spencer Mountains towards the west are broken up into numerous subordinate chains, intersected by several streams, and particularly by the larger rivers, the Grey and Buller, and their tributaries. To the north are the Whakamarama, Aopuri, and Anatoki Mountains, forming a northern and north-western supplement to the Tasman range, Mount Olympus (5,400 feet) occupying a central position. To the north of that river and its northern tributaries, are the Marino, Lyell, and Papahaua ranges, with their principal peaks, Mounts Owen, Newton, Frederick, William, and Rochfort, averaging from 3,000 to 4,000 feet in height. The

rivers Karamea and Mohikinui rise to the north of the Marino Mountains, and flow into the Karamea Bight. They are accessible to small vessels; and from the point where their sources almost unite a pass and track are found across the Tasman Mountains into the valley of the Motueka.

The Buller River is formed by the confluence of two streams flowing through the Lakes Howick and Arthur, in the neighbourhood of which is much romantic and magnificent scenery. It receives from the south two tributary streams of considerable magnitude, the Maruia and the Thackeray, the valleys of which rivers are divided by the Victoria and Brunner Mountains; whilst between the Thackeray, the Grey, and the west-coast, is an extensive isolated chain, the Paparua. In the valleys of these rivers are extensive plains called the Maruia and Oweka plains. Near the source of the Maruia, on its right bank, is Mount Mueller, and near its junction with the Buller, Mount Mantell (6,000 feet); whilst in the Spenser Mountains, to the east of the valley, in addition to Mount Franklin, are other lofty peaks, such as Mounts Humboldt and Una, averaging 8,000 feet. The principal peaks in the Paparua chain are Mount Davy, Mount Faraday, and the Buckland Peaks.

The remaining portions of the province consist of two districts, one drained by the Grey and its tributaries into the Westland Bight, and the other by the Clarence, Waiau-ua, and Hurunui, into the ocean on the eastern coast.

The source of the Grey is in Lake Christabel, a small but beautiful lake at the foot of the Spenser Mountains. This river receives as tributaries the Mawhera-iti from the north, and the Ahaura and Arnould from the south, the latter flowing from Lake Brunner. To the south of the Ahaura are the Werner Mountains, on either side of which are a lake and mountain named in honour of Dr. Hochstetter, the Austrian *savant*, who visited New Zealand in

1859; and between the Ahaura and the main stream are the Ohine-taki-taki plains. In the angle formed by the Mawhera with the Grey are Mount Haast and Mount Gore (4,500 feet). The entire region watered by the rivers Buller and Grey, as well as the coast country between them, contains deposits of gold. The gold coast of the province may indeed be described as extending from the Grey river to the Mohikinui river, a distance of seventy miles. It contains a population of upwards of 10,000, and several large towns,—the most important being Cobden, at the mouth of the Buller; Westport, at the mouth of the Grey; Brighton, with its suburb St. Kilda, on the small river called Fox; and Charleston on the Nill.

The south-eastern portion of the province is called the Amuri district. The Waiau-ua or Dillon River, a large and broad stream of water, flows through its centre, having its source in Mount Franklin. Its course is at first southerly for about 30 miles, when, making a circuit round Mount Miromiro, a mountain 6,550 feet in height, it turns at right angles to the east, passing through a considerable extent of level country known as the Waiau and Hanmer plains, affording excellent pasture, with some good agricultural land. The mouth of the river is accessible to small vessels.

The River Clarence also rises on Mount Franklin, and flows at first parallel with the Waiau-ua, passing in its course through Lake Tennyson; but it also shortly turns abruptly to the east, and enters the Province of Marlborough.

To the south of the rectangular bend of the Waiau-ua River is the peak called Skiddaw, and another called Tekoa or Helvellyn, both approaching 6,000 feet in height. The Hurunui River forms the southern boundary of the province. It rises on a saddle which affords a pass into the valley of the Grey, flows through Lake Sumner, skirts the Mytholm Mountains on its left bank, and then, pursuing a direct easterly course, empties itself upon the east

coast into the Pacific Ocean, a little to the north of Pegasus Bay.

From the description which has been given of the physical characteristics of this province, it will have been seen that it contains a large proportion of rugged mountainous country, the lower slopes and valleys of which afford good sheep pasture. The lowlands are of very limited extent, being confined almost to the shores of the two principal bays, and to a narrow strip along some portions of the west coast. The wealth of the province consists in its mineral resources, though these, with the exception of its valuable gold-fields, and its known deposits of coal and chrome ore, are at present very imperfectly explored. The mildness of its climate, ensured by the sheltered position of Tasman Bay, will secure to the city of Nelson and its precincts a reputation, already widely spread, of being a desirable home for those who seek in the colony facilities for comfort and enjoyment, rather than a field for enterprise and speculation.

The city of Nelson is built upon a favoured spot, open towards the north, and sheltered by high mountains from the cold southerly winds, and of that undulating character which affords scope to architectural taste, of which advantage has been taken. Nelson College is a fine and extensive building, and the English occupies a site of almost unrivalled elegance in the centre of the city. Cobden, Brighton, Charleston, and Westport are large and thriving towns, of the usual character of gold-field towns. The other principal towns and villages are the Waimea and other villages, which form suburbs to the city of Nelson; the principal being Richmond, Motueka, Riwaka, and Moutere, on rivers of similar names, with Collingwood and Clifton on Golden Bay.

The area of the province is about 7,100,000 acres, and its population 23,814. The population of the City of Nelson, 5,652; Westport, 1,500; Charleston, 2,235; Brighton, 1,293; Cobden, 727.

SECTION VI.

THE PROVINCE OF MARLBOROUGH.

SYNOPSIS.

TOWNS. *Chief*,—Blenheim. *Secondary*,—Picton, Havelock, Marlborough, Renwick, Kaikoura.

BAYS. Cloudy Bay, Pelorus Sound, Queen Charlotte Sound, Tory Channel.

HARBOURS. Pelorus, Picton, Port Gore, Port Underwood, Mouth of Wairau, Kaikoura.

CAPIES. Francis Head, Cape Jackson, Cape Koamoroo, Wellington Head, White Bluff, Cape Campbell, Waipapa Point, Kaikoura Peninsula, Amuri Bluff.

ISLANDS. Orient, Forsyth, Chetwode, Arapawa.

LAKES. Grassmere, Elterwater.

MOUNTAINS. *Ranges*,—Inland Kaikoura; Seaward Kaikoura, or Looker-on Mountains. *Peaks*,—Tapuaenuka, or Mount Odin, 9,700 feet; Mount Richmond; Rintoul; Weld, 5,600 feet; Gog; Magog; Kaitarau, 8,700 feet; Whakari, 8,500 feet.

PLAINS. Wairau Plain, Fairfield and Wakefield Downs, Kaikoura Plain.

RIVERS.—Pelorus, Wairau, Awatere, Clarence, Conway.

STATISTICS.

Area,—2,500,000 acres.

<i>Population</i> of Province	4,371
" Blenheim.....	500
" Picton	465

THE PROVINCE OF MARLBOROUGH.

This portion of the South Island was at first included within the boundaries assigned to the Nelson province in the year 1853. It was however constituted a separate province by proclamation, under an Act of the General

Assembly of New Zealand in the year 1859, as the Province of Marlborough.

It occupies the north-eastern portion of the South Island, and is separated from the Nelson province towards the west and south by an irregular line commencing in Cook Strait near Francis Head,—the northern extremity of the tongue of land which bounds Tasman Bay on its eastern side, and including within the Marlborough province the whole of the Pelorus valley, and the principal portions of those of the Wairau, Awatere, and Clarence; and finally following up the course of the river Conway to the coast south of the Amuri Bluff. Some of the prominent points in this line are the Dun Mountain, Mounts Richmond and Rintoul, the Top-house, and the south-western extremity of the Kaikoura Mountains. On the north and north-east it is bounded by Cook Strait, and on the south-east by the ocean.

The coast-line of the northern part of the province, between Tasman Bay and Cloudy Bay, is broken into by two long inlets from Cook Strait, separated by a straggling rocky peninsula, of which the northern extremity is Cape Jackson, and sub-divided into innumerable coves, generally of deep water, and surrounded by steep and lofty hills. The most westerly of these inlets is the Pelorus Sound, which has at its entrance the Chetwode and Forsyth Islands, and at its southern extremity the town of Havelock. The other inlet is Queen Charlotte Sound, named by Captain Cook, who made its secure and ample harbourage the rendezvous and headquarters of several of his expeditions. This sound is entered by two channels, one on either side of the Arapawa Island, of which the southernmost is named Tory Channel, after the pioneer vessel of the New Zealand Company sent out in 1839 to explore the shores of Cook Strait, and which was the first ship that ventured through the channel. At the head of this sound, on its southern shore, is situated the town of Picton, the principal port of the province, and its capital.

town until the removal of the local government to Blenheim, in the year 1865.

After passing through Tory Channel, and following the coast southwards for a few miles, we find it again indented by the extensive and secure harbour of Port Underwood, at the northern extremity of Cloudy Bay. From this harbour vessels have sailed annually for several years, carrying to England the wool produced in the Nelson and Marlborough provinces. A little further south than Port Underwood is a small bay called Whites Bay, at which the western end of the Cook Strait telegraph joins the shore, its other extremity being at Lyall Bay, in the Wellington province. Here a telegraphic station is situated for receiving telegrams by means of the cable, and transmitting them to the various stations throughout the island, as well as for forwarding others to the opposite side of the strait. At this point the mass of mountains through which the two main inlets and their numerous channels ramify, has its termination, and the flat shore of Cloudy Bay commences, which continues to its southern extremity at the White Bluff, a prominent feature on the coast, 890 feet in height.

To the north of the White Bluff is the estuary of the Wairau River, a wide sandy bank with several deep channels, some of which are navigable, and upon which the chief town—Blenheim—is built. A short distance below the Bluff the River Awatere discharges itself; and the shore continues flat until we reach the promontory of Cape Campbell,—a little to the north of which, and close to the coast, is Lake Grassmere, a small lake, but the largest in the province; and a little to the south of it is Lake Elterwater.

At Cape Campbell the coast again assumes a mountainous character, and is flanked by the lofty Kaikoura ranges. Between the landward and seaward Kaikoura ranges flows the River Clarence, which empties itself a little to the south of Waipapa Point. The coast

continues rough and broken to its southern extremity at the mouth of the Conway River. About half-way between the mouth of the Clarence and that of the Conway is a singular projecting promontory, called the Kaikoura Peninsula, which affords some shelter to vessels, and on which a small town of the same name is situated. The eastern extremity of the peninsula is called East Head, and forms the northern headland of a bay, of which the southern headland is called the Amuri Bluff, a few miles only north of the Conway River.

The interior of this province is very mountainous, its northern part being bounded on the west by the eastern fork of the main range already described, spurs from which ramify towards the coast, and form the valleys of the Pelorus and Wairau Rivers. The Dun Mountain, Mount Richmond, and Mount Rintoul, mark salient angles in the boundary line; the two latter being more commonly known in the province as the Patriarch and the Devil's Arm Chair. Mount Rintoul is 4,720 feet in height. The central portion also of the province contains lateral branches from the main range, which divide and confine the parallel valleys of the Wairau and Awatere Rivers. These chains are of considerable height,—Mount Weld, one of their peaks, reaching to 5,600 feet; but the loftiest mountains in the province are in the south, and consist of two parallel ranges, which are disconnected with the main range, but have a similar direction with its lateral branch chains. These are the inland and seaward Kaikoura ranges,—the latter being also known as the Looker-on Mountains, which designation was bestowed by Captain Cook. Between these ranges flows the River Clarence, and on their summits are the lofty peaks of Tapuaenuka, or Mount Odin, 9,700 feet; Mount Alarm, 9,300 feet; and Mounts Gladstone, Kaitarau, and Whakari, all of great elevation,—with numerous others, several of them being extinct volcanic cones.

The rivers of the province, owing to the parallelism

of the principal ranges, are of considerable size and length. The Pelorus, however, is an exception, rising near the Dun Mountain, and flowing through a narrow but fertile valley into the head of the sound of the same name. Near its source is the Maungatapu Pass into the Nelson province; and between its mouth and that of a smaller stream, the Kaituna, is situated the town of Havelock, the port for a small district where gold was at first obtained in very considerable quantities; but the gold-field, being very small, is now almost exhausted. By the valley of the Kaituna stream is a pass to Blenheim, the chief town.

The Wairau River rises in the Nelson province on the slopes of Mount Franklin, near Lake Tennyson, and enters the Marlborough province at the pass called the Top-house. It flows towards the north-east, and receives as a tributary on its right bank the Waiopai. It empties itself into Cloudy Bay; and about nine miles from its mouth, upon a delta stream,—the Opawa,—is situated the town of Blenheim, the capital town of the province, and seat of the local government since its removal from Picton in 1865; and which is connected with Picton, still the principal port of the province, by a good road, traversed daily by public conveyances. The Opawa branch is accessible to small vessels, and the Wairau River itself is navigable for about five miles, as far as the town of Marlborough. The Wairau valley contains a considerable extent of level agricultural land in its lower part, known as the Wairau Plain. The upper part of the valley and the hills on its southern side are well grassed, and afford good sheep pasture.

The Awatere rises near the boundary of the province at Barefell's Pass, flows across the Fairfield Downs in the upper part of its course, and the Wakefield Downs towards its mouth, and enters Cloudy Bay to the south of the White Bluff. The Clarence rises in the Nelson province, on the slopes of Mount Franklin, flows through Lake



Tennyson, and receives on its left bank its tributary the Acheron, which forms part of the boundary of the province. At the junction of the Acheron the Clarence enters the Marlborough province, and flows for a considerable part of its course in a north-easterly direction, in a narrow valley between the two lofty ranges of the Kaikoura Mountains; after which it changes its course to the south-east, and empties itself into the ocean to the south of Waipapa Point. The only other streams in this province of any size are—the Conway, its southern boundary; the Kahutara, south of the Kaikoura Peninsula; and the Flaxbourne, south of Cape Campbell.

The interior of this province consists, as has been described, principally of mountainous country. The Wairau Plain, the Wakefield Downs, near the mouth of the Awatere River, and the Kaikoura Plain, between the mountains and the sea, are adapted for agriculture; but the remainder of the country south of the Wairau River is only fit for, and is almost exclusively occupied as, sheep and cattle stations. North of the Wairau River the greater portion of the valleys and flat land are heavily timbered; and in the more accessible parts adjoining the sounds, several saw-mills, mostly worked by steam power, employ a considerable population.

The area of the province is about 2,500,000 acres, and its population, 4,371. The population of its chief town, Blenheim, is 500, and that of Picton, 465.

SECTION VII.

THE PROVINCE OF CANTERBURY.

SYNOPSIS.

TOWNS. *Chief*,—Christchurch, Lyttelton, Timaru, Kaiapoi. *Secondary (including villages)*,—Rangiora, Oxford, Akaroa, Waimatamate, Temuka, Leithfield, Prebbleton, Arowhenua, Geraldine, Leeston.

BAYS. Canterbury Bight, Pegasus Bay.

HARBOURS. Port Lyttelton, Port Levy, Pigeon Bay, Akaroa Harbour.

CAPIES. Godley Head, East Head, Dyke Head, and other headlands of Banks Peninsula.

ISLANDS. Motanau, or Table Island.

LAKES. Sumner, Coleridge, Ellesmere, Tekapo, Pukaki, Ohau, Heron, Tripp, Howard, Acland.

MOUNTAINS. *Ranges*,—Southern Alps, Black range, Rolleston range, Ragged range, Two Thumbs range, Moorhouse range, Ritter range, Bealey range, Puketiraki Hills, Mount Somers, Harper Hills, Ben Ohau and Ben More ranges, and the Hunters Hills, with Banks Peninsula. *Peaks*,—Mounts Cook, Tyndall, Sinclair, Arrowsmith, Haidinger, Sefton, De la Beche, Darwin, Aspiring, Avalanche, Tasman, Petermann, Elie de Beaumont, Peel, Grey, Nimrod, Armstrong, Rolleston, Torlesse, Park, Ida, and Peveril and Scarecliff peaks.

RIVERS. Hurunui, Ashley, Waimakariri, Rakaia, Selwyn, Ashburton, Rangitata, Waipara, Orari, Opihi, Avon, Heathcote, and Waitaki.

PLAINS. Canterbury Plains, Waipara Plains, Mackenzie Plains, Mount Grey Downs, Timaru Downs.

STATISTICS.

Area,—8,693,000 acres.

Population of Province 38,300

Population of Chief Towns :—

City of Christchurch 6,647

Lyttelton 2,510

Timaru 1,027

Rangiora 1,042

Kaiapoi 700

THE PROVINCE OF CANTERBURY.

The settlement of Canterbury originated with the Canterbury Association in the year 1848, but was proclaimed a province in the year 1852, when its boundaries

were defined as extending from the east to the west coast, and from the Province of Nelson on the north to that of Otago on the south. In the year 1867, however, the General Assembly of New Zealand passed an act, separating the country lying to the east of the Southern Alps from the country lying to the west. The former only is now called the Province of Canterbury, the latter being called the County of Westland.

This province occupies the eastern portion of the centre of the South Island. It is bounded on the east by the sea; on the north by the River Hurunui, which separates it from the Province of Nelson; on the west by the summit of the high range of mountains, or the watershed between the east or west coasts, extending from the saddle separating the sources of the Hurunui and Teremakau on the north to Mount Aspiring on the south, which separates it from Westland. On the south it is bounded by the Rivers Waitaki and Ohau; and a straight line, drawn from the outlet of Lake Ohau to Mount Aspiring, separating it from Otago.

The coast-line of this province is confined to the eastern shore of the island, and is divided into two unequal portions by the mountainous district of Banks Peninsula. That portion which extends northwards round Pegasus Bay is called the Forty-mile Beach; whilst a similar flat shingly coast-line, also bordering the plains on the south, and extending from Little River nearly to Timaru, is called the Ninety-mile Beach.

Starting from the mouth of the River Hurunui, at the north-east extremity of the province, and travelling southward along the coast, we enter Pegasus Bay. This bay is forty miles in breadth, and is protected on the north by the projecting, low, limestone ranges near the mouth of the Hurunui (off which lies Motanau or Table Island), and by Banks Peninsula. The low lands lying between these two regions form the northern portion of the Canterbury Plains, and are watered by numerous minor streams,

and the larger rivers, Waimakariri and Ashley,—on the former of which is situated the town of Kaiapoi.

Arriving at Banks Peninsula we find it to be a rocky, volcanic projection, about thirty miles long and eighteen wide, standing out from the Canterbury Plains, and totally unconnected with any other range of hills. In sailing round this barrier we soon discover the extensive harbour of Port Lyttelton (or Cooper), on the northern shore of which is situated the town and port of Lyttelton, which is connected by a railway about seven miles long with Christchurch, the capital of the province, situated on the plains inland. The northern headland of the harbour is called Godley Head, on which a lighthouse was constructed in 1865.

Leaving Port Lyttelton, and continuing our course round Banks Peninsula, we pass in succession Port Levy and Pigeon Bay, with numerous smaller bays, and arrive at the deep and sheltered inlet of Akaroa Harbour, running in a northerly direction into the heart of the peninsula, on the eastern shore of which is situated the town of Akaroa.

In our progress south, leaving Banks Peninsula behind us, and entering the Canterbury Bight, we pass Lake Ellesmere, a large sheet of fresh water, separated from the sea only by a narrow strip of beach and loose shingle; and we then find that the plains which we lost sight of when leaving Pegasus Bay appear again, forming one continuous flat,—unbroken, except by rivers; as the rocky peninsula round which we have been sailing is entirely isolated. Along these plains, which extend inland for about thirty miles, we continue in a southward course for more than seventy miles on an uninterrupted level; passing in our progress the mouths of the rivers Rakaia, Ashburton, and Rangitata, and several lesser streams, such as the Selwyn,—which empties itself into Lake Ellesmere,—the Orari, and Opihi, and arrive at Timaru, a town situated close to the sea, on the low downs which

form the southern boundary of the Canterbury Plains. For a short distance south of Timaru these downs are still found abutting on the sea shore; but afterwards they recede further inland, leaving a narrow strip of level country at their base, extending as far as the River Waitaki,—the southern boundary of the province.

This province may be divided, with regard to its physical features, into three distinct parts:—*First*, the lofty ranges of the Southern Alps, which attain their greatest altitude (13,200 feet) in Mount Cook; the hills bordering the Hurunui river on the north, and the downs on which the town of Timaru is situated on the south, being merely lower elevations of the same mountain system. *Secondly*, the alluvial flat of the Canterbury plains, formed from the soil deposited by the rivers flowing out of the mountains. And, *thirdly*, the volcanic mass of hills on the coast called Banks Peninsula, standing apart on the edge of the plains.

The summits of the Southern Alps are in many instances covered with perpetual snow; and numerous large glaciers exist, which form the sources of the principal rivers in the province. Lakes also are found among them of considerable extent and depth, the principal of which are Ohau, Pukaki, Tekapo, Coleridge, and Sumner.

In addition to the main range of the Southern Alps, there are numerous subordinate chains ramifying from it, between which the chief rivers of the province flow; such are the Black range, Rolleston range, Ragged range, Two Thumbs range, Moorhouse range, Ritter range, and Bealey range, all of which are connected with the central chain; whilst the Puketiraki, Palmer, and Mount Somers in the north, the Harper ranges near the centre of the province, and the Ben Ohau and Ben More Mountains, and the Hunters Hills, occupying the south-eastern portion of the province,—are more or less detached. Banks Peninsula, the mountainous district on the coast, consists of a crest of isolated hills, with ramifications extending to the

shore in all directions, forming a bluff rocky coast round the peninsula. Its highest elevation, Mount Herbert, is 3,050 feet. The peninsula is about thirty miles long and twenty in breadth. It consists almost entirely of steep rugged hills, covered partly with timber, and partly with fern and grass.

The principal rivers of the province partake in general of the nature of large mountain torrents,—becoming very deep and rapid when the snow melts on the hills, or when a large quantity of rain has fallen, but usually traversing the plains in broad shallow streams over beds of shingle, and are consequently unnavigable. The small rivers, the Heathcote and the Avon, however, on the latter of which is situated the city of Christchurch, are of a different character, and are navigable by small vessels for some distance. Vessels of considerable size also discharge their cargoes at the town of Kaiapoi, about three miles distant from the mouth of the Waimakariri.

Of the principal rivers, the course of the Hurunui has already been described among the rivers of the Nelson province. It passes through Lake Sumner, a considerable lake, at an elevation of 1,697 feet above the sea level. The course of the Ashley is of inferior length to that of the other principal rivers. It rises in the Puketiraki Mountains, and between it and the Hurunui lie the Mount Grey and Waipara Downs; and behind the former, Mount Grey Peak, 3,000 feet high. The Waimakariri rises in the central chain, and has numerous tributaries, the principal of which are the Bealy, Hawdon, Poulter, and Esk. The coach-road to the west coast runs along the valley of this river, and crosses the Alps by Arthur's Pass, at the source of the Bealy. The Waimakariri pursues a devious and irregular course, skirting the Black range and the Puketiraki range, and, passing Harewood Forest, flows through the open grassy plains into Pegasus Bay. The town of Kaiapoi is situated about two miles from its mouth.

The Rakaia river rises in two main branches, divided by the Rolleston range, both fed by glaciers; and, after their junction near Mount Algidus, flows for some distance between Palmer range and Lake Coleridge, from which it is divided only by a narrow neck of land: after passing between Mount Hutt on the right bank, and the Malvern Hills on the left, it emerges into the Canterbury Plains, about thirty-five miles from its mouth, and pursues a rapid course to the ocean, emptying itself into the Canterbury Bight. The principal tributaries of the Rakaia are the Wilberforce, Mathias, Harper, Avoca, and Acheron. At the head of the Wilberforce is Browning's Pass, 4,752 feet above the sea.

To the north of the Rakaia, a small stream, the Selwyn, rises in the Malvern Hills, and flows into Lake Ellesmere; and near the base of Banks Peninsula are the two small streams, Heathcote and Avon, on the latter of which stands Christchurch, the capital of the province. This city is connected by a railway about seven miles long (and passing through a tunnel nearly two miles in length) with Port Lyttelton, situated at the north-western extremity of Banks Peninsula.

The Ashburton rises near Mount Arrowsmith,—passes between the Clent Hills, and the lakes Tripp, Howard, and Acland, and to the south of Mount Somers, 5,240 feet in height, and Alford Forest,—and then flows through the plains to the sea, having the small town of Ashburton on its left bank, about eight miles from the coast.

The Rangitata is formed by the junction of the Clyde and the Havelock, which have their sources near Mount Tyndall, among the enormous snow-fields and glaciers of that Alpine region. These rivers unite east of Cloudy Peak, and passing the Two Thumbs range, with its lofty peak Mount Sinclair, and Mount Potts on its opposite bank, and then between Harper range and Mount Peel, it flows through the southern portion of the plains to the Ninety-mile Beach.

The southern portion of the province also contains a number of smaller rivers having their sources in the Two Thumbs range, such as the Orari, Opahi, Pareora, Otaio, and Waiho. Between the Opihi and the Pareora are the Timaru Downs; and on an open roadstead is situated the town of Timaru, the second largest in the province; whilst on the Opihi, and its tributary the Waihi, are the villages of Arowhenua and Geraldine.

The large river, the Waitaki, forms the southern boundary of the province, and has its sources in several large branches rising in the highest portion of the Alps. The central branch, called the Tasman River, is formed by the great glaciers round Mount Cook; and, after a course of about twenty miles, flows through the extensive Lake Pukaki, which name it takes until it joins the right branch, called the Tekapo. This river flows also from a large lake of the same name, which is fed by two considerable rivers, called the Godley and Macaulay Rivers, rising in the Godley and other glaciers. Between these branches and the River Ohau are the Mackenzie Plains. The left branch, called the Ohau, flowing through the Ohau Lake, divides also into two streams in its upper course, called the Hopkins and Dobson Rivers, separated by the Naumann range,—and is itself separated from the central branch by the Ben Ohau range throughout its entire length. Lower down, the Waitaki receives as a tributary upon its right bank the River Ahuriri, and also upon its left bank the Hakateramea, which latter rises in the Hunter Hills; and thence a course of thirty-five miles brings it to the ocean, at the southern extremity of the Canterbury Bight.

With the exception of Banks Peninsula and some portions of the mountain ranges, the province is generally very devoid of timber; the Harewood and Alford forests being the largest to which the inhabitants of the plains have easy access. The more hilly districts of the province are used for sheep pasturage; but agricultural

pursuits are extensively carried on upon the Canterbury Plains, and the downs and flat country around and to the south of Timaru, there being upwards of 150,000 acres under cultivation. In addition to the towns which have already been described, there are several of smaller size scattered over the agricultural districts; of which the principal are Rangiora, Leithfield, and Oxford, to the north of Christchurch; and Prebbleton, Temoka, and Waimatamate, to the south.

A railway, the first in New Zealand, was constructed in 1863 from Christchurch to the Heathcote Wharf, a distance of about four miles; and subsequently extended to Lyttelton by means of the Moorhouse tunnel, 2,838 yards in length,—a work of great expense and difficulty, passing as it does through the hard volcanic rocks of that portion of Banks Peninsula. The entire line was completed and opened in 1867; and about the same time the Great Southern line was opened to the public, from Christchurch as far as the river Selwyn, about 22 miles.

The first telegraph line also established in New Zealand united Christchurch and Lyttelton. It was opened July 1, 1862, and has since been continued north and south throughout the island,—through Otago to the Bluff at the extreme south, and to Nelson and Picton in the north; and thence by the electric cable, successfully laid across Cook Strait, August 26, 1866, communication has been opened with Wellington, the capital of New Zealand, and with the northern provinces. The telegraph also crosses the island, following the west coast road from Christchurch to Hokitika, and thence to Greymouth, a distance of 199 miles.

Owing to the flat character of the country, the roads in the eastern portion were easily constructed. The west coast road, however, across the island, was a work of great magnitude, traversing a most rugged and inhospitable region, and was constructed by the local government under extraordinary difficulties,—engineering and other-

wise. It was begun soon after the opening of the gold-fields on the west coast in May, 1865, at which time Westland still formed part of the Canterbury province, though quite inaccessible at that time by land from the eastern side of the province. This substantial but very costly road was completed in May, 1866, and is now traversed by vehicles of every description; a public coach completing the distance of 150 miles between Christchurch and Hokitika in 36 hours, including a night's detention half-way, at the river Cass. Arthur's Pass, by which the above road crosses the Southern Alps, is 3,038 feet above the sea.

There are other passes with bridle-tracks connecting the western with the eastern coasts. Of these the most important is Harper's Pass, across the Hurunui Saddle, 3,008 feet in height. This road, though not well kept in repair, is still much used by stock drivers.

Browning's Pass, at the head of the Wilberforce, one of the tributaries of the Rakaia, is little used, though a bridle-track has been found connecting it with Hokitika; as, owing to its elevation of 4,645 feet above the sea, it becomes snowed up for a considerable portion of the year, and the ascent on the south side is very steep. Whitcombe's Pass, also, about 20 miles south-west of Browning's Pass, is of a similar character, its elevation being 4,212 feet above the sea. It unites the headwaters of the Rakaia proper with the source of the Hokitika River.

Haast Pass, in the extreme south of the province, discovered by Dr. Haast in 1863, is a remarkable break in the high chain of mountains, being only 1,716 feet above the sea-level; but it is seldom or never used, no road or track having been formed connecting it with the west coast, as from its position it would benefit the province very little at present.

The area of the province is about 8,693,000 acres. Its *population* in 1867 amounted to 38,300, and that of its

chief town—the City of Christchurch—to 6,647 ; that of Port Lyttelton to 2,510 ; that of Timaru to 1,027 ; and that of Kaiapoi to 700.

SECTION VIII.

THE COUNTY OF WESTLAND.

SYNOPSIS.

TOWNS. *Chief*,—Hokitika, Greymouth. *Secondary*,—Stafford Town, Ross, Kanieri, Okarita, and Weld.

BAYS. Westland Bight, Bruce Bay, Jackson Bay, Barn Bay, and Awarua or Big Bay.

HARBOURS. Greymouth, Hokitika.

CAPIES. Clifly Head, Abut Head, Oturokua Point, Tititira Head, Arnott Point, Jackson Head, Cascade Point, Awarua Point.

LAKES. Brunner, Poherua, Kanieri, Mahirapua, Okarita, Kakapo, Rotokino, Mapouriki.

MOUNTAINS. *Ranges*,—Southern Alps (the eastern boundary of the county), Thompson range, Okura range. *Peaks*,—Kaimatau, Aspiring, Glacier Dome, Castor and Pollux, Alba, Dana, Napoleon, Sefton, Harman, Rolleston, Franklyn.

RIVERS. Grey, Arnould, Teremakau, Arahura, Hokitika, Totara, Mikonui, Waitaka, Whanganui, Poerua, Wataroa, Waiiau, Waikukupa, Weheka, Karangarua, Mahitahi, Paringa, Waita, Haast, Arewata, Awarua.

PLAINS. Grey Plain, Sherrin Plain, Okarita and Open Bay Plains.

STATISTICS.

Area,—2,880,000 acres.

Population of County 15,550.

Population of Chief Towns:—

Hokitika 4,866.

Greymouth 1,607.

THE COUNTY OF WESTLAND.

The portion of the South Island which forms the present county of Westland was, until the year 1867, included within the boundaries of the Canterbury province, of which it formed the western portion. Owing, however, to the formidable barrier of the Southern Alps, which cut it off from overland communication with the Canterbury plains and those districts of the eastern portion of that province which had been first settled, and owing also to the extensive circumnavigation of the island which was necessary in order to reach it by sea, it remained an almost *terra incognita* until the discovery of its rich gold-fields in the year 1865, by explorers who straggled down the coast from Nelson after gold had been discovered to exist in that part of the island.

In the course of the three succeeding years this district became one of the most populous districts of the colony, possessing several large and thriving commercial towns; and in the year 1867 it was separated from the province of Canterbury by Act of the General Assembly, and constituted the County of Westland, with a local government of its own.

It is separated from the present province of Canterbury on the east by the line of watershed of the Southern Alps, running north and south from the saddle between the sources of the Hurunui and Teremakau Rivers to Mount Aspiring; from the province of Nelson on the north by a line running from the saddle before mentioned to Lake Brunner, thence following the Arnould River to its junction with the River Grey, and along the River Grey to its mouth; and from the province of Otago on the south by a line starting from Mount Aspiring, and terminating at the mouth of the River Awarua, in the Big Bay.

The coast-line of the county extends from the mouth of the River Grey southwards to that of the Awarua. It

is generally steep and rugged, densely covered with forest, and bordered at some little distance by the stupendous central mountain-chain, the Southern Alps, the spurs from which form in places precipitous or overhanging cliffs of great height, and very inaccessible.

Starting from the mouth of the River Grey, on which is situated the port and town of Greymouth, the commercial entrepôt for the numerous diggings situated upon the banks or neighbourhood of the river, a south-westerly course of about seven miles along a sandy beach brings us to the mouth of the Teremakau River, on which a village is located, the gold-diggings of this district lying upon the Greenstone Creek, which is a branch of the Teremakau. Passing this, we continue our course along a good sandy beach, backed by level terrace country, and here the little River Waimea empties itself, upon which are situated Stafford Town and the Waimea diggings, the most extensive in Westland.

We next reach the river and town of Hokitika, the town being the largest in the county, and the seat of local government. The Hokitika River is a poor harbour, and subject to sudden changes in direction, and in the depth of its water. Large vessels, therefore, remain in the roadstead, and discharge into steamboats which can enter the river with comparative ease. A short distance south of Hokitika, we pass the Lake Mahinapua, fed by a small stream which empties itself into the Hokitika River near its mouth; and continuing our course to the southward, we now pass along a rocky coast broken by the Totara, Mikonui, Waitaka, Whanganui, and Poerua Rivers, to Wataroa River at Abut Head, a distance of about sixty miles from Greymouth.

Here the level country on the coast narrows, and the mountain ranges continue to approach the shore until their spurs form rough, and often inaccessible cliffs, which present to the traveller a number of bold and picturesque points and headlands.

The coast continues with but little variation in character to Arnott Point, a distance of about sixty-five miles, in a direct line from Abut Head, passing the mouths of the Rivers Waiau, Waikutupa, Weheka, Mahitahi (in Bruce Bay), and Paringa (at Tititira Head). From Arnott Point to Arawata River in Jackson Bay, the coast is low and sandy, with extensive plains, covered mostly with dense forest. The River Haast, a large stream, flows into the sea about ten miles south-west of Arnott Point. From Jackson Bay to the southern extremity of the county the coast is again very rocky and precipitous, a most inhospitable region of forests, rocky gorges, precipices, and swamps. The rivers on this portion of the coast are numerous, but mostly very small. At Cascade Point, a prominent headland, several streams fall over the cliffs perpendicularly into the sea, a height of about 100 feet, a remarkable feature in the wild scenery of the coast, and from which the cape has derived its name.

The country included within the county of Westland consists of the western slopes of the great central Alpine chain of mountains, which attain their greatest elevation in Mount Cook, which reaches to 13,200 feet in height. This, the highest peak, is claimed by the province of Canterbury; but there are, within the boundaries of the county, a number of remarkable summits, of which Kaimatau, one of the main peaks of the Mount Cook range,—Mount Aspiring (about 10,000 feet), on the frontiers of Canterbury, Westland, and Otago,—Mount Alba (8,268), Castor (8,633), Pollux (8,588), Ward, Hooker, Dechen, Dana, and Brewster,—are some of the most noteworthy.

This Alpine region rises, in its higher parts, above the limit of perpetual snow, and furnishes to the traveller the adventure and toil, the romance and danger, together with the prospect of physical wonders and exquisite scenery, which have so long rendered attractive the Alps of Europe; it is interspersed, like the latter, with rugged cones and peaks, fields of ice, and some of the largest glaciers in the

world, together with mountain-torrents, lakes, and precipices, besides immense and almost impenetrable forests on the lowlands and mountain-slopes.

Between the flank of the main range and the sea-coast, and running up the valleys between the numerous spurs, is a considerable extent of undulating country, heavily timbered, reaching from the northern boundary to the River Whanganui. This tract is abundantly watered by numerous mountain-streams, and by the Grey River, which rises in the Nelson province, and the course of which has been described among the rivers of that province. A branch, however, of the Grey, called the Arnould, is within the province, flowing through the Lakes Poherua and Brunner, and entering the Grey at a right angle. Near its junction with and on both sides of the Grey are extensive coal seams. The Grey is navigable for boats and canoes for about thirty miles, and at its mouth, upon its left bank, is situated the town and port of Greymouth.

The Teremakau is a considerable stream rising on the saddle already described, and which forms a point in the boundary of the Nelson and Canterbury provinces, as well as in that of the county of Westland. The country in its neighbourhood is rich in gold, and along its bank passes the mail-road from the east coast. At its mouth is the village of Whitcombe. To the south of this river are two smaller streams,—the Waimea, on which are situated Stafford Town and the Waimea diggings, the most extensive in Westland; and the Ararua, a river long well known to the natives of New Zealand, who undertook journeys thither from all parts of the islands, in order to obtain the greenstone or jade, of which they made their weapons called *merés*, and various ornaments.

The Hokitika rises in the Butler range, near Mount Whitcombe and Browning's Pass, and is fed by the Kokotahi and the Kanieri River, which flows through the Kanieri Lake, and has, at its junction with the Hokitika, a town of its own name. The town of Hokitika, the seat

of the local government, occupies both sides of the Hokitika River, at its mouth.

The Totara is but a small river, about 30 miles from Hokitika; on it is situated the small but picturesque town of Ross. The Mikonui, Waitaba, Whanganui, Waitaroa, and Waiiau, are only mountain-torrents. Near the right bank of the Waitaroa, which has its outlet close to Abut Head, is Lake Rotokino. The small town of Okarito is the principal one south of Abut Head, and is the centre of a considerable gold-digging population. Round Open Bay, on each side of the River Haast, as already described, is a considerable area of flat land, but nearly all of it is heavily timbered.

Ships enter with more or less difficulty the Hokitika, Grey, Teremakau, and Haast rivers, all of which have shifting bars and spits, the Teremakau being at times almost closed against navigation.

The gold regions of the county are reached by three overland routes from the neighbouring provinces. Of these the most northerly crosses the saddle dividing the sources of the Hurunui and Teremakau rivers. The second passes through Arthur's Pass, a fissure in the main range uniting the valley of the Waimakariri with that of the Teremakau. And the third follows round the head of Lake Wanaka, and across Haast Pass. The two latter routes are more fully described in the account of the province of Canterbury.

The gold-fields occupy almost all parts of the county, digging being carried on upon the beach, the terraces, and many of the accessible gullies; and these will probably furnish for many years the principal wealth of the country. The amount of gold exported from the county in the year 1867 amounted to a million and a half of money.

The area of the county is about 2,880,000 acres. Its population in 1867 amounted to 15,550; that of its chief town, Hokitika, to 4,866; and that of Greymouth to 1,607. The native population is extremely small.





SECTION IX.

THE PROVINCE OF OTAGO.

SYNOPSIS.

TOWNS. *Chief*,—Dunedin. *Commercial, &c.*: larger, —Port Chalmers, Oamaru, Hampden, Waikouaiti, Milton, Balclutha: *lesser*,—Port Molyneux, Waiholā, Fairfax, Outram, Waitata, Hawkesbury, Palmerston, Herbert. *Gold-field towns*: larger,—Queenston, Alexandra, Clyde, Cromwell, Lawrence, Havelock: *lesser*,—Kingston, Frankton, Arrowton, Dalhousie, Roxburgh, Wakefield, Newcastle, Gladstone, Waipori, Hindon, Serpentine, Hamilton, Naseby.

BAYS AND SOUNDS OF THE WEST COAST. Big Bay, Martin Bay, Milford Sound, Bligh Sound, George Sound, Caswell Sound, Charles Sound, Nancy Sound, Thompson Sound, Doubtful Sound, Dags Sound, Breaksea Sound, Dusky Sound, Chalky Inlet, Preservation Inlet, Tewaewae Bay.

BAYS AND HARBOURS OF THE EAST COAST. Oamaru Roads, Moeraki Roads, Waikouaiti Roads, Otago Harbour, Molyneux Bay, Waikawa Harbour, Toetoe Bay.

CAPIES, &c., OF THE WEST COAST. Yates Point, Five Fingers Point, West Cape, Windsor Point, Sandhill Point.

CAPIES, &c., OF THE EAST COAST. Cape Wanbrow, Moeraki Point, Shag Point, Tairoa Head, Cape Saunders, Nugget Point, Slope Point, Waipapa Point.

ISLANDS. Secretary, Breaksea, Resolution, Anchor, Chalky, Solander, Green, Taieri.

RIVERS. Clutha, with its tributaries Matakītiki, Cardrona, Shotover, Arrow, Kawarau, Lindis, Manuhēria, Pomahaka, Tuapeka, Waitahuna; Taieri, with its

tributary Waipori; Shag, Waikouaiti, Kakanui, Tokomairiro, Catlins, Tautuku, Waikawa; Mataura, with its tributary Nokomai; Katuka, Hollyford, Moa, Waiau, with its tributary Mararoa, Greenstone.

LAKES. Te Anau, Wakatipu, Wanaka, Hawea, Manipori, McKerrow or Kakapo, Waihora, Monowai, Haorakau, Marora, Taieri.

MOUNTAINS. *Ranges*.—Humboldt, Forbes, Livingstone, Richardson, Thompson, Murchison, Hunter, and Billow, in the west; Hector, Eyre, Garrick, Dunstan, in the centre; and Kurow, Hawkdun, Kakanui, Knobby, Umbrella, Lammerlaw, and Rough ranges towards the east. *Peaks*.—Aspiring, 9,940 feet; Earnslaw, 9,165; Christina, 8,475; Black Peak, 7,576; Tutuko Peak, 9,000; Centaur Peak, 8,284; Ansted, 8,157; Tyndall, 8,116; Edward, 8,459; Cosmos, 8,000; Stone Peak, 7,222; Larkins, 7,432; Aurum, 7,322; Alta, 7,838; Ben Nevis, 7,650; Double Cone, 7,688; End Peak, 6,926; Treble Cone, 6,888; Cardrona, 6,344; Pisa, 6,246; Castle, 6,872; Pembroke Peak, 6,710; Lawrenny Peak, 6,500; James Peak, 6,898; Mount St. Bathans, 6,600; Kurow, 6,293; Ben More, 6,111; Symmetry Peaks, 6,224; Eyre Peak, 6,530; David Peaks, 6,802; Cecil Peak, 6,477; Mineral Peaks, 6,441; Mount Ida, 5,498; Mount Maury, 5,090.

PLAINS. Taieri and Tokomairiro Plains, Clutha Valley, Oamaru district.

STATISTICS.

Area.—13,360,640 acres.

<i>Population of Province</i> (British, including	} 48,577
Chinese) ...	
" " Native ...	450

Population of Chief Towns :—

City of Dunedin	13,000
Port Chalmers	1,500
Oamaru	1,500

THE PROVINCE OF OTAGO.

Otago is the most populous of the New Zealand provinces. It owes its origin to the Scotch Free Church Association, by which the Otago settlement was established in the year 1848; the first band of pioneers arriving at Port Chalmers, with the leader of the expedition, Captain Cargill, on the 23d of March in that year. It originally occupied all that portion of the South Island which was situated south of the Canterbury province, but in 1860 a small block at the south was separated from the rest and formed into the province of Southland.

The province of Otago is divided from that of Canterbury and from the county of Westland to the north by the River Waitaki, from the point where it issues from the Ohau Lake to its mouth on the eastern coast, and by a nearly direct line from the same point to the mouth of the Awarua River on the western coast. It is separated from the province of Southland by the Maitaura River, which forms the eastern boundary of the latter province from its source to its mouth, and by the River Waiau, which forms the western boundary of the same province from Lake Manipori to the Foveaux Strait, and by a line from Mount Eyre to the Manipori Lake, which bounds that province on the north.

Its coast-line is thus divided into an eastern and a western portion, which present widely different aspects to our notice. The western coast-line extends from the Awarua River to the mouth of the Waiau, a distance of ninety miles. Starting from the mouth of the Awarua, the southern extremity of the Westland coast-line, we find the entire coast from this point to the south-western extremity of the island at Windsor Point broken up into an almost endless succession of deep bays, inlets, and channels, resembling the fiords of Norway. The sides of these bays are formed by steep mountain-ridges of great height, and densely wooded, except where capped with

snow, from which flow numerous mountain-streams and cascades. In describing this coast,—which, owing to its rugged character, has been only superficially explored, and remains quite uninhabited,—we can do no more than enumerate the principal of these inlets in the order in which they would be passed. The first is Big Bay, the boundary bay of this province and Westland county; then Martin Bay, into which the waters of the McKerrow or Kakapo Lake flow by the Katuka River; afterwards, in succession, Milford Haven, Bligh, George, and Thompson Sound; Doubtful Inlet, divided from the latter by Secretary Island; Dusky Bay, to the south of Resolution Island; and north of West Cape, Chalky and Preservation Inlets.

From Windsor Point, the south-western extremity of the island, the coast-line is unbroken until we reach Sandhill Point, the western headland of Tewaewae Bay. Into this bay the River Waiau empties itself; and here commences the gap in the south coast-line caused by the intervention of the province of Southland.

The eastern coast-line differs greatly from that already described. Starting from the mouth of the Waitaki, the southern extremity of the eastern coast-line of the Canterbury province, we pass along an extensive beach, and a tract of fine agricultural land, gently rising towards the interior. On a small inlet, Oamaru Bay, about fifteen miles south of the Waitaki, is situated the fast-rising town of Oamaru, which serves as a port for the export of wool, grain, and other produce, from an extensive range of agricultural and pastoral country. About twenty miles further south we arrive at the harbour of Moeraki, on which is built the town of Hampden, the town of Herbert being also a short distance inland; and continuing our course, we pass the mouth of the Shag River, a few miles from which is located the town of Palmerston, in the midst of some fine agricultural country, and in the neighbourhood of the Highlay gold-fields. We next pass Wai-kouaiti river, which empties itself into the bay of the

same name, with the towns of Hawkesbury and Waikouaiti; and in the angle formed by the projection of Otago Peninsula with the mainland lies Blueskin Harbour, and the town of Waititi or Blueskin. Here, changing our course eastward, we pass the entrance to Otago Harbour, a remarkably secure and picturesque inlet, the entrance to which faces due north, on which are situated Dunedin, the capital of the province, and Port Chalmers. Rounding Tairoa Head, and Cape Saunders, the southern headland of Otago Peninsula, we coast along the extensive and fertile plains of Taieri and Tokomairiro, until we reach Molyneux Bay, into which the large and rapid River Clutha discharges itself. About a mile from the entrance of this river is situated the town of Port Molyneux, and about twelve miles up the river is Balclutha.

From the Clutha to the Mataura the coast is rugged and comparatively steep. We first pass a remarkable headland, a little to the south of Molyneux Bay, called Nugget Point, and Catlins River, with a harbour for small craft. A considerable quantity of land has been sold here, and the place is likely to become important.

Waikawa Harbour lies in the extreme south of the province; it is an excellent harbour, and vessels drawing twenty feet of water may anchor safely. Ships of over 100 tons burthen have been built at this port. Toetoe Harbour, at the mouth of the Mataura River, is unsafe, and having a dangerous bar, can only be entered by small vessels.

In this province the great central chain of mountains spreads out in all directions, forming an apparently confused and intricate assemblage of steep ranges, intersected by rapid streams, and interspersed with large and numerous lakes. It is in the eastern portion only that any extensive tracts of land sufficiently level for agriculture are to be found. The interior, however, furnishes gold-fields of great extent and richness. The mountain ranges are too numerous to attempt any detailed description in the

present sketch. They occupy the whole of the country, with the exception of those tracts in the eastern part which have been already referred to. The central chain is the Dunstan, which occupies the interior about midway between the east and west coast, and of which the highest peak is Mount St. Bathans, 6,600 feet in height. The other principal ranges may be arranged in the following order: the Humboldt, Forbes, Livingstone, Richardson, Thompson, Murchison, Hunter, and Billow Mountain ranges, in the western portion, being a continuation of the Southern Alps; the Hector, Eyre, and Garrick, together with the Dunstan, in the centre; and the Kurow, Hawkdun, Kakanui, Knobby, Umbrella, Lammerlaw, and Rough Ridge ranges, towards the eastern portion of the province. The mountain-peaks are also very numerous as well as lofty,—Mounts Aspiring and Earnslaw, both in the north-west, with others, exceeding an altitude of 9,000 feet; and those ranging from 5,000 to 9,000 feet being so numerous that mountains of inferior height assume the appearance of comparatively dwarf and stunted hills. A list of the principal peaks, with their altitudes when known, will be found in the synopsis of the province prefixed to this description.

The eastern portion of the province is, however, comparatively level, and contains the extensive and fertile plains of Taieri and Tokomairiro, together with the Oamaru district in the north-east, and the lower valley of the Clutha. The Taieri Plain extends twenty-five miles in length by about four in breadth, and reaches to within six miles of Dunedin. It was originally one vast swamp, much of which is already reclaimed by the skill and labour of the settlers, and the crops produced are unsurpassed by any other district of New Zealand. The Taieri, in its circuitous course, with its numerous tributaries, traverses the whole region. The Tokomairiro Plain is about seven miles in length by three in breadth; upon it are situated *the towns* of Fairfax and Milton. These plains are

situated between the Taieri and the River Clutha. The Oamaru district, in the north-east, constitutes the largest pastoral and wool-producing district in the province, and has also a considerable extent of agricultural land. The valley of the Clutha, for twenty miles from its mouth, consists for the most part of rich agricultural land, and is thickly peopled.

Midway across the island, and at the extreme north of the province, are the Lakes Hawea and Wanaka, separated only by a narrow range of mountains. The former covers an area of 48 square miles, the latter of 75. About forty miles to the south-west of these is Lake Wakatipu, the largest in New Zealand,—covering an area of 114 square miles; and still further to the south-west lie the Te Anau and Manipori (correctly Maniapura) Lakes, having jointly an area of 182 square miles. These lakes are situated at from 800 to 1000 feet above the level of the sea.

The principal river in the province, and the largest in New Zealand, is the Clyde or Clutha, named Molyneux by Captain Cook, but re-christened by the settlers in memory of the Scottish river, and which drains an extensive and mountainous tract of country. This river is the outlet for the collective waters of the great Lakes Hawea, Wanaka, and Wakatipu. Its principal sources are the Makarora and Hunter, which rise in the Southern Alps near Mount Cook, in the Canterbury province, and form the two first-named extensive lakes. These lakes are drained by two short streams of the same names, and their united waters form the Clutha. The towns of Gladstone, Newcastle, Pembroke, and Wakefield, are situated upon this upper part of its course. It receives upon its right bank also an important tributary—the Kawarau, bringing with it the waters of the great Wakatipu Lake, on which lake Glenorchy, Frankton, Queenston, and Kingston are situated; with Arrowton on a sub-tributary of the Kawarau. At the junction of the Kawarau with the Clyde is the town of Cromwell.

The Manuherikia joins it on the left bank at the town of Alexandra, a little to the north of which, on the same bank of the main river, is the town of Clyde. Roxburgh, Dalhousie, and Balclutha, are also situated upon the main river; the other principal tributaries of which are—the Lindis, Tuapeka, and Watahuna on its left bank, with the Cardrona and Pomahaka on the right. The towns of Clinton, Lawrence, and Havelock are situated upon its tributaries in the lower part of its course. It has been calculated that the Clutha discharges into the ocean 1,600,000 cubic feet of water per minute; being a larger quantity than the Nile, and sixteen times that of the Thames in England. This is owing to the rapidity of its course; it is at present navigable upwards of fifty miles from its mouth, and is said to present no engineering difficulties to prevent navigation to its source, within fifty-five miles of the west coast.

The Waiau is a large river in the south-western portion of the province, forming the western boundary of Southland; it drains a large block of very rugged country, and several extensive lakes, including Te Anau, the second largest in New Zealand, and the Manipori. The Mataura, rising in the Eyre Mountains, forms the eastern boundary of Southland province. The Waitaki, the northern boundary of the province, has been described in the Canterbury section. The only other river deserving special mention is the Taieri, which, as already stated, drains some of the principal agricultural districts of the province, and flows into the sea about twenty miles southwest of Dunedin. This river rises in the Lammerlaw Mountains, and receives a remarkable number of tributaries. Its course is so circuitous that, after traversing more than 100 miles of country, its channel is still no more than twenty miles from its source in a direct line. The Waipori is one of its principal tributaries, which flows through the Lakes Waipori and Waihora, and upon which the towns of Waipori and Berwick are situated.

And upon the main river and its other tributaries are Naseby and Hamilton in its upper course, Outram and Greytown on its lower course, and Hull at its mouth.

The gold-bearing formations of Otago extend over nearly one-half of the whole area of the province. They were first discovered in 1861 at Tuapeka, by Mr. Gabriel Read, and have since extended in all directions, from the Mataura River and Lake Wakatipu to the Hawkdun and Kakanui Mountains, and from Tokomairiro to Lake Wanaka. The principal of them are those named the Wakatipu, Dunstan, Mount Ida, Nokomai, Mount Benger, Taieri, and Tuapeka.

Dunedin, the chief town of the province, and also the most populous in the colony, is built upon a belt of flat land, backed by hills rising to an elevation of about 600 feet, and running at right angles to the bay, from which the town presents the appearance of an amphitheatre, the houses rising tier above tier to its very summit. It possesses many fine public edifices and private houses.

The area of the province is 13,360,640 acres, and its population 48,577, including about 1,000 Chinese, and there are also about 500 Natives within its boundaries. The city of Dunedin contains a population of 13,000, and its suburbs nearly 7,000; whilst Port Chalmers and Oamaru, the principal agricultural towns, have each about 1,500.

SECTION X.

THE PROVINCE OF SOUTHLAND.

SYNOPSIS.

TOWNS. *Chief*,—Invercargill. *Secondary*,—Campbelltown, Riverton, Winton.

BAYS. Toetoe Bay, Howell Road, Kolacs Bay, Wakaputa Bay, Orepuki Bay, Tewaewae.

HARBOURS. Bluff, Invercargill, Riverton.

CAPIES. The Bluff, Baracouta Point, Hinetutu Point, Wakapatu Point, Orepuki Point, Tewaewae Point, Pahia Point.

ISLANDS. Stewart, Ruapuke, Dog, Centre, and Pig Islands.

RIVERS. Mataura, Oreti or New River, Aparima or Jacobs River, Waiau, Makarewa, Waihopai, Wairaki, and Waimea.

LAKES. Waituna, Lagoon, Manipori.

MOUNTAINS. *Ranges*,—Takitimo, Eyre, Hokonui, Taringatura, and Longwood. *Peaks*,—East and West Dome, Mount Hamilton, Telford Peak, Mount Etal, Taringatura Hill, and East and West Peaks.

PLAINS AND DOWNS. Mataura, Waimea, Five Rivers, Waiau and Oreti Plains, Taringatura and Wairaki Downs.

STATISTICS.

Area of Province,—2,776,000 acres.

Population of Province7,943

„ chief town, Invercargill,2,006

THE PROVINCE OF SOUTHLAND.

The southern portion of the colony, which now constitutes the province of Southland, was at first included within the boundaries of the province of Otago, as they were proclaimed in the year 1852. It was made, however, a *separate* province under an Act of the General Assembly

of New Zealand in the year 1861, and in the year 1863 its boundaries were extended so as to include Stewart Island and the neighbouring islets.

The province of Southland, as its name indicates, consists of a portion of the extreme south of the South Island, and is surrounded on three sides by the province of Otago, from which it is separated on the eastern side by the Mataura River from Eyre Peak to its outlet in the Foveaux Strait; on the west by the Waiau River from Lake Manipori* to Tewaewae Bay; and on the north by a line drawn from Eyre Peak, crossing the Eyre Mountains in a south-west direction, and meeting a line drawn due east from the Manipori Lake to the Oreti River.

The coast-line of this province, if we omit the island, is limited to the portion lying between the mouths of the two rivers Mataura and Waiau. It is about eighty miles in length, and very irregular in its outline, consisting for the most part of a low flat beach.

Starting from the mouth of the Waiau in Tewaewae Bay, and following its eastern shore, we pass Pahia and Orepuki Points, the latter being the southern headland of that bay; thence turning eastward we pass Wakapatu and Hinetutu Points, and several small bays, the last and largest of which is called Kolacs Bay; and leaving on the right several small islands, the largest of which is Centre Island, we reach Howell Point. Here the coast makes a semi-circular bend, forming the Howell Roads and Riverton Harbour, into which the Aparima River empties itself, having upon its estuary the town of Riverton.

At the lower extremity of the same bend is the entrance to the Harbour of Invercargill, called also the Oreti or New River estuary, as it receives the waters of the river so named, as well as those of the smaller river Waihopai. At the upper extremity of the eastern shore of the harbour is the town of Invercargill, the capital

* Proper native name, *Maniapora*.

of the province, so named after Mr. William Cargill, the leader of the Otago settlers. The Harbour of Invercargill is sheltered by the northern projection of a singular T-shaped promontory or peninsula, of which the southern extremity is termed The Bluff, and is a bold and precipitous hill, 860 feet in height. Sheltered by this southern projection, as well as by a narrow neck of land extending towards the eastward, lies the Bluff Harbour, at the entrance to which, on Stirling Point, is the pilot station; and directly inside, on the south-western shore, is the port and town of Campbelltown.

The point of the projection facing The Bluff is called Tewae Point, a short distance from which is Dog Island, containing the lighthouse to Foveaux Strait; and further on, nearly in the middle of the strait, is the Island of Ruapuke, the principal Maori settlement anywhere out of the North Island, surrounded by several rocky islets. The remaining portion of the coast is low and sandy up to Toetoe Bay, at the eastern extremity of which is the entrance to the Mataura River, the eastern boundary of the province.

This province, though one of the smallest in the colony, contains, in proportion to its size, the largest extent of level and fertile agricultural land—its entire south-eastern portion consisting of fine undulating park-like country, forming several extensive plains, interspersed with belts of fine timber, and watered by some large streams with numerous tributaries. The northern and north-western portions are mountainous, having the Takitimo range in the west, with Telford Peak, 5,280 feet in height, and Mount Hamilton, 4,674 feet; the Eyre Mountains in the north, with Eyre Peak, 6,084 feet, and East and West Dome, the former of which attains 4,500 feet. In the east, also, are the Hokonui Hills, with East and West Peak, the former being 2,200 feet in height; whilst in the south-west is the Longwood range, and upon the elevated downs in the interior are Mounts Taringatura and Etal.

The principal plains and downs in the province are the

Mataura, Oreti, and Waiau Plains, on the rivers of the same names, in the lower portions of their courses; the Waimea Plain, to the north of the Hokonui Hills; Five Rivers Plain, at the base of the Eyre Mountains; and the Taringatura and Wairaki Downs in the interior.

The principal rivers (omitting the Mataura and Waiau, which separate the province from Otago, and have been described among the rivers of that province) are the Oreti or New River, and the Aparima or Jacobs River. The Oreti rises in the Eyre Mountains, north of the province, and flows nearly due south to Invercargill Harbour, receiving as a tributary the Makarewa. On its left bank, about twenty-five miles from its mouth, is Winton, the principal agricultural town of the province. The Aparima rises in the Takitimo Mountains, and flows parallel with the Oreti into Riverton Harbour, where is the town and port of Riverton.

This province offers great facilities for extensive farming operations, and exports annually a large quantity of wool. The Orepuki gold-fields are situated on the west and south side of the Longwood range, between the Waiau and Aparima rivers, and, though not so rich as those of the neighbouring province, yield a profitable return to those who are engaged in working them.

Invercargill, the capital of the province, is situated on the north-east side of Invercargill Harbour. It is connected overland with Campbelltown, at the southern extremity of the Bluff promontory, by a railroad eighteen miles in length. The Bluff is itself of considerable importance as being the nearest port to Melbourne, and the first place of call for the Australian steamers. It is connected with Wellington by telegraph. The other principal towns and villages are Riverton and Winton, already mentioned.

The area of the province, including Stewart Island, of which a separate description is given, is about 2,776,000 acres. Its population, 7,943; and that of Invercargill, 2,006.

SECTION XI.

STEWART ISLAND.

SYNOPSIS.

BAYS. Mason Bay, Horse-shoe Bay, Half-moon Bay, Wilson Bay.

HARBOURS. Port William, Paterson Inlet, Port Pegasus, Lords River.

CAPIES. Black Rock Point, Saddle Point, Akers Point, East Head, South Cape, South-West Cape, and Weather Point.

ISLANDS. Codfish, Cooper, Bench, Pearl, Long and Ernest Islands.

RIVERS. Murray, Ohokia, Lords, and Heron Rivers.

PEAKS. Mounts Anglem (3,200 feet), Rakeahua (2,110), Table Hill, and Lees Knob.

STEWART ISLAND.

This island was annexed to the province of Southland by an Act of the General Assembly of New Zealand in the year 1863. It was the first part of New Zealand seen by Captain Cook in 1770, and was then supposed by him to form part of the south end of the mainland; and it was not discovered to be an island till nearly forty years afterwards, by the master of a merchant vessel, named Stewart, after whom it has since been named. It is separated from the main South Island by the Foveaux Strait, so named by D'Urville in honour of Admiral Foveaux.

Its coast-line is very broken, and the island has some resemblance in shape to an irregular triangle. Commencing at its northern extremity, Black Rock Point, the first harbour on the eastern side is Port William, which, *although small*, is considered one of the best and most

accessible in New Zealand. Between this port and Paterson Inlet lie Horse-shoe and Half-moon Bays, Akers Point forming the northern headland of this spacious inlet, which runs nearly due west ten miles across the island. Cooper Island lies at the entrance to this harbour. A peninsula, called The Neck, forms the south headland of Paterson Inlet; and seven miles south of it is East Head, the most prominent point on the eastern coast. A little to the south of this is Port Adventure, the most southerly inhabited point of New Zealand.

From Port Adventure the coast trends in a south-west direction to the entrance of Lords' River, a stream of some size, and navigable for four miles from its entrance. Port Pegasus, the second largest harbour in this island, is west of Lords River. It has three main entrances, formed by Pearl and two smaller islands. Wilson Bay is a deep indentation, south of Port Pegasus, and then South Head forms the extreme southern point of the island. The Snares lie sixty-two miles south-east of this cape. They are small rocky islets, affording no shelter or anchorage for vessels.

From South-West Cape, a little west of South Head, the coast trends in a northerly direction. Long Island and numerous smaller ones lie off the shore between this cape and Ernest Island, which forms the south head of Mason Bay, which is much exposed to westerly gales. There is then a succession of rocky headlands to Rugged Isle, which forms the north-western Point. Codfish Island lies about two miles off the mainland, and is the largest on the coast. Between Saddle Point and Fort William is a small stream called the Murray River.

The principal peaks are—Mount Anglem, 3,200 feet; Rakeahua, 2,110 feet; Table Hill, and Lees Knob. There is no continuous range, excepting at the south-west end of the island. A plain runs across from the head of Paterson Inlet to Mason Bay, through which the river Ohokia flows.

Stewart Island, although inhabited by Europeans for more than thirty years, has a very small population, consisting chiefly of half-castes, the progeny of the whalers who formerly frequented its coasts and native women. The chief settlement is at The Neck, in Paterson Inlet. It is throughout densely timbered, much of the timber being adapted for ship-building. The Oyster Fisheries yield during the season employment to the inhabitants, as their produce is largely exported, the oysters being considered the finest in New Zealand.

SECTION XII.

THE OFF ISLANDS:—THE CHATHAM AND AUCKLAND GROUPS, CAMPBELL ISLAND, BOUNTY AND ANTIPODES ISLETS.

SYNOPSIS.

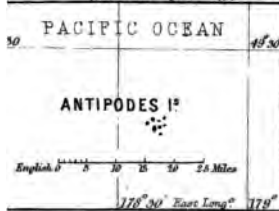
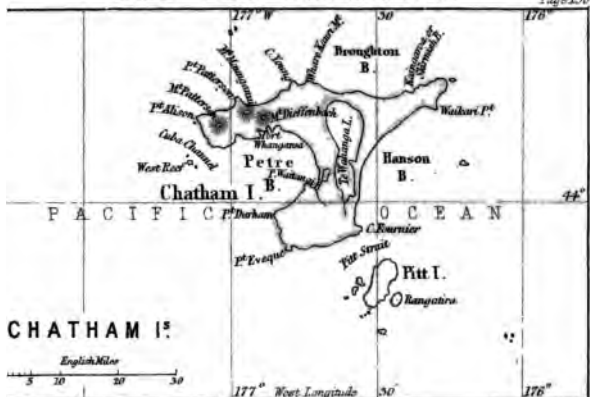
ISLANDS. *Chatham group*,—The Chatham, Pitt, and Rangatira. *Auckland group*,—Auckland Island, Adams and Enderby, and Disappointment; Campbell Island, Bounty Islets, and Antipodes Islets.

BAYS AND HARBOURS. *Chatham group*,—Petre, Han-son, Broughton, and Kaingaroa or Skirmish Bays. Ports Waitangi and Whangaroa. *Auckland group*,—Port Ross or Sarah's Bosom; Carnley Harbour; Lawrie Harbour. *Campbell Island*,—Perseverance Harbour.

CAPIES. *Chatham group*,—Capes Eveque, Fournier, and Young. Points Paterson, Alison, and Durham. *Auckland group*,—Black Head, or North-West Cape; South-West Cape, South Cape, and Cape Bennet. *Campbell Island*,—Point Erebus.

STRAITS. *Chatham group*,—Pitt Strait, and Cuba Channel. *Auckland group*,—Adams Strait.

COLONY OF NEW ZEALAND:
THE OFF ISLANDS.



MOUNTAINS. *Chatham group*,—Paterson, 800 feet; Whare Kauri, Maunganui, Mount Dieffenbach, West Reef. *Auckland group*,—Mount Eden, 1,325; Giant's Limb. *Campbell Island*,—Mount Lyall, 1,500. *Bounty Islets*,—Highest summit, 300 feet. *Antipodes Islets*,—Highest summit, 1,000 feet.

RIVER. *Chatham group*,—Mangatu.

LAKE. *Chatham group*,—Te Wahanga.

STATISTICS.

		Miles.	by	Miles.
<i>Area</i> ,—Chatham group,		30		25
„ Auckland group,		30	„	15
„ Campbell Island,		10	„	10
„ Bounty Islets,		3½	„	1½
„ Antipodes Islets,		4	square miles.	

Population,—(Chatham group), British, 184; Maori and Natives, 475. The other islands are uninhabited.

THE CHATHAM ISLANDS.

The Chathams are a group consisting of one principal island, the Chatham, and two of smaller size, Pitt Island and Rangatira. They were discovered in the year 1791 by Lieutenant Broughton, in command of H. M. Brig "Chatham," and were formally taken possession of in the name of the British sovereign, George III., and named The Chathams, in honour of Earl Chatham. At the time of their discovery they were thickly peopled by a native race, called Moriori, who were supposed to exceed 2,000 in number, although the existing remnant of the race scarcely amounts to 100. These people, though similar in colour and some other respects to the Maori race which is native to New Zealand, possess distinct national characteristics, and their language is very different.

After their discovery, these islands were frequently visited by whalers and sealers; and in the year 1836 a considerable number of native New Zealanders migrated

to them, subduing the Morioris, of whom they destroyed a great part, and reduced the rest to slavery. They effected a complete conquest of the islands, which they have since retained in their possession.

By the extension of the boundaries of the New Zealand Company, in the year 1842, by letters patent from the Crown (confirmed in 1863 by Act of the British Parliament), the Chatham Islands became part of the colony, and settlers soon migrated there, and rented land from the Maori possessors of the soil: an officer also was appointed by the New Zealand Government to reside in the islands, and perform the duties of a magistrate and of other public offices.

In the year 1865-6, the New Zealand Government transported to these islands about 300 rebel Maori prisoners, who, after two years' detention in captivity, effected their escape and return to New Zealand in the year 1868, with an adroitness and tact for which their race has frequently been remarkable, and joined again the rebel ranks of their race in their war against the British Government.

The entire population of the Chatham Islands in 1868 amounted to 184 Europeans, and 359 Maori residents, exclusive of the prisoners, together with 117 of the Moriori.

The Chatham Islands are situated about 360 miles to the east of New Zealand, in the latitude of Cook Strait, lying between the parallels of $43^{\circ} 25'$ and $44^{\circ} 20'$ south latitude, and between the meridians of $176^{\circ} 10'$ and $177^{\circ} 15'$ west longitude. The largest, or Chatham Island, is about 38 miles in length by 25 in breadth.

The coast of the main island on the northern and western sides is generally low, with occasional bluffs and hilly projections, and on the east it is also low but rocky; the south coast, however, is abrupt and precipitous, but with level wooded land upon the summits of the cliffs. The most *important* indentation is that of Petre Bay, on the south-

west, which is about thirteen miles in width, and contains several harbours, of which the best are those of Ports Waitangi and Whangaroa. The former contains the principal settlement, where the magistrate and most of the European inhabitants reside. Whangaroa, though small, is the best sheltered harbour in the island. Hanson Bay occupies nearly the whole of the eastern coast, but is shallow and without harbours. On the north are Broughton Bay, as well as Kaingaroa or Skirmish Bay and Harbour, so named by Broughton from a collision which took place between his crew and the natives. Here is the most numerous settlement in the island, next to Waitangi.

The principal capes are Cape Eveque, a precipitous point in the south, so named from its similarity in form to a bishop's mitre,—it is about 450 feet high; Cape Fourrier, on the south-east; Cape Young, a very conspicuous headland; and Point Paterson, a low projecting point on the north; with Point Alison, also on the north, named after the sailor who first descried the land; and Point Durham, the southern headland of Petre Bay.

Pitt Strait divides Pitt Island from Chatham Island, and Cuba Channel separates the north-west projection of the main island from a dangerous sunken reef, called West Reef.

The surface of the islands is for the most part undulating, with an occasional hill. The most extensive chain of hills is near the north-west coast, and is called Mount Paterson, but it does not exceed an elevation of 800 feet. At its eastern extremity it forms a perpendicular cliff. Mount Whare Kauri and Maunganui are wooded eminences on the north coast; whilst scattered over the northern parts of the island are several pyramidal-shaped hills, the most regular and lofty of which is named Mount Dieffenbach, after the eminent naturalist, who visited the islands in the year 1840.

The only river of any size is the Mangatu, which has a course of about twelve miles, and empties itself into Waitangi Harbour; but lakes form a very conspicuous feature,

the largest, Te Wahanga, occupying a considerable portion of the island, being twenty-five miles in length, and six or seven broad. It is a salt water lagoon, and is generally shallow, and in some parts fordable upon horseback. Occasionally it bursts its sandy barrier, and discharges its surplus waters into the ocean. The other lakes contain fresh water, and vary from one to six miles in circumference.

In some parts of the island there are extensive formations of peat, which have in places become ignited, and present the singular phenomenon of constant underground fires without volcanic agency. These fires have been steadily burning for many years; and in one place, between Whangaroa Harbour and Point Paterson, they have consumed an area of thirty-five acres, forming a large basin with perpendicular walls ten feet in height, with combustion still going on at the bottom.

Pitt and Rangatira Islands present no features of especial interest. The soil of the Chatham Islands is generally fertile; the climate mild, and favourable to the growth of vegetation; and crops of potatoes and wheat have been successfully and extensively cultivated, and exported to the Australian colonies, or sold to whaling ships, which often call in for supplies. The native trees and shrubs resemble those of New Zealand, and the *Phormium tenax*, or New Zealand Flax, is abundant in all parts.

THE AUCKLAND ISLANDS.

The Auckland Islands are a group of one large and several small islands, lying about 180 miles to the south of New Zealand; the largest being known as Auckland Island, the next in size as Adams Island, and two others as Enderby and Disappointment Islands. The group was discovered in the year 1806 by Captain Bristow, in the ship "Ocean," a vessel belonging to Samuel Enderby, Esq., of London. The discoverer named the group after Lord

Auckland, and revisited it in the following year, when formal possession was taken of the islands for Great Britain. They were then uninhabited, but soon became a resort for the South Sea whalers; and in the year 1850, Messrs. Enderby, to whom the British Government had granted the group (in recognition of their services rendered to geographical science in the South Polar regions), established upon them the headquarters of a Whale Fishery Company, and their establishment was augmented by a body of New Zealand natives; but after a few years the establishment was given up, and the island deserted by all its inhabitants. From that time the islands have remained unpeopled, except when they have formed the temporary refuge of shipwrecked mariners, many disastrous wrecks having taken place upon their coasts. Captain Musgrave, of the schooner "Grafton," wrecked in 1863, was detained there, with his crew, for a period of twenty months, and has written an interesting account of the islands, and of his Crusoe-like life. The "Invercauld" in 1864, a vessel of 880 tons, struck upon the north-west coast, and out of 25 persons three only were ultimately rescued after twelve months' residence in the island; and in 1866, the "General Grant," a fine ship, was drawn by the strong currents which exist upon the western coast into a cave, where she foundered, a few only of the passengers and crew escaping.

The Auckland Islands are situated between the parallels of 50° 30' and 51° south latitude, and the meridians of 165° 55' and 166° 15' east longitude, and occupy an area about 30 miles long by 15 broad. Auckland Island forms the centre of the group. Adams Island extends along its southern shore, being separated from it by Adams Strait, a channel of some width. The southernmost point of Adams Island is South Cape. Enderby Island lies at the north of the group, and is about two miles in length, and several smaller islands lie between it and the mainland; whilst Disappointment Island is off the western coast of

Auckland Island. This western coast is unbroken and precipitous throughout, from Black Head or North-west Cape on the north to South Cape on the south, the cliffs rising perpendicularly from the water to a height of several hundred feet; but the eastern coast is broken into by a succession of deep inlets, similar to these on the south-west coast of New Zealand. The largest, as well as the most northerly of these inlets, is Port Ross or Sarah's Bosom, with Lawrie Harbour at its southern extremity, near which were the old Enderby settlements. Another very extensive and well sheltered inlet occupies the south. It is called Carnley Harbour, and contains two considerable arms, called North Arm and Musgrave Harbour.

The islands are mountainous throughout; the main range forming the perpendicular cliffs on the west coast, as well as sending out the spurs which divide the numerous inlets on the east. Mount Eden, a peak of 1,325 feet altitude, is on the east side of Port Ross; and another eminence, called the Giant's Limb, is close to Carnley Harbour. The soil appears to be very rich, the vegetation being luxuriant, and all parts of the islands capable of cultivation. The surface is generally covered with a peaty deposit, several feet in thickness, which renders the ground very wet and spongy. The lowlands are covered with forests of large trees, and the mountains with brushwood. Seals are numerous upon the coasts; and the Mutton Bird, a species much prized by the natives of New Zealand, and cured by them in its own abundant oil, burrows in all parts of the group. Violent gales are of frequent occurrence, and the forest trees are stunted in consequence, but the climate is on the whole mild and healthy. A singular phenomenon is observable in the islands; the magnetic attraction of the rocks being so powerful as to neutralise the polar attraction and render the compass entirely useless.

CAMPBELL ISLAND.

Campbell Island is situated 145 miles to the south-east of the Auckland Isles, and forms the most southerly land included within the New Zealand colony. It is about thirty miles in circumference, and was discovered in 1810 by Captain Hazelburgh, master of the brig "Perseverance." It contains an extensive harbour, called Perseverance Harbour, in which the "Erebus" and "Terror," under the command of Sir James Ross, anchored in 1840. Its north headland is called Point Erebus. The island is uninhabited; its interior is mountainous and covered with trees and vegetation, the surface having a coating of peat, as in the Auckland Isles. The highest hill, called Lyall Hill, is about 1,500 feet high.

THE BOUNTY ISLETS.

The Bounty Islets are a small cluster of rocky islets, amounting in number to twenty-four, lying nearly between the Auckland and the Chatham Islands, and about 470 miles east of Stewart Island. They were discovered by Captain Bligh, of the ship "Bounty," in 1788. They occupy an area of about five square miles, are from 100 to 300 feet in height, destitute of vegetation, without landing, and inhabited only by sea-birds.

THE ANTIPODES ISLETS.

The Antipodes Islets lie to the south of, and are a similar group to the Bounty Islets. They are distant 475 miles from Stewart Island, are uninhabited, without landing, and about 1000 feet in height at the most elevated point. They are principally interesting on account of their situation on the globe being so nearly opposite to Greenwich, from which our longitude is measured; but are in reality situated a good many miles from the exact spot which is the Antipodes of Greenwich.